THE ALVIN PLAN

CITY OF ALVIN, TX

2035 COMPREHENSIVE PLAN UPDATE

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Acknowledgments

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Chapter 1

Introduction & Vision

Beginning in February 2014, the citizens and leaders of Alvin decided to update their Comprehensive Plan. Drafted in 2005, the Alvin “Crossroads” Plan had largely served its purpose in setting a trajectory and growth pattern for the community. The development of the Crossroads Plan was in response to the amount of recent and expected future development, in addition to several pending developments and infrastructure improvements that ultimately contributed to and influenced the pattern and character of new development. Therefore, a decision was made for the community to determine a course of action so as to forge the future - on its own terms - ensuring desirable outcomes. To do so, a shared vision was an essential first step to guide the community and its leaders in their decision-making over the next two decades and beyond.

Almost 10 years later, and in response to present growth and development circumstances, the City has initiated a process to develop the Alvin "Crossroads" Plan. It is now clear that development emanating from the Houston metropolitan area will soon impact the daily lives of Alvin’s citizens. In light of this fact, the plan development process was designed to enable residents and community leaders alike to come together and decide how they would like the community to develop, including critical considerations such as the pattern and sequencing of development within the city limits and throughout the extraterritorial jurisdiction, timely provision of adequate facilities and services,

Plan Objective

The objective of the plan is to provide direction over a twenty-year planning period in the areas of land use, parks and recreation, and growth policies.

coordination of infrastructure improvements, and community appearance and character enhancements. The intended result of this process was to craft a statement of the community's vision, reflecting the expectations and desires of the residents. This vision of what the community aspires to achieve is the first step in charting a strategic path forward to address the complex decisions facing the community in both the near and distant future. Rather than simply reacting to events as they unfold, a shared vision will enable the community to develop a proactive plan for achieving the ideal future imagined by the community through this comprehensive planning process.

About the Alvin Comprehensive Plan

Alvin has a pleasant and charming downtown. The historical buildings are well kept and have active businesses that draw visitors and residents to the area; including Wells Fargo, Gordon Tavern, and the Alvin Public Library, to name a few.

The Alvin "Crossroads" Plan offers a strategic policy framework for both the corporate limits and the City's expansive extraterritorial jurisdiction (ETJ). The objective of the plan is, therefore, to provide guidance for decisions relating to the future use of land, community growth and provision of infrastructure, and parks and recreation areas. The horizon of this plan is the Year 2035.

Alvin is at a "crossroads" in the sense that it is choosing to embark on a new path - one that is guided by a blueprint for the future. It is the intent of this Comprehensive Plan that the policies and associated goals, objectives, and recommended implementation strategies and actions serve as a framework for community decision-making. To ensure growth that is both wise and sustainable, decisions must be based on a formulation of sound policy and founded by a comprehensive and integrated approach to analyzing community issues and identifying realistic solutions, as set forth in this plan.

Stages of the Planning Program

The City adopted its current Comprehensive Plan in September 1, 2005. It was recognized that conditions in the community have changed dramatically since that time, due primarily to ongoing population growth and development throughout its planning area. As such, City Council passed a resolution to allow for the development of this Comprehensive Plan Update. It is the intent of the City to continue its comprehensive plan program on an ongoing basis, including development of additional plan

elements over the course of the coming years. In addition to this introduction, this plan includes chapters addressing land use, growth policies, and parks and recreation, the community snapshot (demographics and socioeconomics), and implementation. It is recommended that additional plan elements need to be developed in the coming years, including chapters to address the following:

- Annexation
- Housing and Neighborhoods
- Community Appearance
- Technology
- Transportation
- Utilities and Drainage Infrastructure

An additional step will be to invest in a more thorough implementation effort, whereby the City reevaluates its land development regulations to ensure that development is both high-quality and predictable. Such implementation process will include revision of existing ordinances and crafting new standards and regulations, consistent with the vision expressed by this adopted public document.

Value of the Plan Development Process

Undertaking this comprehensive plan update process was highly valuable for the community - both leaders and citizens alike - since it provided an opportunity to think beyond the normal day-to-day issues and consider quality of life improvements. This process allowed the community to think grand in scale by examining it's historical, current, and projected growth and development not only within the City, but perhaps more importantly throughout the entire planning area. It also allowed consideration of the influences of development within the adjacent municipalities such as Pearland, Manvel and Angleton, as well as from major transportation improvements such as the proposed alignment of the Grand Parkway. The nature of the planning process also required the community to consider the interrelationships among a variety of long-range planning issues. For instance, there was evaluation of how a transportation improvement such as the Grand Parkway will influence the City's land use and growth patterns, with essential considerations for the impacts this will have on the provision of adequate fire, police, and emergency medical services as well as suitable roads, water and wastewater services, and drainage infrastructure. In addition, it allowed discussion as to the impact of a single project on the character of the community, recognizing the rippling affect that transpires over the course of time.

In addition to encouraging broad, long-term, and integrated thinking, the planning process provided a means for members of the public to identify the community they want now, and more

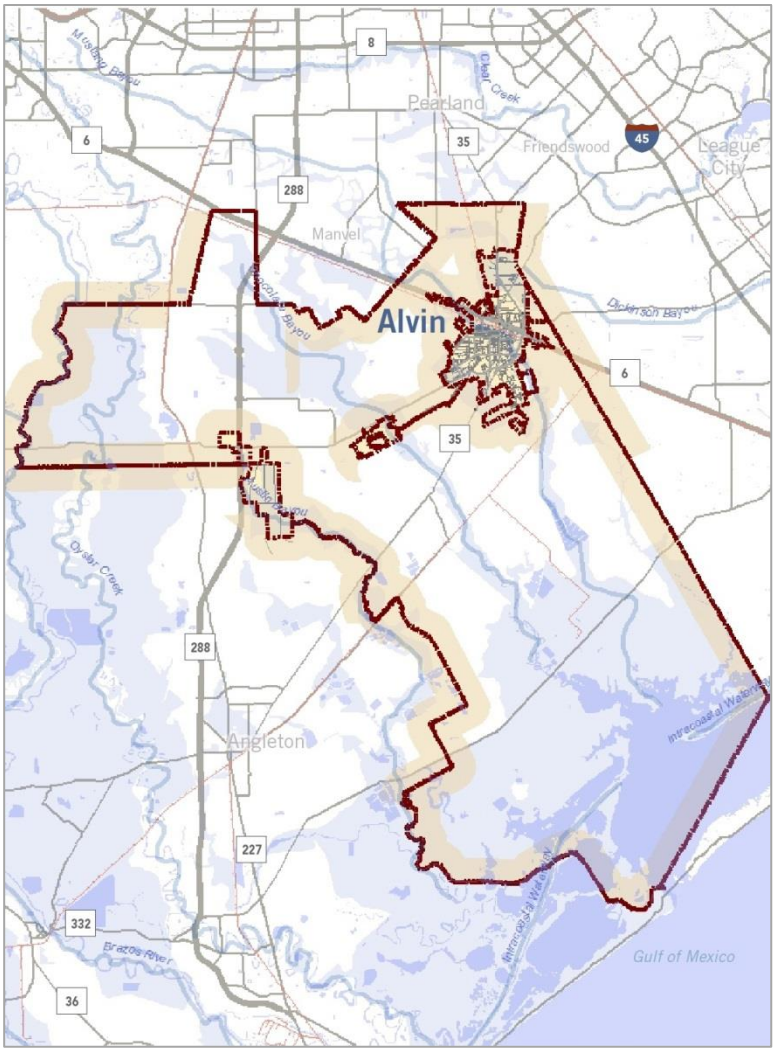
Plan Influence

- The policies and action priorities documented throughout this plan should serve as the foundation for decision-making and judgment regarding:
- The timing and availability of infrastructure improvements to serve new development;
- the appropriateness of proposed development and redevelopment applications;
- the warrant for and timing of city-initiated and landowner-requested annexations;
- the consistency of zone change requests and other zoning-related actions with the principles and policies of this plan;
- expansion of public facilities, services, and programs to meet current needs and future demands;
- priorities for annual capital budgeting;
- potential re-writes and amendments to the City's zoning and land development ordinances and related code elements;
- intergovernmental (including inter-City and City/County) coordination and agreements. Operations, capital improvements, and programming.

importantly, in five, ten, and twenty years - and beyond. It was an important step in this process to allow citizens opportunities to reconfirm their collective vision and further, to encourage their participation in planning for the future. The ability to successfully implement this plan is directly correlated to the amount of citizen participation and the sense of ownership derived from the plan development process.

The vision expressed by residents of this community was transcribed and formed into a series of goals, objectives, and recommendations, each of which are contained within respective chapters of this plan. Collectively, they will serve as a guide for the City Council, Planning Commission, Parks and Recreation Board, City staff, and other boards, committees, and groups in their decision-making and administrative activities over both the short- and long-term.

Figure 1.1, *Regional Context Map*



Insights from Alvin's Citizens

Through facilitating a series of meetings with community leaders and residents, several commonly-held beliefs about broader planning issues emerged which helped to inform and frame the key plan elements that compose this comprehensive plan update:

Land Use and Character (Aesthetics)

- Alvin is not a destination community. Future development needs to build on the community's assets.
- To improve community aesthetics, the City needs to be more demanding of developers and require a higher quality of construction.
- The lack of contiguous development has resulted in a lack of continuity and definition of development outside of the Downtown area.
- There are several neighborhoods in Alvin that need a facelift. The City needs to work with residents to address revitalization and redevelopment efforts within existing residential neighborhoods.
- The City needs to be more proactive in protecting mature landscaping, especially its old live oak trees, for which the city is known and recognized.
- To improve Alvin's visual character, the city needs to develop a more robust signage ordinance; that addresses commercial signage as well as community gateway signage, wayfinding / directional signage and more visible building addresses.
- Alvin needs to attract larger retailers so people do not have to leave the community to purchase basic household supplies.
- Alvin needs a master plan for mixed-use development of an urban character within the city; close to where people live, so they don't have to drive long distances.

Parks and Recreation

- Continue the improvement of the parks signage program and quality amenities to replace the obsolete equipment such as restrooms, benches, tables and pavilions.
- Additional sports complexes, including swimming pools, are needed to meet demand.
- The concern about youth retention spans several plan elements. Parks programming needs to accommodate the demands of younger users.
- There is concern that most parks are dedicated to sports fields and play areas, while there are no spaces solely dedicated to passive recreation and therefore not meeting the needs and desires of the older populations.
- Consider incorporating an eco-tourism program into multiples areas of Alvin, including the Mustang Bayou.

Why Plan?

Cities plan for many reasons, among them are to:

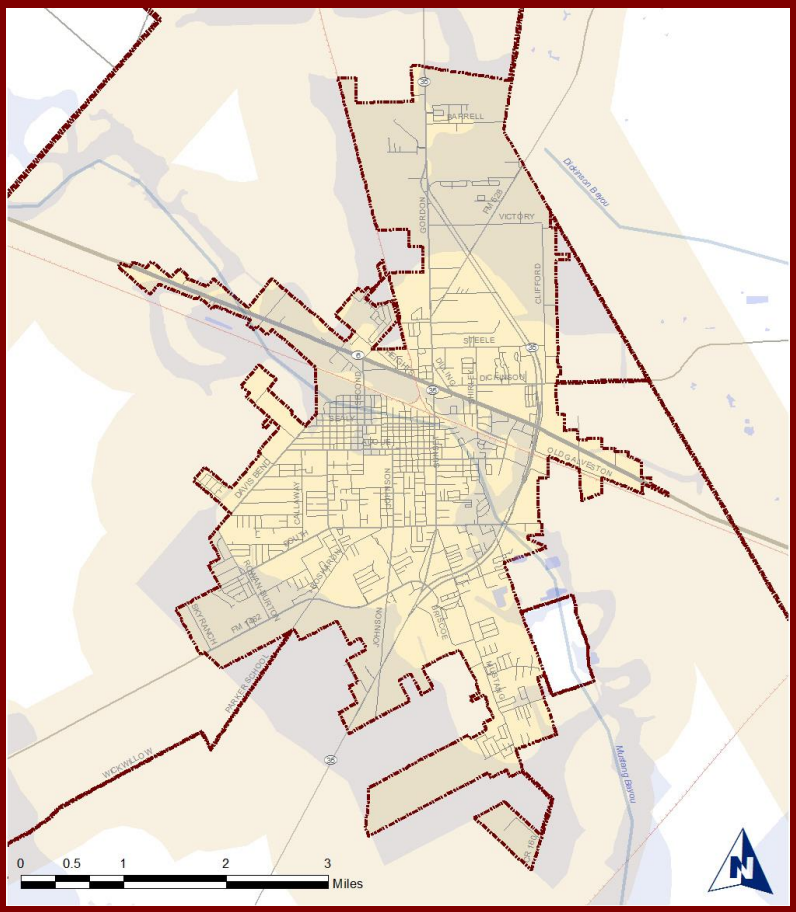
- Take advantage of the community's strengths and advantages while solving its limitations and challenges;
- protect the interests of property owners by determining in advance how, when, and where the community develops;
- Direct rather than react to new development by timing and sequencing the improvement of infrastructure and provision of municipal services;
- Seize economic opportunities through support of existing businesses, attraction of new industry, and fostering business start-ups;
- Enhance the features that contribute to quality of life, such as parks and recreation areas, preservation of historic resources, conservation of natural resources, and quality public safety services; and
- Offer assurance as to the City's commitment to manage its future to ensure compatible and sustainable development.

History of Geographic Information Systems (GIS) in Alvin

A geographic information system (GIS) integrates hardware, software, and data for acquiring, managing, analyzing, and presenting all forms of geographically referenced information. GIS provides the ability to view, understanding, question, interpret, and visualize data in many ways that reveal relationships, patterns, and trends in the form of maps, graphs, reports, and charts. According to ESRI (Environmental Systems Research Institute), the top five benefits of having a GIS database are:

- Cost savings and increased efficiency;
- Better decision making;
- Improved communication;
- Better recordkeeping; and
- Managing geographically.

Since 2005 Alvin has invested a lot of time and fiscal resources into developing a thorough and comprehensive GIS database. The City has layers like City Limits, ETJ, pipelines, contours, schools, parks, trails, annexation records, subdivisions, FEMA flood zones, water lines, sewer lines, storm sewer pipes, wells, and lift stations. These files will help in the development of this plan so that complex analysis recommendations can be illustrated and justified by the geographic data of what is currently "on the ground" in and around the City. The maps throughout this plan have been developed using the GIS data and resources of the City of Alvin and the Houston-Galveston Area Council.



Insights from Alvin's Citizens, continued

neighborhoods to parks, schools, and commercial centers throughout the city.

- Develop a water-based, "blueway," canoe and kayak trail along Mustang Bayou.

Growth Strategies

- The future availability of potable water and maintenance requirements remains a concern throughout the State of Texas. There is interest in learning about and implementing water conservation and native landscaping strategies.
- The community must consider new ways of doing business, with respect to cultivating public-private partnerships and utilizing new mechanisms to incentivize economic growth and development.
- Despite the fact that there is sporadic, marginal development along Alvin's primary corridors, there are several areas where future development should be planned, including along the State Highway 35 corridor and frontage roads, Highway 6 gateways and frontages, and along the railroad corridor north of Downtown.
- Prospects for growth outside the City limits from the larger Houston metroplex raises the issues of potential expansion of utility infrastructure, as well as the improvement and replacement of infrastructure that will not meet projected growth needs.
- There needs to be a business development program to aggressively seek varied industries and retail opportunities in order to provide a diverse economy that will be more resilient to future economic downturns; as well as provide value to the higher quality of life sought by Alvin residents. Continue to advance the development of the Kendall Lakes Industrial Park.
- Alvin should consider an online communications and information system that will allow the City to more easily update the community on changes, events, and needs.
- To ensure high-quality development, Alvin needs to adopt and enforce stricter land development regulations.

Gateways are a key part of creating a visual identity and a sense of entrance into a community. Alvin could capitalize on its location along major corridors from the coast to Houston and create a visual impression on visitors and thru-travelers that will encourage them to revisit the City or stop and stay.

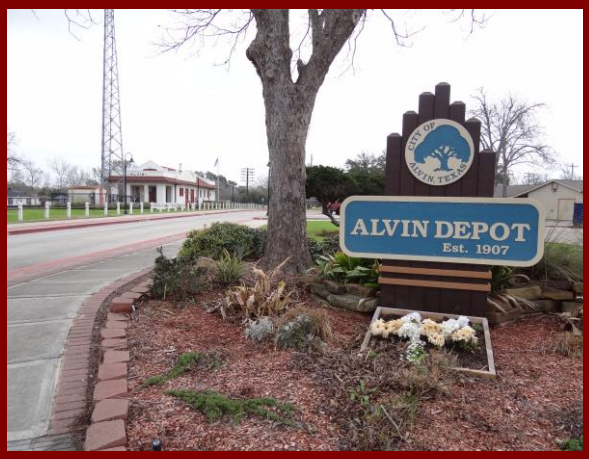
Public Facilities and Services

- Alvin's senior center lacks adequate facilities space to support all of its programmatic activities. There is a universal concern about supporting Alvin's elderly population, with regard to quality of life enhancements, such

Insights from Alvin's Citizens, continued

as more social places and activities; increased walkability and public transportation; and a variety of retail and commercial businesses, in close proximity to neighborhoods.

- A youth-oriented recreational center is needed to facilitate social and recreational activities for young people.
- There are no facilities in Alvin that can serve large assemblies. A multi-purpose municipal facility is needed that can seat up to 1,500 people and support a variety of programmatic requirements.
- There is concern that growth may also foster crime. Above all, citizens want Alvin to be a safe place to live and raise a family.
- As Alvin continues to grow, the City will require increased staff and staff availability to handle the increased demand for maintenance, operations, and services.
- Public facilities are difficult to find and require wayfinding signage systems.
- Alvin is suffering from aging transportation and utilities infrastructure.



Alvin's rich railroad history is showcased in the heart of the City's downtown area with the Alvin Train Depot. This restored site is a historic gem nestled near the Tom Blakeney Trailhead, the Alvin Skate Park, and National Oak Park.

Mobility

- More transit options need to be available to the aging population so that they can retain their independence and a high quality of life.
- Non-vehicular facilities, such as new sidewalks and bicycle trails should be expanded to provide increased intra-City and intra-neighborhood circulation options.
- With the development of the Grand Parkway, the City should be proactive in developing an access management program in order to minimize traffic congestion and direct the type and location of development along the corridor.
- Alvin needs to offer public transportation options to Houston's medical center.
- Alvin needs to develop a thoroughfare plan that focuses on the efficient movement of truck traffic through the community and provides an effective evacuation route away from the Gulf Coast.

Benefits of the Plan

- The Alvin Comprehensive Plan Update provides long-term policy direction in the areas of land use and community

character, growth and development, and parks and recreation. In so doing, the plan offers community leaders and residents the following benefits:

- Establishes policy direction for future development and redevelopment, providing decision-making guidance to members of the Planning Commission, City Council, City staff, as well as the community at-large.
- Identifies recommendations contributing to a work program for departments within the City.
- Identifies improvement needs and priorities for use by City management to guide budgeting and capital programming decisions
- States the municipality's intentions regarding the planning area's physical development and infrastructure investment, ultimately creating an improved level of certainty and predictability for landowners and developers..
- Communicates to citizens the type, pattern, and density of future development, thereby illuminating the impact of development on private property.
- Coordinates transportation and infrastructure improvements with development, creating an integrated development framework.
- Lays out the future economic and physical development of the community, which is useful to other local, State and Federal agencies engaged in the provision of programs, services, and facilities.

Envisioning the Future

A clear vision of what the community aspires to achieve is the first step in charting a path to address the complex decisions facing Alvin in the short- and long-term. A vision describes the community's preferred future, offering direction for the goals, objectives, and policies that provide a framework for future planning, development, and programmatic decisions.

The Visioning Process

The Alvin Comprehensive Plan Update was a seven-month process involving over 200 residents and community stakeholders representing the diversity of the community and its leadership. A 14-person Citizens Advisory Committee (CAC) led the process, offering their input to ensure the plan reflects the values and priorities of the community. The CAC was charged with the responsibility of establishing the community's core values and its expectations for the visioning process. They were also involved in reviewing each of the plan elements to offer their insight and ensure the plan is both realistic and able to be implemented.

Visioning

A vision is the first step toward understanding the past, recognizing existing circumstances, collectively deciding on a preferred scenario, and setting a course of action for realizing what is envisioned in the future. This Community Vision documents the citizens' expectations for tomorrow and forms a framework by which each individual element of this plan follows. It is long-range and intentionally idealistic as a means to stretch the imagination of what is possible. Casting a vision allows the community to come together to decide what it will be like in 20 years, and to put a plan in motion to achieve it.

As used in planning, visioning is a process by which a community envisions its preferred future. It chronicles the hopes, dreams, and aspirations of a community and helps citizens agree on what they want their community to become.

- Michael Chandler

A community forum was held in February 2014 to gather valuable input from the citizens and City staff of Alvin to aid in the development of this plan.

The first step in the visioning process was to assess where the community had been in the past. This effort involved a review of planning documents and other demographic and socio-economic information, which served as the basis of *Chapter 2, Community Snapshot*. This profile offers a glimpse of where Alvin has been in the past and where it is today. This analysis set the tone for community discussions and the overall visioning effort.

Our Vision

The community's vision statement was developed through input from citizens, achieved through the public participation process. This process included a community forum, dissemination of a survey, Citizens Advisory Committee (CAC) meetings, and stakeholder consultations. The vision for Alvin is as follows:

*Looking ahead to the Year 2035 and beyond, **our vision** is to manage growth in a manner that results in predictable development of exceptional quality, improved economic competitiveness, diverse professional and commercial activity, and an enhanced community character; achieve a compatible pattern of land use that sustains property values and supports a blend of housing types for all stages of life and income levels; revitalize downtown as a true city center and community gathering place while preserving Alvin's rich history and unique character; improve transportation efficiency and choices including increased opportunities for walking and bicycling; enhance safe and convenient access to parks and recreation facilities for citizens of all ages, to enable healthy and active lifestyles; protect valued open spaces and conserve natural resources, for the benefit and integrity of our environment, drainage systems, and community appearance; efficient use of community facilities and public infrastructure and their adequate provision concurrent with new development; and, an attractive and well-maintained community that we, the Citizens of Alvin, are proud to call home.*

Organization of the Plan

This plan is organized into five elements, which address existing conditions, key issues, goals and objectives, and recommendations. The chapters include:

- *Introduction and Vision* - This chapter discusses the value of the plan development process, the benefits of the plan, the community vision, and the plan's organization.
- *Community Snapshot* – The *Community Snapshot* provides the first step toward understanding the past, recognizing existing circumstances, collectively deciding on a preferred scenario, and setting a course of action for realizing what is necessary in the future. This effort involved a review of the existing comprehensive plan, demographic and socio-economic information, as well as regional indicators that may have impacts on Alvin's future needs.
- *Land Use* - This element provides a vision for the future physical development of the community and its extraterritorial jurisdiction (ETJ). The purpose of this chapter is to establish the necessary policy guidance for decisions concerning the compatibility and appropriateness of development within the context of the larger community. An essential component of this chapter is the land use policies, which will help the City in deciding the means by which it can manage its future land use and development.
- *Parks and Recreation* - The purpose of this chapter is to determine the community's current and future needs for parks and recreation facilities. This plan element provides policy direction pertaining to the timing of park development, park siting within the City and planning area, the type and quality of facilities, and the method by which improvements are funded.
- *Growth Strategies* - This element of the Plan provides policies to guide decisions relating to timely extension of adequate infrastructure, provision of quality municipal services, and a logical sequencing of future development. The chapter also sets forth policies for managing future development in a manner that is wise and fiscally responsible.
- *Implementation* - The purpose of this plan is to identify a course of policy direction for the community. The implementation element identifies the means by which this policy will be actualized. This chapter

Excessive placement of signage and marginal development along major corridors were cited by citizens as aesthetic issues during the Citizens Advisory Council (CAC) meetings.

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1. Introduction
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includes a five-year action plan that contains recommendations that are linked to the different elements of the plan, the department or agency responsible for the actions, and the timeframe by which the actions will be completed. This chapter also identifies a process for an annual evaluation and a five-year review of the Comprehensive Plan.

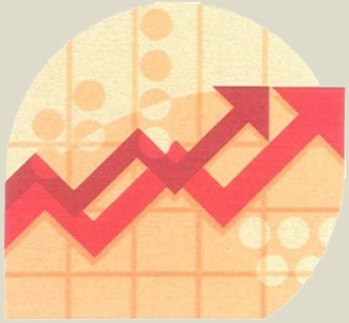
Chapter 2

Community Snapshot

Alvin is a community that is proud of its history and interested in preserving its heritage and uniqueness as a small town on the edge of the nation's fourth largest Metropolitan Statistical Area (MSA). While the City's history continues to be celebrated, made evident by the restoration of historic structures such as the Depot, and the preservation of "original town" neighborhoods, and traditional downtown area, this process of updating Alvin's *"Crossroads" Comprehensive Plan* offers an opportunity for the community to remember its past while envisioning the future. Although future actions may depart from their previous course as a result of emerging new development, major transportation improvements, shifting patterns of use, and changing demographics, the success of the community in achieving its vision will largely depend on its treasured past and values as a small community.

Alvin is a community that is committed to preserving its heritage while also optimistic about what lies ahead. In planning for its future, the community is confronted with the challenge of sustaining, yet enhancing its highly valued small-town character as new development occurs and alters not only the size of the community, but the scale and character of newer neighborhoods and businesses. New development is attractive for its benefits of an increased tax base, new housing and employment opportunities and added convenience. However, if growth and development are not well

A **Metropolitan Statistical Area (MSA)** is a Census Bureau-defined urbanized area of at least 50,000 inhabitants with a total metropolitan population of a least 100,000. Additional contiguous counties are included in the MSA if they meet certain requirements of commuting to the central counties and other selected requirements of metropolitan character (such as population density and percent urban).



Alvin is experiencing an upward trend of new development that will affect its demographics and influence its community character.

managed and directed to occur in a fashion that is compatible with the values and vision of the community, the outcomes may be inconsistent with the voice of the community and desire to preserve the small-town atmosphere and unique quality of life.

Before looking too far into the future, it is important to consider the past and current conditions that are highlighted in this snapshot of demographic and socioeconomic characteristics. While some factors may not reflect positively on the community, it is still important to recognize them during the comprehensive planning process in order to seek strategies to overcome them. This profile of the community offers an in-depth introduction to Alvin and its existing socioeconomic conditions and demographic characteristics pertaining to historical, current, and projected future population; ethnic and household composition; age; income and poverty; educational attainment; employment and labor force; and the economic position of the community and its businesses. The purpose of this chapter is to examine how the community has grown since the last comprehensive plan was adopted (2005), identify current characteristics and resources that will contribute to the envisioned future, and analyze trends that will affect the future course of the community and its economic development.

An important component of this chapter is the year 2035 projected population, which will be used throughout the plan to estimate future demands, requirements for parks and open space, infrastructure capacity needs, and future growth strategies. An understanding of existing population characteristics and future population demands is essential in determining the anticipated development and the resulting demands on the community and its facilities and services.

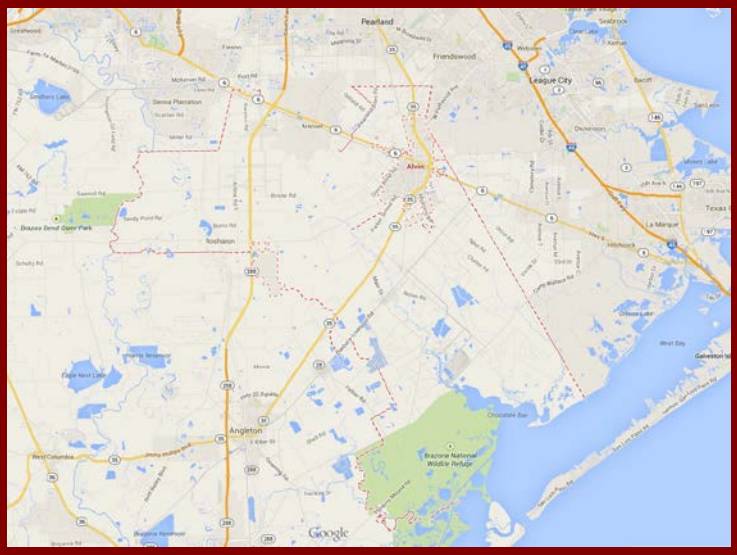
Finally, this assessment includes comparisons with nearby communities – Angleton, Friendswood, Hitchcock, Lake Jackson, Manvel, Pearland and Santa Fe – to provide context for the trends being experienced in Alvin. These communities are similar to Alvin with respect to their proximity to Houston, major transportation corridors, and growth characteristics.

Location of the Community

Alvin is located at the "crossroads" of State Highway (S.H.) 35 and S.H. 6 approximately 12 miles south of Houston city limits, in the Texas Gulf Coast Region. As shown, in **Figure 2.1, *Location***, it is situated approximately 27 miles northwest of Galveston Island, and abuts the neighboring communities of League City, Friendswood, Pearland, Manvel, Liverpool, and Bonney. Primary access to the community is via S.H. 35, which extends north through Pearland (known locally as Main Street) past the Sam Houston Tollway/Beltway 8 (known as Telephone Road north of the Beltway) terminating at Interstate Highway (I.H.) 610 Loop. To the south, S.H. 35 passes through Angleton – the Brazoria County Seat – and continues through Bay City, Port Lavaca, and terminates near Corpus Christi, Texas. Another primary access is S.H. 6, which stretches

from I.H 45/Gulf Freeway north of Galveston through Alvin on a northwest alignment through Sugar Land. It also crosses U.S. 59 (Future I-69) and continues northward to U.S. 290, where it leads to the northwest before turning back north near Hempstead and continuing through Bryan-College Station before terminating in Hearn, Texas. Farm-to-Market (F.M.) 517 (Alvin-Dickinson Road) extends eastward across I.H. 45, through Dickinson and terminates in San Leon at the Galveston Bay. F.M. 528 travels to the northeast through Friendswood where it changes to NASA Road 1 at I.H. 45/Gulf Freeway. F.M. 1462 extends in the southwest direction across S.H. 288, through Rosharon and ending in Damon along S.H. 36.

Figure 2.1, *Location*



Source: Google Maps

History of the Community

Alvin is 12 miles southeast of Houston in northeast Brazoria County, on land originally granted to the Houston Tap and Brazoria Railroad. In the 1860s the Santa Fe Railroad established a flag station near the head of Mustang Slough on its Galveston-to-Richmond branch line. Santa Fe hired Alvin Morgan in 1872 to supervise the loading and shipping of cattle at the stock pens. Morgan built the first house in the area in 1879 and persuaded many travelers to settle there. In 1881 the settlement acquired a post office, and the resident named the community Morgan, but renamed it Alvin upon learning of another Morgan, Texas. City folklore recalls Morgan's inseparable companions – a dog, a goose, and a white buzzard. Alvin was incorporated in 1891 and again in 1893.

- Alvin was incorporated in 1891 and again in 1893
- The population was 3,087 in 1940 and 3,701 in the mid-1950s
- Alvin grew 89.1 percent between 1960 and 1970, to 10,671
- The population was 21,413 persons in 2000
- Resident De. F.R. Winn was nationally praised for his 1898 Cuban Report to Theodore Roosevelt
- Local resident Nolan Ryan was elected to the National Baseball Hall of Fame in 1999
- Brazoria County had a population increase of 22.8 percent between 2000 and 2010, from 241,767 to 313,166 persons.
- Projected Year 2040 population of Brazoria County is estimated at approximately 516,000 persons.
- Alvin has accounted for 7.5 to ten percent of the county population since 1970; this percentage has decreased over the last 20 years.
- Four alternative projection techniques reflect a Year 2040 population ranging from 31,157 to 39,935 persons.
- A "middle ground" of the four projections is 35,546 persons.
- The median age of 33 years is the second lowest among nearby communities

By the mid-1890s Alvin had experienced a population explosion, with the number of residents increasing from 100 in 1890 to an estimated 2,000 by 1896. Businesses in the community included an ice factory, pickle works, cotton gin, bank, opera house, six hotels, four churches, and two weekly newspapers. Alvin's economy was based primarily on farming and fruit growing. Methodists organized the first church in Alvin in 1881, and other denominations soon followed: Baptist in 1886, Presbyterian in 1892, Episcopal in 1896, Nazarene in 1934, and Lutheran in 1938. Alvin's first public school classes met in the Methodist church building, but in the 1890s the school had facilities of its own. In 1910 the community raised funds for a two-story brick schoolhouse. Alvin became an independent school district in 1925. A community college opened at the high school in 1949 but moved to a separate campus in 1963.

Alvin had a population reported at 3,087 persons in 1940 and 3,701 persons by the mid-1950s. The community's economic growth was based on livestock, poultry, dairying, agriculture, jasmine, oil, natural gas, and petrochemicals. During World War II businessmen persuaded the United States government to place an internment camp in Alvin. About 500 Germans from the camp worked in the local canning factory and rice fields for two years.

Between 1960 and 1970 Alvin grew 89 percent, from 5,643 persons to 10,671 persons. In addition to the public schools and community college, it had several private schools and more than 100 civic organizations. Alvin had 100 acres set aside for parks and recreational facilities in 1980. In 1988 the population stood at 18,484 persons; in 1990 it was 19,220 persons. Annually, from July through November, the City braces for flood, hurricanes, and tornadoes. The Galveston hurricane of 1900 destroyed or damaged most of Alvin businesses and homes. In 1979 tropical storm Claudette dumped forty-three inches of rain near Alvin within twenty-four hours, a state record. Four years later Alicia, generally called the most expensive storm in American history, battered the Alvin area.

At least two Alvinites have achieved widespread recognition. Dr. F. R. Winn, an Alvin resident, was nationally praised for his 1898 Cuban Report to Theodore Roosevelt and his eyewitness newspaper report of the battle of Santiago. His distinguished record as medical corpsman in World War I brought internal recognition and requests for assistance from foreign governments. Alvin's baseball superstar, Nolan Ryan, pitched for the New York Mets and California Angels before signing with the Houston Astros; he finished his career with the Texas Rangers in 1993, having set many major-league records, and was elected to the National Baseball Hall of Fame in 1999.[1]

[1] Ida M. Blanchette, *Babe on the Bayou* (Waco: Texian Press, 1979)

Alvin and the Railroad

The inauguration of the "new" passenger train leaving Alvin generated much excitement in the community. The Labor Day excursion to Galveston marks what many hope will be the first of numerous trains between the two cities. Passenger trains ceased stopping in Alvin several decades ago. However, at one time daily rail service between Alvin and Galveston was a fixture in both communities.

Galveston, as the largest, wealthiest city in early Texas, received one of the first railroads in the state when it connected with Harrisburg via the Buffalo Bayou, Brazos, and Colorado Railroad before the War between the States. After the uncertainties of the War the subsequent period of Reconstruction, railroad construction in Texas became serious business. Cities were born along rail lines while those that did not receive a railroad often died. The business community in Galveston, eager to develop rail ties within Texas, was not required to go through Houston and began arranging to help finance a new railroad from Galveston westward. Since one principal commodity shipped on 19th century railroads in Texas was cattle, the organizers of the new line realized the importance of a location with fresh water where the cattle could be held. Alvin Morgan was employed by the Gulf, Colorado, and Santa Fe Railroad to find a location and to oversee the pens and tans. A location on the banks of Mustang Bayou fulfilled the requirements.

The site of the tanks and pens became one of the new communities along the railroad. It received the name of Alvin, after Mr. Alvin Morgan who lived in the community until his death on May 7, 1909. Later additional rail lines, one north to Houston and the other south, joined tracks in Alvin. All of these lines gave the residents of Alvin access to markets for their products, vehicles to receive goods, and passenger service to locations throughout the Unites States. Alvinites could travel to Galveston to conduct business ventures, to purchase products, and to visit medical facilities. The residents enjoyed the benefits the railroad lines provided.

The Santa Fe Railroad built a new depot in Alvin during the first decade of the twentieth century to accommodate the bustling railroad business. The building was constructed in the style prevalent during its construction period. For many years the railroad company maintained a rose garden adjacent to the building. The grounds of the depot contained flowers, shrubs, and large banana trees that were covered during freezing weather to prevent damage. The depot and its grounds provided a nice visual image as the entrance to the City.

Other modes of transportation eclipsed railroads during the twentieth century. Airlines and automobiles became favorite vehicles for travel. Trucks took much of the freight traffic way from rails. Alvin was affected by these changes in transportation. Its depot, once the site of passenger and freight activity, sat vacant for many years. The former center of the City's travel had fallen victim to the times. No longer did it provide a scenic entrance.

After negotiation with Burlington Northern-Santa Fe Railroad, the City of Alvin acquired the depot and its grounds. The outside of the building has been restored to its original details. The interior of the depot has also been restored. The restored building and lushly landscaped grounds are now used for formal gatherings and receptions and provide a wonderful reflection of Alvin's colorful history.

Growth of Brazoria County

According to the 2010 Census, Texas grew from 20,851,820 persons in 2000 to 25,145,561 persons in 2010, reflecting an increase of 17.1 percent. During this same time period, the Brazoria County region had an increase of 241,767 persons to 313,166 persons, which reflected a 22.8 percent change. Generally, with the exception of the 1990s, Alvin has kept pace with the population growth of the County.

As a result of its close proximity and relatively short drive-time to many of the metropolitan area's most significant employers and planned new transportation arteries such as improvements to S.H. 35 and S. H. 288, as well as the new Grand Parkway alignment, an aggressive upward trend is emerging in the County – hence Alvin – with increased development activity and ongoing real estate investment. Locally, this growth trend is expected to maintain a steady incline, with average annual growth increases from 0.7% to 1.8%. The projected county population in the Year 2040 is estimated at approximately 516,000 persons.[2] Using a simple step-down (proportional) technique, assuming Alvin continues to account for roughly 7.7 percent of the county population, this means that the City's population would increase to 39,935 persons by the year 2040.

Historic Population Changes

Historical U.S. Census population figures for Alvin, Brazoria County, and the State of Texas are displayed in **Table 2.1, *Historical Population, 1930 to 2010***. Alvin has had periods of moderate increases in the last two decades. Since 1980, the population has increased by 16.4 percent, 11.4 percent, and 11.6 percent per decade, respectively. The 1950s, 1960s and 1970s were times of significant growth when the population increased nearly five-fold, from 3,701 persons in 1950 to 16,514 persons in 1980. Since 1930, Alvin's population has increased an average of nearly 45 percent each decade.

[2] Based upon the 0.5 2000-2010 Migration Scenarios of the Texas State Data Center (http://txsdc.utsa.edu).

Table 2.1, *Historical Population, 1930 - 2010*

Year	Alvin			Brazoria County		Texas	
	Persons	% Change	% County	Persons	% Change	Persons	% Change
1930	1,511		6.6%	23,054		5,824,715	
1940	3,087	104.3%	11.4%	27,069	17.4%	6,414,824	10.1%
1950	3,701	19.9%	8.0%	46,549	72.0%	7,711,194	20.2%
1960	5,643	52.5%	7.4%	76,204	63.7%	9,759,677	26.6%
1970	10,671	89.1%	9.9%	108,312	42.1%	11,196,730	14.7%
1980	16,515	54.8%	9.7%	169,587	56.6%	14,229,191	27.1%
1990	19,220	16.4%	10.0%	191,707	13.0%	16,986,510	19.4%
2000	21,413	11.4%	8.9%	241,767	26.1%	20,851,820	22.8%
2010	24,236	11.6%	10.3%	313,166	22.8%	25,145,561	17.1%

Source: U.S. Census Bureau

Brazoria County has experienced double-digit growth each decade since 1930, with the largest increases in the 1950s and 1990s when the county population grew from 46,549 persons to 191,707 persons. Over the course of the ten decades, the county has grown from the 23,054 persons to 313,166 persons, which reflects an average increase per decade of nearly 39.2 percent. The most significant growth periods were during the 1940s when the county grew by 72 percent and during the 1970s when the county grew by 56.6 percent. With the amount of growth throughout the county, Alvin's percentage of the population has remained relatively steady – 10.3 percent in 2010.

Similar to the growth of the Brazoria County, the State of Texas has had strong population growth each decade since 1940, ranging from a low of 10.1 percent in the 1930s – the Depression era – to a recent high of 17.1 percent in the 2000s. During the 2000s, the state increased its population from 20,851,820 to 25,145,561 persons.

Projected Change in Population

Population projections are an important component of the long-range planning process for the following reasons:

- To evaluate a range of future population scenarios enabling the community to identify the internal and external factors that may contribute to the rate of population increase;
- To adequately determine and quantify the demands that will be placed on the provision of public facilities and services, such as fire and police protection, water and wastewater facilities, transportation infrastructure, parks and open space, and municipal buildings;
- To allow advanced planning to effectively guide new development, coordinate timely provision of adequate infrastructure, and appropriately direct available resources; and,
- To create a strategy to seize opportunities and overcome foreseen challenges.

There are a variety of methods available for generating multiple projection scenarios, all of which rely – to varying degrees –

- Person under 19 years account for 21.8 percent of the population
- Those under the age of 15 years account for 23 percent of the population
- The mature population (60+ years) accounts for roughly 16 percent of the local population
- 86 percent of the population is classified as "White" compared to 74.1 percent statewide
- Black or African Americans make up 5.4 percent of Alvin's population compared to 11.8 percent statewide
- Roughly 33.2 percent of the population is of Hispanic or Latino origin
- Average family size is 3.30 persons, while the average household size is 2.82 persons, which has remained steady from 1990
- 33.1 percent of households are two-person, and 18.8 percent of households are three-person households which account for 56.2 percent of the total
- Of all households, 25.0 percent are four-or-more-persons households
- The median household income is $45,638

upon historical trends. The four techniques used to determine Alvin's projected population in 2035 are based on information from the Texas Development Water Board, the Texas State Data Center, and U.S. Census. The projected population ranges from a low of 29,972 persons to a high of 36,973 persons, with a "middle ground" projection figure of **33,472 persons**; which will be used for the purposes of this plan. These moderate rates are consistent with Alvin's development activity over the last 24 years. Although modest in comparison to Brazoria County's, the City's building permit activity reflects a similar pace of relatively steady activity, as discussed in the growth capacity element of this plan.

Other growth indicators were evaluated and used to either validate growth trends or were taken into consideration for certain types of growth. For instance, the Alvin Independent School District (AISD) anticipates 4.4 percent compound annual growth rate for the next five years. This rate is approximately three times the pace of growth expected in the City. However, AISD also encompasses the communities of Manvel, Pearland, and other fast-growing portions of Brazoria County. While this growth rate was not used directly, it factored into other quality of life considerations influencing school-aged children.

Regardless of the projection source or method utilized, all reflect a continued challenge on behalf of the City, County, and State to manage the pattern of population growth in a fiscally responsible manner.

Implications of Population Growth

The population projections and associated shifts in the community's socio- economic characteristics reflected by this profile are used as a basis in formulating the City's growth policies. In particular, the above future population scenarios will help the City, as well as private business interests, to better evaluate the following:

- Demands for varying housing types, sizes, and prices;
- Employment for residents of Alvin and the surrounding area;
- Changes in the median household income and the effective buying power of residents;
- Numbers of school-age children moving to the area and its impact on school facilities;
- Projected future traffic volumes, congestion, and demands for new roadway infrastructure and alternative modes of transportation;
- Utilization of local parks and recreation facilities and the demand for additional areas, equipment, and programs to support increased use;

- Capacity requirements for water and wastewater service, storm drainage improvements, and the requisite capital investments; and,
- Impact on the number of police, fire, and emergency medical service calls and their response times, service levels, and facility and staffing needs.

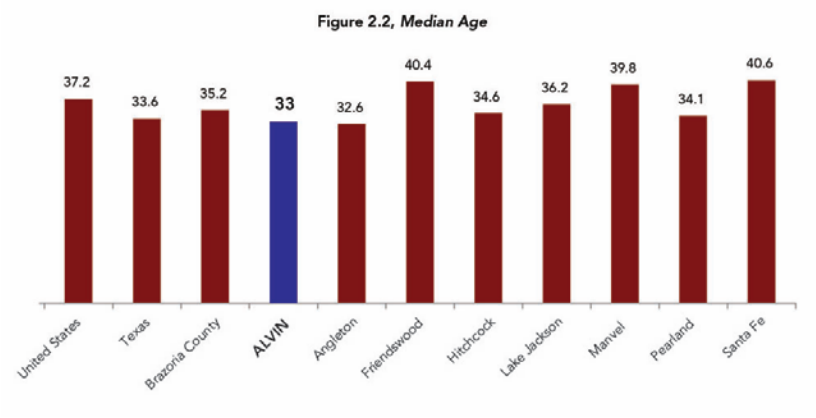
The implications of the expected future population characteristics and the physical and economic growth of Alvin and its planning area are contained in the respective elements of this plan, such as Chapter 3, *Land Use*; Chapter 4, *Parks and Recreation*; and, Chapter 5, *Growth Strategies*.

Comparison Communities

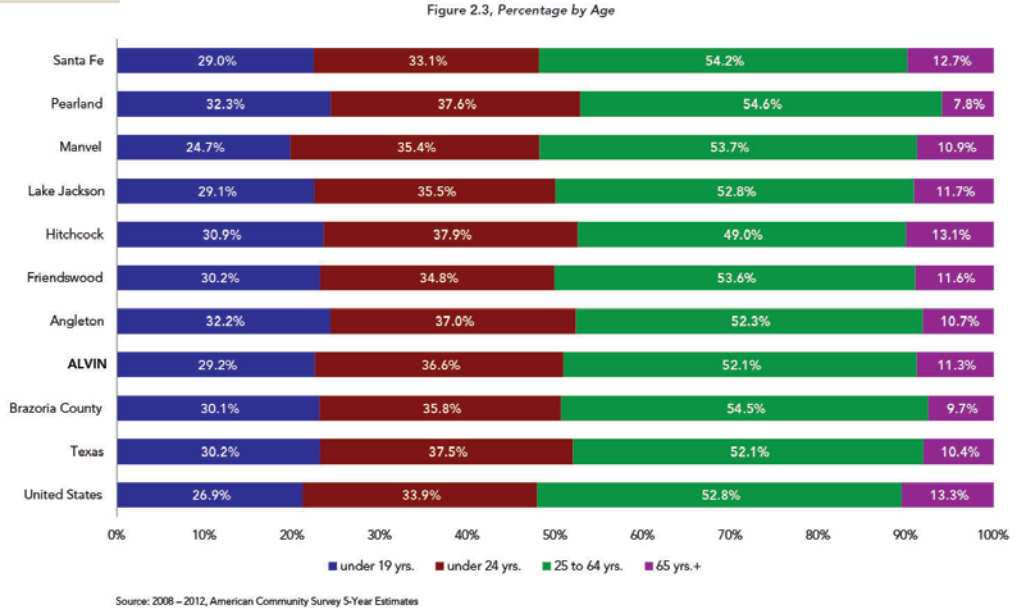
To maintain analytical consistency with the 2005 Comprehensive Plan, and in order to better understand the implications of population projections and the resulting changes to key demographic indicators, the City of Alvin has been evaluated within the context of Brazoria County, the State of Texas and the United States. Alvin's projected demographic changes have also been evaluated in comparison to cities of similar composition within the immediate Houston metropolitan region, including Angleton (2012 population: 18,977), Friendswood (2012 population: 36,898), Hitchcock (2012 population: 7,186), Lake Jackson (2012 population: 27,166), Manvel (2012 population: 6,069), Pearland (2012 population: 96,294), and Santa Fe (2012 population: 12,520). While each of these communities is being impacted by an array of external forces, some of which are consistent with those impacting Alvin, while other forces are unique to the particular city, analysis of comparison communities provides a baseline through which to better understand how resources are expended to address a changing regional environment.

Population Characteristics

The median age for Alvin is 33 years, which is lower than that of the United States, Texas, and Brazoria County. As displayed in **Figure 2.2, *Median Age***, the median age of persons in Alvin is also less than each of the neighboring communities, with the exception of Angleton. Angleton is the lowest median age at 32.6 years, and Santa Fe has the highest median age of all jurisdictions reflected in the illustration at 40.6 years. As Alvin continues to develop it is likely and expected that the median age will be lower than its current 33 years as more young families and their school-age children move into the community.

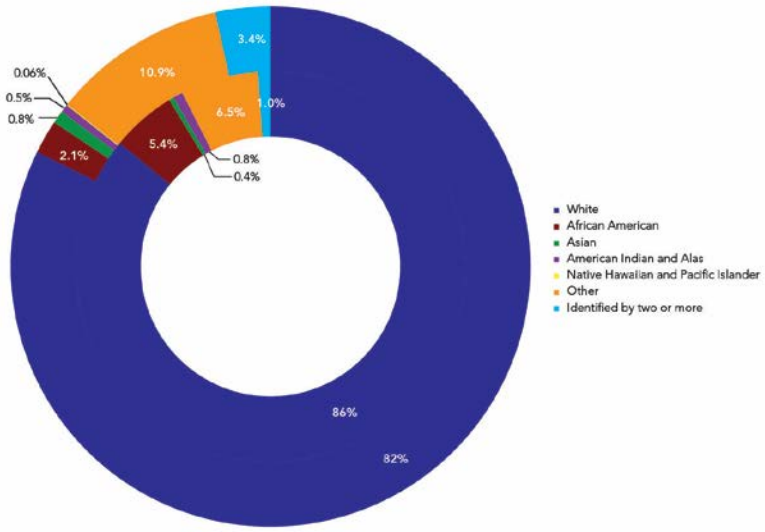


In comparing the percentage of persons under the age of 19, Alvin has a lower percentage than the state, the county, Angleton, Friendswood, Hitchcock, and Pearland. However, the percentage of persons that are less than 24 years of age is higher than the United States, the county, Friendswood, Lake Jackson, Manvel, and Santa Fe, which leads to the lower median age of 33 years. In Alvin, 36.6 percent of the population was under the age 25 in 2010, compared to 35.8 percent in Brazoria County, 37 percent in Angleton, 35.4 percent in Manvel, and 37.6 percent in Pearland. As displayed in **Figure 2.3, *Percentage by Age***, the percentage of persons over the age 65 is in the middle of those considered. Interestingly, the trend is shifting in Alvin as reflected by the change that occurred between 2000 and 2010. The percentage of persons below 19 years of age increased to 29.2 percent while the percentage under the age 24 decreased from 40.8 percent to 36.6 percent and persons over 65 years increased from 9.4 percent to 11.3 percent. This recent trend reflects the number of young families moving into Alvin, which generally have more median persons per households than do other age groups.



The characteristics of ethnicity in Alvin in the year 2000 (outer circle) and the year 2010 (inner circle) are displayed in **Figure 2.4, *Ethnic Composition***. This illustration displays that—as of the 2010 U.S. Census—86 percent of the population was "White" in Alvin compared to 82.3 percent in 2000. The other significant difference within the last decade is those categorized by the Census Bureau as "Black or African American" where the population increased from two percent of the population to 5.4 percent of the population from 2000 to 2010.

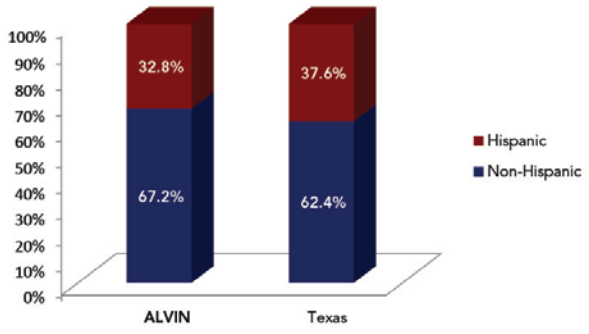
Figure 2.4, *Ethnic Composition*



Source: 2010 U.S. Census

The percentage of the population that classified themselves as "Other Race" decreased from 10.9 to 6.5 percent. The Asian population in Alvin remained relatively the same from 0.8 percent to 0.4 percent over the decade. As of the 2010 Census, there were 0 percent of the population reported of the "Native Hawaiian or Pacific Islanders" race, 185 persons classified as "American Indian or Alaskan Native", and 239 persons of two or more races.

Figure 2.5, *Ethnic Origin*



Source: 2010 U.S. Census

The Census Bureau classifies each of the ethnicities according to their origin as either Hispanic or Latino, or not. Accordingly, **Figure 2.5, *Ethnic Origin***, displays the difference between

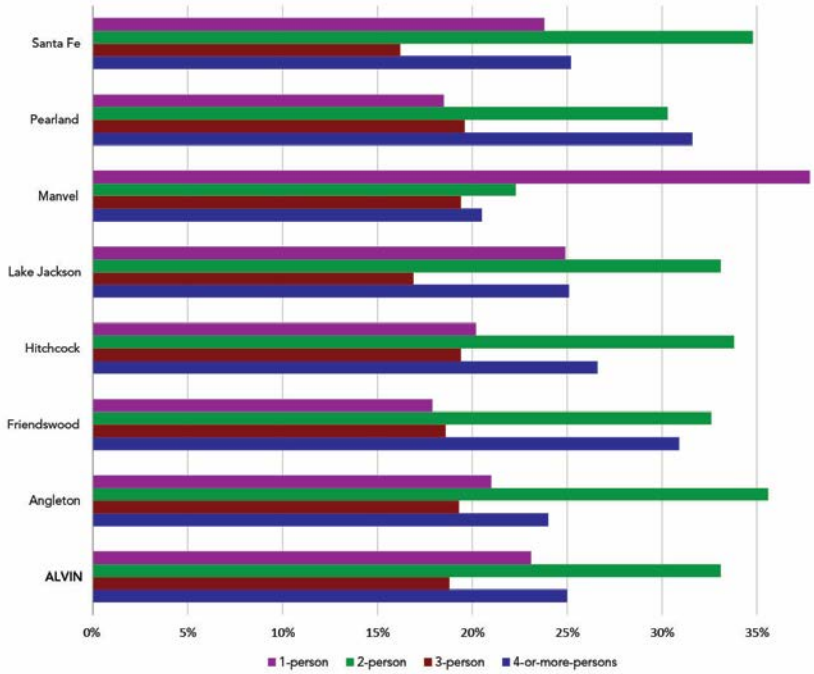
Alvin and the State, reflecting a slightly lower percentage of persons of Hispanic or Latino origin in Alvin than Texas. A little over 68.2 percent of Alvin's population is Not Hispanic or Latino compared to 37.6 percent for the State. Of course with the amount of new development that is occurring and expected to continue this statistic will naturally change over the course of time. There are no data sources available to estimate the amount of change expected other than statewide projections and future estimates.

Household Composition

According to the U.S. Census Bureau, households are classified as either "family" or "non-family" units. Family units are generally defined as those with a married couple or a single head of household with or without children. Non-family households include those with one person living alone. The household composition of Alvin is 72.5 percent family households and 27.5 percent non-family households. The composition is higher in Angleton (73.9 percent), Friendswood (79.5 percent), Hitchcock (73.5 percent), Lake Jackson (71.3 percent), Manvel (59.5 percent), Pearland (79.3 percent), and Santa Fe (72.1 percent). One plausible explanation for the lower percentage of family households in Alvin is the number of single students attending Alvin Community College who live within the City for convenience.

The distribution of family households by number of persons is illustrated in **Figure 2.6, *Household Size***.

Figure 2.6, *Household Size*



Source: 2008 – 2012, American Community Survey 5-Year Estimates

The largest segments of the population in Alvin are in two-person (33.1 percent) and four-or-more-persons (25 percent) households with those households with three persons having 18.8 percent. One-person households made up 23.1 percent of the occupied housing units in Alvin.

Table 2.2, *Persons Per Household*

Place	2010	2000	1990
U.S.	2.61	2.59	2.63
Texas	2.8	2.74	2.73
Brazoria County	2.85	2.82	2.86
ALVIN	2.82	2.71	2.72
Angleton	2.76	2.75	2.82
Friendswood	2.88	2.85	2.93
Hitchcock	2.76	2.62	2.79
Lake Jackson	2.7	2.74	2.78
Manvel	2.64	2.8	2.98
Pearland	2.91	2.84	2.82
Santa Fe	2.67	2.73	2.81

Source: 2008 – 2012, American Community Survey 5-Year Estimates

As shown in **Table 2.2, *Persons Per Household***, with the exception of the United States category, Hitchcock, Angleton, Lake Jackson, Manvel, and Santa Fe, all of the other peer communities, the state and Brazoria County have a higher average number of persons per household. Except for Santa Fe, Manvel and Lake Jackson, the average persons per household increased in Alvin—from 2.72 to 2.82—and each of the other municipalities. The greatest decline in average persons per household was in Manvel, which declined from 2.98 to 2.64 persons. Dependent upon the amount of new development that occurs and the size of homes and median home values, the number of persons per household could increase if younger families with school-age children are attracted to the community. Growth policies and land development controls would also impact the density of development and, hence, household size.

Income and Poverty

As shown by **Table 2.3, *Median Household Income***, Alvin had a 15.5 percent increase in the median household income between

Table 2.3, *Median Household Income*

Jurisdiction	Median Household Income		Percent Change
	2000	2010	
Texas	$31,927	$51,563	38.1%
Brazoria County	$48,632	$68,008	28.5%
ALVIN	**$38,576**	**$45,638**	**15.5%**
Angleton	$42,184	$51,387	17.9%
Friendswood	$69,384	$102,811	32.5%
Hitchcock	$29,848	$46,0 66	35.2%
Lake Jackson	$60,901	$73,857	17.5%
Manvel	$57,344	$76,205	24.8%
Pearland	$64,156	$89,149	28.0%
Santa Fe	$47,550	$60,442	21.3%

Source: 2008 – 2012, American Community Survey 5-Year Estimates

2000 and 2010, which is less than some, but generally on par with the peer communities.

This increase in median household income is nearly half that experienced statewide. Median household income through Brazoria County increased by 28.5 percent, much of which may be attributed to Hitchcock which witnessed a 35.2 percent increase—the highest of those considered. The communities with a greater increase in the last decade include Friendswood, Hitchcock, Manvel, Pearland, and Santa Fe.

Although the recent increase is positive and the median income is 11 percent less than the statewide median the median household income remains below that of the peer communities, including 11 percent less than Angleton, 56 percent less than Friendswood, 38 percent less than Lake Jackson, 40 percent less than Manvel, and 49 percent less than Pearland. With the amount of new development occurring and expected to occur in the community, likely attracting more double income families who work outside of the immediate area, the household income is expected to continue on its upward trend in the next decade and beyond.

The Census Bureau periodically releases estimates regarding the percentage of the population living in poverty. The percentage of Alvin residents living in poverty was 26.5 percent in 2010, which was up from the 2000 figure of 13.3 percent, representing a difference of nearly 13.2 percent. Only Manvel experienced a greater increase in the rate of poverty, increasing from 3.0 percent to 21.6 percent during the decade. Hitchcock also had a significant decline in the poverty rate of 7.1 percent. Friendswood experienced the largest increase of 22.1 percent. While 24.3 percent of the state's population is living in poverty, as displayed in **Table 2.4, *Change in Poverty Status***, the percentage of impoverished persons in Alvin is slightly more than the state, yet significantly higher than each of the peer communities other than Friendswood.

Table 2.4, *Change in Poverty Status*

Jurisdiction	Rate of Poverty		Difference
	2000	2012	
Texas	15.4%	24.3%	8.9%
Brazoria County	10.2%	24.2%	14.0%
ALVIN	**13.3%**	**26.5%**	**13.2%**
Angleton	11.1%	21.2%	10.1%
Friendswood	3.3%	25.4%	22.1%
Hitchcock	19.0%	11.9%	-7.1%
Lake Jackson	6.4%	18.3%	11.9%
Manvel	3.0%	21.6%	18.6%
Pearland	4.7%	20.9%	16.2%
Santa Fe	6.5%	18.8%	12.3%

Source: 2008 – 2012, American Community Survey 5-Year Estimates

Housing Occupancy and Tenure

As shown in **Table 2.5, *Housing Occupancy***, the percent occupancy, which represents both owner-occupied and renter occupied dwelling units, decreased in Alvin between 2000 and 2010 from 93.0 percent

Table 2.5, *Housing Occupancy*

	Percent Occupied		Percent Owner Occupied	
Jurisdiction	2000	2010	2000	2010
United States	91.0%	87.5%	66.2%	65.5%
Texas	90.6%	88.0%	63.8%	63.9%
Brazoria County	90.4%	89.2%	74.0%	74.5%
ALVIN	**93.0%**	**89.9%**	**55.1%**	**56.1%**
Angleton	91.0%	88.7%	69.7%	62.1%
Friendswood	97.0%	95.7%	80.4%	81.3%
Hitchcock	87.4%	84.3%	68.2%	62.8%
Lake Jackson	91.5%	91.7%	71.2%	68.3%
Manvel	95.5%	96.0%	88.8%	83.6%
Pearland	94.6%	93.3%	79.6%	80.9%
Santa Fe	94.4%	90.7%	80.8%	81.2%

Source: 2008 – 2012, American Community Survey 5-Year Estimates

to 89.9 percent, which is generally consistent with the local housing market in the majority of Alvin's peer communities and national economic trends. The percent occupancy is higher in Alvin than in the U.S., Texas, and Brazoria County as well as Angleton and Hitchcock. From a market perspective, it is good to have a percentage of homes unoccupied meaning that there are homes available for persons moving within or into the community. Communities such as Friendswood, Manvel, Pearland, and Lake Jackson were approaching market saturation as of the 2010 Census, limiting the choices and making it difficult for homebuyers to find a home that met their budgetary objectives and expectations. Generally, having five to seven percent of the housing stock as unoccupied is preferable. Below five percent means that the market is saturated thereby requiring new home construction and anything over 10 percent is highly undesirable. Alvin is on the cusp of having an over-abundance of unoccupied housing stock. This may be due, in part, to the age of the structures, 31 percent of which were constructed prior to 1970.

The percent of owner occupied housing units also increased over the decade from 55.1 percent to 56.1 percent. While this is a positive indicator, the overall percentage of owner occupancy is low compared to the nation, state, county, and all of the peer communities. This statistic also illuminates the concern that of Alvin's occupied housing, over 43 percent is renter occupied. Significantly, this exceeds the 2012 national average of renter-occupied households, which is 35 percent, and the state average which is 32.5 percent (2010 U.S. Census). This characteristic is due to, and responsible for, many of the other statistics reported above, such as the median age, average persons per household, median household income and rate of poverty. As will be discussed in *Chapter 3, Land Use*, the latest research into housing policy demonstrates that home ownership helps to stabilize and maintain the

vitality of neighborhoods and stimulates positive social and economic growth. Therefore, housing conditions and characteristics is an area requiring attention to bring the local housing market in line with other area communities. The lack of a proactive program to address the local housing issues may become a hindrance in the City's economic development efforts.

Housing Affordability

In Alvin, the median household income in 2010 was $45,638, as shown in **Table 2.6, *Housing Affordability***. For housing to be considered affordable to a family earning the median household income, housing costs could not exceed $1,141 per month. A family earning 180 percent of the median could afford to pay $2,054 per month and still consider housing costs affordable. Conversely, households earning only 30 percent of the median income can afford $342 in monthly housing related expenses. According to the 2008-2012 American Community Survey 5-Year Estimates, of the housing units with a mortgage, 41 percent of the household income is spent on monthly owner costs. The monthly owner costs for housing units without a mortgage is 11.8 percent of the household income. The aggregate value of all housing units with a mortgage is $353,833,600 compared to $196,840,700 for those without a mortgage, meaning that 35.8 percent of the value of owner occupied units is without a mortgage.

Comparatively, the median contract rent in Alvin is $632, which is 22.6 percent of the household income. Generally, residents of Alvin are spending less of their household income on housing than is typical and generally allowed by lenders, which is up to 30 percent.

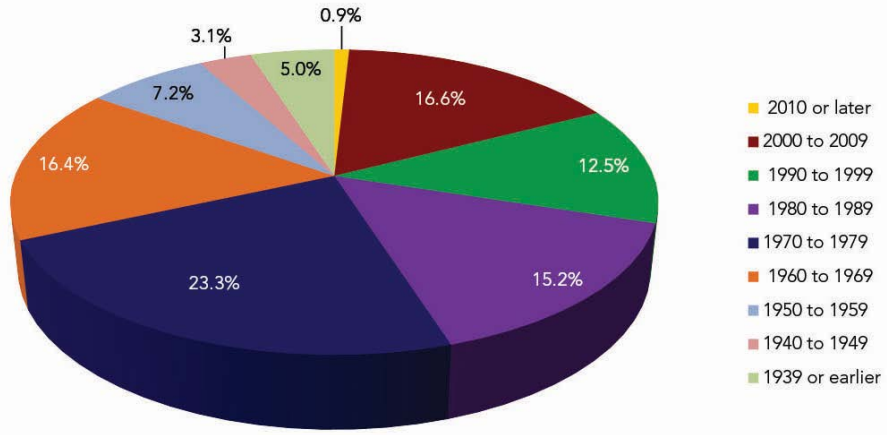
Table, 2.6, *Housing Affordability*

Percent of Median Income	Household Income	Affordable Mortgage Payment
180%	$82,148	$2,054
150%	$68,457	$1,711
120%	$54,766	$1,369
100%	$45,638	$1,141
80%	$36,510	$913
50%	$22,819	$570
30%	$13,691	$342

Source: 2008 – 2012, American Community Survey 5-Year Estimates

The average age of housing structures may be one possible explanation as to why there is such a high percentage of persons without a mortgage and why the percent of household income spent on housing is less than typical. As displayed in **Figure 2.7, *Age of Structure***, of the 9,305 housing units in the community, 23.3 percent were constructed during the 1970s when the population increased by 89.1 percent. Similarly, 45.2 percent of structures have been built in the 30 years since 1980. The remaining 31.7 percent—or 2,943 units—were constructed before 1970. The median age of structures is, therefore, 30 years old, compared for instance to 18 years in Pearland where significant new development is occurring.

Figure 2.7, *Age of Structure*



Source: 2008 – 2012, American Community Survey 5-Year Estimates

Educational Attainment

The Alvin Independent School District (ISD) serves the City of Alvin and surrounding areas. The district abuts numerous other school districts, including Pearland ISD, Friendswood ISD, Santa Fe ISD, Hitchcock ISD, Danbury ISD, Fort Bend ISD, and Houston ISD, as shown in **Figure 2.8, *Alvin ISD Boundaries***. Comparative numbers are presented in **Table 2.7, *Education Statistics***, for the 2012 school year, the most recent year for which data has been published by the Texas Education Agency (TEA). In addition to statewide statistics, data is included for each of the adjacent school districts, considered for the purpose of this analysis as "peer" districts.

The comparisons in *Table 2.7, Education Statistics*, indicate that the Alvin ISD has comparable attendance and annual drop-out rates with those of the peer districts and statewide. The percentage of students who graduated (95.5 percent) is higher than statewide (52.8), Fort

Figure 2.8, *Alvin ISD Boundaries*

Source: Texas Education Agency (TEA)

Table 2.7, *Education Statistics*

Statistic	Texas	ALVIN	Danbury	Columbia Brazoria	Friendswood	Hitchcock	Houston	Pearland	Santa Fe
Total Number of Students	154,278	18,018	731	2,988	5,885	1,437	201,594	19,118	4,597
Attendance Rate (2010 -2011)	94.9%	96.0%	96.0%	95.7%	96.6%	95.1%	95.4%	96.6%	94.2%
Longitudinal Dropout Rate Gr. 9-12	20.7%	1.9%	0.0%	2.6%	0.2%	14.3%	10.8%	1.4%	8.5%
Mean SAT Score (date)	948	953	933	961	1116	860	915	1019	968
Mean ACT Score (date)	19.5	20.3	20	21.7	24.9	18.6	19.6	22.1	20.3
Economically Disadvantaged	71.3%	53.1%	31.3%	52.50%	8.0%	83.6%	80.7%	26.9%	35.7%
Limited English Proficient	17.0%	15.0%	3.0%	5.0%	2.0%	5.0%	30.0%	7.0%	2.0%
Students per Teacher	16.2	16.8	13.3	16.4	17	16	18.5	17.6	17.4
Average Teacher Experience (y rs.)	4.4	9.6	12.6	12	14.6	14	12	9.9	9.8
Average Teacher Salary	41,082	50,157	48,544	45,822	51,345	46,958	51,866	48,311	$46,987
Turnover Rate for Teachers	32.9	10.7	8.7	19.5	9.5	20.1	17.2	10.2	14.8
Adopted Tax Rate (Total)	1.245	1.344	1.137	1.297	1.367	1.54	1.157	1.419	1.495
Per Pupil Expenditures	$9,179	$4,864	$8,800	$7,770	$7,339	$13,884	$9,064	$7,132	$7,736
Bilingual/ESL Enrollment	17.0%	14.0%	3.0%	4.0%	2.0%	5.0%	27.0%	9.0%	2.0%

Source: Texas Education Agency (TEA) 2007-2012

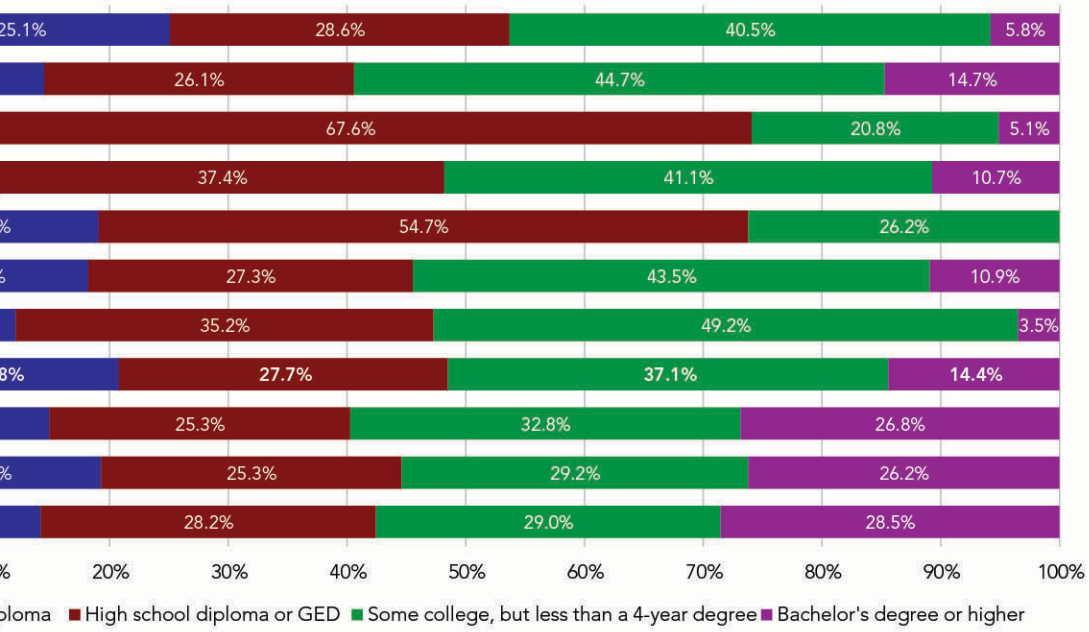
Bend (91.5), Hitchcock (76.2), Santa Fe (86.8), Pearland (95.4) and Houston (81.2) districts, yet lower than Friendswood (98.2) and Danbury (96.6). The SAT and ACT scores are each higher than the statewide averages and compare favorably with the other rural districts and relatively close to those of the more urban districts and relatively close to those of the more urban districts, including Fort Bend, Friendswood, and Pearland. The percentage of economically disadvantaged students is 53.1 percent in Alvin, which is lower than the state and the Hitchcock and Houston ISDs, but higher than Santa Fe, Danbury, Fort Bend, and Pearland ISDs. Students with limited English proficiency constitute 15.0 percent of the student population, which is less than the state and Fort Bend and Houston school districts. The ratio of students to teachers (16.8) is consistent or better than each of the other districts. The average teacher salary is higher for Alvin ISD than all other rural districts other than Fort Bend, Friendswood, and Houston ISDs, which likely explains the lower average teacher experience of 9.6 years. The turnover rate for teachers of 10.7 percent is lower than the state, but generally consistent with the other peer districts. Each of the more affluent and urban districts (such as Pearland and Santa Fe ISDs) have a higher adopted total tax rate than does Alvin ISD, who has a higher rate than Danbury and Houston ISDs. The per pupil expenditure of $4,864 is significantly less than the state ($9,179) and is also less than each of the other districts. The bilingual/English as a Second Language (ESL) enrollment is 14 percent, which is less than it is statewide, but higher than each of the districts other than Houston ISD.

The TEA also monitors the academic accountability of school districts by designating them as Exemplary, Recognized, Academically Acceptable, Academically Unacceptable, Unacceptable due to Special Accreditation Investigation, or Not Rated. In 2010, Alvin ISD received an accountability rating of "Exemplary," which is only held by 19.5 percent of all districts in the State of Texas (November 2010). Therefore, while each of the above statistics may not be as favorable as the other districts, the Alvin ISD is outperforming the majority of its peer communities' ISDs, except for the Friendswood and Pearland ISDs who are also "Exemplary." The individual schools that received the highest accountability rating of "exemplary" for the district include Alvin Junior High, Alvin Primary School, Mark Twain Primary School, Walt Disney Elementary, Melba Passmore Elementary, Hood-Case Elementary, E.C. Mason Elementary School, Longfellow Elementary, Mary Burks Marek Elementary School, Nolan Ryan Junior High School, R.L. Stevenson Primary School, and Don Jeter Elementary. Those with a "Recognized" rating include: Alvin Elementary, Alvin High School, Fairview Junior High, Manvel High School, Manvel Junior High School, G.W. Harby Junior High School, Laura Ingalls Wilder Elementary School, and Savannah Lakes Elementary School. Assets Learning Center was designated as "Academically Acceptable." Of the 1,237 districts in the State of Texas, 241 districts are rated "Exemplary" and 607 are rated "Recognized" in 2010. The districts

rated “Exemplary” comprise 8.6 percent of the total student enrollment, while the districts rated “Recognized” comprise 55.6 percent of total students enrolled. Also, 342 of the 1,237 districts achieved the “Academically Acceptable” rating and make up 32.8 percent of the total students enrolled. Lastly, 37 school districts are “Academically Unacceptable,” representing 2.9 percent of the total students enrolled.

Data on educational attainment in the state, The City of Alvin, and each of the peer communities is provided in **Figure 2.9, *Educational Attainment***. The percentage of persons with a high school education is nearly 27.7 percent, which is in the top tier of the peer communities. Those with some college education or an associate degree account for 37.1 percent of the population, which is also one of the higher percentages among the communities evaluated. The greatest difference lies in the percentage of persons with a bachelor's degree. In Alvin, 14.4 percent of the population has a bachelor's degree or higher compared to 26.2 percent statewide and Pearland, with the second highest percentage (14.7 percent) with a bachelor's degree. However, of the more rural communities, Alvin has a similar educational attainment.

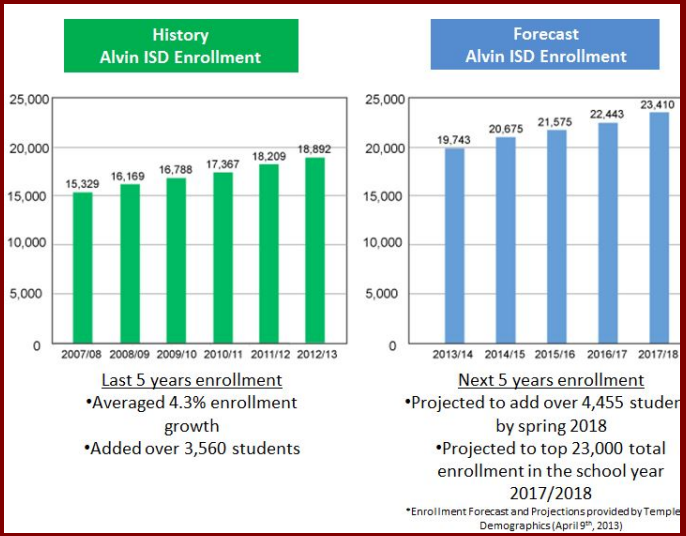
Figure 2.9, *Educational Attainment*



an Community Survey 5-Year Estimates

School enrollment statistics and projections can be a key source of information when considering future populations and service needs. According to Alvin ISD's school enrollment forecast projects over 23,000 students will enroll in the 2017 school year, refer to **Figure 2.10, *Alvin ISD Enrollment History***. This increase of over 4,455 students by Spring 2018 further illustrates the strong growth

Figure 2.10, *Alvin ISD Enrollment History*



Alvin ISD predicts 23,410 students by the year 2017/2018, an increase of 2,735 students over the next four years. This indicates that the population will be steadily growing and need to invest in more programming for younger populations, as well as families.

Source: Alvin ISD Bond Presentation

currently happening in and predicted for northern Brazoria County and its subsequent cities.

Employment

Brazoria County's economic base is primarily concentrated in the retail sector, as shown in **Table 2.8, *Statistics by Economic Sector***. According to the 2007 Economic Census, Alvin was home to 1,886 businesses. There were 430 employer establishments (businesses that had some paid employment within the Census year) in Alvin. A high percentage of the employer establishments in Alvin were in Retail Trade, Manufacturing, and Accommodations and Food Services. Alvin also had a similar industry statistical breakdown compared to Brazoria County, but with lower percentages of Manufacturing.

Table 2.8, *Statistics by Economic Sector*

	Pearland	ALVIN	Brazoria County
Number of Businesses	8,129	**1,886**	23,071
Number of Employer Establishments	997	**430**	3,435
Number of Paid Employees	12,925	**6,961**	51,098
EMPLOYEES BY INDUSTRY			
% in Manufacturing	19.0	**16.6**	27.0
% in Wholesale Trade	5.0	**2.9**	3.1
% in Retail Trade	24.3	**25.4**	23.1
% in Information	0.9	**4.7**	1.5
% in Real Estate	3.3	**3.8**	3.1
% in Professional Services	4.0	**3.3**	5.2
% in Adminstrative Support	3.7	**14.7**	4.4
% in Educational Services	0.9	**0.3**	10.0
% in Health Care + Social Assistance	11.0	**10.1**	13.8
% in Arts, Entertainment, Recreation	0.1	**0.2**	2.2
% in Accommodation and Food Service	20.7	**15.0**	14.3
% in Other Services	5.5	**4.4**	4.3

Source: 2007 Economic Census; *H-GAC Subregional Planning Initiative* (SPI), 2013

Alvin had a total of 430 establishments engaged in retail trade employing 25.4 percent of employees. Manufacturing represents the second highest percentage of employees, 16.6 percent. The Accommodation and Food Service industry has the third highest percentage of employees at 15.0 percent of the workforce. The lowest percentage of employees, 0.2 percent, are working in the Accommodation and Food Service industries—which indicates that overnight stays and dining establishments do not provide a substantial number of jobs to the City of Alvin. During our Citizens Advisory Committee meetings in February 2013, a number of comments were made regarding the lack of variety in Alvin and many felt that the economy was not sustainable across multiple industries—which can be seen in *Table 2.8, Statistics by Economic Sector*.

CROSSROADS 2035

Chapter 3

Land Use and Character

Purpose

The purpose of this plan element is to establish the necessary enabling policy guidance to enable the City to plan effectively for future growth, development, and redevelopment. Sound planning is essential to ensure that the community is not only prepared to provide anticipated infrastructure needs, but also for preserving community character. Ensuring high quality development is as critical as providing the utility infrastructure and connecting transportation system of streets and sidewalks.

The preparation of this land use element involved examination of the community's historic pattern of development, which generally originated in downtown and radiated outward along the railroad and State Highways (S.H.) 6 and 35; the ongoing pattern of new development within the City and its expansive extraterritorial jurisdiction (ETJ); and the types, densities, and arrangement of individual land uses. The general pattern of agricultural lands; residential development of varying densities, including countryside (five plus acres), estate (one to five acres), suburban (7,000 square feet to one acre), and auto-urban commercial uses; auto-urban industrial uses; special institutional uses (public and tax-exempt properties); parks, open space and natural lands; vacant and undevelopable land use types were evaluated as to their contribution to the overall pattern of development and character of the community.

Land use considerations and guidance are at the core of any comprehensive city plan. Effective land use planning provides a framework for successful economic development efforts; for quality and sustainable residential development; for timely investment in new and upgraded infrastructure; coordinated extension of the public park system and a range of other municipal services, especially critical public safety services.

This plan element provides an overall policy framework for guiding and directing the location, character and quality of future physical and economic development of Alvin and its extraterritorial area. The primary focus, or "planning area" of this chapter is within the City's corporate limits and the ETJ, which extends one mile outward from the outer edges of the city. Advanced planning for the areas outside the City limits is particularly essential based upon the amount of existing and ongoing development occurring in the peripheral areas, the expectation of future incorporation of these areas, and the required provision of adequate municipal facilities and services, as discussed in greater detail in Chapter 5, *Growth Strategies*).

The vision as to how Alvin will develop in the future was formed by the concerns and ideas expressed during the Citizens Advisory Committee (CAC) and stakeholder meetings convened by the City in support of the Comprehensive Plan Update. The chapter begins by outlining the key issues relating to the community's existing and future land use character, which is followed by goals, objectives, and recommendations intended to guide the community's ongoing land use and community character decisions. The outcome of this process and the ability of the City to exact control over its future development lie in the implementation of land use and growth policies and the methods of regulation and enforcement.

Each element of this Comprehensive Plan is inherently interrelated as each is influenced by the other elements. Therefore, the concepts of land use and community character are integral to other components of the plan. For instance, the transportation system provides access to land for use and development of varying densities. The provision or lack of utilities infrastructure can dictate the amount, location, and timing of development. Design and development character impact community aesthetics and, thus, the internal and external perceptions held by area residents and those considering investment in the community. Proximity to public facilities can impact public health and safety at specific locations and, as a result, impact the development potential of an area.

The outcome of this process and the ability of the City to exact control over its future development lie in the implementation of land use and growth policies and the methods of regulation and enforcement.

However, it is the design of individual uses, districts, and neighborhoods that influence the character of development more than the use itself. The character of an area is more distinctly defined by the intensity (height and scale) of development, the relative arrangement of buildings and parking areas, the preservation and use of open space, and other aesthetic design features. Community character concepts, in general and as they specifically apply to Alvin, are discussed within this chapter.

Context

As emphasized in the 2013 *Northern Brazoria County / Pearland Subregional Planning Initiative*, produced by the Houston-Galveston Area Council, the communities and municipalities that compose northern Brazoria County, including Alvin, Manvel and Pearland, share many resources, including transportation thoroughfares, businesses, and employment centers. These communities also share many of the same needs and goals as the region prepares for significant growth. As the communities of Alvin, Manvel and Pearland continue to grow, land use and transportation coordination will become increasingly critical. The northern Brazoria – Pearland subregion, within which the City

of Alvin is located, is part of one of the fastest growing metropolitan areas in the United States. Currently, Brazoria County comprises 5.3 percent of the Houston area population. As the communities of northern Brazoria County continue to grow closer in proximity to one another it is critical that the City of Alvin and its neighboring communities forge interdependent relationships in developing efficient and mutually beneficial transportation implementation strategies and land use plans to:

- Maintain community character integrity;
- Regulate development quality;
- Minimize marginal development;
- Ensure the highest and best use of increasingly finite amounts of land;
- Preserve and enhance investment value; and
- Ensure land use and development compatibility.

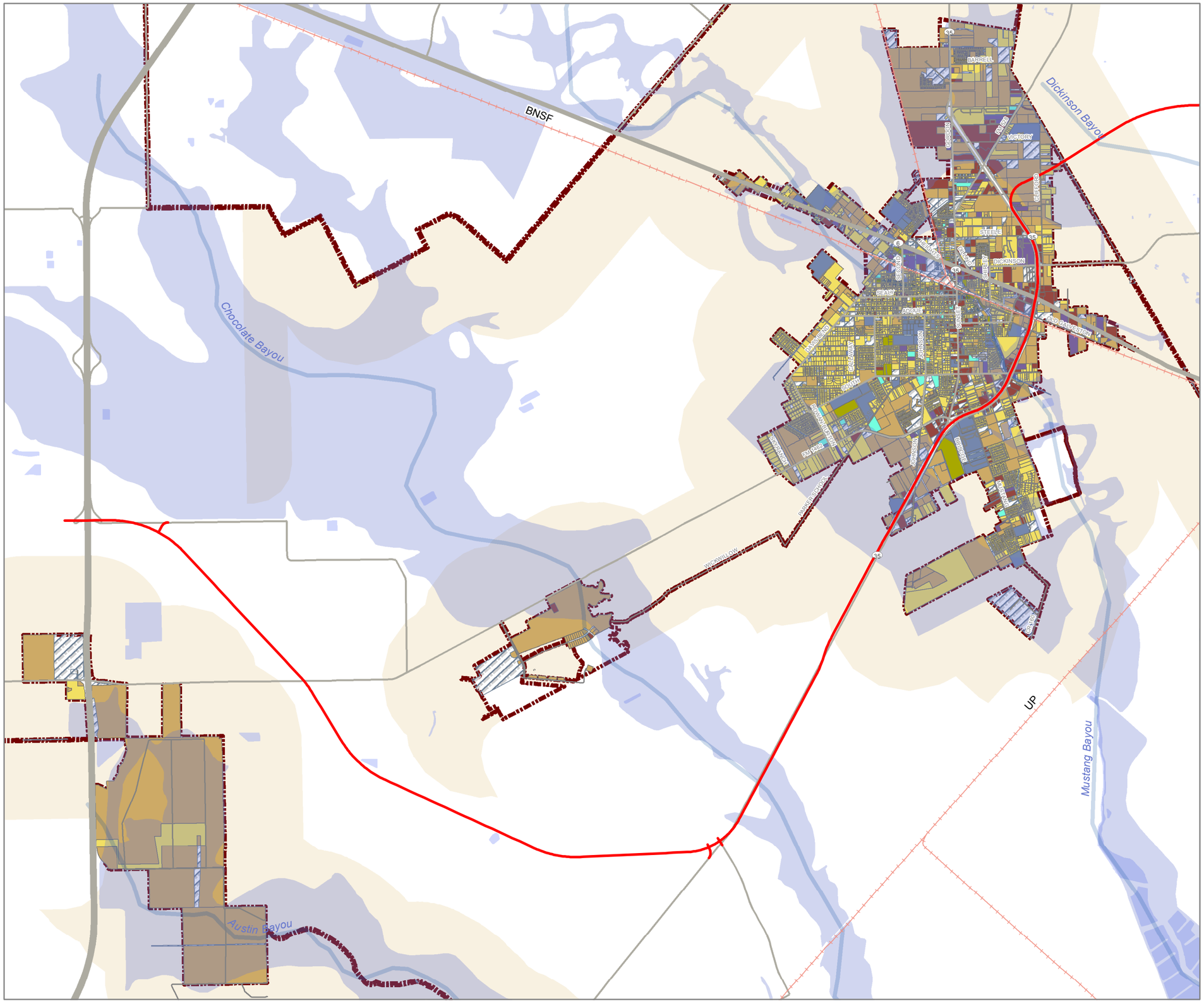
Alvin's total area consists of 12,773.71 acres, within the City's corporate limits; which equates to 8,531 parcels (refer to **Map 3.1, *Existing Land Use and Full City Limits***, and **Map 3.2, *Existing Land Use, Detail***). As part of the Northern Brazoria County Subregional Planning Initiative (SPI), the Houston-Galveston Area Council (H-GAC) divides land use in Alvin into the following ten use categories:

- Commercial = 772.63 acres / 444 parcels / 6.05 % of total acreage
- Institutional = 633.5 acres/ 207 parcels / 4.96% of total acreage
- Industrial = 282.45 acres / 98 parcels / 2.21% of total acreage
- Parks and Open Spaces = 140.86 acres / 31 parcels / 1.1% of total acreage
- Residential = 3,119.42 acres / 5410 parcels / 24.42% of total acreage
- Vacant (Developable) = 6,214.03 acres / 1,153 parcels / 48.65% of total acreage
- Water = 9.66 acres / 6 parcels / 0.08% of total acreage
- Unknown = 1.29 acres / 3 parcels / 0.01% of total acreage
- Undevelopable = 1,521.59 acres / 1,146 parcels / 11.91% of total acreage
- Other = 78.28 acres / 33 parcels / 0.6% of total acreage

Alvin's largest land use designation is vacant, developable land (6,214 acres), of which 3,137.14 acres are within the core area of the City; followed by residential (3,119.42 acres); undevelopable land (1,521.59 acres); commercial (772.63 acres); institutional/public (633.5 acres); industrial (282.45 acres); and lastly, parks and open spaces (140.86 acres). Alvin's vacant land ranges in sizes from 0.05 acres to close to 100 acres within the formal city limits. Outside of the contiguous city limits, on the racetrack property, are larger parcels ranging from 100 to 300 acres, and upwards to 1,299 acres for the largest parcel. The largest institutional properties are school properties and the Alvin Community College campus.

Most of the undevelopable land north of the Burlington North Santa Fe (BNSF) Railroad is located within the FEMA 100-year flood zone along Mustang Bayou and is therefore not suitable for development and is reserved for drainage purposes.

Map 3.1, Land Use at Full City Limits



Land Use

- Commercial
- Government/Medical/Education
- Industrial
- Other
- Parks/Open Spaces
- Residential
- Undevelopable
- Unknown
- Vacant Developable (includes Farming)
- Water
- Grand Parkway Proposed Alignment (2014)
- Rivers and Streams
- Water Features
- 100-Year Flood Zone
- ETJ
- Railroad

Alvin TEXAS

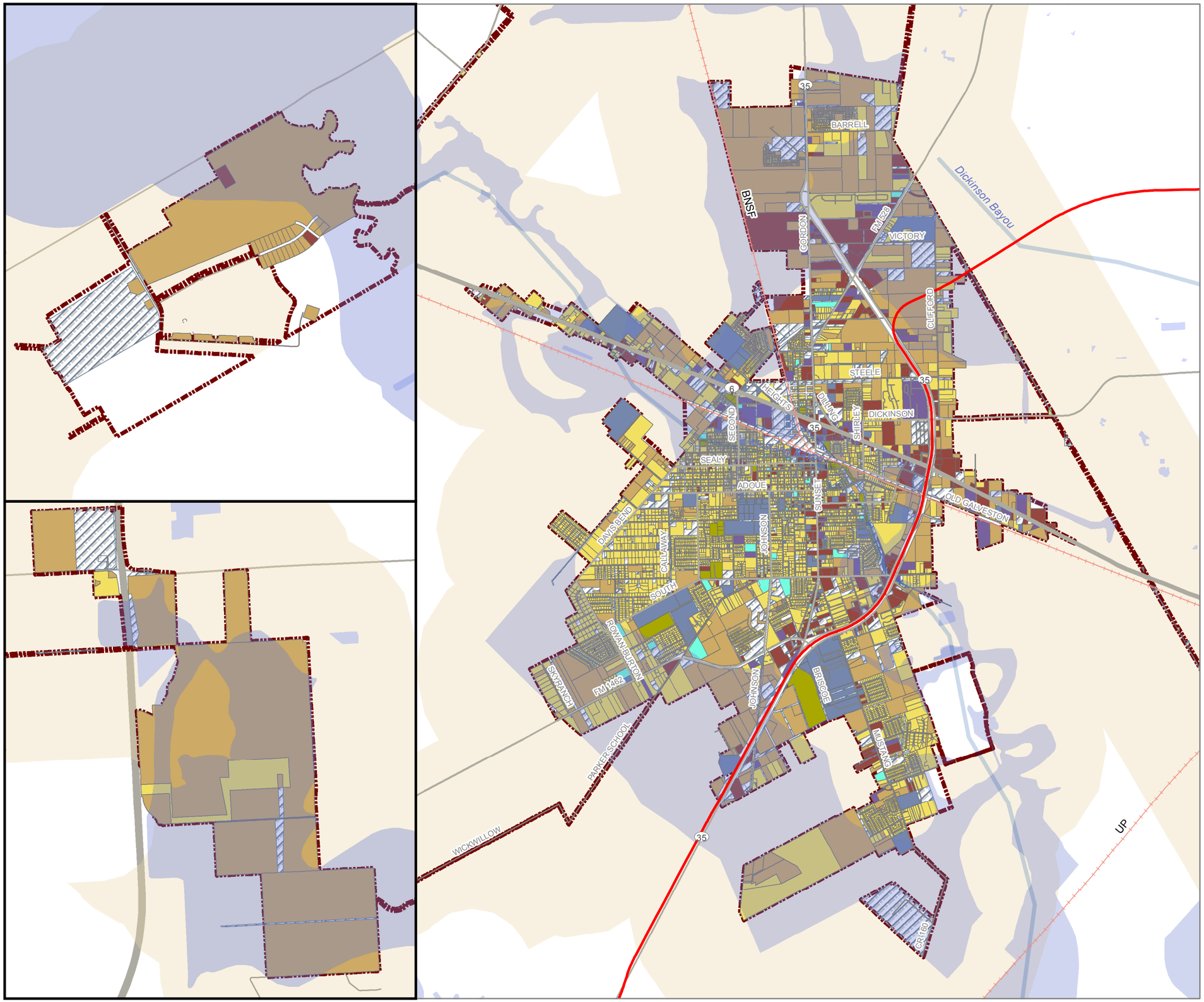
KENDIG KEAST COLLABORATIVE

DISCLAIMER: This graphic representation depicts generalized areas for informational and long-range planning purposes only. The illustration may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property and other boundaries. Data is not guaranteed for specific accuracy or completeness and may be subject to revision at any time without notification.

N

0 0.375 0.75 1.5 2.25 Miles

Map 3.2, Land Use



Land Use

- Commercial
- Government/Medical/Education
- Industrial
- Other
- Parks/Open Spaces
- Residential
- Undevelopable
- Unknown
- Vacant Developable (includes Farming)
- Water
- Grand Parkway Proposed Alignment (2014)
- Rivers and Streams
- Water Features
- 100-Year Flood Zone
- ETJ
- Railroad

Alvin TEXAS

KENDIG KEAST COLLABORATIVE

DISCLAIMER: This graphic representation depicts generalized areas for informational and long-range planning purposes only. The illustration may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property and other boundaries. Data is not guaranteed for specific accuracy or completeness and may be subject to revision at any time without notification.

N

0 0.25 0.5 1 1.5 Miles

Most of the commercial properties in Alvin are located along the City's major thoroughfares, S.H. 6 and S.H. 35 (Gordon Street)—including the 35 bypass. Commercial uses are fairly concentrated east of Gordon Street. To the west of Gordon Street there is an abundance of residential properties.

Issues Involving Land Use

Based upon the analysis of the existing land use character, examination of expected future growth and development trends, assessment of the factors influencing the pattern of development, and the input of community stakeholders, the issues confronting the community may be summarized by the following broad categories:

- Compatible, Cohesive and Sustainable Future Development;
- Compatible, Shovel-ready Industrial Sites;
- Quality, Affordable Residential Development;
- Downtown Enhancement and Economic Reinvigoration; and
- Integrated Transportation Planning and Land Use Planning.

COMPATIBLE, COHESIVE AND SUSTAINABLE FUTURE COMMERCIAL DEVELOPMENT

Alvin's pattern of existing development generally reflects a community that has grown outward from its historic center (downtown) and the railroad. Nonresidential development is primarily located along principal transportation arteries, including of S.H. 6, Business 35, and the S.H. 35 bypass. Larger nodes of commercial businesses are located at major intersections, such as the Wal-Mart center at the S.H. 35 Bypass and S.H. 6 and the Kroger shopping center at the bypass and F.M. 1462. Business 35/South Gordon Street is lined continuously with strip commercial development from S.H. 6 south through Downtown to South Street and continuing on to its merger with the bypass. The depth of commercial frontage extends generally one or two blocks from South Gordon Street, with many instances of encroachment into the adjacent neighborhoods. Residential and nonresidential land use transitions from single-family homes to office and retail conversions, such as accounting and legal offices and smaller specialty retail shops. There are also several locations where commercial development has occurred, such as the intersection of South Street and Kost Street, F.M. 528 and Business 35, and Second Street and Sealy Street, amidst residential neighborhoods, which could be appropriate and compatible given adoption of certain performance standards (refer to sidebar: ***Buffering of Incompatible Uses***).

COMPATIBLE, SHOVEL-READY INDUSTRIAL SITES

The S.H. 35 Bypass is largely undeveloped north of S.H. 6 with moderate to large undeveloped parcels remaining along that portion from S.H. 6 to F.M. 1462. The prevailing pattern of development is a blend of auto-urban, commercial, and residential use. With improvements to this corridor forthcoming, the market outlook is likely to escalate, thereby increasing the amount of nonresidential development pressure along this corridor and in the eastern portion of the community. Without

appropriate land use ordinances to direct the desired character and scale of development, this area will be left strictly to market forces, which may not reflect the appearance preferred and envisioned by community residents.

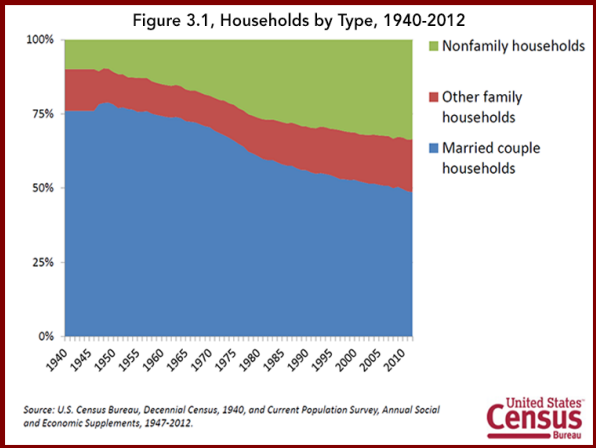
Industrial development is interspersed throughout the community, with the more intensive concentrations along the railroad corridor that parallels S.H. 6, northward along Business 35 and the S.H. 35 bypass, along Mustang Road south of Alvin Community College, and along F.M. 2403 north and south of F.M. 1462. In many instances, these industrial areas directly abut or are in near proximity to residential neighborhoods with little or no separation or screening to buffer or mitigate their associate impacts.

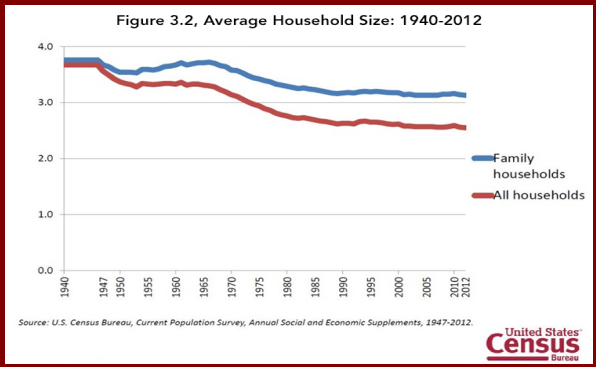
QUALITY, AFFORDABLE RESIDENTIAL DEVELOPMENT, A VARIETY OF HOUSING CHOICES AND LIVABLE NEIGHBORHOODS

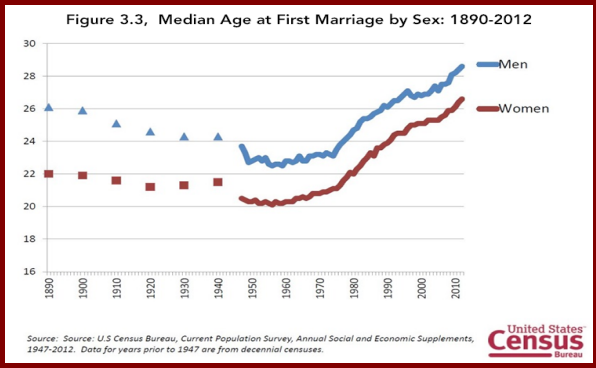
There are several national social trends that are impacting the way people live, which in turn, affects their housing, neighborhood and community needs. For many people, the definition of "family," and its requisite composition of two parents (husband and wife), two children and their dog, Spot; living in a detached, single family home on Elm Street, no longer represents the modern American Dream. Diverse housing types are needed to fill the array of requirements of the contemporary individual, couple and family.

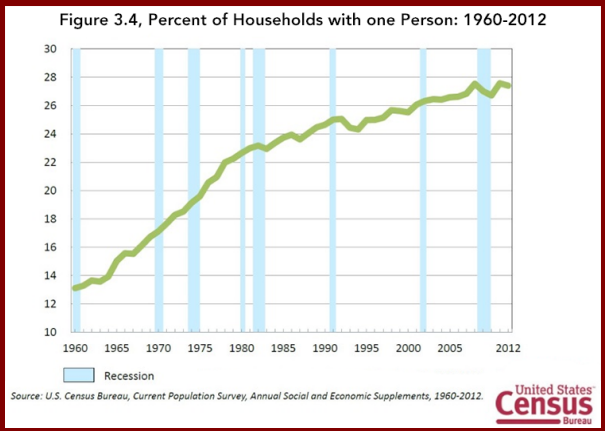
As indicated in **Figure 3.1, *Households by Type, 1940-2012***, in general, married-couple households have declined sharply since the 1950s, from over 75 percent of all households then to about 50 percent now. The major share of that change has been an increase in "non-family households" consisting of singles or persons not "related to each other by birth, marriage or adoption." Average household size has reduced, from about 3.7 persons in 1940 to about 2.6 persons now. Family households have dropped from about 3.8 persons to about 3.1 persons (refer to **Figure 3.2, *Average Household Size: 1940-2012***).

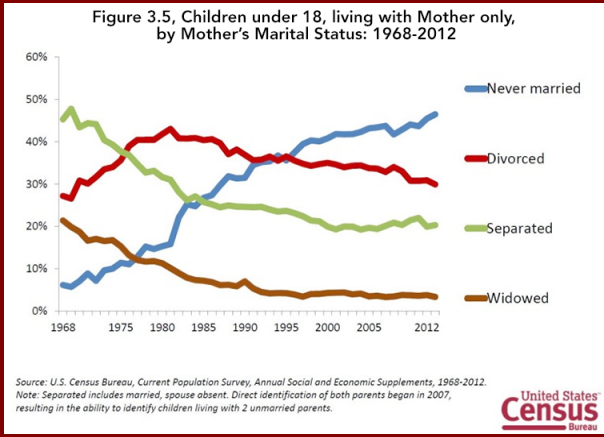
With respect to marriage, as indicated in **Figure 3.3, *Median Age at First Marriage by Sex: 1890-2012***, people are marrying later than they used to, if they marry at all. Among other relevant statistics, the number and portion of people living alone has risen steadily and significantly for decades (refer to **Figure 3.4, *Percent of Households with one Person: 1960-2012***. So has the number of unmarried couples living together, nearly eight million today compared with only around three million as recently as 1996. Even the number of unmarried couples with children has doubled in less than 20 years. The portion of children living with two parents has dropped dramatically from 1960, from just under 90 percent of all children in 1960 to around 70 percent in 2012. Statistically, almost all of the change can be explained by a dramatic increase in











the portion of children living with single moms. However, as illustrated in **Figure 3.5, *Children under 18, living with Mother only, by Mother's Marital Status: 1968-2012***, it's not for the conventional reasons: the percentage of kids living with widowed, separated, and divorced mothers has actually decreased in recent decades; while there has been a sharp increase in the portion of children living with never-married mothers. These national trends and others reflect new lifestyles and subsequently will impact the character of Alvin's built environment over the next 20 years.

Currently, new residential development is primarily single family detached, located south of S.H. 6, although there are several pockets of homes (site built and manufactured) interspersed among and adjacent to properties developed for nonresidential use north of S.H. 6, such as Kendall Lakes and Midtown Park subdivisions.

The original town neighborhoods extending outward from Downtown are increasingly changing from what were once stable residential environments to areas now witnessing the encroachment of incompatible uses and, hence, declining property values and visible signs of disinvestment. Several newer neighborhoods have developed in the southwest quadrant, generally north of F.M. 1462 and southeast along Mustang Road. A significant portion of the current and ongoing residential development is occurring outside the City limits in subdivisions of typical lot sizes, as well as - and even more so - in countryside and estate residential developments.

Alvin offers a variety of long standing and increasingly newly developing subdivisions that, in time, will provide different living environments and an assortment of housing ages and types. Based on the *2008-2012 American Community Survey, Five-year Estimates*, the median home was constructed in 1978, meaning that the median housing stock is 36 years old. Since 1980, 32 percent of the 8,501 housing units in Alvin have been constructed. With new residential development beginning to appear and the expectation that this trend will strengthen in the coming months and years, this statistic is likely to change thereby reflecting a newer stock of housing.

One of the more important issues confronting the community is its overall growth pattern. Countryside and estate residential development is increasingly occurring in the area outside of the City limits, yet within the ETJ. While this pattern of growth has implications on the provision of adequate facilities and services, which is discussed in Chapter 5, *Growth Strategies*, it also has a significant impact on the housing environment inside the City. Development that is occurring in the outlying areas is doing so for a variety of reasons, including, among others, its rural living environment and avoidance of municipal property taxes and compliance with more rigorous building standards. As long as new homes develop in the peripheral areas that offer more living space and larger lots at a reduced cost - with no apparent drawbacks - it will be more difficult for the City to overcome its housing issues and achieve its objectives.

The long-standing neighborhoods in Alvin are designed with a traditional grid street pattern, thereby maximizing convenient access for both vehicles and pedestrians within and between neighborhoods. The more recent developments have discontinuous, curvilinear streets and cul-de-sacs, which are market-desirable and sought-after neighborhood environments, yet cause concern for adequate street and pedestrian provisions in place to provide for adequate circulation and connectivity, as well as proper integration into the existing pattern of the community.

The availability of both quality and affordable housing is an important consideration for the community, particularly in light of its desire to attract new business and industry. There must be an adequate supply of housing at different price points to offer new residents a choice of living arrangements. This may include, in appropriate locations, homes on smaller lots (such as lot line and village homes), town homes and apartments, and manufactured homes, as well as executive home sites. Each neighborhood must also have access to desirable amenities such as close proximity to schools, neighborhood parks, trails linking to other community destinations, and preserved public open spaces.

A recurring theme that emerged from the input received from members of the Citizens Advisory Committee and stakeholder group participants was the City's ability- or inability - to ensure future development that is compatible with adjacent uses and cohesive with the character and fabric of the community. While the context remained the same, different issues were articulated relating to managing development, including references to the density of development, buffering and screening between land uses, impacts on neighborhoods and other adjacent uses, design of new development, and the implementation and enforcement of some form of regulation giving the community the ability to protect the interests of property owners, as well as to control its own destiny.

The sustenance of the existing neighborhoods will present the community with continuing challenges as infrastructure ages and the condition of housing continues to deteriorate over time. Also, placement of manufactured homes and converted multiple tenant dwellings on individual lots among site-built homes will lower values, affect perceptions and preferences, and initiate a transitioning of the neighborhood. Putting plans and programs in place now for the rehabilitation or demolition of older, unsafe structures, construction of new homes on vacant lots, regulations to protect neighborhood integrity, installation of sidewalks and other pedestrian amenities, and a targeted code enforcement program will be vital to preserving the long-term integrity of these neighborhoods.

Recent residential development in Alvin. Is this a neighborhood or a subdivision? What elements contribute to a neighborhood setting?

Source: Google Earth

DOWNTOWN ENHANCEMENT AND ECONOMIC REINVIGORATION

Downtown has a history of being a community focal point for commerce and government activity. Similar to downtowns across the country, Alvin has continued to experience a decline of business activity as large-scale retailers have located along major highway frontages on the fringe of the community. The challenge is, therefore, to return a focus on downtown development by creating a destination that is unique and less reliant on the traditional retail sector. Physical enhancements, such as the restoration of the Railroad Depot, its rail car displays and public

Traditional residential development to the west of Downtown Alvin. What elements contribute to the character of this neighborhood?

Source: Kendig Keast Collaborative

Figure 3.6,
Downtown Alvin, Aerial Photograph

plaza, as well as attractive streetscape improvements, uplift the appearance of the area and are one of many essential elements for reinvestment and reuse. However, there are a myriad of other important elements that must be present and issues to be addressed before Downtown can achieve success. (Refer to **Figure 3.6, *Downtown Alvin, Aerial Photograph***).

As the historic heart of the community, CAC members, stakeholders and residents have all voiced their desire to see Downtown once again become a center of community activity. They are interested in seeing it retain its historic character, made evident by the urban traditional scale of buildings, street enclosure, and emphasis on the pedestrian. There were numerous references to protecting the community's small town feel, which, in part, relies on strong recognition of a City center, rather than auto-oriented strip centers and big-box retailers. They would like to see more development in Downtown, filling-in vacant lots and reusing empty buildings. Creating public spaces and attractions to draw residents and visitors, and establishing Downtown as a local and regional destination is also desirable. Achieving this vision requires formulation of policies and codes to enact control over the use, character, and scale of development.

Creating public spaces and attractions to draw residents and visitors, and establishing Downtown as a local and regional destination is also desirable. Achieving this vision requires formulation of policies and codes to enact control over the use, character, and scale of development.

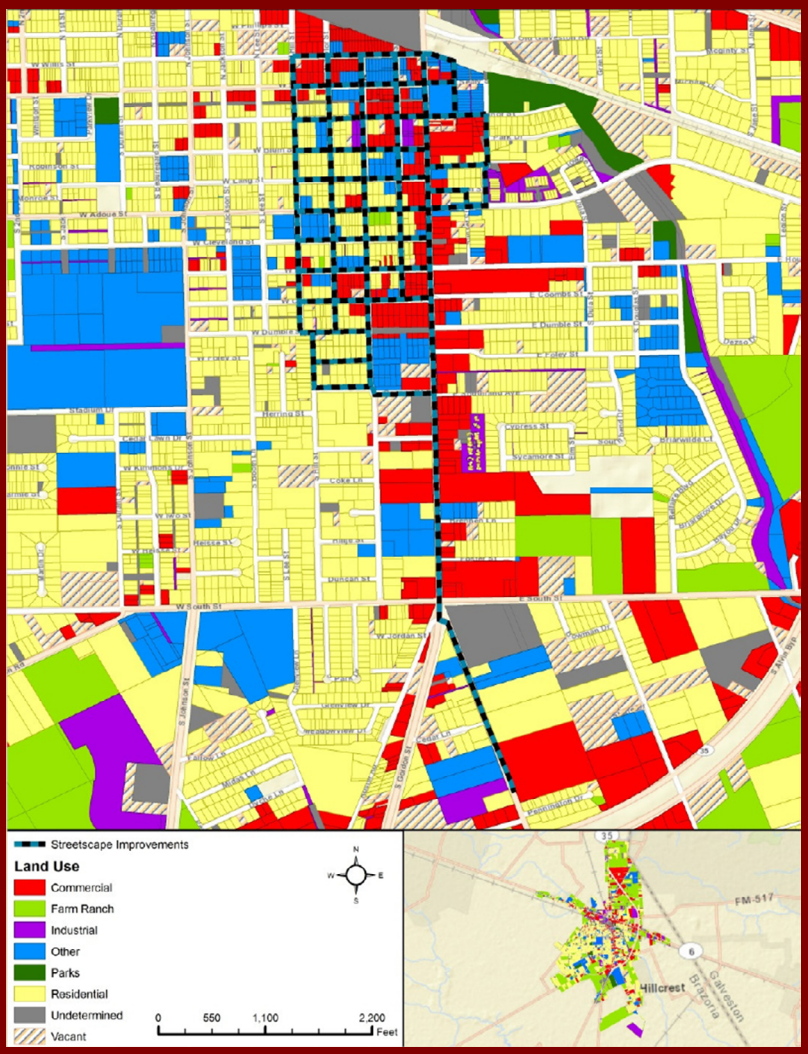
As illustrated in **Figure 3.7, *Downtown Land Use*** (following page), the Downtown area includes a mixture of public uses, such as City Hall, The Railroad Depot, library, museum, and senior center, with numerous semi-public institutions such as churches, daycare facilities, and a lodge. There are also industrial and intensive commercial uses near the railroad, such as the lumberyard and large warehouses. Commercial uses include a blend of offices and retail establishments primarily located adjacent to the railroad, along Sealy Street, and between S. Gordon Street and Magnolia Street, although there are also individual commercial uses encroaching into the neighborhoods. The prevailing residential use is single-family, site-built dwellings, although there are a few scattered manufactured homes on individual lots, houses that have been converted to multiple tenant dwellings, and apartments. There are several instances of home based businesses, some of which are commercial uses and others used for home occupations. There are higher density units, such as town homes and lot line homes, along Adoue Street east of Magnolia Street.

The challenge confronting revitalization of Downtown is rooted in the City's land use policies. Communities who have redeveloped their downtowns have taken a firm stand as to the location of their commercial development, directing it inward, rather than allowing it to locate on the edge of town, thereby drawing traffic and other businesses away from the City center. Doing so requires an implementation tool giving the City the ability to effectively manage its pattern of growth in a manner that is consistent with its development objectives and community vision.

Coupled with development policy is a range of practical issues that act as barriers to redevelopment. Parking is generally a constraining issue for businesses locating downtown. Those that develop on large, vacant

parcels have sufficient land to meet their parking needs and requirements. Within a downtown environment, large expanses of parking are not feasible or preferable. There must, therefore, be acceptable alternatives for the businesses and their employees and patrons. This may require a public-private partnership to acquire and assemble land and develop public parking areas or, better yet, elevated parking structures that allow a concentration of more commercial development in Downtown. The existence of multiple public buildings makes it easier to justify. The assembly of land may also be necessary to accommodate larger building sites for more significant mixed use developments. Incentives are commonly essential for attracting businesses to locate downtown, rather than along one of the corridors. Resolution of other typical problems, such as code-related issues, condition of infrastructure, and traffic access and circulation, must also be studied and addressed to make downtown a reasonable and attractive alternative.

Figure 3.7, Downtown Land Use



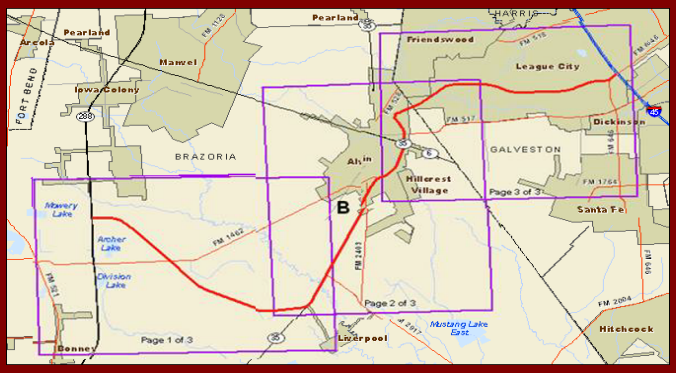
IN ANTICIPATION OF THE GRAND PARKWAY: INTEGRATED TRANSPORTATION PLANNING AND LAND USE PLANNING

State Highway 99 (Grand Parkway) is a proposed 180+ mile, 11 segment (A through I-2) circumferential scenic highway traversing seven counties and encircling the Greater Houston Region (refer to **Figure 3.8, *Grand Parkway Segment Map***). The seven counties include Harris County, Fort Bend County, Galveston County, Brazoria County, Chambers County, Liberty County, and Montgomery County. When State Highway 99 is complete, it will be the longest beltway in the United States and the third loop within the Houston-The Woodlands-Sugar Land metropolitan planning area (with Interstate 610 being the first loop and Beltway 8 being the second loop). Each segment of this plan is a complete and independently justifiable project that has undergone rigorous public and agency involvement/input and analysis of the potential effects on the physical, biological, and human environments of each alignment.

Transportation improvements and regional-scale projects like SH 99 are necessary due to current inefficient connections between suburban communities and major radial roadways. According to the U.S. Department of Transportation's Environmental Impact Statement the current and future transportation demands for the region exceed capacity and many current roadways are experiencing increasing strain on transportation infrastructure from population and economic growth.

Figure 3.8, Grand Parkway Segment Map

Figure 3.9, Segment B Recommended Route



The purpose of the proposed loop is to efficiently link the suburban communities and major roadways, enhance mobility, respond to economic growth, and provide an additional hurricane evacuation route for the coastal region population.

The segments that directly impact the City of Alvin are segments A, B, and C, foremost due to proximity and relevance, followed by the other segments for general connectivity purposes. Segment B is a proposed 28-mile, four-mainlane, controlled access toll road with discontinuous frontage roads, located within a typical 400-foot right-of-way from SH 288 to IH 45 (s) through Brazoria and Galveston Counties.[9] The proposed SH 99 Segment B's 400-foot ROW would be able to accommodate one of following typical roadway sections:

- A 4-mainlane section without frontage roads,
- A 4-mainlane section with frontage roads, and
- A 4-mainlane section with exit and entrance ramps.[10]

The recommended alignment is shown in the **Figure 3.9, *Segment B Recommended Route***, below. The central alignment is approximately 25 miles long and generally follows an eastern route, traveling around the City of Alvin, and then taking a northeastern course to termination. The S.H. 99 Segment B study area borders the city limits of Texas City and includes portions of the cities and communities of Dickinson, Santa Fe, League City, Friendswood, Hillcrest Village, Alvin, Liverpool, Manvel, and Iowa Colony. The alignment uses about four miles of the existing SH 35 bypass and crosses the following roadways: Iowa School Road, County Road 121, County Road 184, County Road 185, FM 1462, County Road 172, S.H. 35, County Road 158, County Road 177, S.H. 6, FM 517, Algoa-Friendswood Road, the planned Bay Area Boulevard expansion and FM 646.[11] The proposed alignment also crosses the following bodies of water: Chocolate Bayou, Briscoe Canal, New Bayou, Mustang Bayou, American Canal, Dickinson Bayou, and Magnolia Bayou.

According to the *SH 99 (Grand Parkway) Segment B Environmental Impact Statement*, land uses within the study area are primarily undeveloped, with a large portion being used for grazing and agricultural purposes. Most retail, commercial, business, industrial, public, and institutional land uses are primarily located within the City of Alvin adjacent to Business S.H. 35 (Gordon Street) and S.H. 35. Residential land uses are scattered across the study area, with several

9: The Grand Parkway Association. http://www.grandpky.com/segments/a/

10: FHWA-TX-EIS-03-05-D Grand Parkway (State Highway 99) Segment B from SH 288 to IH 45. Brazoria and Galveston Counties, Texas. Draft Environmental Impact Statement. U.S. Department of Transportation, Federal Highway Administration, Texas Department of Transportation, Grand Parkway Association. June 2012.

11: The Grand Parkway Association. http://www.grandpky.com/segments/a/

What is the relationship between land use planning and transportation planning?

The relationship between transportation and land use is symbiotic and inextricably connected. Everything that happens to land use has transportation implications and every transportation action affects land use. State and local departments of transportation influence land use by providing infrastructure to improve accessibility and mobility. Accessibility is usually measured by the number of travel opportunities or destinations within a travel radius—measured either by travel time or distance traveled. Alternately, mobility measures the ability to move efficiently between origins and destinations. Thus, mobility is directly influenced by the layout of the transportation network and the level of service it offers.[1] Accessibility and mobility basically refer to the opportunity and ability for people to access opportunities, goods, services, and other resources to improve the quality of their lives and fulfill basic functions necessary for living. Land development generates travel demand, and travel generates the need for new facilities, which in turn increases accessibility and attracts further development.[2] The ongoing debate among planning professionals is whether transportation influences development of whether land use dictates transportation.[3]

Transportation planning's biggest impact on land development occurs when access is provided to land—increased access to land raises its potential for development, and more development yields additional travel.

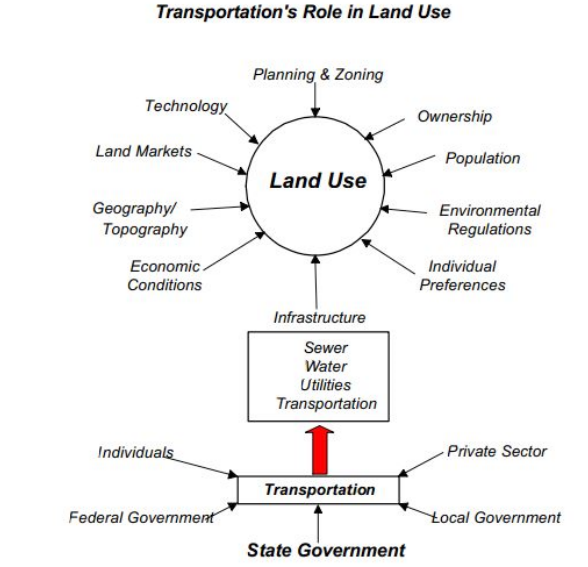
As illustrated in **Figure 3.10, *Transportation's Role in Land Use***, mobility planning factors in the land development process. Transportation projects and systems are one of many factors that can lead to changes in land development patterns. Other factors include population and economic growth, individual preferences and life style choices, other infrastructure, changing technology, local planning and zoning policies, and geographic and topographic conditions.[4] It is for this purpose that State Departments of Transportation, metropolitan planning organizations (MPOs), local agencies and other stakeholders are often involved in the development of programs to coordinate transportation and land use decisions.[5]

Coordinating land use and transportation planning initiatives allows development to foster a balance of mixed uses (such as housing, education, employment, recreation, retail and service opportunities) that require a degree of spatial/geographic proximity, layout, and design of those uses. Recent concerns have arisen regarding transportation's role in exacerbating or combating the problems associated with urban sprawl, suburban congestion, and jobs/housing mismatches.[6] One of the eight planning factors listed in the federal transportation planning laws for States and metropolitan areas requires consideration of strategies that will:

> *(E) protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development…*[7]

Many have cited highway system expansion as a major contributor to urban sprawl by decreasing travel times from urban to suburban areas and making undeveloped areas more attractive for development. In addition, the movement of jobs to suburbs, lower transportation costs versus lower housing costs, the preference to live out of urban areas and away from urban 'problems', and the desire for larger lots have also been highlighted as contributing to the urban sprawl issue. More recently, labor shortages created by suburban housing markets excluding skilled laborers that would traditionally be employed by the industries and commercial enterprises that develop in these areas. In Alvin, the mean travel time to work is about 28 minutes with 42 percent of the population working outside the county of residence—indicating that the majority of Alvin residents work outside of the City and commute to jobs elsewhere in the region.[8] With the groundbreaking and construction of the State Highway 99 (Grand Parkway) Segment B underway, it is imperative that the City of Alvin and other planning entities combine transportation and land use measures to facilitate and guide inevitable development, employment opportunities, and suitable land uses.

Figure 3.10, Transportation's Role in Land Use



[Source for Figure: Indirect and Cumulative Effects Analysis for Project Induced Land Development WisDOT 1996]

1: An Overview: Land Use and Economic Development in Statewide Transportation Planning. Federal Highway Administration. Center for Urban Transportation Studies, University of Wisconsin-Milwaukee. 1999.

2: An Overview: Land Use and Economic Development in Statewide Transportation Planning. Federal Highway Administration. Center for Urban Transportation Studies, University of Wisconsin-Milwaukee. 1999. https://www4.uwm.edu/cuts/lu/lu-all2.pdf

3: Adapted from Hanson, Susan. The Geography of Urban Transportation, Second Edition.

4: An Overview: Land Use and Economic Development in Statewide Transportation Planning. Federal Highway Administration. Center for Urban Transportation Studies, University of Wisconsin-Milwaukee. 1999. https://www4.uwm.edu/cuts/lu/lu-all2.pdf

5: Federal Highway Administration. https://www.fhwa.dot.gov/planning/processes/land_use/

6: An Overview: Land Use and Economic Development in Statewide Transportation Planning. Federal Highway Administration. Center for Urban Transportation Studies, University of Wisconsin-Milwaukee. 1999. https://www4.uwm.edu/cuts/lu/lu-all2.pdf

7: Federal Highway Administration. https://www.fhwa.dot.gov/planning/processes/land_use/

8: 2012 American Community Survey 3-Year Estimates, U.S. Census Bureau

neighborhoods within the study area but not part of an established neighborhood. There are also several planned unit developments (PUDs) in the vicinity of the alignment near the end of the route at IH 45 South (including Bay Colony, Bay Colony West, and the Duncan, Lloyd, McAlister, and Victory Lakes developments), all of which allow for the construction and development of the SH 99 Segment B.

The Houston-Galveston Area Council (H-GAC) is responsible for intergovernmental regional planning and coordination efforts within the 13 County Gulf Coast Planning Region of Texas, the Grand Parkway project is no exception. On behalf of the cities of Alvin, Friendswood, and League City, H-GAC is incorporating the proposed S.H. 99 Segment B into the Houston-Galveston Regional Transportation Plan and will be coordinating further as each phase begins, deviates, and is completed.

CONVENIENT ACCESS TO COMMERCIAL / RETAIL / INSTITUTIONAL DEVELOPMENT OFFERING A WIDER RANGE OF CHOICES

Figure 3.11, Retail Trade Area

An important concern raised by members of the CAC and participants within the stakeholder listening sessions involves the lack of convenient commercial shopping opportunities and quality health care services in and around Alvin. There is interest in attracting national retail chains (e.g., Target, Lowes) to locate in proximity to the City. At this time most "big-box" retail is located in the larger, neighboring communities such as Pearland and League City. For example, at the time of drafting this plan element, the nearest Lowe's Home Improvement store is located in Pearland, a distance of 10.2 miles (approximately 15 minutes) from Downtown Alvin. The nearest Target is located in Dickinson, a distance of 11.9 miles (approximately 16 minutes) from Downtown Alvin. The Houston Medical Center is 28.1 miles (approximately 35 minutes) from Downtown Alvin. To further emphasize the demand and the opportunity for increased commercial and retail enterprises, a recent retail gap analysis for the Alvin Retail Trade Area (refer to **Figure 3.11, *Retail Trade Area***), which is based on an projected 2018 population of 77,314 persons (Alvin population of 27,424 persons), estimates an aggregated retail sector potential sales to be $779,202,700, an actual sales estimate of $551,100,000, which equates to a leakage of $228,102,800.[12]

In response to these estimates, the following summarizes some of the larger development programs either developed or soon to be under construction within the City of Alvin and its ETJ:

Kendall Lakes Light Industrial Park

To attract compatible industrial development, the City of Alvin needs to be able to provide shovel and infrastructure-ready industrial sites within its corporate limits and ETJ. The recently developed, Kendall Lakes Light Industrial park consists of more than 200 acres immediately north of Downtown Alvin, along S.H. 35 with rail service provided by the BNSF Railroad. The location of the industrial park provides convenient access to S.H. 35, S.H. 288 and Interstate Highway 45. Immediately north of the industrial park is the Kendall Lakes residential subdivision (refer to **Figure 3.12, *Kendall Lakes Light Industrial Park***).

Heritage South Mixed-Use Development

A Friendswood, Texas-based developer, has announced plans to develop a 40-acre master planned, commercial and entertainment district, named Heritage South (refer to **Figure 3.12, *Heritage South, Plan***). The project will contain more than 600,000 square feet of retail, office, hospitality, entertainment venues, apartments, live-work units and townhomes. The site is located immediately adjacent and to the north of S.H. 6, west of the S.H. 35 Bypass. The proposed development compliments the regional livable center concept plan for corridor infill and downtown revitalization. The Heritage South development program embraces a street grid concept with traditional architectural patterns. A town square and pavilion will include women's fashion stores, boutiques, sidewalk cafes, and corner stores. Concerts in the park, leisure strolling, and/or shopping, cycling, and outdoor entertainment experiences will be inviting to all who frequent or choose to live in this new development (refer to **Figure 3.13, *Heritage South, Conceptual Rendering***).

Cardon Group Development

Another large-scale development program that exemplifies the inherent opportunities associated with Alvin's location within the Houston metropolitan region; as well as the local demand for quality retail and residential development is the Arizona-based, Cardon Group, LLC's proposed mixed-use development at the intersection of S.H. 288 and FM 1462. Comprising of 1,550 acres, the Cardon Group Development will include a range of single family detached residential housing densities, and multi-family housing, interspersed with office and retail development, and generous expanses of parkland, waterways and open space amenities (refer to **Figure 3.14, *Cardon Group Development***). When constructed this development will provide a significant draw for people desiring to live within convenient access to the Houston Medical Center complex as well as the Lake Jackson area petro-chemical industrial complex.

Hospital Complex And Skilled Nursing Facility

Houston-based, University General Health System, Inc., a diversified, integrated multi-specialty health care provider, plans to construct a new hospital and skilled nursing center in Alvin, just east of the S.H. 35 Bypass, across from the Kendall Lakes Industrial Park (refer to **Figure 3.15, *Hospital Complex***). The hospital is anticipated to be developed in three phases. The first phase would include a 10-bed hospital, a 10-bay emergency room, and a diagnostic imaging center. Phase II would include the addition of operating rooms and intensive care unit (ICU) beds. Finally, Phase III would add additional beds as market conditions warrant." When completed the hospital component shall consist of 74,000 square feet of usable building space (administration/ancillary uses/beds/operating rooms/intensive care/diagnostic imagining/emergency department/mechanical room/vehicular loading and unloading dock. The skilled nursing facility component will provide for a minimum of 50 beds to serve patients. The total square footage of the skilled nursing facility shall be a minimum of 50,000 square feet. The skilled nursing component will provide services to patients including post-acute care

Figure 3.12, Kendall Lakes Light Industrial Park

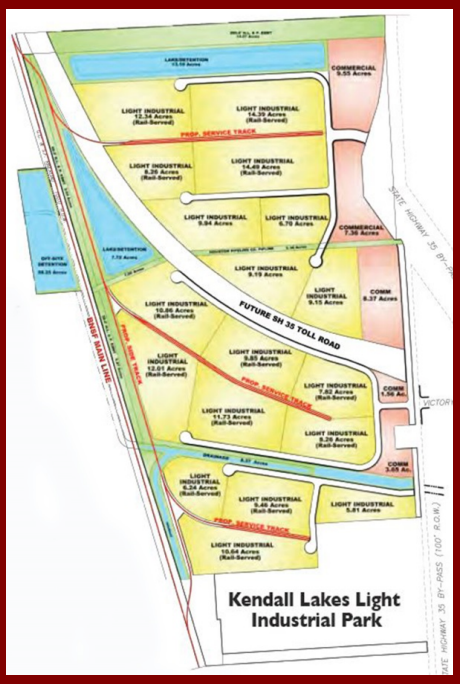


Figure 3.12, Heritage South, Plan

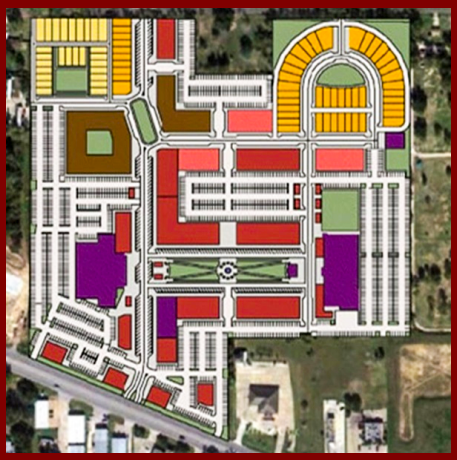
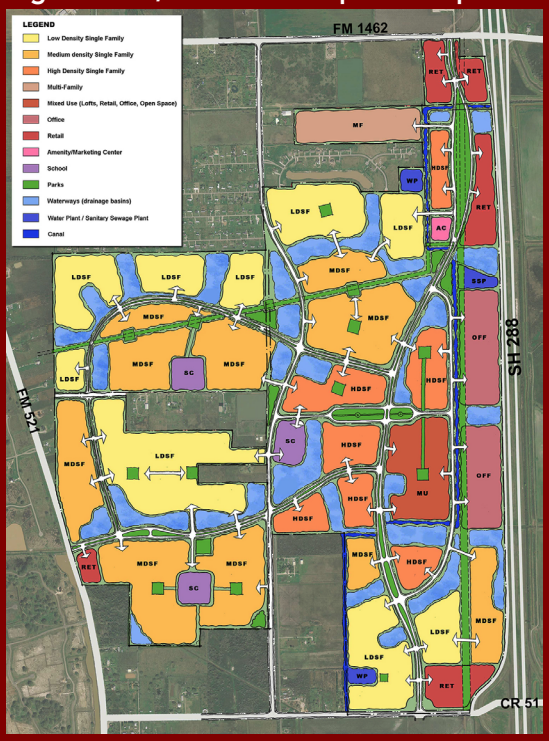


Figure 3.13, Heritage South, Conceptual Rendering

Figure 3.14, Cardon Group Development



skilled nursing; traditional skilled nursing; rehabilitation care; acute dementia care and palliative services. The hospital complex and skilled nursing facility will be funded in part though the City of Alvin's tax-increment reinvestment zone (TIRZ).

APPEARANCE ENHANCEMENT AND COMMUNITY ATTRACTIVENESS

The physical appearance of a community is, perhaps, the single most evident glimpse of its economic viability, government pro-activeness, and civic pride. The initial impression of a community is formed by the appearance of its built environment, including the nature of community aesthetics, condition of public facilities and maintenance of roadways, presence of parks and public open spaces, integrity of neighborhoods, care of private and public properties, and overall attractiveness of the community. Many of the more established neighborhoods, such as those surrounding Downtown, have tree-lined streets that are a source of character and pride. This significant contribution to character is absent in newer subdivisions. Preserving trees and natural areas gives character to the community. Trees moderate the micro-climate of an area, particularly during the warm summer months, and make neighborhoods more comfortable. Community appearance contributes to quality of life for those who reside in the community and is of significant consideration for those who may be considering an investment and relocation decision (refer to sidebar, ***Buffering of Incompatible Uses***).

The character and appearance of Alvin are top priorities according to a broad cross-section of the community who participated in the citizen involvement process. Residents recognize the importance of quality of life in the success of their economic development program and, therefore, expect quality new development and redevelopment. There is a strong desire to improve the entrances to the community with distinctive gateways, enhance the roadway environs with streetscape improvements, increase the amount of green space adjacent to the right-of-way, preserve mature vegetation and natural lands, add more landscaping and screening of parking and storage areas, control the size and location of signage, better manage the appearance of structures and vacant properties, limit the amount of outdoor storage and display, and diligently enforce the City's land development regulations.

Figure 3.15, Hospital Complex

In addition to aesthetic enhancements such as those described above, there is also concern about the character of individual developments. The placement of parking on a site in relation to the right-of-way, amount of landscape surface and preserved vegetation, bulk and scale of buildings, location of storage and service areas, and amount of impervious surface coverage are all factors that contribute to the character of individual sites and collectively to the overall character of the community.

Alvin residents generally acknowledge their challenges relating to the appearance of the community. They cite among their concerns the number and appearance of

vacant structures, lack of landscaping within parking lots and throughout development, storage of equipment and supplies within view of the public right-of-way and adjacent properties, enforcement of property maintenance standards, compatibility of adjacent land uses, removal of mature trees and encroachment of natural areas, presence of overhead utility lines, a proliferation of signage, maintenance and appearance of Mustang Bayou, "tired" neighborhoods and commercial areas, appearance of metal buildings, and conditions of public infrastructure. Overcoming these challenges is not insurmountable with a concerted effort on behalf of the City and individual property owners. Doing so, however, requires a proactiveness to affect change through imposition of higher development standards and regulations.

Buffering of Incompatible Uses

The Oxford English Dictionary defines *incompatible uses* as: "different uses of land or other resources which cannot exist together in the same area because one inhibits or adversely affects another." This is often the case when residential uses abut industrial uses, commercial uses, or entertainment-related uses. Issues such as pollution, noise, lighting, parking, and crime can have significant negative impacts on the quality of life for residents nearby. The following photos are examples of incompatible uses in Alvin. The effluent from car washes can pollute nearby water sources if not regulated correctly; music halls and bar venues may generate noise, traffic, and criminal behavior if not monitored; and industrial uses can generate pollution, noise, lighting issues, and unsightly outdoor storage and debris. It is important to regulate the types of uses allowed adjacent to one another and require varying degrees of buffering and screening to prevent the negative impacts of incompatible uses from ultimately diminishing the quality of the neighborhood and cultivate a poor perception for visitors and residents.

According to the American Planning Association, the zoning buffer is an attempt to solve the ever-present problem of incompatible land uses. There are two types of buffers—the use buffer and the landscaped buffer. Use buffers are essentially zoning districts located and mapped in such a way that a buffer district is interposed between one zone and another—basically the zoning ordinance reflects a land-use arrangement based on the idea of protection. Landscaped buffers are noncontroversial uses sited between two conflicting types of districts/land uses. The effect of a landscaped buffer is primarily physical: it provides space, obstructs undesirable views, and in other ways reduces the impacts of one use upon another.

The photos below illustrate non-buffered, incompatible uses in Alvin's residential areas. In two photos one can see that the driveway of a residence is facing the rear side of a commercial property without any buffering or screening to hide the air conditioning units, storage, wires, pipes, and other unsightly elements of a large commercial enterprise. In the second photo the bright orange storage complex is clearly visible from the street of this residential neighborhood, creating a visual distraction that distracts from the quiet, residential look of this streetscape. It also forces visitors to question the safety, comfort, and aesthetics of the place, as these issues can be major factors in the consideration of buying, leasing, or remaining in a home.

Screening

Screening dumpsters is a basic ordinance requirement in most cities. It helps to protect property values and keep sites cleaner and safer. Trash receptacles are not aesthetic and can be unsightly on properties, as seen in the following photos. What may be a beautiful drive down a popular street in a town can be diminished by the sight of trash, dumping, and bulk containers—oftentimes leaving a lasting memory in visitors' perception of the place. Screening of dumpsters prevents wildlife and people from disrupting the proper disposal of hazardous materials, it prevents companies from experiencing liabilities with improper disposal or interaction with waste materials, and it contains waste materials in a safe and aesthetic manner.

Screening is also necessary for parking lots and other uses. In the photos below there is no screening of the parking lot toward the major street; this is often desirable to provide a visual buffer between the roadway and uses. Screening adjacent to roadways visitors from seeing parked cars, can minimize noise, and can also act as a drainage conduit for stormwater runoff during storms and natural events.

EFFECTIVE PLAN IMPLEMENTATION AND PRUDENT USE OF DEVELOPMENT REGULATIONS

Communities that are successful in achieving their vision are those who have established a collective vision, formed consensus, and are committed to action. Community awareness and action doesn't end with the completion of its comprehensive plan, it begins with the plan's adoption and must entail a highly organized, and sustained level of effort on behalf of the City's citizens and elected officials. Without this resolve, plans are largely ineffective and lack the support necessary to realize the community's stated goals and objectives. Therefore, in order to achieve desirable development outcomes, there must be a firm commitment to abide by the policies and recommendations of this plan.

The goals, policies, objectives, and recommended actions are intended to provide the guidance necessary to achieve the preferred type, pattern, and density of future development, as well as the envisioned character of the community. As conditions change over time, the plan will require periodic review and amendment to continue to reflect the City's economic development objectives, growth policies and regulations, and other long-range planning considerations.

The most often mentioned theme that emerged from the input received from CAC members and stakeholders during the community forum was the City's ability- or inability - to ensure future development that is compatible with adjacent uses and cohesive with the character and fabric of the community. While the context remained the same, different issues were articulated relating to managing development, including references to the density of development, buffering and screening between land uses, impacts on neighborhoods and other adjacent uses, design of new development, and the implementation and enforcement of some form of regulation giving the community the ability to protect the interests of property owners, as well as to control its own destiny.

Directly associated with the implementation of this plan is the enactment of incentives, standards, and regulations to ensure compliance with the City's policies and overall community vision. While regulations impose certain restrictions on the use of land, in the interest of all persons and the community as a whole, they are an essential component for realizing each of the values expressed by individuals during this planning process. Regulations that are enacted must be fair, equally applied, and contain a degree of reasonableness. There must also be diligence in their enforcement so as to protect the interests of all persons - including those who are nearby or adjacent to the use - and to secure the overall vision of the community.

There are a variety of methods available to enact control and, thus, manage development in a responsible manner, as outlined in Appendix A, *Land Use Supplement*. The approaches taken are fully in the hands of the community and its leadership. While there are traditional means that are common among other communities, there are also creative variations that must be customized to address the specific issues and intended outcomes of this community. The content of this chapter establishes a firm foundation and policy framework, which may be used as a basis for making decisions as to a specific course of action taken and methods chosen to achieve the community's vision. **See *Marginal Development and Code Compliance Issues*.**

Marginal Development and Code Compliance Issues

Alvin has several examples of code compliance issues, as well as marginal development. Both of these issues, though not necessarily related, can have similar negative impacts on the perception of the city. Marginal development has primarily occurred along S.H. 6 and 35 with large signs and buildings with little to no architectural significance or interest—this can really discourage passers-through from stopping and interacting in the businesses, spaces, or services of the City. Future developers are concerned with the location of their businesses/investments and many will not choose sites near businesses and sites that are not attractive, well-kept, or are outdated because it can hinder their own businesses, degrade their own investments, and ultimately hurt the success of their investments.

Similarly, code compliance issues can create a visual eye sore that can diminish property values, leave a lasting negative impression, and hinder future development in the area. Code compliance is a larger issue than mere aesthetics; the lack of code compliance can cause safety and fire hazards as well, potentially endangering residents as well as their neighbors.

Goals and Objectives of the Community

The goals, objectives, and subsequent action recommendations respond directly to the above issues, which were raised by citizens who were part of the Citizens Advisory Committee, as well as those who participated in the stakeholder listening sessions; all of whom played a role in identifying these issues in their identification of Alvin's core values, strengths, and challenges ahead. These issues also reflect the observations discovered through analysis of the existing land use character within Alvin and its immediate extraterritorial area.

GOAL 3.1: FUTURE CHARACTER AND LAND USE PLANNING TO PREVENT UNDESIRABLE ENCROACHMENT OF NEIGHBORHOODS AND SENSITIVE AREAS.

Objectives and Actions

- *Objective 3.1.1: Encourage the development of compatible land uses, avoiding mixtures of incompatible uses in close proximity to one another.*
    1. Prepare and adopt a unified development ordinance (UDO), which would consolidate all land use regulations into a single document. A unified development ordinance would apply to development within the City and extraterritorial jurisdiction (ETJ), with the exception of any controls precluded within the ETJ by Chapter 212, *Municipal Regulation of Subdivisions and Property Development*, of the Texas Local Government Code. A UDO would include development guidelines pertaining to: lot sizes, dimensions and setbacks; use density and intensity; parking, loading, and driveways; street access; screening and landscaping; bufferyards; resource protection; and standards for specific developments.
    2. Evaluate alternative means for managing the pattern of future development with a primary intent of protecting neighborhoods from encroaching incompatible development; as well as coordinating adequate provision of municipal facilities and services. Incorporate the selected regulatory provisions into the proposed unified development ordinance. Adopt decision criteria for use by the Planning Commission and City Council allowing consideration of a multitude of factors, such as the use and character of the surrounding neighborhoods, the extent to which the proposed use is in harmony with or would detrimentally affect adjacent and nearby uses, and the suitability of the use for the property.
    3. Allow a range of development options on individual properties with the use of performance standards to require compatibility for adjacent uses exhibiting varying use intensities. Therefore, a mixture of land uses may be permitted subject to integrated design and compatibility standards.

- *Objective 3.1.2: Create effective controls for adequately separating incompatible uses based upon their character, intensities, and impacts on adjacent and nearby uses.*
    1. Within the UDO, categorize development as to its character, intensity, and nuisance potential, thereby allowing the formation of provisions to ensure compatibility between uses based upon measures of their intensity. Such provisions would include a menu of alternative bufferyard standards, which would be applied based upon the intensity of adjacent uses and varying site conditions. Bufferyard standards allow choice among a range of options for achieving a required opacity, including buffer width, plant materials, structures such as fences and walls, or land forms such as an earthen berm.
    2. Adopt resource protection standards to preserve stands of existing vegetation, which form effective natural buffers within and between uses. Preserved vegetation would be required to meet certain standards of performance, such as opacity and vegetation density, as a means of avoiding conflict between incompatible land uses. Coupled with the protection standards would be provisions for allowing variations of conventional subdivisions, such as clustered, conservation, and preservation development, each of which reward preservation of open space with bonuses - or incentives - allowing an equivalent development density. These forms of development encourage integration of open space and natural resources, thereby meeting the objectives of the community and developer.
    3. Protect the existing street trees by incorporating provisions for tree preservation into the proposed unified development ordinance. Adopt street repair and improvement specifications that, to the maximum extent practicable, will not disrupt the drip line of existing trees, including provisions for protective construction fencing, limitations on grade changes, and prohibition of storing and dumping materials. Furthermore, adopt landscaping provisions requiring the installation of street trees and on-lot trees in new subdivisions.
    4. Adopt policies and standards for preserving the integrity of established neighborhoods, including provisions relating to the type and construction of infill housing on vacant lots. Amend Section 24 112-16, *Placement Standards*, pertaining to the placement of U.S. Department of Housing and Urban Development (HUD)-code manufactured homes on single lots to further define - within the limits of the law - "compatible with other dwellings in the subdivision or area when compared to dwellings within a 1500-foot radius." Pursuant to Senate Bill 1326, adopted June 18, 2003, establish standards for industrialized housing, including requiring such housing to have a value equal to or greater than the median taxable value of each single-family dwelling located within 500 feet of the lot on which the industrialized housing is proposed to be located; requiring exterior siding, roofing, roof pitch, foundation fascia, and fenestration compatible with the single family dwellings within 500 feet; requiring compliance with

building setbacks, side and rear yard offsets, subdivision controls, and other site requirements applicable to single-family dwellings in the community.

- *Objective 3.1.3: Identify the areas that are more conducive for intensive development while being conscious of environmentally sensitive areas, such as those within or adjacent to the floodplain along Mustang Bayou and other drainageways, near the gas well fields, and surrounding prime agricultural lands.*

  1. Incorporate into the unified development ordinance flood protection standards, which would restrict/prohibit uses in proximity to the floodplain; protect vulnerable uses against flood damage; control the alteration of natural floodplains, stream channels and natural protective barriers; control activities that may increase flood heights, velocities, or damage; and regulate the construction of flood barriers that may unnaturally divert flood waters or increase flood hazards to other lands. Such standards would establish a process for reviewing and issuing floodplain development permits and provisions for flood hazard reduction and handling nuisances within hazard areas.
  2. Adopt an ultimate growth policy, consistent with Chapter 5, *Growth Strategies*, as to the nature and extent of urban service provision, including water, wastewater, transportation, and drainage infrastructure, into the outlying areas of the extraterritorial jurisdiction. Provision of services and allowance of urbanizing development patterns result in premature conversion of agricultural lands and deterioration of the natural environment, as well as creating a fiscal strain on municipal resources. Consider the incorporation and use of concurrency requirements, thereby tying land development to concurrent provision of adequate facilities and services.
  3. Establish standards to prevent encroachment of housing and other incompatible uses within the City limits and the extraterritorial area in near proximity to both operating and abandoned oil and gas well sites, which pose potential hazards to housing, including potential fire, explosion, spray, toxic emissions, and other pollution. As regulated by HUD for approval of projects and financing, which may apply to local regulation as well, no dwelling may be located closer than 300 feet from an active or planned drilling site or 75 feet from an operating well (to the site boundary, not to the actual well location).
  4. Pursue open space preservation within adjacent development, dedication of conservation easements, or fee simple acquisition of land along Mustang Bayou to protect this natural resource from the impacts of urban development, including increased erosion and flooding, pollution of waters, and loss of natural protective barriers.

GOAL 3.2: STABILIZATION OF "TIRED" NEIGHBORHOODS, REHABILITATION AND REVITALIZATION, AND PROVISION OF QUALITY HOUSING.

Increasingly, public officials, community leaders, and academics are looking to housing policy and the promotion of homeownership in particular, as a cornerstone strategy in fostering sustained community revitalization. Research is demonstrating that home ownership can help stabilize and maintain the vitality of a neighborhood or area, stimulating positive social and economic growth. In addition, high rates of homeownership in a neighborhood promote community involvement, increase resident satisfaction and enhance the neighborhood's image. According to Census data, buyers live in a community four times longer than renters. Since homeowners are typically more invested in a community, social and political networks are more easily established, as are stable environments for children's development.[13]

Objectives and Actions

- *Objective 3.2.1: Enhance existing neighborhoods and commercial areas that are "at risk" of decline.*

  The condition of structures and the maintenance of properties contribute to the health and welfare of residents, as well as the appearance of neighborhoods and the larger community. Housing that appears in need of upkeep can create the impression that a community is in a state of decline. Freshly painted and well-maintained homes are indicative of a positive community with a promising future. Frequent turnover of residents and the loss of "pride of ownership" are often reflected in how residences are maintained. In areas where smaller, lower-value dwellings have transitioned to rental properties, absentee ownership and/or negligent landlords can also undermine efforts to maintain the quality and stability of a neighborhood. The cumulative effect of inadequate maintenance can undermine whole blocks, as well as entire multi-family complexes.

  The community must remain cognizant of its older housing stock as rehabilitation and reinvestment will become increasingly important to the integrity and vitality of neighborhoods within the original City core. There are distinct neighborhood differences as most of the housing in the central neighborhoods is older and warranting reinvestment. Code enforcement and basic building maintenance are critical issues in these neighborhoods. Comments by members of the CAC and participants within the stakeholder listening sessions indicated concerns about external appearance and the need for removal of blighted properties, particularly in those areas that serve as neighborhood gateways. Some residents suggested the need for stricter regulations or better enforcement of existing requirements. Others emphasized the need to improve basic cleanliness and property maintenance.

  Effective code enforcement is needed to ensure that basic standards are upheld, which stabilizes individual properties and safeguards the entire vicinity. But code enforcement and nuisance abatement only go so far, requiring the City to intervene to ensure the eventual removal of blighting influences that are beyond restoration.

1. Preserve the suburban character of the established neighborhoods through compatible adjacent uses, infill development, and redevelopment by adopting regulations and compatibility standards. At a minimum, create enforceable standards to sustain the suburban character of the existing neighborhoods without the encroachment of incompatible uses.
2. Identify areas of the community that are experiencing or at risk for experiencing particularly high levels of disinvestment and deterioration. Subsequently, coordinate with area property owners to identify and prioritize needed infrastructure improvements funded by a target-area capital investment program. Additionally, aid in the solicitation of grant funds and private investment to leverage the value of public dollars. Create incentives and bonuses to overcome the common redevelopment constraints of disadvantaged areas. Provide both technical and administrative assistance to aid in redevelopment efforts.
3. Form a target-area capital investment program focused on infrastructure improvements within at-risk neighborhoods. The purpose of this program is to provide a dedicated source of annual funding for use in making improvements and leveraging private reinvestment through rehabilitation, redevelopment, building additions, and/or infill development.
4. As discussed in Chapter 4, *Parks and Recreation*, focus on park and recreation improvements as a means for elevating neighborhood viability. Highlight the importance of clean, safe, well-maintained, inter-connected and vibrant neighborhood parks as an anchor for strong, established neighborhoods where residents and kids use public spaces and interact on evenings and weekends. Another neighborhood-scale open space amenity is the creation of neighborhood gardens, which can be located in existing parks or as a temporary use on vacant lots.
5. Improve the walkability of neighborhoods with the installation of sidewalks concurrent with all new development and rehabilitation or construction of new sidewalks in the older neighborhoods, particularly adjacent to schools and parks. Amend the subdivision manual requiring public access easements within and between developments to provide connections to public parks, natural areas and open spaces, and the eventual community trail system. Also require dedication of conservation and public access easements along natural features and linear greenways to promote recreational opportunities.
6. Incorporate into the unified development ordinance provisions allowing a relaxation of specified standards that may prevent or add difficulty to the redevelopment process, given certain precautions and criteria. These provisions may apply community wide or within specified boundaries. Common constraints to redevelopment include problems with site access and circulation, limited areas for parking and loading, nonconforming setbacks, and on-site drainage requirements,

Quality Neighborhood Design

Contemporary subdivision design too often overlooks the time-honored elements of what makes a neighborhood appealing and sustainable for the long term. Typical features of a quality neighborhood design include:

- Some focal point, whether a park or central green, school, community center, place of worship, or small-scale commercial activity, that enlivens the neighborhood and provides a gathering place.
- Equal importance of pedestrian and vehicular circulation. Street design accommodates, but also calms, necessary automobile traffic. Sidewalks along or away from streets, and/or a network of off-street trails, provide for pedestrian and bicycle circulation (especially for school children) and promote inter-connectivity of adjacent neighborhoods.
- A variety of dwelling types to address a range of needs among potential residents (based on age, income level, household size, etc.).
- Access to schools, recreation and daily conveniences within relatively close proximity to the neighborhood, if not within or at its edges (such as along bordering major streets).
- An effective street layout that provides multiple paths to external destinations (and critical access for emergency vehicles) while also discouraging non-local or cut-through traffic.
- Appealing streetscapes, whether achieved through street trees or other design elements, which "soften" an otherwise urban atmosphere and draw residents to enjoy common areas of their neighborhood. Landscape designs consistent with local climate and vegetation.
- Compatibility of fringe or adjacent uses, or measures to buffer the neighborhood from incompatible development.
- Evident definition of the neighborhood "unit" through recognizable identity and edges, without going so far (through walls and other physical barriers) as to establish "fortress" neighborhoods.
- Set-aside of conservation areas, greenbelts or other open space as an amenity, to encourage leisure and healthful living, and to contribute to neighborhood buffering and definition.
- Use of local streets for parking to reduce the lot area that must be devoted to driveways and garages, and for the traffic calming benefits of on-street parking.
- Respect for historic sites and structures, and incorporation of such assets into neighborhood design.

each of which may allow acceptable variations so as not to overburden long-standing areas.

7. Establish an education and awareness program to inform persons with limited income about various programs for rehabilitation assistance. Establish a proactive code enforcement program that offers helpful assistance to property owners in complying with municipal codes. Utilize Community Development Block Grant (CDBG) funds to leverage the amount of reinvestment and to implement projects and programs, such as infrastructure repair, park development or improvement, or removal of unsafe structures, aiming to improve neighborhood conditions in areas of low to moderate income and in efforts to eliminate "slum and blight."
8. Assist neighborhood residents of the older housing areas in the formation of official neighborhood organizations. City

staff may offer assistance in drafting deed restrictions that may be adopted by individual neighborhood associations to restrict certain uses and conditions, as well as to enforce their adherence. Participation in neighborhood improvement and revitalization efforts may also be initiated by churches, civic organizations, schools, and businesses through programs such as neighborhood clean-up, home improvement, and beautification.

9. Create incentives such as permit streamlining, fee waivers, tax deferral, and infrastructure cost-sharing for builders and organizations that provide infill construction on vacant lots or parcels in a manner that compliments the immediate and adjacent neighborhoods. To ensure consistency and compatibility of infill units, establish design guidelines that address building materials, roof pitch, facade treatment, porches, proportional dimensions, and other elements to ensure that new development and rehabilitation enhances neighborhood character.

10. Emphasize neighborhood outreach and coordination. Pursue multiple ways to maintain communication links to neighborhood leaders and representatives, such as through less formal neighborhood associations and/or councils where organized homeowners associations have lapsed over time (and require a certain level of voting and/or owner participation to be considered active). Such forums can prove valuable for inviting "grass roots" input into (and notice of) capital improvement priorities, park and public facility upgrades, street and infrastructure projects, pending zoning cases, crime prevention activities, code compliance initiatives, etc. Establishing a community-wide association or network of neighborhood councils can also lead to annual gatherings and/or other periodic meetings and seminars on issues of interest to all neighborhoods.

- *Objective 3.2.2: Design new neighborhood developments to engender a sense of community and neighborhood integrity.*

1. Allow for varying lot sizes within residential developments without requiring the more rigorous submittal procedures and requirements of a planned unit development. Adopt criteria such as an average lot formula, minimum open space ratio, and maximum allowable gross and net density to maintain control over the character of development. Create density bonuses for achieving community objectives, such as preservation of permanent open space, conservation of natural resources, and provision of development amenities. The use of development clustering and conservation and preservation development would allow the character of existing neighborhoods to be maintained and the small-town atmosphere preserved.

2. Encourage alternative subdivision designs, such as mixed use development, clustered housing, and conservation and preservation development. These alternative neighborhood environments would allow the City to maintain its small-town character, consistent with many of its existing neighborhoods,

while protecting its resources. Incentives should be created to allow increased density generally equivalent to the loss of units required to set aside land for open space and resource conservation. The outcome is development that maintains its efficiency- units per acre- thereby meeting the objectives of the developer and landowner, while meeting community objectives for character enhancement. Incorporate a site capacity calculation into the requirements to allow for adjustments of development intensity to actual site conditions. This tool allows sites that are constrained environmentally to develop with a character that is consistent with adjacent neighborhoods.

3. Require tree preservation for residential development and especially for infill development and redevelopment in neighborhoods with mature tree canopies. Required open space ratios and density transfers will allow increased flexibility in subdivision design to avoid loss or disruption of mature stands of existing vegetation.
4. Require drought-resistant species of street trees in all new residential developments, which must be coordinated with utility placement to avoid problems as the street trees grow.
5. Require open space ratios for residential districts to allow sufficient common areas to effectively separate and buffer incompatible adjacent uses. Provide density bonuses to offset the transition area. Create site design and building standards for multiple family developments to ensure compatibility with abutting uses, including consideration for varying building heights, similar roof pitch and composition, increased setbacks along shared boundaries, locations of ingress/egress, and adequate buffering and screening.

- *Objective 3.2.3: Utilize the USGBC LEED for Neighborhood Development (ND) to evaluate the design of proposed residential and mixed-use neighborhoods.*

  The U.S. Green Building Council (USGBC) has developed a building performance rating system entitled, Leadership in Energy and Environmental Design (LEED). There are several categories of LEED with which to evaluate the performance of various types of buildings, including, but not limited to:

  - LEED for New Construction (NC),
  - LEED for Schools,
  - LEED for Healthcare, and
  - LEED for Homes.

  In 2007, the USGBC introduced LEED for Neighborhood Development (ND) as a means of taking the green certification concept beyond individual buildings and applying it to the neighborhood context. Co-developed by the Natural Resources Defense Council, the Congress for the New Urbanism, and the U.S. Green Building Council, LEED-ND takes a broad approach to neighborhood sustainability, reflecting the most current research and ideas about smart, green, sustainable, and well-designed neighborhoods.

LEED-ND contains a set of measurable standards that collectively identify whether a development or proposed development of two buildings or more can be deemed environmentally superior, considering the development's location and access, its internal pattern and design, and its use of green technology and building techniques. These standards include prerequisites (required as a baseline for sustainable neighborhood development) and credits (additional best practice standards for sustainable neighborhood development). LEED-ND encourages strategies that conserve resources such as reinvesting within existing neighborhoods, cleaning up contaminated sites, protecting natural areas, and facilitating connections to the surrounding community. The LEED-ND Rating System is organized into three basic sections:

- Smart Location and Linkage (SLL)—where to build;
- Neighborhood Pattern and Design (NPD)—what to build; and
- Green Infrastructure and Buildings (GIB)—how to manage environmental impacts.

Smart Location And Linkage (Sll): Where To Build

Selecting and planning for the location of development is fundamental to environmental sustainability and an important determinant of how much residents will walk or drive. Even if a building or larger development uses high-performance, green construction techniques, a poor location that destroys natural areas, requires people to drive long distances, or exposes people to toxic substances will likely overshadow the benefits of green construction. Redeveloping previously developed sites and "infill" sites (which are surrounded by previously developed land) is a key smart growth strategy.

As will be discussed in Chapter 5, *Growth Strategies*, building in favorable locations uses land efficiently and preserves open space, ecological areas, and agricultural land around cities. It also tends to cluster housing, jobs, stores, and public spaces together. When these conveniences are within easy reach, it makes public transit, cycling, and walking more feasible and reduces the length of car trips. Good connections for pedestrians, cyclists, and vehicles—both within a neighborhood and to surrounding areas—are essential for a neighborhood to capitalize on a smart location. This means frequent street connections and pathways to surrounding areas, a high degree of internal connectivity, and few barriers—such as cul-de-sacs or difficult-to-cross streets—to adjacent areas and uses. Research shows that walking and physical fitness increase with greater street connectivity, measured by the number of intersections per square mile.

Neighborhood Pattern And Design: What To Build

Once planners or developers have decided where to build, they have to decide what to build. Should there be homes? Shops? Parks? Which activities will the neighborhood be designed for? What will it look like, and how will it feel to walk through? The *Neighborhood Pattern and Design* section of LEED-ND addresses some of these topics. It encourages strategies like walkable streets, diverse and compact neighborhoods, high quality public spaces, reduced dependence on

automobiles, and community participation in design.

While it is important to separate and buffer incompatible land uses there are advantages to mixing residential, commercial, and live-work land uses. The diverse uses of blended neighborhoods tend to support each other and reinforce a sense of neighborhood character, while decreasing the need to travel long distances for goods, services, or work. Uses can be mixed within the same neighborhood—such as when homes are located next to a corner store—or even within the same building—such as live-work spaces or ground-level shops with housing or office space above them.

Additional categories within *Neighborhood Pattern and Design* include Walkable Streets, Reduced Parking and Transportation Demand, Bicycle-Friendly Design, and Mixed Uses and Community Spaces.

Green Infrastructure And Buildings: How To Manage Environmental Impacts

Even if a neighborhood has a great location and layout, it will not achieve excellent environmental performance without thoughtful and innovative green design. The *Green Infrastructure and Buildings* section includes strategies such as incorporating energy and water efficiency, reusing older buildings, recycling materials, reducing stormwater runoff, and eliminating pollution sources.

Beyond actually pursuing LEED-ND certification for a proposed development project, another approach is to evaluate the quality of existing neighborhoods using the LEED-ND checklist. For most neighborhoods, this process will involve three main steps:

Evaluate The Neighborhood

Work with local governments or other community organizations to conduct an audit of a neighborhood using the LEED-ND categories, prerequisites and credits. A checklist at the end of the USGBC publication, *A Citizen's Guide to LEED for Neighborhood Development*, can be used to aid the evaluation.

- Focus on strengths and weaknesses.
  Identify areas where the neighborhood or community performs well under LEED-ND. Where it does not, solicit stakeholder input on community needs.
- Respond with a plan.
  Propose retrofits, targeted redevelopment, infrastructure improvements, or other measures that build on the neighborhood's strengths and address its weaknesses. The level of detail and effort can vary widely—from an informal list of suggestions to a detailed design and policy proposal that becomes the backbone of a neighborhood plan. If a neighborhood is already the focus of a planning effort, participation in that process is essential to ensure that it addresses the needs you have identified and protects the neighborhood's strengths.

GOAL 3.3: REHABILITATE EXISTING HOUSING STOCK.

The condition of structures and the maintenance of properties contribute to the health and welfare of residents, as well as the appearance of neighborhoods and the larger community. Housing that appears in need of upkeep can create the impression that a community is in a state of decline. Freshly painted and well-maintained homes are indicative of a positive community with a promising future. Frequent turnover of residents and the loss of "pride of ownership" are often reflected in how residences are maintained. In areas where smaller, lower-value dwellings have transitioned to rental properties, absentee ownership and/or negligent landlords can also undermine efforts to maintain the quality and stability of a neighborhood. The cumulative effect of inadequate maintenance can undermine whole blocks, as well as entire multi-family complexes.

The community must remain cognizant of its older housing stock as rehabilitation and reinvestment will become increasingly important to the integrity and vitality of neighborhoods within the original City core. There are distinct neighborhood differences as most of the housing in the central neighborhoods is older and warranting reinvestment. Code enforcement and basic building maintenance are critical issues in these neighborhoods. Comments by residents at public meetings indicated concerns about external appearance and the need for removal of blighted properties, particularly in those areas that serve as neighborhood gateways. Some residents suggested the need for stricter regulations or better enforcement of existing requirements. Others emphasized the need to improve basic cleanliness and property maintenance.

Objectives and Actions

- *Objective 3.3.1: Create a proactive program for handling the condemnation, demolition, and/or rehabilitation of substandard structures and underdeveloped property.*
    1. Revise local health, building, and development codes, as needed, to streamline the process for addressing unsafe or dilapidated structures and other potential health and safety risks, such as inoperable vehicles, weeds, and heavy trash.
    2. Employ a pro-active code enforcement strategy that first offers helpful assistance to property owners in complying with municipal codes rather than a punitive approach, so that enforcement resources may be targeted to the worst areas and offenders. This can also involve cross-training of enforcement personnel in conflict management and resolution.
- *Objective 3.3.2: Ensure a variety of housing options, environments, and price ranges to support a diverse population.*
    1. Study the housing market within the City and extraterritorial area to identify existing and projected future shortages - or surpluses - of available housing in different price ranges, thereby allowing formation of near-term strategies to fulfill the market demands. Evaluate the reasons as to the extent of housing development occurring in the peripheral unincorporated areas and make necessary adjustments to

accommodate such development within the City limits. Specifically, create incentives to counter the benefits and fiscal advantages for locating outside the City limits.

2. Amend the existing subdivision manual to incorporate a housing palette into the proposed unified development ordinance, thereby permitting a range of lot sizes within standard development, rather than requiring a planned unit development. The lot sizes would be in addition to the current provisions for 7,000 square feet, one-half acre, and one-acre lots, with applicable dimensional specifications (e.g. lot area, height, and maximum floor area ratios). A palette would act to provide a wide range of options to housing developers, which allows adaptation to market forces and creates opportunity for varying housing styles and price points within the same development. An added benefit of a housing palette is a lean toward avoiding housing and hence, neighborhood monotony.

GOAL 3.4: DOWNTOWN AS A VIBRANT CENTER OF BUSINESS, COMMUNITY ACTIVITY AND URBAN LIVING.

Objectives and Actions

- *Objective 3.4.1: Improve Downtown as a center of business activity, and destination for local residents and visitors.*

1. Prepare a Downtown master plan that is of sufficient detail to result in a regulating plan that illustrates the intended arrangement and form of development. This would include typical building footprints to reflect general character and scale, public spaces and activity areas, and contextual relationships with existing uses and adjacent properties.
2. Utilize the Downtown plan to develop allowable parking configurations, such as mid-block only lots, as well as building form standards including building massing, height, building placement, allowable frontage types and conditions, and allowable encroachments.
3. Form a public-private partnership for revitalization and redevelopment of Downtown. Such partnership would include a role for the City in acquiring and assembling larger parcels of land to allow more sizeable development; vacating rights-of-way and easements, as necessary; conducting studies on the local market, traffic and parking, and design options; and being a mutual investor in projects such as a parking garage. Consider the formation and use of a tax increment reinvestment zone (TIRZ) district, which would define the district boundaries and create a source of funds for capital costs of public works or improvements, new buildings, structures, and fixtures; demolition, alteration, remodeling, repair or reconstruction; clearing and grading of land; and costs for financing, professional services, and administration.
4. Create attractive incentive packages to entice retailers and employers to locate or relocate within the Downtown district. Such incentives may include use of the City's bonding capacity

for major public improvements, tax abatement or rebates for businesses that locate in Downtown and commit to pre-established lease terms, forgivable loans, subsidies to lower Downtown lease rates to make them favorable to other areas in the community, low interest loans and loan guarantees, state and federal grant and loan programs, provision of public parking improvements, and others. Together, the incentives must outweigh the advantages of locating in other areas of the community- or in another community.

- *Objective 3.4.2: Promote Downtown as an alternative residential living environment.*

  1. Pursue the strategies related to promotion of new residential and mixed-use activity in downtown Alvin. Numerous studies have illustrated that when people live in a relatively "urban" environment, they bring new foot traffic to the area (especially on evenings and weekends); additional retail, service and entertainment demands which can spur the immediate market; and expectations for a safe and hospitable environment in which to live, recreate, and host guests and visitors. So amenities and security are both necessary to create a favorable environment for more extensive residential living in and around the City's historic commercial core. Encourage a broad mixture of uses including office and retail commercial businesses, service-related establishments, cultural and entertainment activities, and high-density residential use. To ensure compatible co-existence, establish performance standards regarding lighting, signage, parking, and noise, among other locally determined variables. Allow and create incentives for the use of upper floors of commercial buildings for residential purposes, including important provisions for reserved resident parking, a blend of uses that offer convenient services, and protection from nuisances associated with intensive commercial districts. Seek ways to introduce retirement housing into the Downtown area, thereby offering close proximity and access to services and community amenities.

  2. Designate firm boundaries for the Downtown area, within which high-density housing is permitted without encroachment into the abutting low-density single family neighborhoods. Within the defined Downtown area, concentrate higher intensity residential uses within allowances for increased building heights and floor area ratios. Also allow building conversions from single-family to multiple family dwellings. Higher density residential uses should be located closer to the commercial center with lower density uses across the street and adjacent to single-family dwellings, which will mitigate visual impacts and preserve the neighborhoods environment. In the Downtown fringe, "granny-flat" accessory dwelling units should also be permitted.

  3. Adopt design standards for residential uses within the Downtown and its defined fringe areas to ensure their appearance reflects a more urban character. Specific performance standards should be created relating to building design and articulation, orientation, height, setbacks, parking, and resident access to

ensure compatibility and cohesiveness with the Downtown environment.

- *Objective 3.4.3: Enhance and expand the Downtown to create a village-scaled urban center as a community focal point and an economic destination.*

  1. Transform the existing auto-urban character of Downtown to an urban environment by infilling vacant parcels, eliminating front yard building setbacks and parking lots to create increased building enclosure of the public right-of-way, enhancing the pedestrian environment with streetscape improvements, requiring a minimum height of new structures of no less than two stories with allowances in certain locations for increased height, and attracting uses that are characteristic of a historic center. The intensity of the urban character should be centered at the intersection of Business 35 and Sealy Street for a distance of three or four blocks, with a lessening of density and intensity outward to the defined edges of the district.
  2. Develop design standards for the redevelopment of existing buildings and construction of new buildings to reflect the architectural character reminiscent of the remaining buildings and the community's past. Standards should be created for the height and build of buildings, their minimum floor area ratio, orientation to the street and sidewalk, allowable building materials, design articulation and fenestration, use of awnings and canopies, style and size of signage, and other building and site features.
  3. Create a distinct identity of Downtown, including forming an identifiable edge to the district with monuments and gateway treatments at the entries from each direction (particularly along Business 35 at the northern and southern entries and Sealy Street from the west and House Street from the east), along with unifying design elements, such as unique signage and banners, landscaping, decorative lighting, street and sidewalk/crosswalk patterns, and other unique urban design treatments. Also, improve the pedestrian precinct with traffic calming devices, such as speed tables, roundabouts, or narrowed entrances; street furniture and public art displays; way-finding signage and informational kiosks; public plazas and green spaces; sidewalk cafes and outdoor activity areas; and street vendors. Expand the existing streetscape improvements - lighting and sidewalks - throughout the district. The highest priority corridors for streetscape enhancements include S. Gordon Street and Sealy Street.

GOAL 3.5: ADOPT ENHANCED POLICIES, PERFORMANCE STANDARDS, AND GUIDELINES TO ENSURE HIGH QUALITY AND COMPATIBLE LAND DEVELOPMENT.

Objectives and Actions

- *Objective 3.5.1: Enhance the auto-urban character of Business*

35, S.H. 6, and the S.H. 35 Bypass.

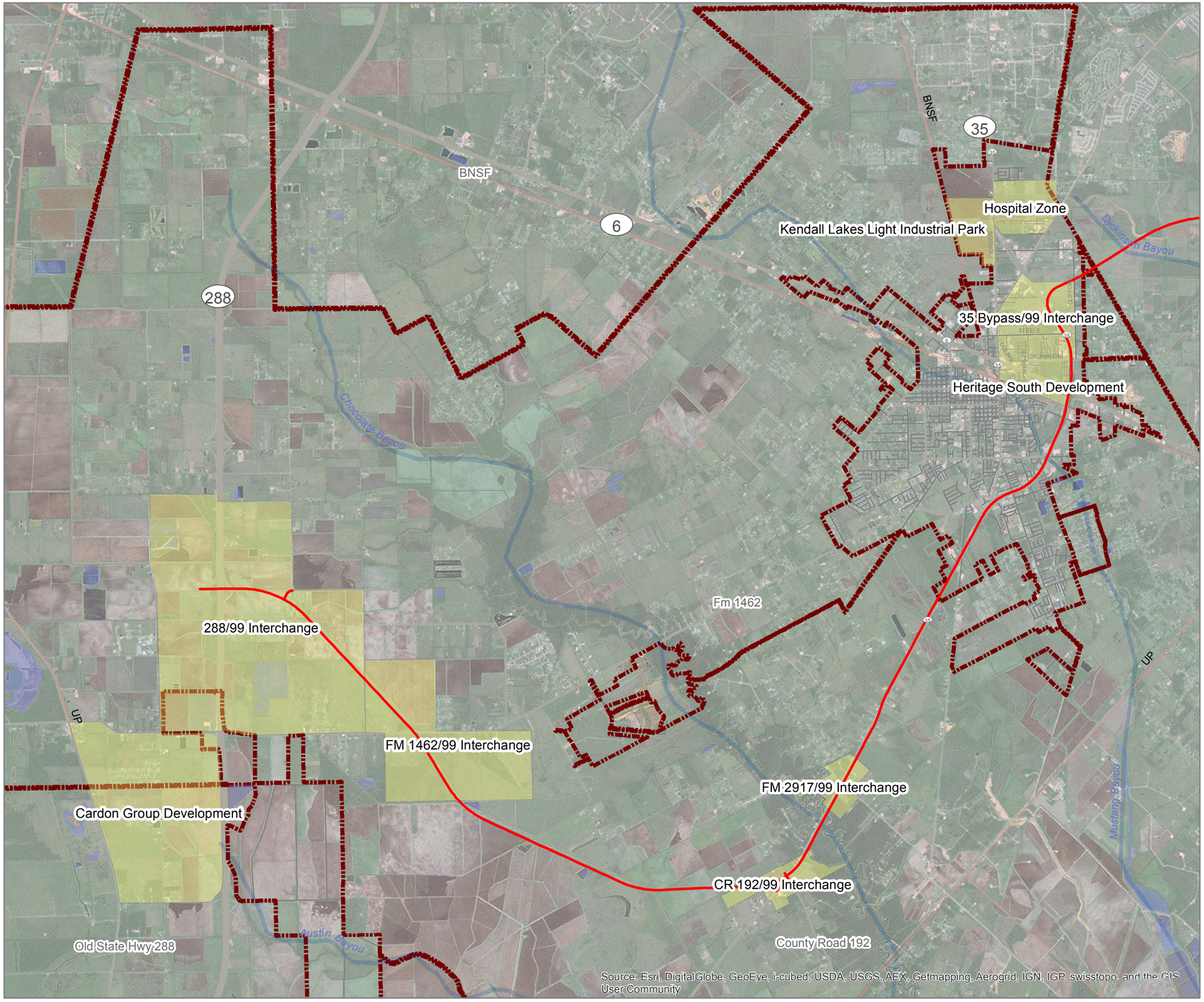
1. Create special performance standards for the properties abutting Business 35, S.H. 6 and the S.H. 35 Bypass, including provisions that may be incorporated into the proposed unified development ordinance pertaining to increased landscape surfaces (adjacent to the right-of-way and throughout individual sites) and reduced impervious surface coverage; floor area ratios; requirements for landscaping, screening, and buffering between uses; outdoor storage, display and use activity; the type, size, number and placement of signs; outdoor lighting standards; building placement and orientation; site access and circulation; and building design and appearance.
2. Utilize the City's capital improvement program to direct the locations of nodes suitable for intensive nonresidential development based upon the availability, sizing, and timing of adequate water, wastewater, drainage, and transportation improvements. Such programming of capital improvements should be designed and scheduled to accommodate the City's economic development potential. Such strategy is not intended to slow nonresidential development, but rather, to direct development intensity to locations in the community that are suitable and appropriate for such use, and where the infrastructure systems may be adequately designed to meet the requisite demands of business and industry. The identified locations of significant nodes are the intersections of the S.H. 35 Bypass and F.M. 528, S.H. 6, and F.M. 1462 and to a lesser extent, at the intersections of S. Gordon Street and S.H. 6 and South Street.

- *Objective 3.5.2: Delineate development performance zones within which enhanced standards and development guidelines can regulate development quality and ensure compatibility.*

  As new development or redevelopment plans are proposed, City staff and the Planning Commission, together with the City Council, should take the policies and recommendations of this Comprehensive Plan Update into consideration. The proposed policies within this chapter and the methods for regulating development character and quality, outlined within **Appendix A, *Land Use Supplement***, coupled with the strategies outlined within Chapter 5.0, *Growth Strategies*, should weigh heavily in future decisions by City officials, residents and other stakeholders in achieving the shared community vision and ensuring quality development that is compatible with existing land uses and the small-town character of Alvin.

  As illustrated in **Map 3.3, *Development Performance Zones***, the proposed construction of Segment B of the Grand Parkway will require new interchanges with existing thoroughfares and subsequently will provide access to thousands of acres of currently undeveloped land. As previously discussed there are several significant mixed-use development projects that are proposed, including the new hospital and nursing complex, the Kendall Lakes Industrial Park, the Cardon Group Development and the Heritage South development program. These proposed developments will

Map 3.3
Performance Development Zones



Performance Development Zones
Grand Parkway Proposed Alignment (2014)
Rivers and Streams
Water_Features
Railroad

KENDIG KEAST COLLABORATIVE

* DISCLAIMER: This graphic representation depicts generalized areas for informational and long-range planning purposes only. The illustration may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property and other boundaries. Data is not guaranteed for specific accuracy or completeness and may be subject to revision at any time without notification.

N

0 0.425 0.85 1.7 2.55 Miles

likely stimulate additional development in immediate proximity to the proposed development sites. As new commercial and office development occurs within these areas, it is strongly recommended that development performance zones be established, within which enhanced performance standards and development guidelines can regulate development character, quality and compatibility with the development. **Appendix B, *Development Guidelines***, provides an outline of proposed design guidelines for mixed-use commercial and office development ion Alvin, as well as exemplifies specific criteria and dimensional standards. The degree to which each standard applies to a development project should be evaluated on a case-by-case basis in an effort to achieve a high-quality, unified design character that meets the City of Alvin's intent of encouraging superior project design that will attract a wide variety of appropriate businesses to the community; which, in turn, will stimulate job growth and economic vitality within the City of Alvin and the proposed Grand Parkway corridor.

GOAL 3.6: ADOPT POLICIES, REGULATIONS, INCENTIVES, AND PROCESSES THAT CONSISTENTLY REPRESENT THE VISION AND DESIRED CHARACTER OF THE COMMUNITY.

Objectives and Actions

- *Objective 3.6.1: Conduct regular reviews and periodically amend the Comprehensive Plan and its implementing regulations to reflect changing conditions.*
    1. AS discussed in Chapter 6, *Implementation*, perform annual plan evaluations by staff and the Planning Commission to review and assess the Comprehensive Plan and make amendments, as necessary, to evaluate its consistency with recent development, infrastructure improvements, and policy decisions of the City Council. Subsequently, prepare minor amendments to the plan and submit them for public review and comment through a formal hearing process. The City Council must approve the plan amendments and adopt a resolution of approval.
    2. Every five years, an evaluation and appraisal report should be prepared, which involves a thorough review and appraisal of the plan's goals, objectives, policies, and recommendations, as well as a reassessment of the overall community vision. This appraisal process should involve a detailed evaluation of changing conditions and characteristics possibly causing reassignment of policies and priorities, the ability to successfully implement the plan's recommendations, identification of inconsistent or conflicting direction with other plans and ordinances, and re-prioritizing the recommended actions with implementation task assignments and funding strategies.

- *Objective 3.6.2: Review and revise ordinances to effectively implement the Comprehensive Plan.*
    1. Conduct a thorough review and critique of the City's subdivisions and property development manual, subsequent to the adoption of the Comprehensive Plan, to ensure the ability to enact its policies and objectives. A comprehensive ordinance review should evaluate the benefits and limitations of all existing development-related regulations and provide a constructive review and specific recommendations concerning potential code amendments. The review should give recommendations for the overall code organization, format, readability, and general "user-friendliness," as well as the overall effectiveness of the ordinance in guiding development and achieving the community's long-range planning goals.
    2. Perform annual reviews of the City's development ordinances and make amendments, as necessary, to reflect recent changes in development policy established by land use and growth policy decisions of the Planning Commission and City Commission.

General Principles

The following general urban design principles inform the development guidelines outlined in Appendix B:

- *Livable Neighborhood Scale*. New development should reflect the pedestrian-oriented character of nearby neighborhoods, with small blocks, a compact, fine-grained building pattern, and good quality streets and public spaces.
- *Links to Existing Development*. Street and visual connections should be designed to connect new development with existing development. Access through the site should be public and inviting, and the design of the streets, open spaces and buildings should reinforce the concept that new development is an extension of the surrounding community, embodying and perpetuating its landscape and community character.
- *Pedestrian and Transit Orientation*. New development should reflect a pedestrian-oriented community that encourages alternatives to auto ownership and usage to the greatest degree possible. Pedestrian, landscape, signage, and lighting systems shall be integrated within the overall development. Streets, open spaces, and buildings should relate to each other in a way that provides the overall development a sense of hierarchy, order, and orientation. Buildings and their frontages should be designed with their abutting streets and open spaces in mind and vice versa. The quality of office park development and character should be improved and sustained by:
    - Planning the site as a whole, even if only a phase is to be built immediately;
    - Establishing common architectural design themes for buildings, signage, walls, and landscaping treatments;
    - Effectively separating uses within a development, such as customer and employee parking from truck and loading access;
    - Locating loading areas away from residential uses;
    - Establishing a unified streetscape treatment for internal streets,

using such devices as common street trees, common sign design / location, and lighting systems.

- *Building Materials*. Buildings should provide a strong sense of permanence and quality. A well thought out application of detailing also enables a building to endure over time. Materials should be durable, well-coordinated across the building, and honestly applied. Special attention must be given to material at the pedestrian level.

Community Character

There is an essential difference in evaluating the current development pattern from the perspective of land use, as opposed to community character. Simply conducting an inventory of uses and classifying them according to their functional use, such as low- and high-density residential, business, commercial, industrial, and public/quasi-public uses, does not account for the widely varying characteristics of these uses as to the physical character that is portrayed. Individual uses that may otherwise be classified similarly may exhibit two very different characters as a result of their scale and design. For instance, a neighborhood grocery store and Wal-Mart both sell groceries and are both commercial uses, but their characters are entirely different. A community character assessment, therefore, examines the generalized use of properties, but further categorizes these uses into character classes and types according to such factors as density (generally determined by lot size and building coverage), ratios of landscape surface and impervious cover, and the amount of vegetation or volume of landscaping.

The influence that uses exert on other uses and the impacts associated with their operations, which are individually unique, have important implications on development outcome and, thus, quality of life. Therefore, the character of uses -- individually and collectively -- have essential land use policy implications that must be handled according to their performance in the context of their natural and built environments to achieve the intended quality outcome.

To protect and enhance Alvin's character, this plan must articulate the land use components and development design elements that contribute to its "small-town" atmosphere. Once the plan establishes the goals and policies, the City must consider how to implement the plan and achieve its vision. This may include amendments to the subdivision regulations and consideration of a unified land development code to better manage the pattern, densities, and intensities of uses. Implementation tools are essential to ensure development occurs in a manner that is consistent with the vision of this plan- and, more importantly, the residents of this community.

Character Considerations

Residents of Alvin cite its small-town atmosphere, proximity to Houston and the Texas Gulf Coast, access to quality primary (exemplary accountability rating by the Texas Education Agency) and local higher learning institutions (Alvin Community College), well-maintained parks and recreation areas, and strong family values as its most valued assets. They enjoy the benefits of a small town located a reasonable distance from more populated areas. The expansive countryside surrounding the

community and its agrarian uses contribute to its small-town community character. Residents have a strong sense of pride in their community and enjoy it as a place to live and raise a family. This Comprehensive Plan must, therefore, translate these intangible values into future development and growth strategies so that future decisions enhance, rather than deteriorate, these important community values.

With growth of 13.18 percent since 2000 and an increase in population of roughly 2,823 persons between 2000 and 2010, there has been a modest amount of new development within the community. The development that has occurred has primarily been new residential neighborhoods in the areas around the periphery of the community (along Mustang Road and to the southwest on either side of South Street) and new commercial businesses along S.H. 6 and S.H. 35 Bypass. While these new developments have contributed to the character of the community, there remains concern on behalf of citizens as to the continuous aging of housing and neighborhoods, as well as to the integrity and physical appearance of the long-standing nonresidential uses throughout the community.

The purpose of this plan is to establish a policy framework as to how the community grows and the pattern, type, and appearance of new development. Affecting the City's ability to realize their vision is the lack of an implementation tool to manage development consistent with the community's vision and expectations. Without pro-activeness on behalf of the community to exact control over its own destiny, there is reason for concern regarding continued decline in the social and economic stability of the community. Haphazard development will negatively impact the character of the community without a concerted effort to manage its placement relative to adjacent uses, as well as its appearance and design. The community must also reinvest in older neighborhoods, rehabilitate the housing stock, revitalize Downtown and other business areas, protect natural resources and sensitive lands, provide development incentives and assistance for improving businesses and properties, continue to upgrade and improve municipal infrastructure, and further enhance community livability with additional parks, trails, and open space amenities.

Even with a proactive approach to land planning and development design, there remains a natural impact to Alvin's small-town character. Growth itself, while a positive indicator of economic stability, will shift the character of the community. Acknowledging the benefits of growth and development and their importance to sustaining the local economy, this plan must seek to sustain the traits that contribute most significantly to the valued characteristics of Alvin, such as its tree-lined streets, parks and open spaces, stands of mature vegetation, resources such as Mustang Bayou, and segments of its built environment like the historic downtown area.

Community Form

There are two basic forms of communities, including a *freestanding community* like Alvin that is separated from its neighbors and has a surrounding rural character. A freestanding community has an observed edge - although not always clear - that enables visitors to form an

identity of the community. This type of community is quite different from a *composite community*, which is formed when communities grow together, thereby making it difficult to identify one community from another. In the latter case - as in suburburban communities like Sugar Land, Stafford and Missouri City to the north along S.H. 6; and League City, Friendswood and Pearland north along S.H. 35 - there are no clear edges, leaving each community without an individual identity.

Creating a permanent identifiable edge to the community through clearly defined gateway improvements, preservation of permanent open space, and strict protection of the rural character will collectively form an "edge" to the community, thereby giving it form and definition. Sporadic development stretching outside of the City limits, such as that which is increasingly occurring along both S.H. 6 and S.H. 35, blurs the entrance and sense of arrival into the community. Controlling both the pattern and type of development in these areas will help to form a positive first impression and signify a formal entrance into the community.

Alvin is situated such that a transition to a composite community is becoming increasingly possible as Manvel, League City and Friendswood sprawl closer each year. While the City does not have control over the land use and growth policies of its neighbors, it has the discretion of forming its own definitive boundary, thereby allowing it to maintain a freestanding and unique identity. However, doing so will require near-term policy and regulatory decisions to define the limits of community growth. While the outward growth of League City and Friendswood may pose the most near-term threat to Alvin's community form and, hence, character, the amount of rural estate and countryside development occurring around the periphery and throughout the ETJ also presents a real challenge to the community. This area is within the subdivision authority of the City, thereby offering an instrument by which the community may influence the pattern of development.

Types of Character

The core values of the community were identified through the input received from the Citizens Advisory Committee and stakeholder listening session participants. The values that most clearly reflect the desired future vision of Alvin are to be an economically balanced, well-educated, clean and attractive, family-oriented, small-town community that has its own uniqueness and identity. To achieve this vision, a means of converting this statement of future intent into land use policies and implementation must be formed. An inventory of existing land use character was used to characterize existing development and document the general patterns of use and design features that form the character of development and identity of the community as a whole. Once the existing character is known, standards may be formulated to alter the character of certain areas and enhance others.

Each of the community character types described below is present in Alvin with varying degrees of significance. Those that are more readily identifiable include the indication of urban character along S. Gordon Street in the immediate Downtown area; the auto-urban nature of commercial and industrial development along S.H. 6, S. Gordon Street (Business 35), the S.H. 35 Bypass; and the suburban character of neighborhoods throughout the community. In addition, there are a

few higher density manufactured home communities and apartment complexes that exhibit an auto-urban residential character, which are scattered throughout the community. The outlying areas around the community are agricultural and increasingly rural estate and countryside in character. The range of community character types and their functions are as follows:

URBAN CHARACTER

In communities like Alvin, the only remaining areas with any indication of an urban character are the remnants of its historic Downtown. These areas were traditionally a center of commerce, culture, and entertainment in the community. With the advent and increasing popularity of the automobile, its reflection on the patterns of contemporary communities has led to an auto orientation of nonresidential use in strip centers along highways and arterial streets. Hence, urban areas have declined, leaving behind only portions of what may have existed at one time. However, the value of the urban character is once again being recognized and, as a result, is returning to communities of all sizes. A mixture of uses, most often with first floor commercial and upper floor residential use, streets enclosed by buildings, an emphasis on pedestrian scale, and public spaces, are characteristic of the urban environment. An urban center is designed with an intensity of use to draw people into close contact, where congestion and personal encounters are both expected and essential for creating a vibrant community center.

Urban spaces are "architectural," meaning that they are enclosed by buildings and therefore possess a defined volume of space. In other words, the distance across a space, e.g. the width of a downtown street in relation to height of the block face, is essential for creating an "urban" environment. This environment is formed Downtown by the block faces on either side of S. Gordon Street north of Willis Street. These buildings have a consistent height of two stories and are abutting the right-of-way with only a pedestrian pathway (sidewalk) separating them. The distance-to-height (D/H) ratio at this cross-section offers enclosure that is characteristic of an urban environment.

The block face along S. Gordon Street south of Willis Street is the only portion of Downtown that reflects an urban character. The rest of the larger Downtown area is more characteristics of an auto-urban character as a result of single-story building heights, increased building setbacks, parking lots abutting the street right-of-way, and signage that is oriented to the attention of the passing automobile. However, the urban character could be greatly enhanced by an increase in population and employment density along S. Gordon Street, Sealy Street, and throughout the Downtown area, extending the streetscape enhancements to further improve the pedestrian orientation, and creating additional public plazas and gathering areas.

AUTO-URBAN CHARACTER

This character type represents all of the commercial and industrial areas throughout the community. It is most commonly associated with the auto-oriented retail strip centers and small commercial sites along each of the major roadways. Fast food restaurants, gas stations, small

shopping centers, and big-box retailers, like those found along S.H. 6, increasingly along the S.H. 35 Bypass, and particularly along S. Gordon Drive, are the dominant commercial images of an auto-urban character. Higher density residential uses, such as attached and multiple-family housing, manufactured home communities, and site-built homes on very small lots also have this character due to their density, limited open space, relative amount of impervious surface devoted to buildings and parking lots, and increased building enclosure.

The primary difference in urban and auto-urban characters is the role of the automobile in its site design. Rather than buildings oriented to the street, as in an urban setting like that found to a certain extent in Downtown, auto urban environments are characterized by large expanses of parking surrounding large building footprints with limited allowance for landscape surfaces.

Although the development intensity of auto-urban areas is usually less than that found within an urban setting, this is commonly due to lower land values and design preference, rather than an outcome of local regulation. Auto urban uses require a significant amount of space for high levels of automobile dependent interaction, i.e., large surface parking lots with multiple points of ingress/egress, service and loading areas, etc. As a result, buildings are constructed at the back of the site nearest neighboring uses and away from their roadway frontage. This is often the result of large setback requirements in local ordinances. Auto-urban uses also have a greater reliance on site access, thereby adding to the number of ingress/egress points. The result is expansive parking areas that dominate the front setback and, thus, the character of the development.

The impact of accommodating the automobile, as is typical of contemporary development, is a primary determinant in the character of an auto-urban environment. Auto-urban uses - with very few exceptions - consume more land for streets, parking, and other vehicular use areas than is covered by buildings, which commonly exceeds a two-to-one ratio. This type of development design demands large sites and proximity to a high volume roadway, which diminishes the importance of architecture and results in reduced landscape surface and elimination of natural features.

SUBURBAN CHARACTER

This community character type is very different from the urban and auto-urban types. The distinguishing factors of a suburban character are an increase in open space - both on individual sites and cumulatively throughout a development - and the preservation or use of vegetation within and between developments helping to create a balance between building mass and "green mass." Rather than creating a sense of enclosure by buildings, as in an urban environment, trees and vegetation form a very different sense of enclosure. Therefore, landscape surface and vegetative cover are essential elements in creating suburban character.

The physical distinction between a suburban and urban (or auto-urban) character is the level of use intensiveness or magnitude of activity affecting adjacent uses. Suburban environments are sought as relief from more intensive urban settings, thereby leading to the popularity

of contemporary neighborhoods denoted for their larger lots and open spaces.

There are numerous examples of suburban character throughout the community. Perhaps the best examples are the more mature neighborhoods. In these areas, tree-lined streets and a blend of traditional housing styles help to form its attractive character. While the newer subdivisions also exhibit a suburban character, they are quite different from more traditional neighborhoods as a result of the curvilinear street patterns, contemporary "box-like" housing styles, consistent setbacks, and lack of vegetation. Enhancing the suburban character of these areas may include varying lot sizes, housing styles and setbacks; integrating more open space throughout the developments; and the preservation or use of vegetation along streets and on each lot to increase the vegetative cover.

All too often, the open space that contributes to a suburban character of a neighborhood is abutting land that is not yet developed and with open views that are not yet closed. As in the case of many neighborhoods in Alvin, particularly those that are on the edge of town or currently abut vacant land, the adjacent views that contribute to the small-town character are largely temporary, rather than permanent. The natural open space and views of the landscape are "borrowed" from the adjoining land. Consequently, as development occurs in these previously open areas, the character of the existing neighborhood also changes. In Alvin's case where there are no land development regulations to ensure compatible adjacent uses; the magnitude of character change may vary greatly depending upon the use type developed next door. This is a vital consideration for the protection of neighborhoods and values of residential properties.

A large majority of the neighborhoods in Alvin have views of "open space" across the street or behind their lots. Additionally, the surrounding agricultural land further contributes to the value and enjoyment of homeowners and their value for preserving a small-town character. However, as new development occurs in these "borrowed" areas, it is likely that there will be a heightened dissatisfaction of homeowners when the adjacent land develops, particularly since they have no public process or recourse to alter the eventual outcome. Therefore, to maintain these views and achieve the type of character expressed emphatically by residents, permanent open space must be incorporated into each development. One means of achieving this character is by clustering development, which allows equal or higher density, while preserving permanent open space.

Suburban estate (large-lot) character is not common within the City limits, although it is common in the peripheral areas around the community. An estate character requires low-density development on larger properties (typically one acre or larger), thereby producing a visual openness. As a result of larger lot sizes, open space and vegetation are intended to be the more dominate views, while the buildings are to be apparent, yet secondary to the landscape. Dependent upon the size of the home and its percent of coverage and location on the lot, the estate character may more closely resemble a larger version of the typical suburban character. To achieve an estate character, the design of these subdivisions must actively seek to imitate more rural areas through the use of rural street sections

without sidewalks, vast open space throughout the development, use of rural fence types and/or hedgerows to divide properties, preservation or planting of native vegetation along property boundaries, and generous building setbacks on all sides.

RURAL CHARACTER

This character class includes three types - countryside, agricultural, and natural. The areas surrounding Alvin are typical of a rural character as a result of the community's freestanding nature and the prevailing agricultural landscape. Similar to the transition from the urban to suburban character classes, the visible distinction of the rural character is the importance of the natural landscape - rather than buildings - as the dominant visual feature. Agricultural activities and natural areas are the dominant land use, rather than conventional suburban and estate residential development.

- *Countryside Character* – This type of rural character includes space residential acreages, which are often in the ex-urban areas (the areas beyond the City limits) where the first signs of suburbanization are present. Examples of a countryside character may be seen in the outlying areas around Alvin where dwellings are on larger acreages. The common fate of these areas is often an eventual conversion to a suburban estate (more dense) character as additional acreages are developed in near proximity to these rural areas. Very low intensities (minimum five-acre lot size) are needed to preserve a countryside character, which can be achieved by vegetative screening and locating homes where they are less visible. This character type may be sustained through stringent limits on minimum lot sizes or permanent protection of prime agricultural land and open space.
- *Agricultural Character* – The character of these rural areas is dominated by agricultural use where homes are an accessory to the agricultural operation. Agriculture may also be a dominant land use in the "countryside" areas, which accommodate a rural residential lifestyle, while allowing agricultural use to continue. In the more rural areas, it is the intended and nearly sole use. The landscape is accented by farmsteads, barns, fences lining farm fields and areas for livestock, and a virtually unbroken horizon. These elements contribute to its rural character.
- *Natural Character* – The character of natural rural areas constrain development due to features such as streams and floodplains or large, heavily vegetated areas. These areas are found along Mustang Bayou, adjacent to other drainage areas within the floodplain, and scattered throughout the planning area.

Managing for Future Development

During the process of developing this plan there was resounding support of the community to proactively plan for the future. Beginning with the Citizens Advisory Committee and stakeholder listening sessions, citizens voiced their preferences to sustain the small-town atmosphere, preserve the historic character of downtown, conserve environmental resources, set aside valued land for parks and public open space, protect neighborhoods from encroaching incompatible development, enhance the appearance and identity of the community, and coordinate timely

provision of adequate public facilities and infrastructure. The purpose of this plan is, therefore, to explore the implementation options for achieving each of these objectives and to provide guidance for future decision-making.

LAND USE COMPATIBILITY

Over the years, since the development of Alvin's 2005 Comprehensive Plan the consensus is that there is general support to limit the degree of impact on adjacent uses. There are several alternative techniques for mitigating impacts, as discussed elsewhere in this chapter and in Appendix A, *Land Use Supplement*.

Policies for Future Development

GENERAL

This chapter is intended to be used as a policy framework to guide development and redevelopment in a manner that will positively contribute to the community's character and, hence, economic development, environmental sensitivity, and livability. Well-managed growth and orderly development leads to more effective use of limited public funds in providing adequate public services and needed capital improvements. Through proactive and effective land use planning, design, and regulation, the City may fulfill its primary responsibility to promote the public health, safety, and welfare of the community and its residents.

The following policies are statements of the City's intentions for managing its future growth and development character. These policies reflect the future vision of the community and its land use pattern. Together with the goals, objectives, and recommended actions, outlined above, these policy statements will serve to guide decision making by the Planning Commission and City Council as they implement this Comprehensive Plan.

- Provide a range of different land use character types in suitable densities and arrangements that are responsive to market trends and demands and consistent with local values and sound land use planning principles and practices.
    1. The City should encourage new development and significant redevelopment where adequate public services and utility capacity are already in place or projected for improvement
    2. Effectively manage future growth to achieve a compact and fiscally responsible pattern of development.
- Land uses should be arranged to minimize situations in which development on certain properties detracts from the enjoyment and value of surrounding and nearby properties.
    1. Mixing of incompatible uses on individual parcels in close proximity should be avoided. Mixed use developments, where practical, should be planned and coordinated so as to seek harmony in the physical appearance of the development and to appropriately coordinate a blend of uses in a compatible manner.

2. Development patterns should provide for transitions and buffering between various land use intensities. Where land uses of incompatible intensities abut, there should be adequate bufferyards (landscaping and screening) to separate them. Residential areas should not be situated next to intense nonresidential uses without provisions for increased separation and buffering. Less intense nonresidential development may be appropriate next to residential development with regulatory performance standards to mitigate adverse impacts.
3. Potential adverse impacts on adjacent land use types should be considered in the City's development review process (including factors such as noise, odor, pollution, excessive light, traffic, etc.).
4. New development or redevelopment on "in-fill" parcels in developed areas should maintain compatibility with existing uses and the prevailing land use pattern in the area.
5. The City's land use pattern should focus new development and significant redevelopment where adequate public services and utility capacity are already in place or projected for improvement, including streets, water, wastewater, and drainage infrastructure.
6. Areas of historic value should be maintained and enhanced in accordance with preservation guidelines and development standards.
7. Land uses with heavier traffic generation should be located on higher-capacity roadways to ensure safe and appropriate transportation access and circulation.

- Future development and redevelopment should be planned and implemented with appreciation for the physical environment and natural features of the community and with recognition of potential physical constraints to ensure appropriate siting of various types of development.
  1. Urban development should not encroach into floodplain areas unless there is compliance with stringent floodplain management practices to maintain adequate capacity for storage and conveyance of flood waters.
  2. Floodplains and other environmentally sensitive or valuable areas should be reserved as natural areas and "greenbelt" preserves for wildlife and recreation, whenever possible, and used as open space buffers between incompatible land uses, whenever appropriate. Development should not occur within floodplains unless there is compliance with stringent floodplain management practices.
  3. The City should enhance the character and aesthetic attractiveness of the community and its neighborhoods, districts and corridors. Land uses with unusual characteristics or a higher likelihood of raising compatibility issues should be subject to more focused review and approval through a special approval process. Reasonable conditions or permit provisions should be applied to mitigate potential adverse impacts on

nearby properties and uses.

Residential Development Policies

- Provide suitable areas for a variety of residential types and densities.
  1. Appropriate locations for single-family and multi-family residential development should be provided based on accessibility, site suitability, utility availability, and environmental factors.
  2. A variety of housing types should be encouraged to promote an affordable and diverse community.
  3. Portions of the community should be reserved for uniform development of a specific housing type (e.g., detached single-family dwellings, duplexes, townhomes, patio homes, apartments, and manufactured homes), while blending of residential uses should be allowed in other areas to suit the differing tastes of housing consumers, but with reasonable development standards to ensure compatibility.
  4. Manufactured home parks and subdivisions should be accommodated in suitable locations to encourage clustering of this residential land use type and provision of recreation space and other amenities.
  5. A portion of the community should be reserved for development of single-family homes on larger than typical lots, especially where lower residential density and limited road improvements will contribute to preservation of environmental assets, scenic vistas, or valued agricultural land, or where individual wells and on-site treatment systems will remain the primary means of water and wastewater service.
- Maintain the integrity and preserve the character of existing and future neighborhoods by protecting them from encroaching incompatible uses that may detrimentally affect the value and enjoyment of residential properties.
  1. Residential development should be oriented away from major highways and primary streets without adequate transitioning standards and situated within the roadway network and relative to other land uses so as to minimize high volumes of through traffic.
  2. Residential areas should not be situated next to intense nonresidential uses without provisions for increased separation and bufferyards. Less intense nonresidential development may be appropriate next to residential development with performance standards to mitigate adverse impacts.
  3. Multiple-family housing should be developed at a density and scale that is compatible with the surrounding neighborhood and available utilities and roadway capacity. Larger multi-family developments should be located on sites with adequate space for off-street parking, accessory structures, and recreational activity, and toward the edge of single-family residential areas where higher traffic generation and taller building heights can be better accommodated.

4. Smaller scale commercial development should be accommodated at selected locations within or at the edge of residential neighborhoods to address retail and personal service needs of nearby residents in a convenient and accessible manner.
5. Elementary and middle schools should be located toward the center of neighborhoods along collector and local streets, within close walking distance for most children.
6. Senior high schools and larger middle schools should be located near arterial streets with primary access to a collector roadway to adequately manage access and limit adverse impacts on residential neighborhoods.
7. Manufactured homes should be accommodated on individual lots amid conventional site-built homes in areas where this mixed residential land use pattern already exists and is acceptable to neighborhood residents, especially where smaller-size lots are prevalent.
8. Uses that commonly have moderate- to large-scale assemblies of people such as churches, funeral homes, membership organizations, and other institutions, should be appropriately located on adequate size parcels with sufficient space to accommodate the off-street parking and accessory needs. Such uses should be located so as to minimize any adverse or undue significant burden on adjacent or adjoining land uses, as well as that portion of the street network.

Commercial / Office Development Policies

- Locate new commercial developments near existing commercial areas or clustered in newly-developing areas to serve consumer demand and ensure accessibility, while buffering nearby residential uses from adverse impacts.
  1. Portions of the community should be reserved strictly for commercial activity to accommodate a variety of wholesale, retail, service, and office uses where the highest traffic volumes and greatest utility demands can be served and more extensive signage and outdoor display of materials will be expected and permitted.
  2. Commercial development should be concentrated in nodes at major intersections and other appropriate locations along highway frontages and primary roadways, as opposed to scattered and/or “strip” development, to encourage more pedestrian-oriented commercial settings.
  3. Smaller scale neighborhood retail and service uses should be located at intersections of collector and arterial streets and at the edge of logical neighborhood areas- or within neighborhoods where suitable sites exist and conditions are appropriate to balance compatibility with convenience.
  4. Low-intensity office and professional uses should provide a transition between residential areas and more intense uses, with reasonable building height limitations and adequate buffering and landscaping to ensure compatibility.

5. Light- to medium-intensity commercial development should be encouraged along roadway corridors to buffer adjacent residential neighborhoods from more intensive uses and corridor activities.
6. Adequate setbacks and buffering should be provided where commercial development abuts nearby residential areas, especially where outdoor display and/or storage occurs.
7. Commercial uses with more intensive operational or traffic service characteristics should be located away from residential areas.
8. Larger commercial developments should be located on sites that are large enough to accommodate adequate off-street parking, circulation drives, and necessary building setbacks and landscaping.
9. The City's development ordinances should promote the viability of older commercial properties, as well as new commercial development.

- Designate areas that can support industrial development, while avoiding adverse impacts on other land use types.
  1. Portions of the community should be reserved strictly for industrial activity to accommodate the most intensive manufacturing and warehousing uses with the least likelihood of disturbing non-industrial land uses in the City.
  2. Industrial development should be located so as to have good access to major highways and primary streets, truck routes, railroads, and hazardous material routes.
  3. Adequate separation and buffering should be provided whenever industrial development occurs within range of other land use character types.
  4. Industrial development should not be directly adjacent to existing or anticipated future residential areas without provision for adequate bufferyards.
  5. Industrial activities should be conducted within enclosed structures, whenever possible, and outdoor activities and/or storage should be properly screened from public view.
  6. Public uses that are industrial in nature (e.g. public works facilities/yards, vehicle storage and maintenance sites, treatment plants, and utility substations) should be located appropriately to minimize impacts on other nearby land use types and include effective screening and buffering.
  7. Higher-quality industrial and heavy commercial development should be encouraged in industrial park settings (e.g. lower intensity uses, enhanced exterior elevations, increased amenities, and open space).

CROSSROADS 2035

Chapter 4

Parks and Recreation

City parks are dynamic institutions that play a vital, but not fully appreciated or understood role in the social, economic, and physical well-being of America's cities and residents. Notable landscape architect Frederick Law Olmsted designed America's first urban parks in the 19th Century. These green spaces provided relief from the stresses and strains of city life and brought people together across social, economic, and racial divides. During the post-World War II years people shied away from urban centers, preferring suburban homesteads with spacious yards. During these years the quality of the nation's park systems suffered enormously from lack of investment and interest. Many parks today have yet to fully recover.

As cities across the country find that populations are being attracted back into the city and its urban core, revitalized park systems and recreation facilities are becoming central themes of this urban revival. They are not only safe and beautiful, but parks also aid in addressing critical urban issues from health and housing, to education and tourism—all of which are discussed in greater detail throughout the chapter.

Purpose

The purpose of this chapter is to address the community's current parks and recreation needs and preferences through the preparation of a systematic program to guide ongoing development and enhancement of the system, while evaluating and quantifying anticipated future requirements. This element serves to provide guidance as to the methods

Parks and Recreation Accomplishments Since 2005

- 2014 - Conceptualization of the Tom Blakeney, Jr. Hike and Bike Trail Phase III
- 2013, 2012, 2011 - "Playful City USA" by the non-profit organization KaBOOM!
- 2013 to Present - Recipient of grant funding from Brazoria County to construct nature-oriented, educational amenities at National Oak Park
- 2013 - Dog Park Construction
- 2012 - Alvin Skate Park
- 2011 - Completion of the Tom Blakeney, Jr. Hike and Bike Trail Phase II
- 2010 - Briscoe Park Renovations Completed
- 2007 - "Agency of the Year" by the Texas Recreation and Park Society
- 2005, 2008, and 2012 - "The Governor's Community Achievement Award" for conserving and enhancing the natural resources of Texas by the Texas Department of Transportation and Keep Texas Beautiful, Inc.

These accomplishments set the stage for bigger and bolder initiatives in the future, all of which contribute to the quality of life and economic wellbeing of Alvin's citizens.

for acquiring parks and open space; sources of funding available for development and maintenance; identification of existing and future "need areas," both within the City limits and extraterritorial area; types and qualities of facilities; and the general timing of enhancements and improvements. This chapter is intended to guide the City's short-term decisions and long-range planning efforts for developing a "first class" public parks and recreation system for the City of Alvin.

Parks and recreation facilities are an essential part of a healthy, quality, and sustainable community environment. They provide necessary components in human existence for events outside of the home, after work, and beyond school activities. Whether for passive or active use, park areas and recreation facilities are an important part of everyday life. Much like streets and sidewalks, water and wastewater lines, drainage facilities, police and fire equipment, and other municipal facilities and services, parks and open space are an integral part of the municipal infrastructure. Therefore, parklands and facilities warrant an equal level of attention and commitment of resources to adequately acquire, construct, operate, and maintain.

A comprehensive and interrelated system of parks and recreation opportunities that respond to the needs and values of the local residents contribute to a community's livability. Parks and recreation opportunities contribute to the health of residents, provide a variety of recreational and educational activities for all ages, and preserve and enhance the quality and integrity of the natural environment. Parks and recreation opportunities are also significant in attracting visitors to the community and, thus, contribute to local tourism and economic development.

There are several reasons why the parks and open space that are discussed within this chapter are important and worthy of municipal investment, including the following:

- Parks and open space investments contribute to the community's livability and quality of life, which in turn enhances its attractiveness as a place to live and conduct business;
- Well-maintained, high-quality parks and open spaces improve the appearance of the community, which help form a positive and desirable image of Alvin to visitors and investors;
- Parks provide areas and facilities for the community's youth as well as its adults and seniors to achieve their active and leisure recreation needs;
- Parks contribute to a healthful community lifestyle by enabling citizens to utilize parks and trails for sport and exercise;
- Parks satisfy the interests of local recreation leagues and activity groups who utilize these facilities for athletic events and social interaction; and
- Parks preserve valued open space and sensitive lands for the benefit and enjoyment of future generations.

City of Alvin Parks Administration

It is the responsibility of the City of Alvin Parks and Recreation Department to:

- Oversee the development and construction of all City parks and recreation facilities;
- Oversee building and lawn maintenance for all City structures and facilities;
- Coordinate all summer activities, including adult and youth sports year round, and special events;
- Manage Brazoria County community services programs;
- Integrate activities with the Alvin Senior Citizen Center; and
- Ensure that all athletic programs are coordinated and lead by experienced teachers, coaches, and professionals who have the necessary certifications to maintain safety and enjoyment (i.e. American Red Cross certifications and training).

Concurrent with the Parks Department's responsibilities, the Parks and Recreation Board also plays a critical role in the implementation of plan initiatives. The Board consists of seven members and makes recommendations to the City Council regarding open space planning, parks, and recreation planning and/or purchase, disposal, or trade of

"Playful City USA"

The Journal of the American Academy of Pediatrics reports that play is essential to the social, emotional, cognitive, and physical well-being of children. That being said, children today are playing less than any other generation of the past and it is causing serious social issues with which we are now trying to handle (childhood diabetes, childhood obesity, depression, etc.). In 2013, 217 cities across America—including Alvin—were recognized by the non-profit organization KaBOOM! as a "2013 Playful City USA." Playful City USA is a national program from KaBOOM! that celebrates and promotes local policies that increase and facilitate play opportunities for children and recognizes communities for their efforts in creating unique local action plans to increase the quantity and quality of play in their community.

The State of Texas was the third state with the most nominations (15), following Florida and California. KaBOOM! selected Alvin for its outstanding dedication to play, citing Alvin's Play-a-thon program as an exciting new program promoting unstructured play and gives outdoor toys to reinforce the goal of active living. Alvin is eligible for funding through nationwide grants, including Let's Play (a community partnership led by the Dr. Pepper Snapple Group) to promote getting kids and families active.

Source: KaBOOM! Press Release. Building a Movement for Play: Non-Profit Organization KaBOOM! Names Alvin Among 217 "Playful City USA" Communities. May 2013.

Source: Alvin Parks Department

Source: Kendig Keast Collaborative

Alvin's Park History

Built in 1932, the Maury Maverick Bridge is one of two remaining in the state that features a polygonal-top-chord Warren pony truss greater than 100′ in length as a main truss span. The bridge is also one of five multiple truss bridges in Texas with a polygonal-top-chord Warren truss as its main span). The bridge originally crossed the San Antonio River along County Road 207 in Karnes County.

The Bridge was acquired in 2000 by the City of Alvin through a state program, facilitated by Texas Department of Transportation and the State Historic Preservation Office (SHPO) where the Maury Maverick was decommissioned for vehicular traffic and approved for pedestrian traffic.

In 2003, the center span of the bridge, approximately 116 feet in length, was rehabilitated in accordance with SHPO guidelines and relocated to National Oak Park to span the Mustang Bayou as part of the Tom Blakeney Jr. Hike and Bike Trail. Currently the trail is approximately 1.7 miles long beginning at National Oak Park and ending at South Street.

such lands. Recommendations involve the coordination of parks and recreation policy initiatives, goals and strategies within the City's Comprehensive Plan, Parks Master Plan, future plans / studies, issues pertaining to open space, parks, recreation, or land planning, and on priorities for the allocation / expenditure of funds. Thus, the Parks and Recreation Board plays a role, in conjunction with the Parks and Recreation Department, in determining the current and future successes of Alvin's parks and recreation system.

PARKS MASTER PLAN

In 2006, the City of Alvin Parks and Recreation Department, and the Parks and Recreation Board developed a 10-year master plan designed to guide and address the future development and redevelopment of the City's parks and recreation program, recognizing the crucial role that the City's parks, recreation facilities, trails, and open spaces play in the vitality and well-being of Alvin and its citizens. The 2006 Parks Master Plan assessed the unique needs of the community by conducting an assessment of demographics, existing facilities and equipment, and demand-based information gathered from citizen input and parks questionnaires that were mailed to residents with their water bills (which was used to identify specific use patterns and indicate areas of high use or lack of use in order to determine future needs).[1] The Parks Master Plan listed goals followed by the standards necessary to support the City's need for desirable parks, recreation facilities, and open spaces—many of which are still relevant today. The goals focused on several important issues such as accessibility and mobility; public / private partnerships and community stakeholder participation; as well as operation and maintenance responsibilities.

Interests of the Community

Input received the Citizens Advisory Committee (CAC), and during the stakeholder interviews, several parks and recreation issues were identified, including the following:

1: City of Alvin Parks and Recreation Master Plan (2006).

Preservation of Open Space and Conservation of Resources.

There are areas interspersed throughout the community and the larger planning area that possess valuable natural resources warranting protection. These areas contribute significantly to the physical character and natural beauty of the areas within and around the community. Specifically, lands along Mustang Bayou and within the areas of the 100- and 500-year floodplains, low-lying wetlands, as well as scattered pockets and dense stands of vegetation offer opportunities for resource conservation and land preservation. These areas are sensitive to urban development, are of great value to the semi-rural character of the community, and offer opportunities to fulfill community objectives for environmental protection and sound resource management. Residents of Alvin are interested in creating a community that is both unique and attractive. Several citizens commented on the desire for more passive green space; enhancement of the bayou; protection of mature vegetation; increased connectivity and accessibility; the continued enhancement of park facilities; and preservation of valued open spaces. These objectives may be achieved by adopting sound environmental conservation and responsible land development practices. Sensitive areas along the bayou and its tributaries and within the floodplain and wetlands may be incorporated within developments as a natural amenity while sustaining their resource function. Doing so requires a system that balances development efficiency and resource protection. Through innovative land planning, resources may be preserved and effectively integrated into development without compromising private interests.

The restoration of natural areas within parks or adjacent to "tired" residential and commercial areas of the community can serve as a catalyst for redevelopment and economic revitalization. For instance, there is a significant opportunity to make Mustang Bayou a focal point of neighborhoods and public areas rather than abutting the rear lots of adjacent development. Enhancing this resource as a "blueway" canoe and kayak trail, along with what is being done with the Tom Blakeney, Jr. Hike and Bike Trail, offers a unifying element that has the potential to link together the community's neighborhoods, parks, schools, and areas of commerce. The Phase III segment of the Tom Blakeney,, Jr. Hike and Bike Trail is currently in the schematic phase of design (see **Map 4.1, *Park System Plan***). Land along the Mustang Bayou, floodplains, creeks and lakes all offer unique opportunities for land and habitat preservation, recreational trail systems, linear parks systems, and the establishment of Alvin as a recreational conduit from Houston to the Coast. Public stakeholder comments directly recognized the Mustang Bayou as a catalyst for drawing regional-level interest to the area, in addition to providing valuable amenities to the local population and fulfilling other community objectives, including recreational opportunities, tourism generation, sound resource management, and regional significance. Preservation and development of these sites will require sound environmental conservation and responsible land development practices, as these sites are especially sensitive to urban development.

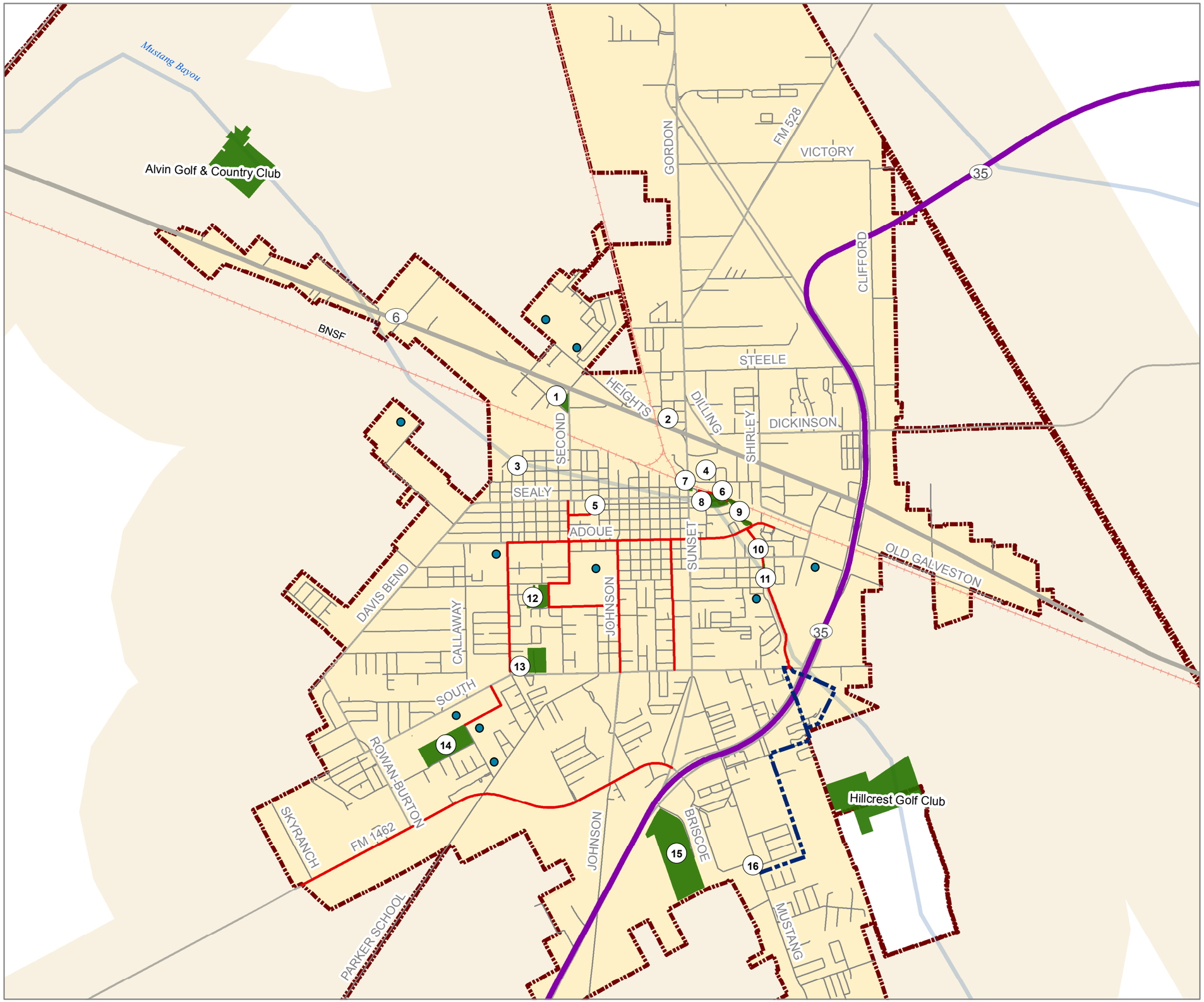
Nature-based tourism and ecotourism are some of the fastest growing recreational activities in the United States and are sources of significant economic benefits for many localities. The City was recently awarded a

Goals of the 2006 City of Alvin Parks Master Plan

1. Provide ADA accessibility for all playgrounds.
2. Connect with linkages or provide access to natural amenities throughout City.
3. Develop after school and summer programs for youth utilizing current AISD facilities.
4. Develop senior programs utilizing current park and community facilities.
5. Develop a balanced parks and recreation department that provides equal opportunities for recreational activities throughout the community.
6. Manage and maintain parks in a manner which encourages their appropriate use.

Source: 2006 City of Alvin Parks Master Plan.

Map 4.1
Park System Plan



Alvin Parks
Schools
Existing On-Street Bike Route
Tom Blakeney Jr. Trail Proposed Phase III
Grand Parkway Proposed Alignment (2014)
Rivers and Streams
Railroad
City limits
ETJ

1. Newman Park
2. Ruben Adame Park
3. Talmadge Park
4. Marina Park
5. Sealy Park
6. The Depot
7. Citizens Park
8. National Oak Park
9. Tom Blakeney, Jr. Hike and Bike Trail
10. Prairie Dog Park
11. Bob S. Owen Pool
12. Lions Park
13. Morgan Park
14. Pearson Park
15. Bob Briscoe Park
16. Hugh Adams Park

*This map was generated using data provided by Kendig Keast Collaborative, City of Alvin GIS Department, City of Alvin Parks and Recreation Department, and AECOM.

DISCLAIMER: This graphic representation depicts generalized areas for informational and long-range planning purposes only. The illustration may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property and other boundaries. Data is not guaranteed for specific accuracy or completeness and may be subject to revision at any time without notification.

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Miles

grant from Brazoria County to help fund the enhancement of National Oak Park with the design and construction of outdoor, nature-oriented educational spaces and facilities. The City will soon be involved in the design and construction of several new recreational amenities, including:

- ADA-compliant educational pavilions (containing renewable energy sources, such as solar power for lighting and ceiling fans);
- ADA-compliant observation platforms to be built for birdwatching, observing nature, and viewing Mustang Bayou;
- Wetland habitat/gardens—such as a water garden for birds, butterflies, and other animal species—that will include a constructed wetlands filtering system for storm water and a bird sanctuary for resting migratory birds; and
- Educational interpretive signage that will be installed throughout the parks to increase public appreciation and awareness of the importance of protecting, restoring, and preserving the natural environment.

Alvin is in close proximity to a wealth of natural amenities, including Resoft County Park (4.7 miles), Quintana Beach County Park (42.7 miles), and Brazoria National Wildlife Refuge (27.6 miles), San Luis Pass County Park (52.3 miles), and Surfside Jetty County Park (39 miles), Camp Mohawk County Park (eight miles); San Bernard National Wildlife Refuge (44.2 miles): all of which are located in Brazoria County. Additional recreational areas within the region include Brazos Bend State Park (27.9 miles), in Fort Bend County; Galveston Island State Park (52 miles); George Bush Park (44.3 miles), Lake Houston (46.9 miles), and Lake Houston Wilderness Park (64.4 miles), in Harris County; Big Boggy National Wildlife Refuge (68.7 miles) in Matagorda County, and Sam Houston National Forest (98.4 miles), in Montgomery County. Packaging the region's amenities and Alvin's unique natural features into an overall regional planning program could potentially initiate a broader image of Alvin as a recreational destination. Tourism activities may include:

- Nature watching opportunities;
- Recreational trails with educational opportunities;
- Kayaking/canoeing along enhanced water features;
- Seasonal hunting tours;
- Boating and fishing; and
- Educational conferences/research convoys.

Balanced, Convenient and Accessible Parks

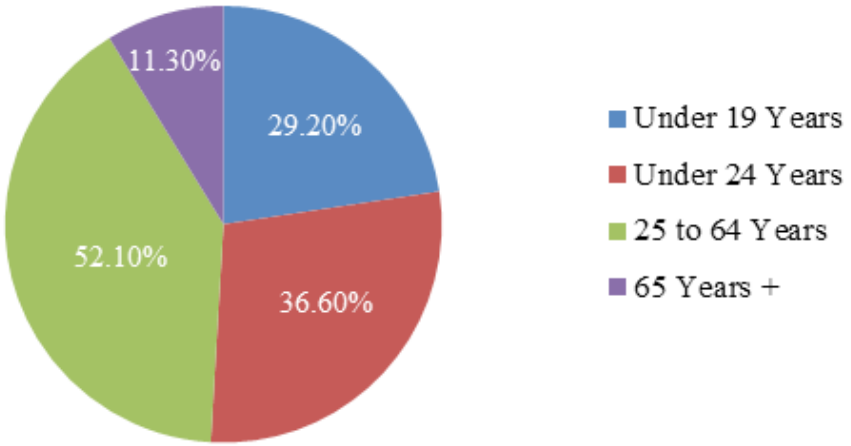
The key to a successful and well utilized system of parks is an even distribution of recreation areas and public open spaces throughout the community. In this way, all residents have convenient access to open spaces thereby meeting their active and passive recreation needs. It is also important that these individual parks are located and designed to be compatible with the surrounding neighborhoods, provide safe and convenient access, and incorporate the equipment and facilities desired by its users.

A true "system" of parks offers a wide range of public spaces, including large-scale facilities intended for persons within the larger region (generally within a one-hour driving distance); facilities for use by the whole community (typically within a one-mile radius); those that are used by one or more neighborhoods; as well as mini-parks for use by an individual development or small area. The value of an adequate park system is its ability to meet the individual needs of all persons.

In terms of a "balanced" system of parks refers to a combination of indoor and outdoor facilities as well as an adequate assortment of different types of activities (both passive and active) to meet the recreational needs of residents year-round. Given the warm climate during the summer months, it is particularly important to provide indoor facilities and programs, as well as outdoor activities that are sensitive to the weather conditions. Concern was raised within CAC and stakeholder meetings regarding Alvin not having enough facilities to support indoor recreational activities, as well as places to convene large assemblies of people.

Alvin's median age is 33 years, with the largest age cohorts being between the ages of 25 and 64 years of age (as shown in **Figure 4.1, *Population Age by Percent (%)***). This data indicates that the community is primarily younger than middle-age and likely have young families in tow, and therefore require diverse spaces, amenities, and programs for the accessibility, usability, enjoyment, and participation of all age groups.

Figure 4.1, Population Age by Percent (%)



Resident comments regarding parks and recreational needs include more indoor centers and venues for a variety of purposes, such as cultural events, youth activities, recreational programs, and community meetings. Residents also voiced interest in a natatorium and in more passive parks "with no backstops," to accommodate the older residents. There was also concern voiced that parkland development needs to keep pace with new residential development, ensuring that public parks are developed concurrent with the construction of new residential neighborhoods and development.

The quality of facilities is also a higher priority than the quantity of spaces as long as there is a good distribution of areas throughout the community. It was repeated in several meetings that there was a need for senior activities and multi-use passive park spaces in which older

Thelma Ley Anderson Family YMCA

The Thelma Ley Anderson Family YMCA is a major recreational asset to the City of Alvin and its recreation system. The YMCA facility is located at 3201 South Highway 35 and offers a robust programming calendar that consists of sports leagues, swimming lessons, lifeguard classes, special events, retreats, and day camps. The YMCA currently leases 14.38 acres of the Bob Briscoe Park from the City of Alvin for sports events and outdoor programming. Cooperative partnerships like this one between the YMCA and the City of Alvin are what give the parks and recreation system some vitality and flexibility in programming, facilities management, and financial burdens. This is a great example of a successful partnership between the City and an organization for the benefit of all Alvin residents.

Source: https://www.ymcahouston.org/thelma-ley-anderson/

Bicycle Facility Design Guidelines

The American Association of State Highway and Transportation Officials (AASHTO), Guide for the Development of Bicycle Facilities defines a bike lane as "a portion of a roadway which has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists." There has been growing support for bike lanes along urban and suburban roadways. Several small towns have led the way in establishing networks of bicycle lanes, especially college towns with high levels of student cyclist commuters (i.e., University of Texas at Austin). As the economy and society begin to demand alternative modes of transportation, it is going to become increasingly important that these facilities are designed for optimal safety, connectivity, accessibility, and enjoyment.

Bike lanes are used to create on-street, separated travel facilities for bicyclists, enabling them to travel at preferred speeds and facilitate predictable movements between cyclists and motorists. On-street bike lanes are typically four to six feet wide, but can be up to six and seven feet wide on roadways with higher motor vehicle speeds and traffic volumes, or where pedestrian traffic is anticipated. Sometimes buffers can be used between bike and motor vehicle lanes to visually narrow a wide street or colored pavement/contrasting paving material can be used to distinguish bike lanes from vehicle lanes. Formal bike lanes contain street striping, painted warnings/directions on the roadway surface, and signage (see image below).

There are some cases where minimum widths, as mentioned above, cannot be met and may be provided by unmarked bike lanes. Striping is proven to increase a bicyclist's perceived level of comfort and thus the level of service for the street. Unmarked lanes are two feet wide or more with no markings or signage that would designate it as a bike lane. According to the (Federal Highway Administration (FHWA), unmarked lanes are temporary solutions that will serve limited users for a finite period of time.

A five-foot bicycle lane ranges from around $5,000 to $535,000 per mile, with an average cost of around $130,000 per mile. These costs can vary substantially based upon variations in project specifications and the scale and length of the facility. In addition to financial considerations, there are other major design concerns to be taken into account when planning, designing, and constructing a bike network, including:

- Roads and streets on which bicycle lanes are considered should be evaluated to determine if this facility is appropriate.
- Sidewalks may serve cyclists at speeds less than five miles per hour (such as children); however, the inclusion of on-street facilities discourages high-speed cyclists from riding on sidewalks, therefore reducing potential conflicts between pedestrians and cyclists.
- Door zone conflicts should be reduced, wherever possible, by providing space between bike lane striping and the boundary of an adjacent parking lane.
- Avoid ending bike lanes and segments where users may be left in unsafe and undesirable locations or situations.
- Extend road striping of marked crosswalks across bike lanes, and of bike lanes across intersections or across turning lanes, to indicate that users must yield to pedestrians and drivers must be aware of bicycle crossing, respectively.
- Provide a smoothly paved surface and keep lanes free of debris or trash. With all new thoroughfare construction, the placement of paving joints, drain inlets, and manholes within the bike lane, causing cyclists to swerve and reducing the usable width of the lane, should be avoided.

Source: Pedestrian and Bicycle Information Center. Bicycle Lanes. http://www.pedbikeinfo.org/planning/facilities_bike_bikelanes.cfm

Source: Polgar, Sara. Water Trail Principles and Strategies. San Francisco Bay Conservation and Development Commission. March 2007.

Bike lane signs should be replaced with bike lane stencils, with optional NO PARKING signs where needed.

The bike lane along Second Street at Adoue Street is striped and has signage that alerts motorists of the presence of cyclists. This bike facility circles the Alvin ISD High School facility giving students an alternative mode of transportation, as well as parents.

Picture Source: Federal Highway Administration. FHWA Course on Bicycle and Pedestrian Transportation (Lesson 19: Bicycle Lanes).

citizens might find spaces that suit their less active needs, while still providing valuable outdoor and recreational amenities for them.

Park assets and amenities vary according to age group and include the

following:

- Playgrounds (new or updated);
- Swimming pools (new or updated) and splash pads;
- Picnic areas;
- Baseball fields/softball fields (and eventual complex with official fields, bleachers, etc.);
- Community/cultural center space;
- Recreation/fitness center space; and
- Recreational trails;
- Connectivity; and
- Natural amenities.

In this chapter each park's facilities are recorded and general condition determined through observation.[2] Twelve of the City's fourteen developed parks have more than one combined amenity; combinations include both sports fields and pavilions/gazebos, picnic areas, multi-use courts, and miscellaneous-use open spaces (a.k.a., passive recreation areas). Several facilities are quickly reaching capacity to serve programmatic demands and need to be expanded to meet increased program enrollment and use. Planned reinvestment is also required to accommodate the demand for future program expansion; amd should be informed by a thorough evaluation of the park system's budget, projects, staffing, and maintenance needs and schedules.

Linking Parks, Schools, and Neighborhoods

A system of parks and recreation areas is not complete without linear linkages between facilities and connections to neighborhoods, schools, and other public facilities. The Tom Blakeney, Jr. Hike and Bike Trail along Mustang Bayou is an ideal example of a pedestrian linkage which ties together Downtown with National Oak Park, Prairie Dog Park, and Bob S. Owen Pool, along with the nearby neighborhoods and schools. Continuation of this facility along the Bayou and branching it into the adjacent neighborhoods and business areas will enable the trail to serve as a spine for the community's pedestrian recreation system. The use of excess rights-of-way along streets, alleys and railroads; utility and drainage easements; and wide shoulders along arterial streets and rural roadways offer the benefit of linkages between facilities. Connecting each of the public parks and open space areas by expanding the current off-street recreational trails, sidewalks and on-street bikeways will ultimately create an interconnected system of public spaces that is highly desirable in Alvin. The existing on-street bike network connectivity and the existing park system can be seen in **Map 4.1, *Park System Plan***.

An interconnected system of bicycle and pedestrian facilities serves as a form of recreation and exercise and has an added benefit as an alternative mode of transportation. During the CAC and stakeholder meetings, residents expressed a desire to extend the current nature trail to include other off-street and on-street bike lanes/routes that connect the area's parks, schools, neighborhoods, and public buildings. Off-

2: Conditions were determined through aerial observation and analyusis. Sources include GoogleEarth, GIS files provided by the City of Alvin, and on-site field visits.

Public-Private Partnerships

It would be much more challenging for cities to handle the increasing and ever-present responsibilities of operation and maintenance costs of parks and recreational programs without the assistance and support of public, private, and non-profit organizations. In today's economy it is imperative that public-private partnerships (P3) are developed because often times there are limited budgets available for special programs and/or projects, public and private support is necessary for sustainable success, relationships can be developed to address future needs, and to increase participation in programs. Partnerships can come in many forms, such as financial sponsors for programs and events, volunteers, equipment supplies, and facilities. Some of the partnerships that the City of Alvin maintains and utilizes include:

- Alvin Independent School District
- Alvin Convention and Visitor's Bureau (CVB)
- Friends of Alvin Parks Foundation
- Thelma Ley Anderson YMCA
- Alvin Family Community Center
- Alvin Girls Scouts
- Alvin Little League
- Alvin Yellow Jackets Youth Football
- Alvin Raiders Youth Football
- Alvin Youth Soccer
- Anytime Fitness
- Alvin/Manvel Chamber of Commerce
- Rotary Club/Sunrise Rotary Club
- Kiwanis Club
- Lions Club
- Big Kountry Shooting Range
- Tour De Braz Bike Club

street trails and linkages allow for relatively uninterrupted pedestrian movement to and through the park system and protect users from busy development areas and associated vehicular traffic. Such linkages may boost accessibility to parks and other public spaces, thereby expanding the effective service area coverage of these existing parks and allowing more people to access them. Alvin has a disconnected network of trails, pedestrian pathways, and bike paths. There is interest in providing direct linkages between off-street recreational trails and on-street multi-modal transportation networks (e.g. bike lanes and sidewalks). The Tom Blakeney, Jr. Hike and Bike Trail constitutes 1.7 miles of paved trail that begins at National Oak Park, which is located in Downtown, and ends past the Bob Owen Municipal Pool at South Street, effectively connecting the Historic Depot and Downtown, through town toward Alvin Community College.

Phase III of the Tom Blakeney, Jr. Trail system is completing conceptualization and is programmed for construction in the near future as funding is secured. Phase III completes the City of Alvin's vision from the mid-90's of providing pedestrian/walking/biking connectivity to the Alvin Community College. This vision was important for several reasons: (1) to provide additional exercise opportunities for the community, and linking directly to a 2.5-mile long trail located on the Alvin Community College campus; (2) providing connectivity to and from Alvin Community College, and more recently the development of Briscoe Park—which hosts a half-mile trail, and the adjacent YMCA; and (3) providing educational opportunities in combination with the conservation of natural amenities and ecological resources along Mustang Bayou.

Alvin's street network provides an ideal opportunity for adding on-street bike lanes that directly connect to Alvin's school campuses, existing parks, recreational facilities, and residential neighborhoods within the City. As outlined in Figure 4.3, Proposed Bike System Plan, the proposed mobility enhancements will also provide access to a proposed blue trail network along Mustang Bayou and existing bike network through downtown, as well as linking directly with the proposed Tom Blakeney, Jr. Hike and Bike Trail Phase III at Alvin Community College, and other shared recreational facilities.

Implementation and Management: Coordination, Collaboration, and adequate Funding

Inter-governmental agreements and public-private partnerships (P3) create opportunities to use tax-dollars wisely, utilize land efficiently, and conserve precious environmental resources. Joint acquisition, development, and ongoing maintenance of public spaces leverages additional resources. Alvin has recently entered into maintenance contracts with companies who are willing to do the bi-weekly/weekly maintenance and upkeep at several of the City's' parks—including Pearson Park, Morgan Park, Hugh Adams Park, Marina Park, Talmadge Park, and the Tom Blakeney, Jr. Hike and Bike Trail. Seeking partnerships will effectively lower the City's burden of maintenance responsibility and more efficiently utilize spending so that Parks and Recreation staff can be more available and focused on planning events and programs, organizing partnerships, and seeking funding/promotional opportunities

for new ventures.

Coordination and collaboration among agencies, such as with Brazoria County, Alvin Convention and Visitors Bureau (ACVB), Alvin Independent School District (AISD), Alvin Community College, Athletic Sports Associations (ASA), and other local agencies and organizations is of mutual benefit to all parties. It eases the burden on public tax dollars and enhances the quality of areas and facilities.

A collaborative approach to parks and recreation planning requires

The Benefits of Parks in Advancing the Development of Healthy Communities

According to the National Recreation and Park Association (NRPA), parks and recreational facilities possess three values that make them essential services to communities:

1. Public Health and Environmental Benefits
   - Designing places within which people can become physically active can improve individual and community health, and result in an increase of residents who exercise regularly.
   - Research shows correlations between the reduction of stress, reduced blood pressure, and perceived physical health and the length of time spent in parks.
   - Parks and other conserved open spaces help to improve water quality, protect groundwater, prevent flooding, improve air quality, produce wildlife habitat, and provide places for individuals to connect with the natural environment and recreate outdoors.
   - Cities can use parks to help preserve essential ecological functions and to protect biodiversity.
   - When planned as part of a system of green infrastructure, parks can help shape urban form and buffer incompatible uses.
2. Social Importance
   - Parks are a tangible reflection of the quality of life in a community; providing identity for citizens and enhancing the perception of quality of life in the community.
   - Parks provide gathering places for social groups and families, as well as for individuals of all ages and economic status, regardless of their ability to pay for access.
   - By providing gathering places, parks facilitate the social interactions among residents that are critical to maintaining community cohesion and pride, as well as developing social ties that become the glue that holds the community together and drives future actions.
   - Voter approval rates for bond measures to acquire parks and conserve open space have exceeded a 75 percent success rate in recent years, revealing the public's prioritization of parks in government spending.
   - Parks and recreation programs provide places for health and well-being that are accessible by persons of all ages and abilities, especially to those with disabilities.
   - Community involvement in the planning and design of neighborhood parks, as well as access to parks and recreation opportunities are positively associated with lower crime rates, vandalism, and juvenile delinquency.
   - Parks have a value to communities in the formation of a sense of public pride and cohesion.[3]
3. Economic Value
   - Parks improve the local tax base and increase property values.
   - Cities can use parks to reduce public costs for stormwater management, flood control, transportation, and other forms of built infrastructure.
   - Quality parks and recreation are cited as one of the top reasons for business relocation decisions.
   - Parks and recreation programs generate revenue from operating costs.
   - Indirect revenues are generated for the local and regional economies through the hosting of sports tournaments and special events such as arts, music, and holiday festivals. Economic activity from hospitality expenditures, tourism, fuel, recreational equipment sales, and many other private sector businesses yields more sustainable local and regional economies.

3: National Recreation and Parks Association. "Why Parks and Recreation are Essential Public Services." http://www/colchesterct.gov/Pages/ColchesterCT_Dept/PR/forms/Parks-Are-Essential-Public-Services.pdf

communication and coordination among all vested entities and interested parties. Through agreements created between public agencies as well as partnerships with the private sector, the parks and recreation system benefits in its quality and affordability. Joint acquisition, construction, ongoing operation, and maintenance allow efficient use of public dollars while ensuring that facilities are coordinated and connected.

Unfortunately, the funding for parks and recreation is often a lesser priority in comparison to water, wastewater and drainage facilities, and safety-sensitive services such as fire and police protection. However, parks and public open areas are equally important forms of public infrastructure. While funding for the primary public facilities and services demand sufficient funding to avoid failing conditions, the dollars available for parks and recreation are less certain. Identifying a dedicated funding source and effectively leveraging state and federal grant funds is important to developing and sustaining an adequate parks and recreation system.

Goals and Objectives of the Community

The following goals, objectives, and actions are designed to address the above issues, which were identified by citizens of the community through their participation in the stakeholder meetings and on the advisory committee. The 2006 parks Master Plan is a valuable resource that should be used on a continuous basis in guiding the City's parks and recreation development program. These goals, objectives, and recommendations should be referenced in other planning studies and development proposal reports to ensure consideration of existing and planned public parks, recreation areas, and open spaces.

GOAL 4.1: CONSERVATION OF NATURAL RESOURCES THROUGH PARKLAND ACQUISITION, OPEN SPACE PRESERVATION, AND ENVIRONMENTALLY SENSITIVE PLANNING.

Objectives and Actions

- *Objective 4.1.1: Encourage the conservation of environmentally sensitive areas, i.e. streambeds and floodplains, wetlands, wildlife habitats, and areas with soil limitations, through land development policies and guidelines, incentives, and regulations.*
    1. Seek to acquire highly sensitive lands and conservation sites, such as those within the floodplain areas and adjacent to Mustang Bayou, to preserve as public open space or recreation areas. Consider formation of a land bank through which owners of properties in the floodplain are encouraged to deed undevelopable land to the bank and in return, receive bonuses for increased development density or other dimensional allowances. Alternatively, acquire conservation easements to protect valuable resource areas from encroaching development.
    2. Amend the subdivision regulations to allow the use of conservation, preservation, and clustering subdivision techniques, allowing flexibility in lot size, setbacks, and other

area standards to increase open space, preserve natural areas, and set-aside land for wetlands and sensitive habitat areas. Also integrate site capacity calculations into the regulations to quantify the allowable density that can be accommodated on an environmentally constrained site.

3. Preserve the environmental quality of Mustang Bayou by protecting valuable open space and habitats, improving drainage and water quality, and providing sensitive eco-recreational facilities. Enforce sound floodplain management practices to maintain the water carrying capacity of drainage ways, channels, and floodplain areas.
4. Develop an eco-tourism program aimed at protecting critical areas and educating the public about the local flora and fauna, as well as how they can participate in its conservation.
5. Develop a "Blue Trails" concept plan and trail network that establishes the Mustang Bayou as a key addition to the larger Alvin Trails Network and capitalizes on local resources as a means of tourism, education, research, and recreation (see **Figure 4.2, *Proposed Blue Trails Route along Mustang Bayou***).

Figure 4.2, Proposed Blue Trails Route along Mustang Bayou

This figure represents a conceptual "blue trail" along Mustang Bayou that will allow for numerous recreational activities, provide additional scenic locations, and educational opportunities. Water-based trails, or "blue trails," are recreational routes along waterways with a network of public access points supported by broad - based community partnerships. Water trails provide both conservation and recreational opportunities for communities. According to the San Francisco Bay Conservation and Development Commission, the following elements should be considered in blue trail development:

1. Identify, or provide criteria for identifying critical areas of the bayou (such as navigational exclusion zones, hazards and unusual boating conditions, sensitive wildlife and ecosystems, sites with poor water quality, etc.) that require giving users key information, restricting access, or taking other management actions.
2. Conduct site assessment and planning for trailheads (put-in/take-out) by identifying issues related to embankment stabilization and access requirements, boater and navigational safety/security, operations and maintenance, and education and interpretive needs.
3. Develop a set of trailhead development and management strategies that can be implemented to address issues related to access needs, wildlife/ecosystem concerns, boater and navigational safety and security, management needs and available resources, along with educational and interpretive needs and opportunities.
4. Promote a water trail ethic that teaches and promotes safe, low-impact boating practices and encourages users to protect the bayou's unique ecological resources and as a recreational trail water amenity.
5. Enforce and teach personal boating safety, and navigational safety, and national security through a water trail education program, active coordination among recreational groups, other environmental agencies,regulatory agencies, and appropriate launch facility design and site management.

In the figure on the next page, the proposed Mustang Bayou blue trail has several strategic put-in and take-out (trailhead) locations identified along the bayou; these spots were determined through analysis of aerial photography and research into ideal programmatic requirements for successful boat launches and kayak trails. The put-in points are identified in Figure 4.3 and include Highway 6 and the intersection of Second Street at Lobitt

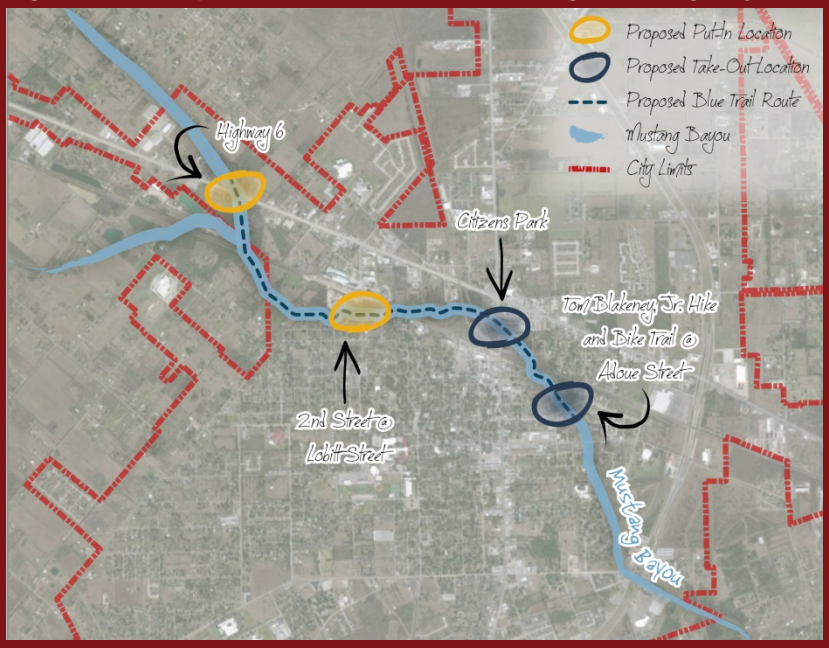
These two photos are examples of kayaking in various reaches of the Buffalo Bayou in central Houston. Kayaking is a popularized trend that has hooked many residents of the Bayou City and beyond into exploring the outdoors and observing nature in and around Houston.

Source:

[Photo1] Bayou City Outdoors. Kayaking/Boating/Canoeing. http://www.bayoucityoutdoors.com/clubportal/clubstatic.cfm?clubID=3&pubmenuoptID=14099

[Photo2] A|K Graphics. Buffalo Bayou Kayaking Houston. 2010. http://aaronkgraphics.blogspot.com/2010/06/buffalo-bayou-kayakinghouston.html

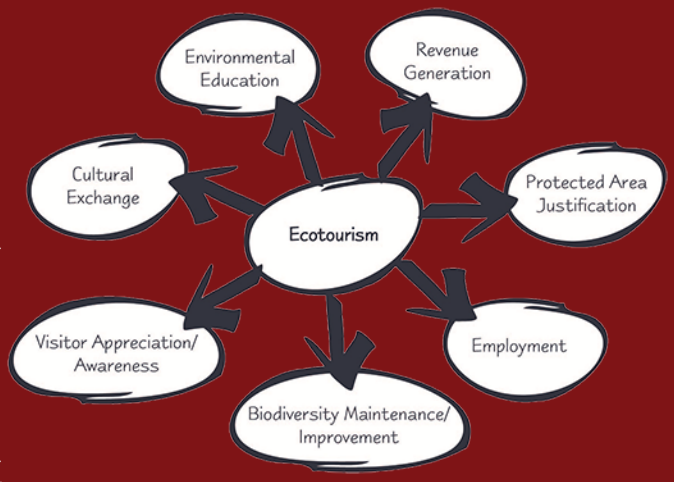
Figure 4.2, Proposed Blue Trails Route along Mustang Bayou



Street. Due to their upstream location, where the bayou begins to widen, these trailheads are ideal for starting an afternoon voyage, while their proximity to semi-developed properties affords them the opportunity to be retrofitted to accommodate low-intensity parking for visitors of the trail. The take-out points are identified at Citizens Park and at the Tom Blakeney, Jr. Hike and Bike Trail at Adoue Street; these locations are downriver before the bayou begins to go underground and taper into depths too shallow to navigate. The proposed blue trail is approximately 2.28 miles in length from the first put-in to the last take-out point, which would take the average leisure kayaker (traveling three to four miles per hour) a little less than an hour to traverse.

Source: National Water Trails System. http://www.nps.gov/WaterTrails/

Ecotourism: Economic and Conservation Benefits



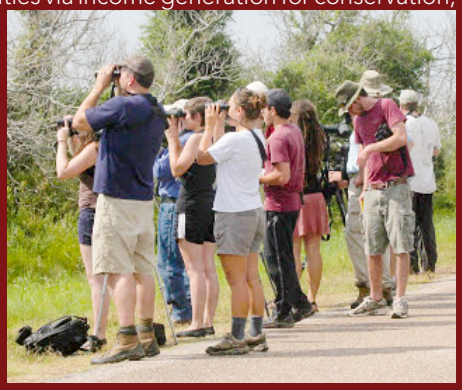
Ecotourism has become a popular activity in natural areas around the world providing opportunities for visitors to experience beautiful wonders of nature and culture as well as learn about the importance of environmental conservation and local history. The definition of ecotourism, as adopted in 1996 by the International Union for Conservation of Nature (IUCN), is:

> *Environmentally responsible travel and visitation to natural areas, in order to enjoy and appreciate nature (and any accompanying cultural features, both past and present) that promote conservation, have a low visitor impact and provide for beneficially active socio-economic involvement of local peoples.*

According to the Nature Conservancy, ecotourism is a tool to accrue benefits for both local people and the protected area, making it an ideal part of a sustainable development strategy where natural resources can be used as tourism attractions without causing harm to the natural area. An ecotourism initiative must have the following aspects in order to be successful:

- Have a lower impact upon a protected area's natural resources;
- Involve stakeholders (individuals, communities, eco-tourists, tour operators and government institutions) in the planning, development, implementation and monitoring phases;
- Respect local cultures and traditions;
- Generate sustainable and equitable income for local communities and for as many other stakeholders as possible;
- Generate income for protected area conservation; and
- Educate all stakeholders about their role in conservation.[4]

Ecotourism has the opportunity to boost local, regional, and national economies. Visitors require numerous goods and services while traveling, including hotels, restaurants, shops, guide services, and transportation systems—thus, a multitude of businesses receive direct benefits from ecotourism. Ecotourism has the potential to reduce the threats posed by conventional tourism to natural areas and communities via income generation for conservation, local enterprise and employment, cultural exchange, environmental education, protected area justification, and visitor appreciation.



Source: Sam Taylor. Lone Star Birding and Beyond Blog. http://lonestarbirds.blogspot.com/2012/06/black-tailed-godwit-first-record-for.html

As will be discussed in greater detail within Chapter 5, *Growth Strategies*, the City, in partnership with the Brazoria County Conservation and Reclamation District No. 3, has developed several regional detention basins to address periodic flooding issues. Several of the detention basins have been designed to maintain a minimum water level to accommodate wetland vegetation and migrating and overwintering waterfowl.

4: Drumm, Andy and Alan Moore (2002). Ecotourism Development: A Manual for Conservation Planners and Managers (Vol. 1). The Nature Conservancy, Arlington, VA.

The Brazoria National Wildlife Refuge (NWR)

Brazoria County is a dynamic and intricate ecosystem consisting of coastal wetlands and prairie that is home to more than 300 bird species. The Brazoria National Wildlife Refuge serves as the end point of the Central Flyway for waterfowl in winter, and an entry point for neo-tropical migratory songbirds weary from their 600-mile Gulf crossing from Mexico's Yucatan Peninsula. Migration is one of the most fascinating aspects of the natural world. Two times a year, billions of birds migrate vast distances across the globe. The geographical area covered by a migratory bird over the course of its annual cycle, encompassing breeding and non-breeding grounds and the connecting migration route, is known as a flyway.[5]

The Brazoria National Wildlife Refuge is a 44,414-acre wildlife conservation area located along the Texas Gulf Coast, east of Angleton and Lake Jackson, and about 28 miles south of Alvin. Within close proximity to the greater Houston area, the refuge offers respite for both wildlife and visitors; for wildlife, the expanse of salt and freshwater marshes, sloughs, ponds, and coastal prairies make up the birds' feeding and nesting grounds throughout the year. For people, these rare pieces of 'wild' Texas offer one-of-a-kind wildlife observation, nature hiking, and educational opportunities. Mild temperatures, fresh and salt water estuaries, bay waters, and a blend of soil types are a few of the variables that make up the rich habitat of the Brazoria NWR that attracts more than 400 species of birds, 95 species of reptiles and amphibians, and 130 species of butterflies and dragonflies. Within the refuge, mud flats and salt water marshes transition to fresh water; while many shorebirds mass along the salty shoreline and shallow bay waters, thousands of waterfowl fill the marshes and freshwater ponds. Between the salty and fresh waters are the brackish wetlands that serve as nurseries for shellfish and finfish to spawn and contribute to the diet of many bird species—such as blue herons, roseate spoonbills, and wood storks.

Further inland, within the refuge, the landscape is transformed into freshwater marshes, ponds, and bayous where lotus-covered wetlands and cattails support purple gallinules, bitterns, frogs, crawfish, river otters, and alligators. As the salinity changes, so do the plants—transitioning the wetland habitats to coastal prairies that are pollinated by bees, butterflies, and moths.[6]

5: Kirby, J.S., Stattersfield, A. J., Butchard, S.H. M., Evans, M. I., Grimmett, R. F. A., Jones, V. R., O'Sullivan, J., Tucker, G. M. and Newton, I. (2008). Key conservation issues for migratory land- and waterbird species on the world's major flyways. Bird Conesrv. Int. 18: S74-S90.

6: U.S. Fish and Wildlife Service (USFWS),

Source: U.S. Fish and Wildlife Service

Chocolate Bayou

Chocolate Bayou is a stream located approximately 20 miles from Alvin, in Brazoria County. Fisherman can find a variety of fish including redfish, black drum, red drum, spotted sea trout, and channel catfish.

Source: http://www.hookandbullet.com/fishing-chocolate-bayou-danbury-tx/

The Central Flyway

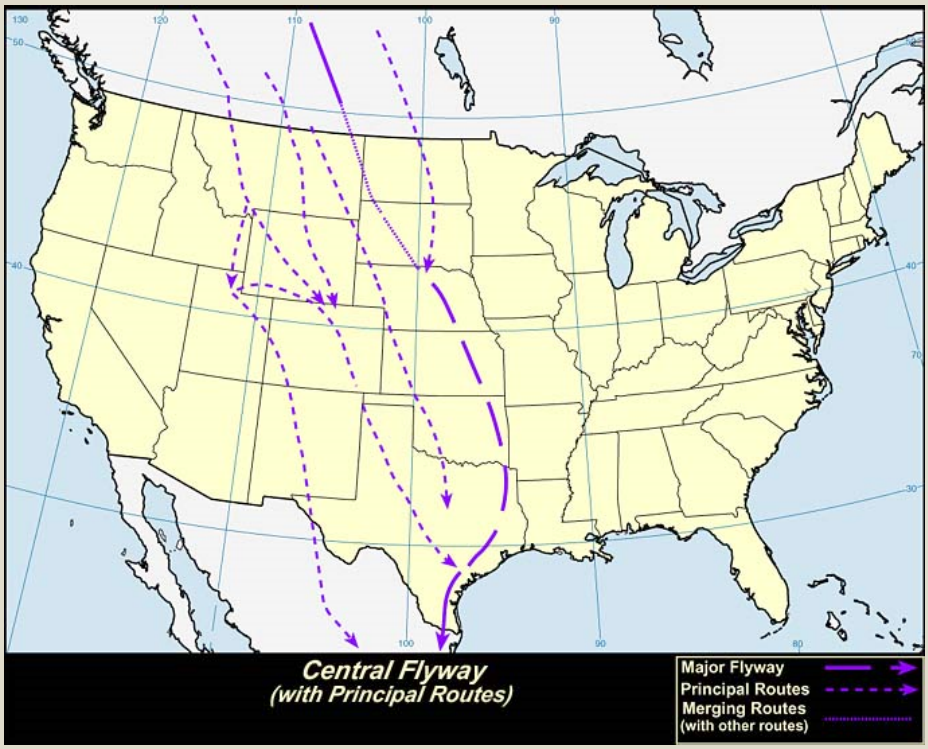
Migration patterns typically follow a north-south axis with birds relocating to milder climates at lower latitudes for the duration of the non-breeding season.[6] Taking on such tremendous journeys can be dangerous as birds are reliant on favorable weather conditions, en route resources and the geographical features they encounter—such as mountain ranges, watercourses and coastlines, avoiding large bodies of open water and taking advantage of prevailing wind patterns and updrafts. Subsequently, a number of species share the same flyways (especially those with similar biological and ecological trails); for example, water birds require a route that encompasses a variety of highly-productive staging sites. In the United States there are three classified flyways:

1. Atlantic Flyway;
2. Mississippi Flyway; and
3. Central Flyway.

The Central Flyway is a massive bird migration route, covering more than one million square miles across North America's interior. It is composed of the Canadian provinces of Alberta, Saskatchewan and the Northwest Territories, and the states of Colorado, Kansas, Montana, Nebraska New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming.[7] The territories within the Central Flyway serve over 380 species of birds (not all of which are migratory)—including 16 priority bird species: American Oystercatcher, Black Skimmer, Brown Pelican, Greater Sage-Grouse, Least Tern, Lesser Prairie-Chicken, Piping Plover, Reddish Egret, Redhead, Red Knot, Ruddy Turnstone, Sanderling, Sandhill Crane, Snowy Plover, Whooping Crane, and Wilson's Plover.[8]

Birds have an increasing recreational value as eco-tourism (including birdwatching, camping, hiking, nature study, and photography) has become part of a popular, multi-billion dollar industry. According to the USFWS report *Birding in the United States: A Demographic and Economic Analysis*, more people participate in birdwatching than baseball, football, basketball, and hockey combined. In 2001, birders spent an estimated $32 billion on wildlife-watching; this includes money spent for binoculars, field guides, bird food, bird houses, camping equipment, and travel-related costs such as food and transportation costs, guide fees, etc.[9] Forty percent of birders (roughly 18 million Americans) traveled more than a mile from home to bird watch, visiting a variety of habitats on both private and public lands creating economic benefits in many places. This $32 billion that birders spent on wildlife-related recreation generated $85 billion in economic benefits for the nation in 2001. This ripple effect on the economy also produced $13 billion in tax revenues and over 863,406 jobs, as outlined by USFWS. The magnitude of these figures clearly showcases birding and eco-tourism as a major economic driver, driving billions in spending around the country.

The Central Flyway provides many places, including Alvin, with a variety of nature-based tourism opportunities, given that the localities within the flyway take action to protect and enhance natural environments and wildlife habitats. For Alvin, planning and promoting wildlife preservation could significantly increase regional interest in birdwatching and recreational opportunities, which would result in increased direct and indirect revenue generation.



6: Newton, I. (2008). The ecology of bird migration. London: Academic Press.

7: Flyways.us. "The Central Flyway." http://central.flyways.us/

8: The National Audubon Society. "Priority Birds." http://conservation.audubon.org

9: U.S. Fish and Wildlife Service (2001). Birding in the United States: A Demographic and Economic Analysis.

Source: http://www.fws.gov/refuge/Brazoria/wildlife_and_habitat/index.html

A Region Rich in Conservation Efforts

In addition to the Brazoria National Wildlife Reserve there are several other wildlife conservation areas along the coast that are worth mentioning for their beauty, preservation efforts, and recreational opportunities. These refuges are:

- *Justin Hurst Wildlife Management Area*

  The Justin Hurst Wildlife Management Area (WMA) is a 11,938 acre wildlife preservation area located west of Freeport near Jones Creek. The majority of these lands were purchased from 1985 to 1987 using waterfowl stamp funds. The Justin Hurst WMA is representative of the Gulf Coast Prairies and Marshes Ecoregion, which makes up about 15,000 square miles of the State. The purpose and goal of this WMA is to: develop and manage lands for migratory waterfowl, expand and improve facilities to accommodate research that will complete understanding of coastal ecosystems, and to provide public outreach and recreational opportunities to the public.

- *San Bernard National Wildlife Refuge*

  According to the U.S. Fish and Wildlife Service, the San Bernard National Wildlife Refuge includes bottomland forest units that are scattered across the flood plains of the Brazos and San Bernard Rivers. This type of growth provides the ideal habitat for migratory songbirds throughout the year. There are several locations within the refuge that are open to the public, though much of the refuge is closed to the public; with the intention of preserving much of the landscape as a wildlife sanctuary. There are numerous opportunities to observe wildlife, including the 9.4-mile car tour or a hike on one of the many hiking trails.

GOAL 4.2: A BALANCED AND WIDE VARIETY OF PUBLIC PARKS, RECREATIONAL AREAS, INDOOR RECREATIONAL FACILITIES, AND OPEN SPACE IN NEAR PROXIMITY TO ALL RESIDENTS.

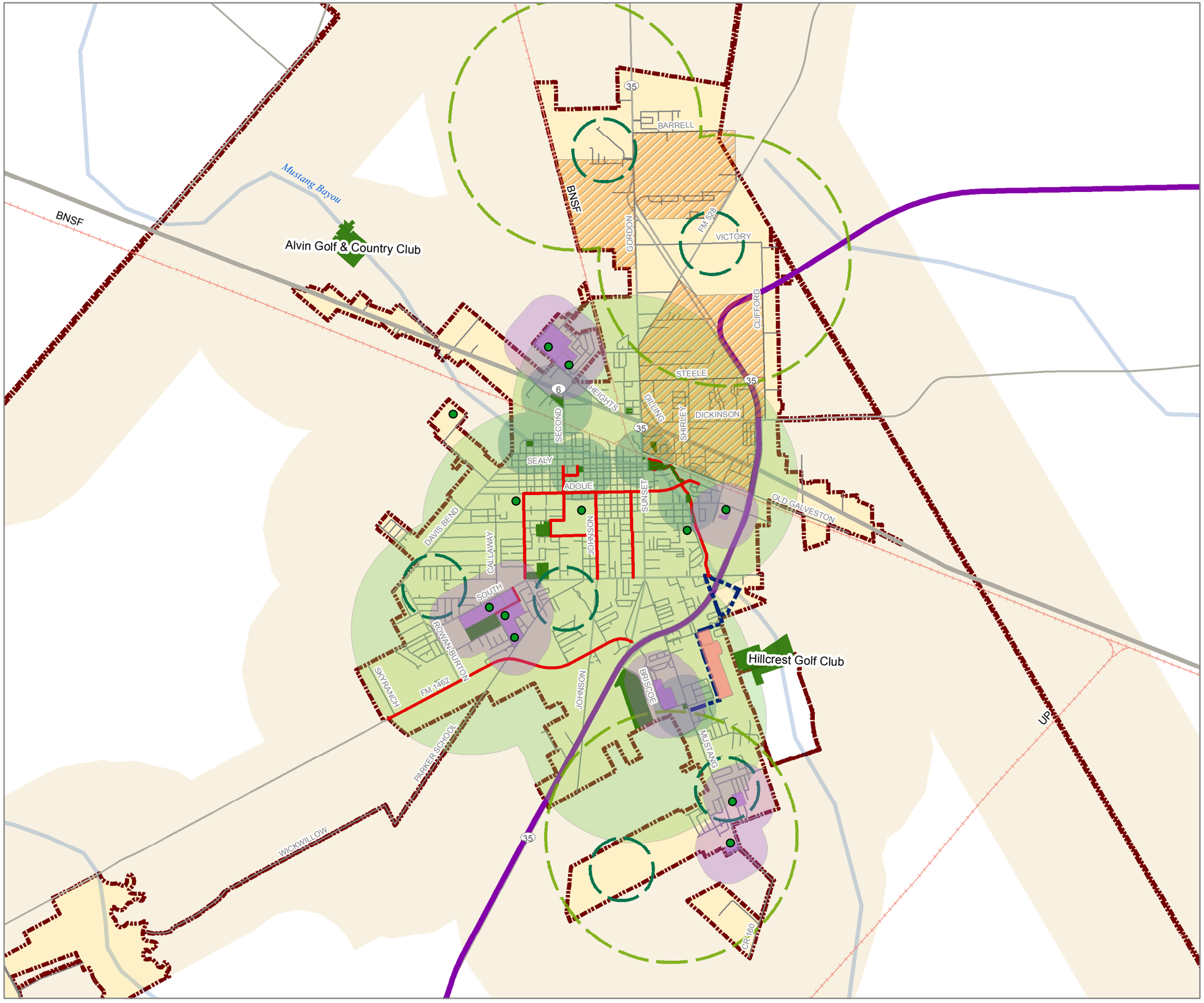
Objectives and Actions

- *Objective 4.2.1: Accommodate the current and future needs of residents by providing a system of mini-parks, neighborhood play areas, and large community parks.*

  1. Acquire and develop parks in the identified "need areas" displayed in **Map 4.2, *Parks Service Area Needs***, to provide an even distribution and thus, equitable opportunities and convenient access in all areas of the community and its planning area. Specifically, focus attention on the acquisition of three to five acre neighborhood park sites within the denoted "need areas" to achieve standards.
  2. Amend the City's parkland dedication provisions and parkland development fund requirements to require that parkland dedication and subsequent improvements occur during the first phase of subdivision development. Revise parkland dedication fees in lieu and development ordinance to establish a fund to allow for community park dedication and subsequent fund allocation so that the City might have more opportunities to acquire larger parcels of land that benefit a larger service area rather than solely requiring dedication within the Park Land Dedication "Zones."

     Include provisions and some degree of surety that will require an implementation timetable for the installation of parks to ensure that developers follow-through in their construction in a timely matter (i.e. certificate of occupancy may be deemed temporary until the park is determined to be sufficiently implemented).
  3. Aim to comply with the maximum standards displayed in **Table 4.1, *Existing Acreage Versus Future Demand***.
  4. Update the City's Park Master Plan, and include the strategies and recommendations outlined within the City's Pedestrian-Transit Master Plan (2013), including the trails and bike lane concepts into a single document addressing parks, recreation, and trails as a singularly focused initiative rather than separated.
  5. Proceed in implementing the City's Park Master Plan and Needs Assessment, 2002-2012, regarding the recommendations and timeline for action.
  6. The Parks Department should work with the Alvin Convention and Visitors Bureau to formulate a development program, schedule and budget, as well as site selection criteria for the construction of a youth-oriented, indoor sports facility, or series of facilities that would also accommodate the programmatic requirements for large assemblies of people.
  7. Identify parcels for potential acquisition for pocket parks or public open space.

Map 4.2
Park Service Area Needs



- Proposed Performance Development Zones
- City-Owned Lake Property
- Proposed Neighborhood Park Service Area (1/4 Mile)
- Proposed Community Park Service Area (1 Mile)
- Neighborhood Park Service Area (1/4 Mile)
- Community Park Service Area (1 Mile)
- Alvin Parks
- School Park Service Area (1/4 Mile)
- School Park Facilities
- Schools
- Existing On-Street Bike Route
- Tom Blakeney Jr. Trail Proposed Phase III
- Grand Parkway Proposed Alignment (2014)
- Rivers and Streams
- Railroad
- City limits
- ETJ

*This map was generated using data provided by Kendig Keast Collaborative, City of Alvin GIS Department, City of Alvin Parks and Recreation Department, and AECOM.

DISCLAIMER: This graphic representation depicts generalized areas for informational and long-range planning purposes only. The illustration may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property and other boundaries. Data is not guaranteed for specific accuracy or completeness and may be subject to revision at any time without notification.

0 0.25 0.5 1 1.5 Miles

8. Acquire excess rights-of-way, vacated alleys and easements, areas beneath overhead power lines, irregularly-shaped parcels, and other non-developable parcels for utilization as mini-parks and public open space.
9. Acquire public use easements at each of the major entrances to the community, such as S.H. 6, S.H. 35, F.M. 517, F.M. 528, and F.M. 1462, for use as public open space and installation of cohesive community signage and gateway treatments.
10. Identify prime locations for the development of park and trail gateway signage and landscape improvements.
11. Develop a park standards manual that outlines equipment standards (types and finishes), branding guidelines, and design requirements so that the Alvin park system maintains a consistent level of quality, maintenance, and desirable aesthetic appeal.
12. Amend the subdivision regulations to create alternative street cross sections thereby allowing for increased green space along collector and arterial roadways, with increased density allowances as an incentive to developers. Also provide density bonuses as incentives for conservation of land adjacent to Mustang Bayou and its tributaries and preservation of heavily vegetated areas and other sensitive development areas.
13. Identify parcels of property (such as sites along the Mustang Bayou that are within the FEMA floodway and not suitable nor approved for future development) that will serve as public passive recreational open space. It is important to have an equal distribution of passive parks with recreational parks in order to appeal to users of all ages and allow for multi-use spaces rather than singular uses.

Parkland Dedication Ordinance: Key Features

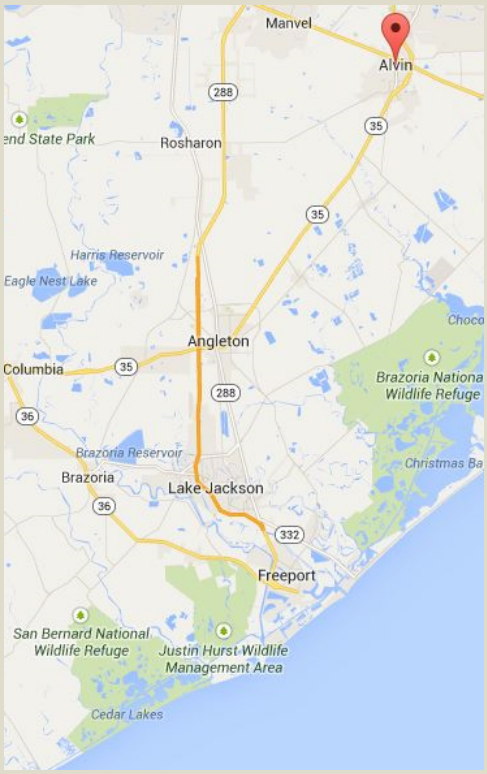
The City of Alvin's parkland dedication ordinance is based on the following provisions:

- Land dedication requirements based upon one acre per a designated number of dwelling units in the entirety of the development and not by sections or phases;
- Designation of park zones for which fees collected within the zone will be within the zone;
- Discretion of the City to require payment in lieu of land dedication for expansion or improvement of existing facilities (rather than development of new facilities) within the same zone as a proposed development;
- Requirement of land dedication or fee upon issuance of a building permit where a plat is not required;
- Fees shall be equal to the sum of the average price of land and on-site improvements of other park facilities, which shall be computed on a per dwelling unit basis;
- Proportional credits for private parks and encumbered lands;
- Encourage the preservation of open space to enhance the community's livability, aesthetic quality, and natural beauty.

- *Big Boggy National Wildlife Refuge*

  The Big Boggy National Wildlife Refuge was established in 1983 to protect habitat for migratory birds—such as the flat coastal prairies, salt marshes, and two saltwater lakes. Big Boggy includes Dressing Point Island in East Matagorda Bay, which, according to the U.S. Fish and Wildlife Service, is an important rookery for colonial nesting birds, including brown pelicans along the Texas coast. Big Boggy is the smallest refuge of the three refuges in the Texas Mid-coast Refuge Complex—however, its 4,526 acres is home to many waterfowl (up to 55,000 geese and 15,000 ducks yearly).

Source:http://www.tpwd.state.tx.us/huntwild/hunt/wma/find_a_wma/list/?id=41; https://www.fws.gov/refuges/profiles/index.cfm?id=21541; http://www.fws.gov/refuges/profiles/index.cfm?id=21542

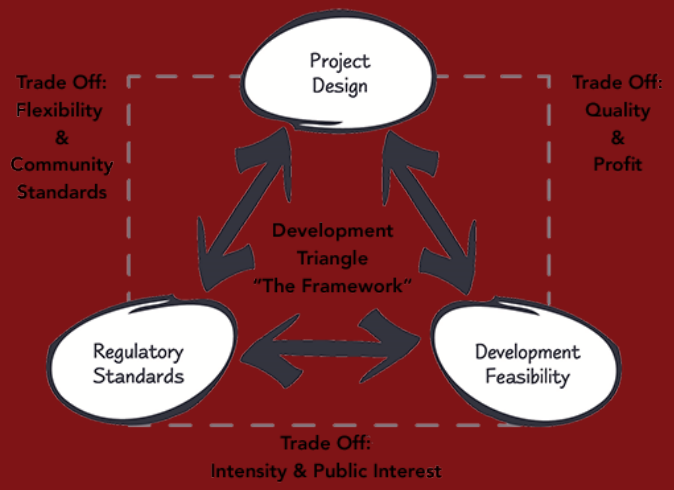


The City of Alvin has been upgrading its facilities system-wide and had really started to develop a visual standard for its parks. It is important to develop a park standards manual that will help to standardize park amenities, such as trash receptacles, pavilion construction/design, and lighting design; and maintain a consistent level of quality among all parks in the City's system. Standardizing park amenities will also help to develop a brand of quality that sets Alvin parks apart from other city parks.

- *Objective 4.2.2: Sustain and improve the quality, condition and attractive appearance of public areas and facilities with an aggressive maintenance program.*
  1. Develop an annual operation and maintenance plan for Alvin's parks system, including provisions for regular physical condition assessments of grounds and facilities, equipment safety inspections, maintenance scheduling and personnel tracking, and a funding and resource assessment.
  2. Increase the annual budget for park maintenance, management, and administration.
  3. Continue supporting and working with the Friends of Alvin Parks Foundation, Alvin ISD, the Thelma Ley Anderson YMCA, the Alvin Family Community Center, the Girl Scouts, youth sports clubs, Rotary Clubs, the Kiwanis Club, and the Tour De Braz Bike Club to encourage and promote community involvement, program attendance, and investment in maintaining and policing public parks.
  4. Improve parks' accessibility for disabled users. Ensure that existing parks have adequate sidewalk curb cuts and ramps, wheelchair accessible sidewalks and trails, while providing accessible facilities and equipment.

Development and Project Feasibility

Land development programs and projects are complex and multi-faceted; the implementation of which requires taking into account numerous variables including regulatory standards and public interest. These issues are best summed up and explained in the Development Triangle, below. The model highlights the three major development drivers: project design, regulatory standards, and development feasibility. A project's development feasibility determines its design, while simultaneously being limited or directed by existing regulatory standards of the locality—these three elements are symbiotic and affect each other and the ultimate outcome in the form of programmatic and material "trade-offs." Trade-offs come in many forms, including quality, profit, intensity, public interest, flexibility, and community standards. This development model is a great summation of the process through which future projects, including parks and recreation initiatives, will have to pass in order to be most effectively and efficiently implemented.



Active vs. Passive Recreation

The types of recreation chosen for a specific park can vary depending on the surrounding population's age. Age plays a huge factor in these decisions because physical capacities at different ages vary dramatically such as eyesight, mobility, hearing, and dexterity. As depicted in Figure 4.1, Population Age by Percent (%), the majority of the population is between 25 and 64 years of age (approximately 52 percent of the population according to the 2008-2012 American Community Survey, 5-Year Estimates), therefore the City needs to provide citizens with enough variety to equitably serve the full population. The most basic differences between passive and active recreation are described below.

Passive Parks

Passive recreation areas refer to a mix of non-sports-related uses typically found in a neighborhood park, undeveloped land, or minimally improved lands, which includes the following: landscaped area, natural area, ornamental garden, non-landscaped greenspace, stairway, decorative fountain, dog park, picnic area, water body, or trail without recreational staffing. These "unprogrammed spaces" allow for a variety of uses because they accommodate change of use over time, as the needs or interests of the community change.

Active Parks

Active recreation refers to a mix of uses in a park that includes the following facilities or facility types: athletic fields, buildings or structures for indoor recreational activities, concessions, community gardens, outdoor courses or courts (basketball, volleyball, and tennis), children's play areas, picnic shelters, restrooms, event areas, or bike paths.

Active parks sometimes include more loosely structured areas for softball, soccer, Frisbee / Frisbee golf, and pick-up games.

Source: Kendig Keast Collaborative

The image on the left is from National Oak Park's playscape, and the image on the right is from Ruben Adame Park's sports field backstop. Both are examples of active park features. The sports field does enable the option of multi-use activities, including non-organized sports and activities, and picnicing.

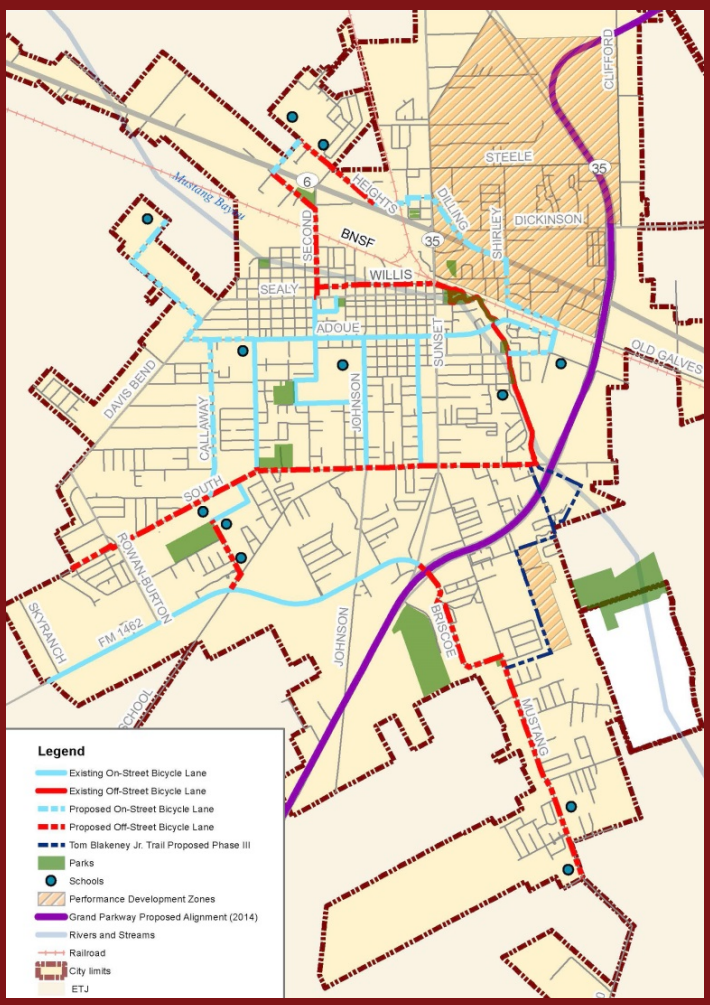
GOAL 4.3: AN INTERCONNECTED SYSTEM OF TRAILS AND BIKEWAYS PROVIDING COMMUNITY CONNECTIVITY.

Objectives and Actions

- *Objective 4.3.1: Provide an interconnected system of paths, trails, lanes, and routes that are multi-purpose, accessible, convenient, and connect each of the parks to neighborhoods, schools, workplaces, and other community destinations.*

  1. Continue to extend the Tom Blakeney, Jr. Trail along Mustang Bayou across—preferably beneath or over—the railroad tracks, Second Street, South Gordon Street and S.H. 6 to the west and northward to the City limits as well as southward beyond Alvin Community College to the Hillcrest Golf Course and down Mustang Road to the R.L. Stevenson Primary School and the Walt Disney Elementary School. Incorporate provisions for

Figure 4.3, Proposed Bike System Plan



an exclusive pedestrian right-of-way concurrent with the improvements to S.H. 35. Simultaneous with new development and redevelopment, secure easements for off-street trail segments (where possible) or space within the rights-of-way of new streets for connections to/from the Blakeney Trail throughout the community. Priority should be placed on connections to schools, residential neighborhoods, elderly assisted living facilities, proposed performance development zones, and each of the public parks. See **Figure 4.3, *Proposed Bike System Plan***.

2. Ensure that provisions for an off-street recreational trail is included within the proposed Grand Parkway alignment and cross-section, extending the length of the thoroughfare within the City's corporate limits and extraterritorial jurisdiction (ETJ).

3. Complete missing connections in the system of on-street bike lanes to form a comprehensive network providing access to all segments of the community. Incorporate into the annual budgeting process an annual set-aside for enhanced signage and striping, bike lane surface repairs, and intersection safety improvements.

4. Produce a brochure displaying the entire bike and pedestrian trail network concept along with the timing and programmed development of the system.

5. Establish requirements for the dedication of easements or rights-of-way for adjoining the trail network development. In new residential and commercial developments, rights-of-way should be dedicated for the main trail segment, and easements dedicated throughout the development to provide direct access points to the system. Design standards must also be established for segments of the trail and other connections to ensure long-lasting and minimal maintenance construction.

6. Coordinate with the railroad, drainage district, and utility providers for access to and across their easements and/or rights-of-way in the development of the bike and pedestrian trail network. Adopt a local policy for the acquisition and use of floodways and drainage channels, railroad corridors, vacated alleys, and other rights-of-way and easements as trails and pedestrian connections.

7. Ensure the inclusion of proposed on-street bicycle trails, off-street recreational trails, and complete streets-related improvements are included within H-GAC's Regional Transportation Plan (RTP).

8. Regularly submit applications for state and federal grants through the Texas Parks and Wildlife Department, Moving Ahead for Progress in the 21st Century Act (MAP-21), Community Development Block Grants (CDBG), Congestion

Mitigation and Air Quality (CMAQ) Improvement Act, Land and Water Conservation Fund, and other available programs to leverage funds for bikeway and trail planning and development, as described in Appendix C, Funding Sources.

9. Coordinate with Brazoria County and the Texas Department of Transportation (TxDOT) to program, schedule and install shared right-of-way signage and wide shoulders along each of the farm-to-market highways and select county roads to accommodate distance cyclists.

Elderly Mobility and Alternatives to Cars

As our demographics change and our population is experiencing a massive generation of aging Baby Boomers, it is no surprise that mobility issues and concerns have become a priority for many families and communities. Excessive personal driving habits have been linked to an increase in depression and a decline in out-of-home activities and community mobility. The perceived need and desire to drive also limits the use and demand for of alternative transportation options like walking, cycling, and public transportation. Thus, the ability of a person to drive plays a huge role in the complicated relationship between ageing, physical and psychological health, community mobility, and use of health services.

Limited mobility options can put a huge burden on the individual, families, communities, and society—reinforcing the real need for policy makers, local governments and communities to consider the transportation needs of the elderly to support their ongoing mobility. Strategies addressing safer roads include creating a safer and more forgiving road environment that matches the characteristics and travel needs of the road users that use it. It is recommended that:

- Road design and operation standards be adopted that reflect the needs and capabilities of older road users.
- Consider improving environments that older drivers have trouble navigating, including improved intersections, freeway interchanges, horizontal curves, passing zones, and construction zones.
- Consider improving environments for pedestrians and cyclists, including the measure and control of vehicular traffic speeds to moderate levels (traffic calming), separation of vulnerable road users and motorized traffic, provision of complete streets facilities geared toward elderly pedestrians' and cyclists' needs, introduction of measures to reduce the complexity of travel environments, and provision of facilities and public transit stops.
- Improve infrastructure and land-use to facilitate accessibility and availability of transportation options, to ensure the safety and security of the public environment, and to deliver a range of public and private services appropriately.[10]

In Alvin, the importance of family, community caring and hospitality, are important and valued qualities. As evidenced during CAC and stakeholder meetings, citizens cited concern about the lack of transportation options available to the elderly. As Alvin continues to grow and develop, it is important to provide pedestrian facilities for the aging population. It was also highlighted that there are not many open spaces or parks that do not have familial or child-oriented amenities with playscapes and backstops. Many citizens would like to see more passive recreation options so that they might relax, enjoy the outdoors, and not be disturbed by the activities that take place in sports fields and jungle gyms.

10: Whelan, Michelle, Jim Langford, Jennifer Oxley, Sjaanie Koppel, Judith Charlton. The Elderly and Mobility: A Review of the Literature. Monash University Accident Research Center. November 2006.

Source: Kendig Keast Collaborative

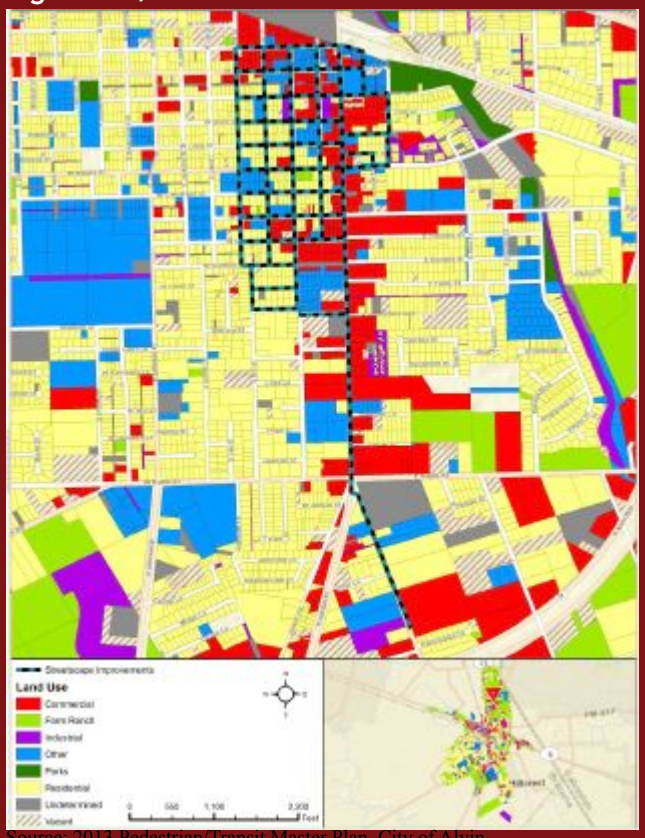
Bikes offer an alternative mode of transportation for short trips to the store or pharmacy and still afford Alvin's aging population with the independence and mobility to feel in control and capable. However, for bikes to be a viable alternative for elderly residents there must be the accessible and connected infrastructure in place to provide safe, efficient, and easy routes to destinations.

Source: Kendig Keast Collaborative

Downtown Alvin has experienced some major updating of its pedestrian facilities. These images show the brick pavers, curb cuts, street trees, and wheelchair ramps that comprise major streetscape improvements throughout Downtown.

As illustrated in **Figure 4.4, *Land Use***, below depicts pedestrian circulation recommendations as part of Alvin's 2013 Pedestrian/Transit Master Plan. This figure depicts the land uses in and around downtown Alvin, where most of the corridors for which pedestrian enhancements are recommended are situated. There have been some improvements in the Downtown area along Gordon Street—including curb cuts, ADA ramps, brick pavers, signage, street trees, and renovated historically-significant buildings. Enhancing the streetscape throughout the downtown and along this grid pattern greatly increases the aesthetic feel of these areas, but also contributes to the level of service provided by the pedestrian facilities—including their connectivity and accessibility.

Figure 4.4, Alvin Land Use



Source: 2013 Pedestrian/Transit Master Plan. City of Alvin

Available Funding Techniques:

- Current revenue
- Community Development Block Grants
- Reserve funds
- Enterprise and revenue funds
- General obligation bonds
- Lease-purchase
- Eminent domain
- Authorities and special districts
- Sales Tax
- User fees
- In-kind services and volunteer participation
- State and federal assistance
- Land donation
- Trust fund
- Private financing
- Land dedication
- Fee-in-lieu of development
- Tax deferral
- Tax reductions

Techniques for Design and Placement of Interpretive Signage along Trails

Trail signage is an important tool in engaging users, educating the public, and providing important safety information. To be effective signage should contain the following:

- Use an introductory sign to set the theme of the trail and indicate trail distances / length. This sign usually has a longer message that may include historical facts as well as safety information. For some trails, this may be the only interpretation needed or desired.
- All signs should have a provocative title, graphics, and minimal text.
- Interpretive signs should be placed closer to the beginning of the trail while visitors are still fresh and curious. Avoid placing two signs within view of each other.
- Place signs at natural stopping points (e.g. points of interest, great views, animal habitats, etc.) and where people may have questions.
- Limit the number of signs along trails to maintain visitor interest.
- Use panel sizes of 30″ x 18″ for major trail panels at 7″ x 5″ for identification panels. Mount signs along trails at 35 – 45 degree angles to the ground so that users can view them easily when passing. Signs should be placed to avoid ruining pristine areas and scenic views.

Source: Gross, Zimmerman, and Trapp (1999). Signs, Trails, and Wayside Exhibits: Connecting People and Places. UW – SP Foundation Press, Inc. Stevens Point, WI. (Page 99).

The Tom Blakeney, Jr. Hike and Bike Trail is a phenomenal amenity in the heart of Alvin's Downtown. The signage is updated and of good quality.

Source: Kendig Keast Collaborative

GOAL 4.4: COOPERATIVE AGREEMENTS AND COORDINATED EFFORTS WITH OTHER GOVERNMENTAL JURISDICTIONS, EDUCATIONAL BODIES, AND PRIVATE SECTOR ENTITIES.

Objectives and Actions

- *Objective 4.4.1: Form mutually beneficial partnerships with and among the public and private sectors to expand and improve the provision of services and facilities.*
  1. Develop agreements with Brazoria County, Alvin lSD, and Alvin Community College (ACC) to enable joint acquisition of land, development and maintenance, and use of areas and buildings. Also encourage their involvement in the construction, management, and operation of parks and open space conservation areas.
  2. Establish cooperative agreements with developers, landowners, non-profit organizations, and sports associations to develop parks and recreation facilities, which may include lease-

purchase agreements or municipal maintenance, as a means to encourage private sector participation in the provision of public parks.

- *Objective 4.4.2: Identify dedicated sources of funds for ongoing development, maintenance, and operation of the parks and recreation system.*
  1. Develop a five-year Capital Improvement Program (CIP) for parks and recreation improvements, consistent with the timeline of actions, as amended from time to time, in the most recent and updated iteration of the City's Park Master Plan.
  2. Utilize the comprehensive listing of potential funding sources provided in Appendix C, Funding Sources, to identify potential programs to leverage additional funding for local projects. Subsequently, consider contracting with or hiring an experienced grant writer to regularly pursue federal, state and foundation grants to subsidize local funding. Regularly submit applications for Texas Recreation and Parks Account (TRPA) program funds for both indoor and outdoor grants, which may be submitted in January and July of each year.
  3. Establish a parkland improvement fund, which would be an account for which fees in lieu of land dedication would be deposited. These fees must be contributed to a specific account—as opposed to the general fund - that can be effectively tracked to ensure expenditures benefit the areas (park zones) from which they were derived.

Life is Better in a State of Travel

Travel and Tourism is the 3rd largest industry in the United States and has a substantial economic impact locally, regionally, and nationally. It generates employment opportunities, income revenue, and sales tax revenue. Visitors bring in new dollars, money not earned locally, into Alvin to spend. It is estimated that this spending then turns over 2.5 times within the local economy. Alvin's Convention and Visitors Bureau works directly with the Parks and Recreation Department to use the community's recreation venues for regional and state sports tournaments and festivals. Visitors stay in Alvin's hotels/motels, dine in the community's restaurants, shop in stores, buy fuel and par take in entertainment venues. This spending, in turn, creates a better quality of life for local residents.

Inventory of Facilities and Spaces

Establishing a "firstclass" parks and recreation system is predicated upon the availability, location, and condition of existing city-owned parks and recreation areas. In determining the need for additional parkland, recreational facilities, and park-related improvements, the first step is to assess the level of sufficiency of the existing parks in meeting the needs of the community. This assessment is accomplished by comparing the acreage of parks to standards for cities of comparable size; and by soliciting the input of citizens.

Integral to park planning is a thorough inventory and evaluation of the elements that compose the existing system. Each park must be evaluated in terms of proximity to its users, safety, accessibility, availability and condition of its equipment/facilities, and utilization. The City currently offers an assortment of parks that provide for a variety of activities, including the following:

- Restrooms in each community park (Bob Briscoe Park, Bob S. Owen Pool, The Depot, Lions Park, Morgan Park, and Pearson Park);
- Covered pavilions (30);
- Baseball (7), softball (8) and multi-purpose fields (1);
- Soccer fields (2);
- Volleyball courts (2);

- Basketball courts (6) and tennis courts (2);
- Play complexes (19);
- Walking/jogging (9) and bike (9) trails;
- Swimming pools (1);
- Parking; and,
- Related equipment and improvements (bleachers, picnic tables, covered pavilions, water fountains, swings and slides, payphones, trash receptacles, etc.)

The parks that are owned and maintained by the City include a total of approximately 115.8 acres of land, including 14.38 acres being leased to the YMCA for a recreation center and fields within Bob Briscoe Park. However, the property should be considered in future planning goals, connectivity considerations, and the like. Alvin's park system acreages are divided into six community parks (Bob Briscoe Park, National Oak Park, Lions Park, Morgan Park, Pearson Park, and Ruben Adame Park,) with a total of 105 acres, four neighborhood parks accounting for 6.9 acres (Hugh Adams Park, Newman Park, Sealy Park, and Talmadge Park), two mini "pocket" parks totaling 1.5 acres (Hugh Adams Park and Prairie Dog Park), three special use facilities (The Historic Depot, the Bob S. Owen Pool, and the Alvin Senior Center), and two open spaces (Marina Park and Citizens Park) contributing 2.4 acres. The City boasts one dynamic trail, the Tom Blakeney, Jr. Hike and Bike Trail, that is destined— upon completion— to become a major linkage between Downtown, National Oak Park, and Alvin Community College.

Classification of Parks

The National Recreation and Park Association (NRPA) published the Recreation, Park, and Open Space Standards and Guidelines to establish nationally applicable criteria for the provision of parks and recreation facilities and open space. These standards serve as a guide for parks and recreation planning, but do not replace reasonable judgment or specific local needs. The desires of the citizens of Alvin justify continued development of parks, recreation, and open space to meet the specific needs and requirements of the community. These standards are shown in greater detail below in **Table 4.1, *Park Guidelines***. Parks and recreation standards are typically expressed in terms of acres of land dedicated for parks, recreation, and open space per unit of population, such as one and a half acres per 1,000 persons (for neighborhood parks).

Table 4.1, Park Guidelines

Park Type	Size (acres)	Walking Distance (miles)	Area / 1,000 Persons
Mini "Pocket" Park	< 1	0.25	0.5 acre / 1,000 persons
Neighborhood Park	5 – 10	0.25 – 0.5	2.0 acre / 1,000 persons
Community Park	30 – 50	0.5 – 3.0	5.0 acre / 1,000 persons
Regional Park	Variable	Variable	100 – 300 acres total
Source: National Recreation and Park Association (NRPA)			

While national standards are useful, it is important to ensure they are reasonable for the community given considerations such as participation

trends, user characteristics, demographics, socioeconomics, climate, natural environment, and other considerations. Leisure and recreation values are unique to each municipality; therefore, it is important that the standards represent the interests and desires of the community. Values related to leisure and recreation activities are unique to each municipality; therefore, the standards should represent the interests and desires of local park users. It is also important to highlight that standards represent a quantitative threshold, but do not necessarily account for the quality of spaces and facilities. In other words, a well-designed system of parks that is tailored to the needs and preferences of its users is more likely to be utilized than a system that simply meets standards. It is, therefore, essential to balance the standards with local considerations and observed utilization trends to ensure that the system is achieving its ultimate objective of satisfying the interests of the community.

A variety of types and sizes of parks and recreation facilities and activities are recommended to satisfy the diverse interests of the population, ensure adequate and equal opportunity for all persons, and ultimately, encourage use by all population groups. Parks are typically classified according to the size of the population they are intended to serve. Conventional park classification usually includes mini parks, neighborhood parks, community parks, and open spaces. The City of Alvin has 13 parks constituting 115.8 acres of developed/designated land and 53.7 acres of undeveloped land. Alvin's parks, recreation, open space and trails system consists of six community parks, three neighborhood parks, two mini parks, three special use facilities, two open spaces, 53.7 acres of undeveloped lake property, and 1.7 miles of recreational hike-and-bike trails—all of which can be reviewed in greater detail and description in **Table 4.2, *Inventory of Existing Parks, Recreation, Open Spaces and Trails Systems***, and **Table 4.3, *Park Amenity Inventory***. For geographical understanding of Alvin's existing parks system, refer to **Map 4.1, *Park System Plan***.

Table 4.2, Inventory of Existing Parks, Recreation, Open Spaces, and Trail Systems

Park Name	Park Address	Acres
Community Parks		
Bob Briscoe Park - Alvin Dog Park	3625 Briscoe Drive	42 1.7
Pearson Park	2200 Westpark Dr.	22.9
National Oak Park - Alvin Skate Park	118 S. Magnolia St.	14 -
Morgan Park	1500 W. South St.	13.8
Lions Park	1060 College Dr.	9.4
Ruben Adame Park	801 Shaw St.	1.2
Subtotal	**6 Parks**	**105 Acres**
Neighborhood Parks		
Newman Park	1200 Newman St.	4
Talmadge Park	Talmadge/Sixth	1.6
Sealy Park	206 S. Durant	1.3
Subtotal	**3 Parks**	**6.9 Acres**

Table 4.2, Inventory of Existing Parks, Recreation, Open Spaces, and Trail Systems

Mini "Pocket" Parks		
Hugh Adams Park	3502 Mustang Rd.	1
Prairie Dog Park	575 E. Hathaway	0.5
Subtotal	**2 Parks**	**1.5 Acres**
Special Use Facilities		
Bob S. Owen Pool	919 Bayou Dr.	-
The Historic Depot	200 Depot Center Blvd.	-
Alvin Senior Center	309 W. Sealy St.	-
Subtotal	**3 Facilities**	**-**
Open Space		
Marina park	Hwy 6/Bowling Alley	2.3
Citizens Park	Gordon/Willis St.	.1
Subtotal	**2 Open Space**	**2.4 Acres**
Trails		
Tom Blakeney, Jr. Hike and Bike Trail	National Oak Park through South St.	1.7 Miles
Subtotal	**1 Trail**	**1.7 Miles**
TOTAL SYSTEM	**13 Parks**	**115.8 Acres**
Source: City of Alvin		

MINI "POCKET" PARKS

Pocket parks are typically less than one acre in size and are intended to serve a concentrated or limited population—such as very young children or senior citizens. Mini parks are typically located in very close proximity to high-density residential developments, such as apartment complexes, planned communities, specialized housing for the elderly, or in downtown areas. However, mini parks might also serve commercial areas with workers and shoppers being the primary park space users. There are no specific criteria to guide development of mini parks although they should have facilities and improvements available to meet the identified needs of the immediate development; for example, mini parks can provide limited playground equipment, benches, and/or picnic tables. The notable features that distinguish a mini park are its considerably smaller size and lack of restroom facilities; in urban areas, these spaces are often referred to as "pocket" parks. Recommended facilities and improvements include:

- Picnic tables with covers;
- Perimeter sidewalks;
- Shade trees and native landscaping;
- Drinking fountain;
- Security lighting;
- Multi-purpose open play area;
- Playground equipment (<15 children);
- Perimeter fencing or landscaping;
- Benches;
- On-street parking; and
- Trash receptacles.

Alvin currently has no designated mini parks, however it is the recommendation of this plan that the parks under one acre—that meet the NRPA standards described above—be designated as mini parks. This recommendation would include Hugh Adams Park, and Prairie Dog Park—all of which combine to 1.5 acres. Mini parks are a great alternative to designating sites that may not necessarily be suitable as a traditional park space, but instead may be retrofitted for recreational or outdoor purposes so that visitors and the public might still enjoy the benefits.

NEIGHBORHOOD PARKS

Neighborhood parks are five to 10 acres in size and should provide facilities and improvements to accommodate use by neighborhoods within one-quarter to one-half mile of the park. Ease of access from surrounding neighborhoods, central location, and pedestrian/bicycle linkages are key considerations when developing neighborhood parks. They should be designed to accommodate the needs of all ages and, therefore, should have a blend of passive and active facilities. It is highly desirable to include neighborhood residents in the park design process to ensure it is compatible and accounts for the desires of its intended users—including a blend of passive and active facilities. Recommended facilities and improvements include:

- Picnic tables with covers;
- Barbeque pits;
- Sidewalks/natural walking trails;
- Shade trees and native landscaping;
- Drinking fountain(s);
- Security lighting;
- Multi-purpose open play areas;
- Multi-purpose play courts;
- Playscape (up to 25 children);
- Perimeter fencing/landscaping;
- Benches; and
- On- or off-street parking.

The City of Alvin has three neighborhood parks totaling 6.9 acres of parkland—Newman Park, Talmadge Park, and Sealy Park. The neighborhood parks usually have sports fields (including soccer fields and baseball/softball pitches), picnic areas, and playgrounds—ideal amenities for sports leagues, families, and visitors. Also, passive parks and sports field conditions vary depending on seasonal changes and severity—which, if harsh, can sometimes make the parks look barren, under-utilized, and/or unappealing. Refer to **Table 4.3, *Park Amenity Inventory***, for more detailed amenity inventories.

COMMUNITY PARKS

Community parks are 30 to 50 acres in size and are intended to function on a large scale, serving the parks and recreation needs of an entire community within a distance of one mile. They typically include facilities and improvements for area-wide activities and assembly events such as picnic areas, walking/jogging trails, athletic fields, and other larger-scale activities. The facilities and improvements must be planned and designed for heavy use by persons of all ages, including the provision of adequate off-street parking spaces near these types of parks. Where feasible, community parks should be located adjacent or connected to a greenway/trail to provide an off-street linear linkage with other areas of the community. They must also be located such that their use characteristics, such as overhead lighting, crowd noise and traffic, will not negatively impact adjacent neighborhoods. Primary access to a community park should be provided by an arterial street with secondary access via a collector roadway. Community wide input through a mail-back survey, intercept surveys, or interest group interviews should be a primary determinant of the development program for a community park. Recommended facilities and improvements include:

- Picnic tables with covers;
- Barbeque pits;
- Sidewalks/natural walking trail;
- Mountain biking trails;
- Exercise stations (optional);
- Shade trees and native landscaping;
- Drinking fountains;
- Security lighting;
- Multi-purpose open play areas;
- Multi-purpose courts;
- Playscape (up to 50 children);
- Bicycle racks;
- Perimeter fencing/landscaping;
- “Children at play” street signs;
- Benches;
- Trash receptacles and enclosures;
- Curb cuts/crosswalks;
- Tennis courts;
- Basketball courts;
- Softball/little league fields with bleachers;
- Soccer/football fields with goals;
- Sand volleyball courts;
- Swimming pool;
- Covered pavilions;
- Performance stage (optional);
- Restrooms;
- Fencing for ball fields/athletic courts;
- Surface for general play area; and
- Off-street parking.

Alvin’s six community parks total 105 acres (Bob Briscoe Park, Pearson Park, Lions Park, Morgan Park, National Oak Park, and Ruben Adame Park), with 42 acres belonging to Bob Briscoe Park alone. The Bob Briscoe Park is located toward the southern boundaries of Alvin’s contiguous city limits and has undergone major renovations/updates in recent years—including covered trash receptacles, uniform wayfinding signage, shade pavilions, and more. The Bob Briscoe Park is also home to the Alvin Dog Park, a 1.7 acre development that is the first of its kind

Table 4.3, Park Amenity Inventory								
Park Name	Community Building	Sports Field	Picnic Area	Playground	Restroom	Multi-use Court	Walking Track	Misc. Use Open Space
Bob Briscoe Park	3 shade pavilions, concession building	Football, Soccer	Y	-	Y	-	½ mile walking track	Y
Pearson Park	Pavilions (5), concession stands (2)	Multi-purpose lighted athletic fields (9)	Y	Play Complex, Swings	Y	Tennis courts (2)	Y Bike Trail	-
National Oak Park + Alvin Skate Park	Rotary Pavilion (40'x80'), covered pavilions (7)	-	Y	Play Complex, Swings	N	-l	Y (origin of the Hike and Bike Trail)	Y
Morgan Park	-	Baseball / Softball fields (2), sand Volleyball courts (2)	Y	Play Complex, Swings	Y	-	-	-
Lions Park	-	Multi-purpose athletic fields (4 lighted fields)	-	-	Y	-	Walking/ jogging trail, Bike Trail	-
Ruben Adame Park	Covered pavilion	Baseball field with a backstop, Basketball	Y	Play Complex, Swings	N	-	Walking trail, Bike Trail	-
Newman Park	Covered Pavilion	Baseball/ Softball field with backstop, Soccer, Basketball (1)	Y	Play Complex, Swings	N	-	Y	-
Talmadge Park	-	Baseball field with backstop (1), Softball, Soccer	Y	Play Complex installed in 2004	N	-	-	-
Sealy Park	-	Basketball court (1)	Y	Play Complex, Swings	N	-	-	-
Hugh Adams Park	Covered Pavilions (8)	Soccer fields (18), football field (1)	Y	Large Play Complex, Swings	N	-	Walking/ Jogging Trail, Bike Trail	-
Prairie Dog Park	Covered Pavilion	-	Y	Play Complex, swings	N	-	Hike and Bike Trail	-
Marina Park	Covered Pavilion (1)	-	Y	-	N	-	-	Y
Citizens Park	-	-	-	-	N	-	-	Y
Tom Blakeney, Jr. Hike and Bike Trail	Rotary Pavilion (40'x80'), covered pavilions (7)	-	Y	Play Complex, Swings	N	-	Hike and Bike Trail (1.7 miles)	Y

in the City and creates a unique recreational destination for residents of the community. The dog park was established at the request of citizens seeking recreational activities and is free and open to the public, though its use is primarily determined by the weather and seasonal changes. The City is responsible for mowing, fertilization, and oversight of the dog park, though maintenance requirements are reduced seasonally.

REGIONAL PARKS

Regional and large urban parks, which are greater than 50 acres in size, are typically in an area of natural quality for nature-oriented outdoor recreation and tourism, such as viewing and studying nature, bird watching, wildlife habitat, swimming, picnicking, hiking, fishing, kayaking/canoeing, camping, and trail uses. Regional parks may include active sports complexes or play areas such as athletic fields. Recommended facilities and improvements include:

- Picnic tables with covers;
- Barbeque pits;
- Natural walking trails;
- Mountain biking trails;
- Camp sites with/without utilities;
- Nature preserve or wildlife habitat;
- Shade trees and native landscaping;
- Drinking fountains;
- Security lighting;
- Multi-purpose open play areas;
- Multi-purpose courts;
- Playscape (up to 50+ children);
- Bicycle racks;
- Benches;
- Trash receptacles/enclosures;
- Basketball courts;
- Soccer/football fields with goals;
- Swimming pool or beach; and
- Restrooms.

Alvin does not currently have any regional parks within its city limits, though it is within 27.6 miles of the Brazoria National Wildlife Refuge in Freeport, TX and 27.9 miles of the Brazos Bend State Park—both well-known and visited regional amenities with outdoor recreation, education, and eco-tourism opportunities.

OPEN SPACE AREAS

Open space areas include reserved public lands dedicated as permanent open space or parkland. These lands are generally owned by the local government or dedicated through private instrument as a development reserve. They are typically undeveloped and used for informal activities, and can also serve as flood collection areas during major storm events. Other examples of open space areas include easements for drainage basins, excess rights-of-way, greenways, and street esplanades.

Alvin has two open spaces that total 2.4 acres, these parks are Marina Park and Citizens Park. Marina Park is a triangular open space containing a covered pavilion and is situated along the banks of the Mustang Bayou to the South, the Alvin Bowling Center to the North, and a single-family residential neighborhood to the East. Citizens Park is a beautiful little green space situated in the heart of Downtown.

Resources versus Needs

To assess the adequacy of the existing parks and recreation supply, it is necessary to look at the existing population compared to the supply of parks provided by existing facilities, and relate them to planning standards for desirable levels of service. In addition, it is necessary to consider forecasts in population to determine future needs and identify deficiencies, if any, of the system.

A combination of standards-based and demand-based approaches was utilized to assess the need for additional parks, recreation areas, and facilities within Alvin. The demand-based approach entailed input from the community forum and informal interviews, as well as the existing and projected future population of the planning area discussed in Chapter 2, Community Snapshot. Utilizing National Recreation and Parks Association (NRPA) standards, the acreage of parks and recreation areas needed in the community are displayed in Table 4.4, Park and Recreation Needs.

CURRENT NEEDS AND PROJECTED FUTURE DEMANDS

As outlined in **Table 4.2, *Park Guidelines***, the standards range in size per 1,000 persons for each classification of park. Based upon a 2010 Census population of 24,236 persons, the total acreage needed is roughly 181.77acres of mini, neighborhood, and community parks. Currently, the City maintains 115.8 acres of formal parks (not including open spaces) and recreation areas, which is only meeting about 63 percent of the total park needs in the community. Regional park facilities are not included in the assessment of current and future needs due to the City's proximity to Galveston Island and its coastal amenities, as well as the availability and range of regional facilities located throughout the Houston-Galveston region.

The City does not presently meet or exceed any of the recommended standards for park acreage. The City currently meets 86.65 percent of the recommended standards for community park acreage, 14.24 percent of the recommended standards for neighborhood parks, and 12.38 percent of the recommended standards for mini parks. The greatest area of need is for additional neighborhood parks, which is currently deficient by 41.57 acres. There is also a demand for additional mini parks, which is currently deficient by 10.62 acres.

Also displayed in **Table 4.4, *Park and Recreation Needs*** (following page), is a tabulation of the recommended supply necessary to support the projected "middle ground" population of 33,472 persons (refer to Chapter 2, Community Snapshot). The additional acreage needed by the Year 2035, above that already owned by the City, will be about 153.23 acres.

The greatest area of need in 2035 will be for additional community parks, where nearly 72.75 acres will be needed. The additional 64.20 acres of neighborhood parks may be met with the acquisition and development of one or more additional community parks within one of the identified needs areas reflected in **Map 4.2, *Park Service Area Needs***. By 2035 the need for mini parks will increase from 10.62 to 16.28 acres, meaning that a total of 16.28 acres of mini parks will need to be designated between now and then.

Table 4.4, Park and Recreation Needs								
Park Classification	2010 (Population: 24,236)				2035 (Projected Population: 33,472			
	Recommended (acres)	Actual (acres)	Acres Needed	Percent (%) of Need Met	Recommended (acres)	Actual (acres)	Acres Needed	Percent (%) of Need Met
Mini Park	12.12	1.5	10.62	12.38	17.78	1.5	16.28	8.44
Neighborhood Park	48.47	6.9	41.57	14.24	71.10	6.9	64.20	9.7
Community Park	121.18	105	16.18	86.65	177.75	105	72.75	59.07
Total	181.771	113.4	58.37	52.39	266.63	113.4	153.23	42.53

Source: : Kendig Keast Collaborative

Service Areas of Parks

Evaluating servic areas is an effective means of determining whether specifically-defined geographic areas that have sufficient park lands available, as well as to identify the demographic need for additional parks and recreation areas and facilities. The effectiveness and use of an entire park system is strongly determined by the location of each park. To be utilized parks need to be conveniently accessible and evenly distributed throughout the community. This section identifies and analyzes areas of Alvin that are under-served, over-served, or underutilized. Depicted in **Map 4.2, *Park Service Area Needs***, are service area buffers around all existing parks. Each park is classified, as well as park assets and amenities analyzed, to determine the degree to which user demands are being fulfilled.

Community parks have a primary service area of one mile, meaning that a majority of persons utilizing these area-wide parks generally reside within this radius. As illustrated in **Map 4.2, *Park Service Area Needs***, Alvin currently has six community parks—Bob Briscoe Park, National Oak Park, Pearson Park, Lions Park, Morgan Park, Ruben Adame Park, and the Tom Blakeney, Jr. Hike and Bike Trail—that contribute 105 acres. While their associated service areas cover the majority of the City limits, the northern and southern most areas of the community have limited coverage. Since there is limited development in these areas, the community park needs are not pressing—but as development continues north and south along Highway 35 (soon to be the Grand Parkway/99) it will become imperative to set aside land to address future needs. If all current park acreages remain the same until the year 2040, then according to calculations made in Table 4.4, Parks and Recreation Needs, the community parks will only meet 59.07 percent of the population's need and require 72.75 acres to meet the growing population's demand for community park amenities.

The area with the greatest need for a community park facility is the neighborhoods adjacent to the downtown area. Otherwise, the needs and existing geographic inefficiencies are at the edge of the corporate limits as well as in the peripheral areas. Of great significance is the amount of residential development that has occurred and continues to occur outside of the City limits. Without parkland dedication requirements that are tied to the City's subdivision regulations, which extend to include the

extraterritorial jurisdiction, the magnitude of need in the outlying areas will continue to grow. The result will likely be an increased utilization of the parks within the City limits, which places a burden on the fiscal resources of the City without receiving an equivalent return of property tax dollars. Therefore, there is and will be significant needs for park facilities concurrent with ongoing and future development throughout the City's planning area.

Neighborhood parks are intended to provide residents with ample opportunity for both passive and semi-active recreation activity within close proximity to their neighborhoods. The method of determining the need for neighborhood parks is quite different from an assessment of need for community parks. Whereas community parks are designed for large-scale, area-wide events and activities, neighborhood parks are intended to meet the daily recreation needs of nearby residents. The level of activity is limited as a result of the size and location of these parks and the equipment and facilities available. Neighborhood parks should be within a short walking distance (typically one-half mile or less) for the residents of one or more neighborhoods thereby encouraging use and promoting convenience, ease of access, and walking safety for neighborhood children.

Illustrated in **Map 4.2, *Park Service Area Needs***, are the one-quarter mile service areas of the three existing neighborhood parks— Newman Park, Sealy Park, and Talmadge Park. The limited coverage of the neighborhood park service areas clearly illustrates the concentration of these parks in the most densely populated areas along Mustang Bayou in central Alvin, as well as the lack of dispersion anywhere else within the city. There are several neighborhood areas that are not within acceptable proximity to a neighborhood park; particularly south between S. Gordon Street and S. Johnson Street; along South Street near Rowan-Burton Road; along Davis Bend Road near Shane Street; north of S.H. 6 and west of S.H. 35; and in the southeastern quadrant of the community along Mustang Road and to the east of Fairway Street

From a purely locational standpoint, the analysis indicates that, within the City limits, the northern and southern districts of Alvin are currently under-served by the existing parks and recreation system. Alvin is unlike other cities in that it has a variety of quality parks and amenities—such as the dog park, skate park, sports complex, pool, and greenspace—that provide different functions and become destinations for those purposes. By establishing a couple of mini "pocket" parks to the north and south, as well as a community park (either through pre-development acquisition by the City, parkland dedication requirements concurrent with subdivision approval, public/private partnerships, grants, or any combination of these methods), Alvin will more thoroughly serve the developing sectors of the City. Requiring the dedication of parkland concurrent with a final plat or a development site plan is a sound method to assure adequate park areas consistent with the demand and impact placed on the public parks system by new development.

Joint Use of Areas and Facilities

Playgrounds, athletic fields and courts, meeting rooms and centers, and other buildings and facilities add to the available municipal parks and recreation facilities. If accessible to the public, these areas and facilities can enhance the number and availability of neighborhood and community parks within the City. A reciprocal agreement between jurisdictions, whether it is the City and Alvin Independent School District (AISD), Alvin Community College (ACC), Brazoria County, or other entities, should address joint purchase of land, use of buildings and facilities, maintenance, and operation of grounds and equipment, which may be mutually beneficial to all parties. The sharing of these public resources enables greater efficiency and minimizes duplication.

The City of Alvin currently shares the following facilities: the Alvin High School Football Stadium, AISD Pools and Sports Fields, the Alvin Family Community Center, the Alvin Senior Center (internal shared facility), and the Alvin Girl Scout House. As displayed in **Map 4.2, *Park Service Area Needs***, the school sites contribute to the service area coverage of the neighborhood parks. While there is some degree of overlap with the neighborhood park facilities, they serve some areas that are not well served by existing neighborhood park facilities, such as the area at the southern area of Mustang Road and north along Heights Road. If joint use agreements can be reached between the City and partnering entities, the coverage of park facilities can be expanded to better serve the area neighborhoods. Joint use of facilities and inter-jurisdictional agreements reap benefits for all parties and may result in the establishment of park and recreation facilities in unincorporated areas.

System Plan for Future Park Development

The general plan for future development of Alvin's parks and recreation system was developed through evaluation of existing conditions, planned improvements, and projected future needs based upon anticipated development and increases in population. A future plan for the development of parks and recreation areas is shown in **Map 4.2, *Park Service Area Needs***. The plan shows the generalized locations of proposed future neighborhood and community parks, including those within the City limits and within the extraterritorial areas around the immediate periphery of the community.

To develop a system of neighborhood and community parks that will adequately serve the existing and projected future parks and recreational needs of the community, the City will need to acquire and develop parks within the identified deficiency areas shown in **Map 4.2, *Park Service Area Needs***. These parks will help to achieve full service area coverage of community parks and an even distribution of neighborhood parks. As new residential subdivisions are platted and developed, there should be allowances for sufficient land capable of being developed for public park and recreation uses.

CROSSROADS 2035

Chapter 5

Growth Strategies

This comprehensive plan makes assumptions anticipating the pattern of future growth and offers the necessary policy guidance to effectively manage it. The intent of many of the principles, actions, and policies outlined within this chapter, as well as Chapter 3, *Land Use*, are to encourage compact and efficient development patterns, thereby minimizing fiscal and other likely impacts caused by outward, sprawling development.

Managed growth involves promoting and ensuring a sequential development pattern that encourages the efficient use of resources. The most efficient pattern of growth for the community is infill and contiguous growth that occurs sequentially from existing developed areas and is closely coordinated and timed to occur concurrently with adequate service provision. Conversely, haphazard development that occurs in an unplanned and uncontrolled manner is inefficient, undesirable and costly. Alvin must establish a plan for sequencing growth in concert with utility extension policies. Ultimately, growth should be based on the community's stated vision, goals and objectives regarding the kind of community within which residents want to live. Through advance planning, an opportunity exists to ensure that new development occurs in a contiguous, orderly and fiscally responsible manner through enhanced land development regulations, annexation, and other regulatory policies and incentives; and at the appropriate time.

This chapter is closely related to other elements of this plan addressing land use and community character; parks, recreation and open space

preservation; resource conservation; and, transportation; all of which relate to expected growth and the community's capacity to meet increasing demands for public facilities and services. The analysis and findings presented in this chapter are based primarily on known factors regarding the existing infrastructure systems, programmed and anticipated utility improvements, existing staffing and service capabilities of the Police Department, Alvin Volunteer Fire Department, and Emergency Medical Services Department, and projected population growth of the City and its planning area. A general conclusion is that the community is in relatively good shape to serve existing and future development within and immediately adjacent to the current corporate limits. However, it is not capable of providing adequate facilities and services throughout the entire extraterritorial jurisdiction (ETJ), but only to the most prudent and beneficial areas that are viable for urban development.

In addition to analyzing the City's capacity to support future changes in population or shifts in its land use pattern, this chapter also establishes a policy framework for managing future development in a manner that is wise and fiscally responsible. Without a proactive stance to ensure that development occurs in a logical and sequential pattern, it will continue to be driven solely by market forces, which will not necessarily occur in a manner that can be efficiently served with adequate public facilities and services. The City of Alvin has the opportunity to utilize a number of strategies, tools and techniques for influencing and managing the pattern and timing of development within the City limits and ETJ. While there is no single approach that meets all needs, a combination of planning, regulatory, and financing mechanisms can be used to influence what is constructed and where.

Alvin has witnessed a modest but steady increase in its population over the course of the last two decades, though due to land planning activities and major transportation enhancements - such as the proposed Segment B of the Grand Parkway and improvements to both State Highway (S.H.) 35 and S.H. 6 - in the City limits and the ETJ, the growth is expected to dramatically increase. Recent growth has generally occurred in the periphery of the existing developed area and perhaps more so in the outlying areas of the ETJ. Additionally, the City has continued to see new development, primarily to accommodate new housing stock to meet the growth of the community as a result of rapid growth throughout the Greater Houston Metropolitan Area. Naturally, this new development has occurred at the edge of the community, leaving large pockets of undeveloped land. Nonresidential development has occurred primarily along the major transportation corridors of S.H. 6 and Business 35, and increasingly along the S.H. 35 Bypass. Larger nodes of commercial development are located at the intersections of these major thoroughfares. Older neighborhoods are transitioning into professional services, shops and specialty retail stores, and industrial uses are interspersed throughout the community. The heaviest concentrations of industrial uses are along the railroad corridor that parallels S.H. 6, and along Business 35 and the S.H. 35 Bypass. Newer residential neighborhoods are developing primarily in the northwest quadrant of the ETJ, toward Pearland and Houston.

While much of the industrial and commercial uses are in discrete areas, they are often adjacent to or in near proximity to residential areas, with

little and often no buffering between uses. Since Alvin has limited land use controls, uses have been permitted to be placed generally wherever land is available for use with little, if any, regard as to its compatibility or effect on other land uses. There has similarly been an absence of development standards to alleviate incompatibility, or to ensure that a development has adequate public facilities while allowing for additional growth and development to also have access to public facilities. In other words, a significant land use can use a disproportionate amount of water, wastewater, and roadway capacity that may not be sufficiently sized to accommodate such use. This is evident particularly in the outlying areas where new subdivisions are generating high volumes of traffic, which is being placed on narrow, inadequately improved roadways with no shoulders and deep ditches.

Alvin has an unusually large ETJ because of an extensive 1960 strip annexation to avoid being enveloped by the City of Houston. The boundaries of the ETJ were upheld by the Houston Court of Appeals. Because of the size of this area, Alvin does not exercise its statutory authority over subdivision platting within the entirety of the ETJ. The City regulates platting within the City limits, and portions of the ETJ that are nearest to the City limits, around the Speedway area annexation and in Savannah Plantation. An interlocal agreement was adopted in 2004 pursuant to an amendment in state law, which allowed the apportionment of subdivision review authority. This agreement grants subdivision approval authority of the remainder of the area to Brazoria County, which reviews plats based on its ordinance, not the City's. The City and County regulations should be regularly reviewed for differences in subdivision and improvement design standards and exactions; should the City adopt more stringent standards, the reliance on the Brazoria County subdivisions approval process may eventually negatively impact the future growth of the City, or increase the costs of annexing areas with what will then be substandard public improvements or rights-of-way.

Alvin, like many Texas communities, is increasingly challenged by limited fiscal resources. The local economy is sustaining itself, but not growing at a pace fast enough to secure sufficient resources for infrastructure. It is, therefore, essential for the City to evaluate its pattern of development and seek ways to improve the efficiency of its service provision and its effectiveness in delivering quality, reliable, and adequate facilities and services to its population.

Conventional Growth Management Methods

Within the current context of anticipated economic and population growth, it is wise for Alvin to consider ways in which it can exert maximum influence over the direction, timing, pattern, mix and quality of new development within the City limits – growth that will require the provision of public utilities and services in a cost-efficient manner; that in turn, may be catalytic in attracting businesses and people to the area.

It is currently within the City's capacity to exercise the following tools to manage growth:

- Long-range Planning is a process of identifying, analyzing and documenting locations in the City that are targeted for the gradual expansion of its urbanized area, in contrast with areas that are less conducive for intensive development because of environmental or other identifiable constraints (e.g., terrain, wetlands, historic sites, etc.), existing patterns of use and ownership, or service provision constraints.
- Annexation brings key growth areas and areas intended for limited development into the City limits well before any significant development activity begins, and so appropriate land use and development standards may be established early on. Annexation is a mechanism to expand the City's tax base, especially to incorporate the pool of tax and fee payers who benefit from municipal infrastructure and services. Consequently, the City assumes responsibility for providing services to newly annexed areas, in the form of expanded utilities infrastructure and police and fire protection, among other services.
- Subdivision and Development Regulations can be used to carry out growth strategies, particularly in terms of the quality of new development or redevelopment. Clear infrastructure standards in the regulations, and associated City specifications and criteria, shall establish minimum improvements required of private development.
- Development Agreements where appropriate, require that development in the ETJ must comply with certain aspects of the regulations that apply to similar development within City limits, prior to their annexation into the City. Development agreements can be negotiated with private interests that request extension of the City's utility infrastructure to fringe and/or ETJ locations, especially to clarify the timing of future planned improvements and any conditions in exchange for the City's infrastructure and service commitments. They can also be used to establish levels of participation in public-private cost-sharing arrangements for infrastructure improvements, as well as reimbursement provisions for infrastructure oversizing or other special circumstances.
- Impact Fees assessed on new residential and nonresidential development provide dedicated funding for particular capital improvements that are specifically needed to serve the new development (as authorized by Texas state law for water, sanitary sewer, drainage, and roads).
- Multi-year Capital Improvements Programming clearly establishes the City's intentions for extending its primary arterial streets, trunk water mains, and wastewater collection lines to targeted growth areas.
- Joint Powers Agreements (JPA) are a means for the City and other units of government to coordinate on the provision of infrastructure (as well as public services and administrative functions), as regulated in Chapter 163 of the Texas Utilities Code.
- Adequate Facilities Ordinance requires that approvals for projects are contingent upon evidence that public facilities have adequate capacity for the proposed development. When facilities are found to be inadequate, development is postponed or developers may contribute funds to improve facilities.
- City-county Coordination through interlocal agreements facilitates synchronization of development policies and procedures in rural parts of Brazoria County and helps to improve regulatory enforcement in the City's ETJ.
- Zoning is the land use regulatory concept under which a municipality establishes rules for the use and development of land. A zoning structure consists of two separate components. The first is the text of the ordinance, which establishes specific development regulations that will be applicable to structures and property within the community. The second component is the

zoning map, which allocates the various zoning districts geographically within the community. In adopting zoning the City establishes a series of districts, and within each district, sets forth the uses to which structures or land may be placed. Section 211.004 of the Texas Local Government Code specifically requires that zoning regulations must be adopted in conformance with a comprehensive plan.

- Urban Growth Boundary / Urban Service Limit established around a community within which the local government plans to provide public services and facilities and beyond which urban development is discouraged or prohibited. Boundaries are usually set to accommodate growth over 10 to 20 years and are intended to provide more efficient services and to protect rural land and natural resources.
- Designated Development Area is similar to an urban growth boundary in that certain areas within a community are designated as urbanized, urbanizing, future urban and/or rural, within which different policies for future development apply. This is often used to encourage development in an urbanizing area or redevelopment in an urbanized area.[1]

1: Miles, Mike E., Richard L. Haney, Jr., and Gayle Berens, 1996. Real Estate Development: Principles and Process. (Second Edition) Urban Land Institute. Washington, D.C., p. 261.

Interests of the Community

The following issues pertain to the City's capacity to provide adequate facilities and services and ability to manage its future growth and development. The findings are based on analysis of the existing land use and expected future development pattern, planned improvements of the water and wastewater systems, police and fire capabilities and service areas, and both short-term and long-range strategies to manage future growth. These issues are summarized into the following broad categories:

EFFICIENT UTILIZATION OF PUBLIC FACILITIES AND SERVICES

The City's pattern of development over the course of its history has naturally grown outward from Downtown. The City's earlier development was generally compact as a result of the grid street system, traditionally smaller lots and home sizes, and less reliance on the automobile. More recently, development reflects a contemporary design with curvilinear street systems, the use of cul-de-sacs, and larger, more irregularly shaped lots. With the increased reliance on the automobile, the development patterns of American cities have spread outward. The result of this, which is equally apparent in Alvin albeit at a lesser scale, is that development occurs in a sprawling pattern, leaving sizable pockets of undeveloped land to separate older and new neighborhoods. In Alvin, sprawling development is largely a result of the size of the ETJ, limited control of development in the ETJ (particularly with the delegation of subdivision plat approval to the County), as well as other factors.

One of the more significant reasons for the City's pattern of development is caused by the extent of the 100-year floodplain (refer to **Map**

Preserving Choices: Principles of Smart Growth

Smart growth describes an approach to urban planning that concentrates growth in compact, walkable, urban centers to avoid sprawl. Smart growth planning advocates land use that is compact, transit-oriented, walkable, and bicycle-friendly. Neighborhood schools, complete streets, and mixed-use development with a range of housing choices are examples of smart growth.

When communities choose smart growth strategies, they can create new neighborhoods and maintain existing ones that are attractive, convenient and safe. They can protect the environment while stimulating economic growth. Most of all, they can create more choices for residents, workers, visitors, children, families, single people, and older adults—choices regarding where to live, how to get around, and how to interact with the people around them. When communities do this kind of planning, they preserve the best of their past while creating a bright future for generations to come.[2]

The Smart Growth Network (SGN) is a network of private, public, and non-governmental partner organizations seeking to improve development practices in neighborhoods, communities, and regions across the United States. SGN has developed 10 smart growth

5.1, ***Floodplain and Surface Water***)—and other localized flooding conditions—that affect both developed and undeveloped areas. Rather than confront the costly requirements to develop them, developers have naturally opted for less encumbered and more readily buildable areas. The outcome has necessitated the expansion of facilities and extension of services in these areas, including drainage facilities, which will continue to impact the full development of the City and the ETJ. There are particularly significant issues in the Dickinson Bayou watershed and Chocolate Bayou watershed, both of which are largely unstudied areas. This will be an important consideration in future annexations of land currently within the ETJ, as the City will have to consider the costs of the necessary infrastructure maintenance and improvements in the area; not just streets, water and sewer facilities, but costly drainage facilities and detention improvements as well.

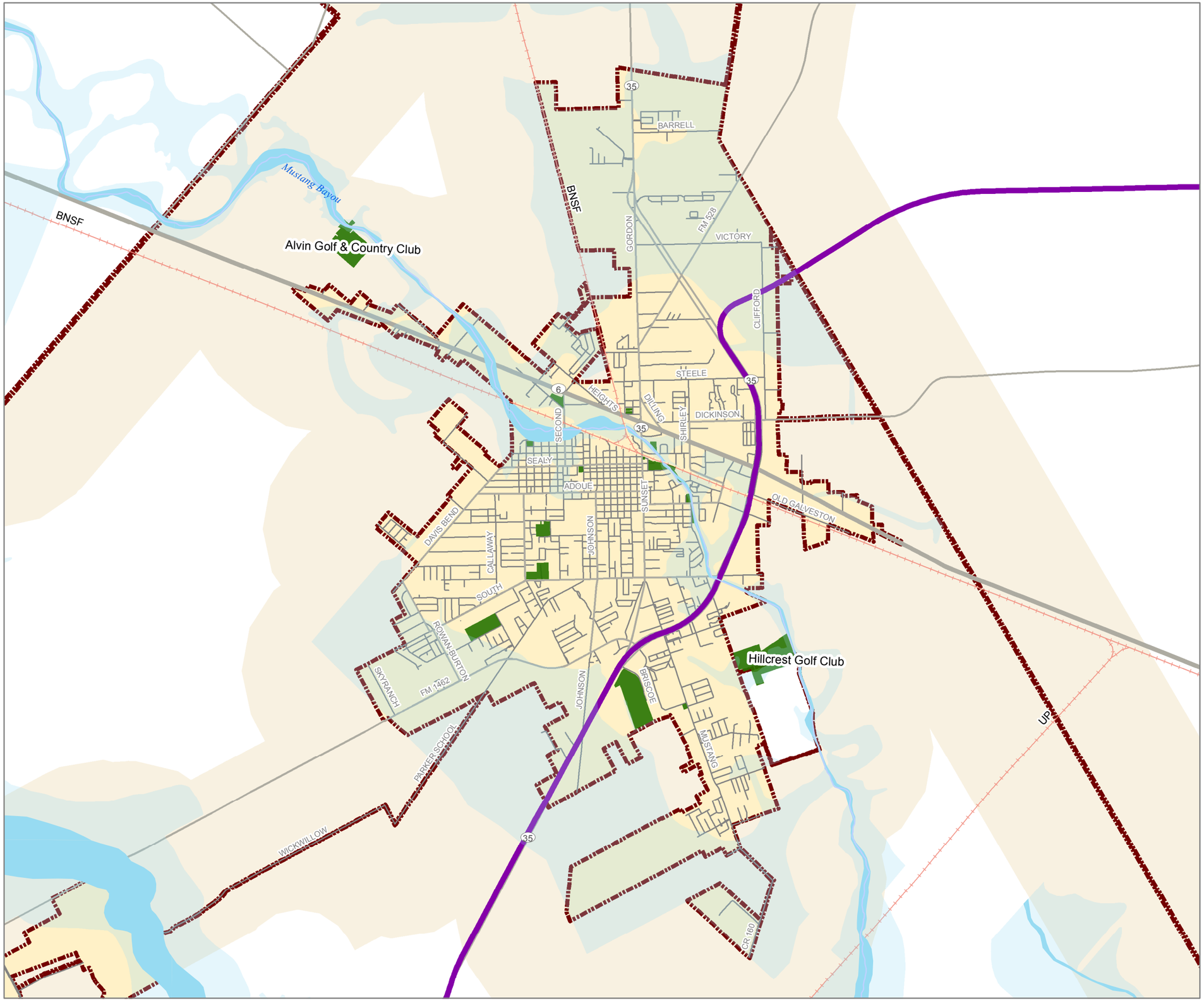
Alternative development types, such as clustering, conservation, and preservation development (as discussed in Chapter 3, Land Use) offer opportunities to maintain development efficiency and character by incorporating sufficient land into the subdivision design to preserve sensitive areas, conserve natural features, and sustain pre-development stormwater run-off conditions, as displayed in the graphics in the left margin. On smaller, nonresidential infill sites, the standards may include provisions for off-site regional detention, limitation on the allowable impervious surface areas and maximum floor area considerations.

One of the primary tenets of the "Smart Growth" movement is provision for infill development and redevelopment. The intent of these planning policies and principles is to allow more compact and efficient development patterns, thereby minimizing the common sprawling development pattern, which is costly to the City, both in the provision and maintenance of utilities and transportation infrastructure. Since the drafting of the 2005 Comprehensive Plan, Alvin's development pattern to date has been leap frog, in contrast with more planned, incremental growth, and exhibits the characteristics and consequences of sprawl. This is particularly the case due to the amount of observed development activity already occurring in the outlying areas, as well as the number and scale of likely developments in this area. Since the community is poised to experience several significant new development projects within the City limits as well as in the outlying areas of the ETJ, it is essential that the City establish a near-term and long-range policy framework and regulatory means through which to ensure a wise and fiscally responsible pattern of future growth.

SEQUENTIAL PATTERN OF DEVELOPMENT, TIMED TO OCCUR CONCURRENT WITH THE PROVISION OF ADEQUATE PUBLIC FACILITIES AND SERVICES

Several new developments, albeit of a relatively small scale to date, have occurred on the edge or outside of the City limits. Many of these developments do not seek annexation, though there would be benefits to the owners, including the availability of urban infrastructure (water, sewer, and drainage improvements), increased services (code enforcement, police service, etc.), and the City's authority to regulate development through its subdivision and related development ordinances. These services, however, come with City taxes, which increase development

Map 5.1
Floodplain and Surface Water



FEMA Floodplain (Zone A)
Floodway
Mustang Bayou
Alvin Parks
Grand Parkway Proposed Alignment (2014)
Railroad
City limits
ETJ

FEMA Special Flood Hazard Area - Zone A:
Areas subject to inundation by the 1% annual chance flood event.
These areas are denoted as High Risk flood areas.

*This map was generated using data provided by Kendig Keast Collaborative, City of Alvin GIS Department, City of Alvin Parks and Recreation Department, and AECOM.

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and housing costs. Many of these developments are being formed with Municipal Utility Districts (MUD), which bear the long-term debt of the infrastructure costs, adding a property tax to properties located outside the City. Few, if any, developers want to impose MUD taxes along with City taxes on future residents. While the majority of MUDs are in the ETJ, however, there has been one in-city MUD formed. The planning considerations for MUDs and their longterm effects on planning decisions are discussed in further detail below.

As a result of the above circumstances, significant development is occurring within the City's ETJ, much of which is not feasible for annexation or the provision of municipal services. Subdivisions are able to develop in these areas without annexing into the City, meaning they avoid the payment of municipal property taxes, required compliance with the City's building code, and connection to municipal utilities, among other requirements. Therefore, this is an attractive development option that offers a suburban estate or rural living environment in convenient proximity to the City, and to transportation alternatives in the greater Houston area, yet at a reduced development cost. The outcome of the current land use policies - or lack thereof - is an increasing presence of rural subdivisions around the periphery of the community, which impacts the infrastructure and amenities provided by the City, without those property owners bearing any of the costs.

There are both practical and policy issues associated with peripheral development. The more significant issues relate to the inability of the City to promote orderly growth and urbanization by coordinating development with the provision of facilities and services. Another common issue with development occurring outside the City limits is a limitation for expanding the tax base in line with increasing service demands. This is especially important since residents and businesses outside the City benefit from access to public facilities and services, such as parks and libraries, but do not share in the tax burden associated with constructing and maintaining these facilities and services. A sprawling pattern of development stretches resources and increases costs for providing services, while burdening the capacities of infrastructure systems that are not adequately designed to support such development.

The benefit of State law providing the authority for the City to regulate subdivision development within its ETJ is the ability to manage growth. While landowners can acquire utilities from providers other than the City, implementation of sound subdivision regulations in the ETJ, coupled with a facility management approach such as traffic sheds, would allow the community to better control the pattern, density, and timing of development within this area. Therefore, through land development policies and coordinated City-County regulations, development may be timed to be concurrent with the provision of improved facilities and services. This, in effect, allows the City to fulfill its obligation to protect the public health, safety, and welfare. (Refer to the section of this chapter entitled, "Managing Growth," for more information.)

It is important to acknowledge the influence of public investments on private development activities. As commonly stated, the three most important factors in real estate development are location, location, and location. The importance of location is derived, at least in part, by the presence and availability of infrastructure, such as streets and utilities.

Continued...

principles, which, when applied, can help to create compact, sustainable, livable communities. The principles include:

- Encouraging community and stakeholder collaboration in development decisions;
- Preserving open space, farmland, natural beauty, and critical environmental areas;
- Mixing land uses;
- Taking advantage of compact building design;
- Creating a range of housing opportunities and choices;
- Creating walkable neighborhoods;
- Fostering distinctive, attractive communities with a strong sense of place;
- Strengthening and directing development towards existing communities;
- Providing a variety of transportation choices; and
- Making development decisions predictable, fair, and cost effective.

Communities that are successful in translating these principles into planning policies are well on their way to achieving socially, environmentally and economically sustainable places for their citizens to live work, and play.

2: Smart Growth Network. This is Smart Growth. www.smartgrowth.org

Managing Growth and Development in the ETJ

According to the Texas Local Government Code, an extraterritorial jurisdiction (ETJ) of a municipality is the unincorporated area contiguous to the city's corporate boundaries. The ETJ's distance from the city limits is determined by the city's population.

ETJ radius from City limits	Municipal population
0.5 miles	<5,000
1 mile	5,000 – 24,999
2 miles	25,000 – 49,999
3.5 miles	50,000 – 99,999
5 miles	>100,000

With an increase in less than 1,000 persons, Alvin's ETJ will expand from a one mile width to a two mile width; which will increase its degree of land development authority, regarding enforcing land development regulations, including parkland dedication.

Therefore, where there are readily accessible transportation facilities and utilities infrastructure, land values escalate and development follows shortly thereafter. This is an important consideration as the City, County, and State consider such improvements as the proposed Grand Parkway. Location of such a significant transportation facility would likely attract development, which could serve as an impetus for more sprawling growth. A decision as to the location of the Grand Parkway, therefore, has significant land use implications for the future growth of Alvin that warrant monitoring, continued involvement, and consideration.

Sustainable provision of quality, reliable infrastructure facilities – Alvin's population over the past few decades has been generally stable, with modest growth. Therefore, infrastructure planning has focused less on increases in physical plant capacities and extensions of water, distribution and wastewater collection mains, and more on updating its aging infrastructure, solving issues such as the inflow and infiltration (I & I) of stormwater into the sanitary sewer system, and complying with Federal permitting regulations. While infrastructure has been extended to serve new development, a majority of the City's investment in its utility systems has been improvements to its quality and reliability.

Water Supply and Distribution

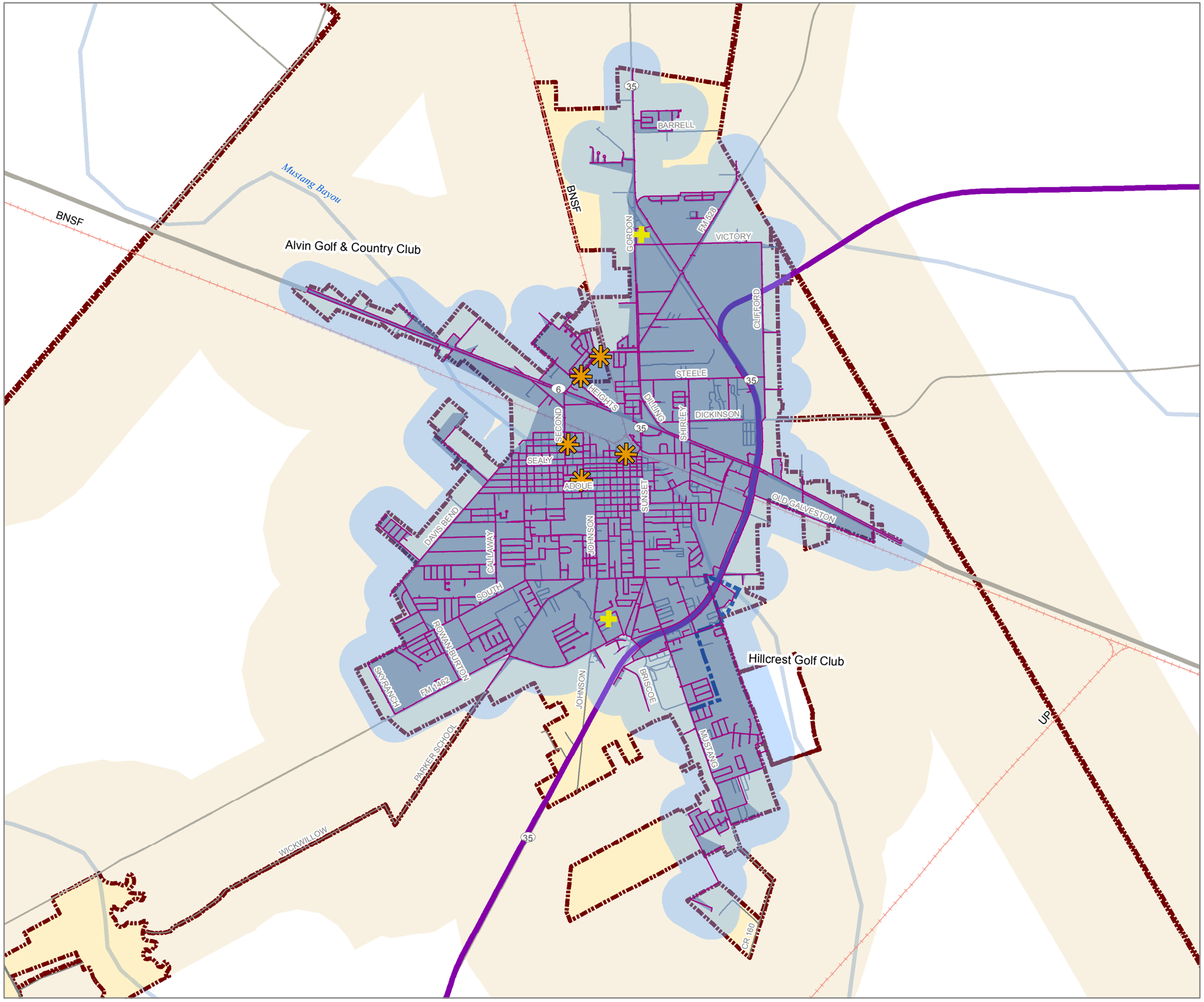
The supply of water is a significant longterm issue for the community, which must be planned well in advance of future needs. The City currently provides water service to users within the City limits, as well as a few users outside the City limits. The primary source of potable water currently is from groundwater wells. There is no surface water treated and supplied by the system.

Displayed on **Map 5.2, *Water Storage and Distribution System***, is the City's existing water storage and distribution system, which is capable of supplying water to the City's residential, commercial and industrial communities. The ¼-mile buffer also depicted on Map 5.2, indicates the system's primary expansion area to support the contiguous growth of Alvin's urbanized area, or in the event of future annexations or economic development opportunities.

On average, the City of Alvin uses approximately 2.7 to 2.8 million gallons of water each day. There are seasonal differences in water usage; increasing in the hot summer months when lawn irrigation is necessary and outdoor water amenities become more utilized; and decreasing during the rainy season. Alvin's "unaccounted for water," remains around 10 percent, down from almost 24 percent in the mid-1990s. Water that is unaccounted for is the difference between the amount of water that leaves the wells (including leaks and the flushing of fire hydrants) and the amount accounted for through monitoring. To meet anticipated water demands, - from the customers it serves and is expected to grow to serve, the City continues to replace two and one quarter inch (2 1/4") diameter water lines with six inch (6") diameter water lines. This is primarily to improve water flows and improve fire flow capabilities. Currently, there is approximately 5,000 linear feet of water line requiring replacement.

In 2008, the City constructed the Northside Water Tower to accommodate anticipated growth in and around the Kendall Lakes residential subdivision and the Light Industrial Park. The tower's elevated tank has

Map 5.2
Water Storage and Distribution



- Elevated Water Towers
- Municipal Water Wells
- Water Mains
- Primary Expansion Area (1/4 Mile Buffer)
- Existing Service Area
- Grand Parkway Proposed Alignment (2014)
- Rivers and Streams
- Railroad
- City limits
- ETJ

*This map was generated using data provided by Kendig Keast Collaborative, City of Alvin GIS Department, City of Alvin Parks and Recreation Department, and AECOM.

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a 750,000 gallon capacity, which will provide adequate water volumes to support industrial growth and up to 7,000 additional residents. The City is planning to construct an additional 500,000 to 750,000 elevated tank in 2015, to replace the 500,000 gallon tank on Dyche Lane, which has been determined by the Texas Commission on Environmental Quality to be too low. The location of the new elevated water tank remains to be determined.

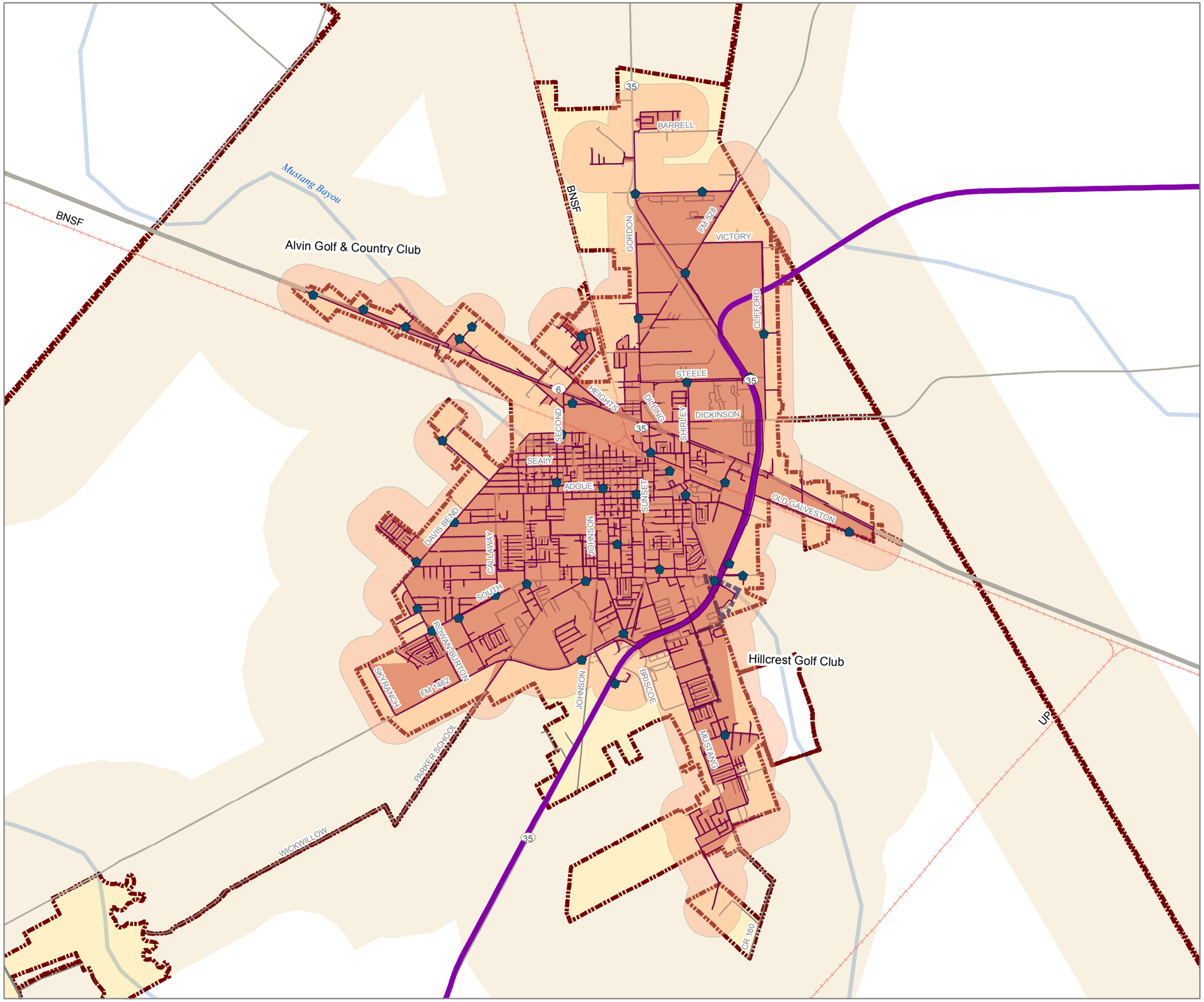
The City has also recently launched an automated meter reading system, whereby the City will be able to read utility meters remotely. This will enable the City to be more accurate and report actual water usage as well as identify potential leaks in the system.

Wastewater Collection and Treatment

The City of Alvin Sewer Division maintains approximately 140 miles of sewer main lines, manhole clean outs, lift stations, and service connections within the Alvin city limits. The Division is responsible for the operations, repair and maintenance of leaks, sewer stoppages, and fire hydrants, up to a resident's private property line. The geographic extent of the system is displayed on **Map 5.3, *Alvin Wastewater Collection and Treatment System***. An additional ¼-mile buffer indicates the system's primary expansion area to support the contiguous growth of Alvin's urbanized area, or in the event of future annexations or economic development opportunities. The flow estimates and assumptions above take into account the issue of inflow and infiltration (I & I). This involves storm water and groundwater that enters collection systems through faulty joints, connections, manholes and cracks. This is a common problem faced by many communities with aging municipal systems. As will be discussed later in this section, systematic measures to reduce and minimize I & I can benefit the entire sanitary sewer system, especially by reducing unnecessary flows through the wastewater treatment process.

Currently, all generated municipal wastewater is collected and treated at the City's single active sludge wastewater treatment plant (WWTP), where the effluent is then released into Mustang Bayou. Assumed daily sewage flow is approximately 110 gallons per person. Average daily sewage flow is 2,000 gallons per day per acre for residential development and 3,000 gallons per day per acre for commercial development. The average operating volume of the WWTP is 2.6 to 2.7 million gallons per day (MGD). The treatment plant's design capacity is rated by the Texas Commission on Environmental Quality to be 5.0 MGD, which would equate to a 75 percent flow rate (the percentage at which an additional plant would be required), and a projected population of approximately 40,000 persons. The peak flow may fluctuate upwards during heavy storm events - caused largely by inflow and infiltration of stormwater into the sanitary sewer system but the system has not exceeded 75 percent of plant capacity to date. The City is proactively addressing these issues through an I & I mitigation program, which involves replacing sewer mains and infrastructure concurrent with major road projects, as well as by its ongoing program to increase the pumping capabilities of the system's lift stations. In 2009 the City completed Phase 1 rehabilitation, which involved replacing the surface aerators with fine air bubblers, modifying two clarifiers and chlorine contact chambers, and adding two blowers. Phase 2 rehabilitation will include upgrading an additional clarifier and installing a new belt press to remove water from the sludge.

Map 5.3
Wastewater Collection and Treatment System



- Lift Stations
- Sewer Lines
- Primary Expansion Area (1/4 Mile Buffer)
- Existing Service Area
- Grand Parkway Proposed Alignment (2014)
- Rivers and Streams
- Railroad
- City limits
- ETJ

*This map was generated using data provided by Kendig Keast Collaborative, City of Alvin GIS Department, City of Alvin Parks and Recreation Department, and AECOM.

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With the completion of Phase 1 and 2 rehabilitation, the WWTP capacity will expand to 8.0 MGD.

During the mid- to latter part of 2014, the City will embark on a significant sewer line replacement project, located primarily within the older part of the city, from 2nd through 9th streets and from Lobbit Street to W. Adoue Streets. Funded by a Texas General Land Office hurricane relief grant, over 18,250 linear feet of sewer line will either be repaired or replaced.

Stormwater Drainage

Due to the flat terrain and the presence of natural drainage features, such as Mustang Bayou, the community has extensive areas that are within the Federal Emergency Management Agency (FEMA) designated floodplains and flood prone areas (refer to **Map 5.1, *Floodplain and Surface Water***). This results in periodic flooding during storm events, the severity of which depends on the size, duration, and nature of the event. The City has undertaken improvements in the stormwater drainage over the course of the last five to 10 years, which has helped remedy the more significant drainage issues. There remain, however, localized flooding problems that threaten structural flooding for as small as 10 or 25-year storm events. The City shares responsibility for drainage with the Brazoria County Conservation and Reclamation District No. 3, with the City being responsible for the storm sewers and roadway ditch system, and the district handling the larger outfalls. Street drainage can be a major issue in heavy rain events.

The design of development and the degree of impervious surface area significantly influences the volume of stormwater that is generated and its means of collection and conveyance, The density and intensity of development, measured in terms of units per acre and ratios of open space and impervious surface coverage, contribute to both localized and communitywide flooding conditions. Generally, the means for managing stormwater is to require the design of subdivisions and non-residential sites to comply with predevelopment run-off conditions. Development types such as cluster, conservation, and preservation development, allows densities that are proportional to the capacity of the land to support urban development, while conserving site resources and preserving sufficient land for stormwater collection, holding, and aquifer recharge.

To address flooding issues the City partnered with the Brazoria County Conservation and Reclamation District No. 3 to develop and maintain several regional detention basins. A 2011 drainage study, commissioned by the City of Alvin, recommended the construction of three detention basins within the City limits, to reduce flooding at the intersection of South and Johnson Streets. The first two detention basins will be located along the M-1 Ditch on South Street. The upstream detention basin has been designed to be approximately 15 acres in area (112 acre feet) and is planned to be located at South and Kost Streets, adjacent to the M-1 ditch, which is the major drainage artery leaving the City of Alvin. The downstream detention basin has been designed to be five-acres in area (32 acre feet) and is planned to be located at the intersection of Durant and South Streets. The detention basins are designed to be in-line, with the proposed storm sewer outfalling directly into the pond and outfalling

into the M-1 Ditch. The M-1 ditch transports two million gallons of treated wastewater to areas south of Alvin in Brazoria County, where it is recycled for industrial uses, rice farms, and potable water. These detention basins will significantly aid in reducing street flooding around the intersection of South Street and Johnson Street (refer to **Map 5.4, *Stormwater Drainage Infrastructure***).

In April 2014, the City executed a Memorandum of Understanding (MOU) with Texas A&M University to develop a stormwater wetlands component of the detention basin located at Kost Road and South Street. Texas A&M is determining the wetland species of plant material suitable for the area, and will use grant funding to purchase and install the wetland plant material within the detention basin. The function of the proposed stormwater wetland is to improve the water quality flowing from the Kost Detention Pond site, while providing a natural wetland habitat and opportunities for Alvin residents to observe and enjoy wildlife in a wetland setting. The Project is part of the larger effort to improve non-point source (i.e. stormwater runoff) water quality in Harris, Galveston and Brazoria Counties by demonstrating the use of engineered wetlands as a stormwater best management practice. The Project is grant funded through the Texas Commission on Environmental Quality and the Galveston Bay National Estuary Program.

SUSTAINING THE PROVISION OF QUALITY MUNICIPAL SERVICES

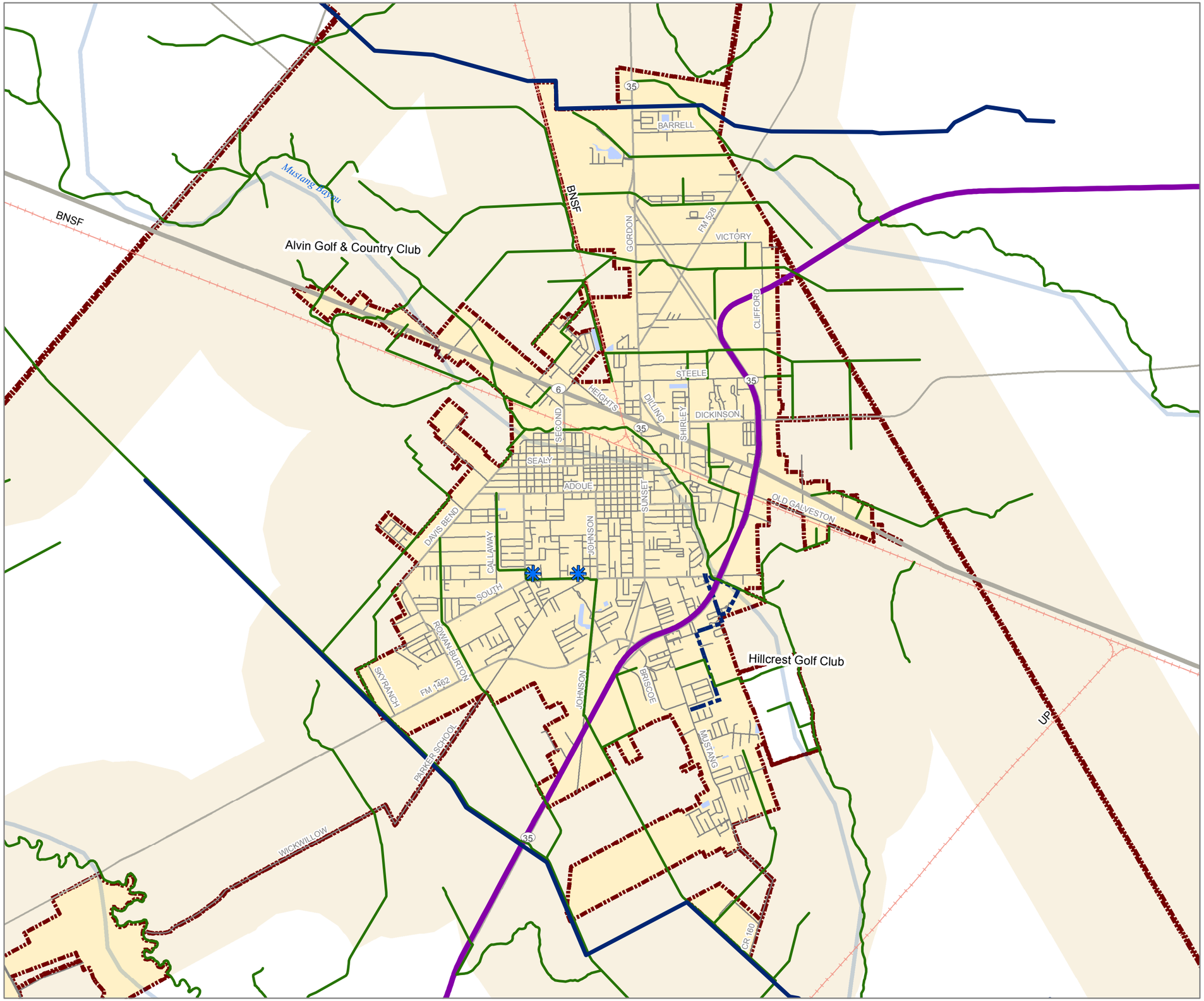
Although Alvin has not been experiencing major growth in its population, it is nonetheless, important that the City continue to invest in its police and fire protection services to meet constantly changing needs. There is a high expectation on behalf of the public to feel safe and secure from the threats of criminal activity and fire hazards. This inherent expectation places an ongoing burden on the police and volunteer fire departments to stay current with the latest technology and training, upgrade equipment and communication systems, and maintain a visible presence in the community. The result is of fiscal consequence caused by the demand for added personnel and costly new capital facilities and equipment.

Police Services

The Alvin Police Department (APD) has established itself as a model police agency through its development and implementation of innovative police programs. Best described as a full-service agency, the Alvin Police have developed such programs as “Coffee with Cops,” “Clean Sweep,” “ADD’EM UP” (interactive teen anti-drinking and driving) and the “Are You Okay?” program (assists the elderly and home-bound of our community). APD also has an award-winning Victim Assistance Program, a youth-centered and anti-tobacco program and the Shephard Program that assists in locating and returning wayward Alzheimer’s patients.

A significant issue associated with Alvin’s projected growth that may impact the Police Department has to do with traffic. The city currently has traffic issues on all major thoroughfares and these will only increase with population. The current state of City streets will need to be addressed comprehensively and decisively during this time frame in order to meet the needs of current and future residents and visitors. Traffic enforcement and compliance will remain of major concern and concentration for the

Map 5.4
Stormwater Drainage Infrastructure



- Proposed Detention Basin
- Irrigation Canals
- CR3 Drainage Ditches
- Detention Ponds
- Grand Parkway Proposed Alignment (2014)
- Rivers and Streams
- Railroad
- City limits
- ETJ

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What is "Low Impact Development?"

One method of reducing throughput of water resources is to require that all new land development incorporate low-impact development (LID) / green infrastructure approaches to mimicking / restoring pre-development hydrology to the maximum extent practicable. LID is an approach to land development that uses various land planning and design practices and technologies to simultaneously conserve and protect natural water resource systems and reduce infrastructure costs. LID still allows land to be developed, but in a cost-effective manner that helps mitigate potential environmental impacts. For example, site plans should be developed that keep water from running off the land too quickly and instead allow the water to soak back into the earth and replenish the groundwater table or aquifer. Reducing the quantity and velocity of water run-off minimizes soil erosion and loss of land. Site plans should employ strategies and techniques that protect the quality of water that flows into lakes, streams, and wetlands or recharges groundwater supplies. LID stormwater management best practices should be implemented within public rights-of-way, particularly along roadsides and in parking lots, where soils and other conditions will allow. LID processes for systematically managing stormwater include 'chains' or natural treatment methods of filtration, infiltration, and storage and ultimately reuse.

Rain Gardens

A rain garden is a shallow, constructed depression that is planted with deep-rooted native plants. It is designed to receive runoff from hard surfaces such as a roof or driveway.

Source: elandscapellc.com

Green Roofs

Green roofs capture and direct rainwater to bioswales and rain gardens on the ground (Green Building Resource Center, Houston, TX).

Source: Kendig Keast Collaborative

Stormwater Capture

Building roofs are designed to capture and direct rainwater to collection systems on the ground. (Lady Bird Johnson Wildflower Center. Austin, TX)

Source: Kendig Keast Collaborative

Cistern Storage

Rain water is captured and stored in this cistern, and used for landscape irrigation. (Lady Bird Johnson Wildflower Center, Austin, TX)

Source: Kendig Keast Collaborative

Vegetation Swales

Vegetated swales clean stormwater runoff from parking lots and allow it to infiltrate the earth. (Bagby Street Reconstruction, Green Roads Silver Certified)

Source: Kendig Keast Collaborative

police department. The other overarching issue will be the increase in the calls for service, which, based on current call load (27,748 in 2013), and projecting that onto the anticipated growth, calls for service to the Police Department should top 45,000 per year in 2035.

Irrespective of any fluctuations in the amounts of reported crimes over the past five years, the amount of calls for police services has increased consistently. These two facts must be considered when considering adequate staffing levels for current and future growth trends. The Police Department also employs 30 civilian positions. With an annual operating budget of approximately $6.2 million, the Alvin Police Department offers a variety of services to improve the public safety and quality of life in the community.

Currently, the Alvin Police Department consists of 79 paid members, 49 of which are sworn police officers. This equates to one officer for every 494 residents, or 2.04 officers per 1,000 population, which is an improvement since the drafting of the 2005 Comprehensive Plan, but is not congruent with what the United States Department of Justice has published as being the national average for southern states, which is 2.4 officers per 1000 population. The Police Department would presently require hiring an additional eight officers to match the national average for police agencies in the southern United States.

Based on the national average and Alvin's projected growth the Police Department will require 12 additional police officers, four additional detention officers, four additional communications officers, two new animal control personnel and two new clerk/secretarial positions. Equipment needs would include uniforms etc., six additional police vehicles outfitted with new in-car computers, in-car camera systems, new radars, and a commensurate amount of other required vehicle equipment and lighting. The department will also require one additional animal control vehicle. The station will require three to five new desktop

computers along with increased licensing for various software to increase users. Communications will need to add, at minimum, one additional dispatch terminal, which will include additional phone lines, computer and licensing. If additional growth occurs within Alvin's southern ETJ then the Police Department will need to look at specialized training and watercraft to deliver comprehensive police services.

Alvin Police Department Mission Statement

The mission of the Alvin Police Department is to be the model of excellence in policing by working in partnership with the community to fight crime and the fear of crime, enforce laws and enhance the quality of life while safeguarding the Constitutional Rights of all people. We are committed to providing outstanding service to all our residents and visitors alike and maintaining a work environment in which we continuously recruit, train and develop an exceptional team of employees who possess honor, integrity and compassion.

The Alvin Criminal Justice Facility is centrally located at 1500 South Gordon Street, in Alvin. The present facility provides approximately 23,000 square feet of interior space for law enforcement and support functions. This building houses the police administration, patrol and criminal investigative divisions (CID), municipal code enforcement officers, a city health inspector, a communications (dispatch) center, a public accessible crime prevention and victim assistance office, and a criminal records division. Also included in this structure is the detention (jail) facility that accommodates up to 24 incarcerates at any given time. The Police Department also oversees the personnel and operations of the Animal Control Shelter that is located off-site, on SH 6 West. The Police also enjoy some shared storage space off-site, which is below the Alvin Museum.

To support Alvin's projected growth the Criminal Justice Facility will require modest renovation. In the next three to five years the station will require additional parking areas. The Patrol and CID wings of the station need to be expanded for additional administrative areas. An additional store front or substation will also be required, the location of which will need to correspond with the area of the City experiencing the most growth.

Additionally, with recently annexed areas broadening the City's boundaries towards FM 1462 / SH 288, which invites potential commercial/business developments along with some residential growth, consideration should be afforded to creating/staffing a substation for police services and law come to fruition, an additional 2,200 homes on the northwest portion of the City may give rise to considerations that a substation should be available there as well.

As new development occurs within and around the periphery of the community, the rate of which is expected to increase in the near-term, the organization and administration of the Volunteer Fire Department (VFD) must change to accommodate increased calls and demand for services over an expanded area. Although the effective service area of the departments is the City limits, both the Police and Fire Departments have a general obligation to the public (managed by mutual aid agreements in some instances) for offering assistance beyond the City. The extent of development that occurs outside the City limits is, therefore, highly relevant from a public safety perspective. The ability to respond to a call in a timely manner is largely dependent upon the proximity to an adequately equipped and manned fire station or police sub-station. The City continues to fund the Alvin Volunteer Fire Department, which was approved by the voters in 2004. In the case of a fire, the availability of a sufficient quantity and pressure of water are critical considerations. The density of development (the number of dwelling units and persons

affected), or lack thereof, that occurs in the outlying rural areas has real implications for the provision of adequate public safety services.

Fire Services

As development continues and land use patterns shift in the future, there will be requirements for additional firefighters and station locations in order to sustain and improve the level of service. Coordination with the Volunteer Fire Department will be essential in locating additional new fire stations throughout the City's planning area as a means to optimize fire and emergency response. In addition, as the population continues to increase it is likely that the department will transition from a volunteer force to full-time permanent firefighting personnel. At that time, additional facilities and equipment will be necessary.

The Alvin Volunteer Fire Department is composed of five paid support staff and 70 volunteers, with the volunteers being partially city and partially county residents. The Alvin Volunteer Fire Department protects 78,000 people living in an area of 100 square miles throughout the Alvin area including portions of Brazoria County. They operate out of three stations that protect a primarily residential area. Financial support is provided by the City of Alvin, Brazoria County, ESD #3 and through private donations. The City has an ISO (Insurance Services Office) rating of 2 and the County rating is 8-B. As identified in **Figure 5.1, *Fire Department Locations***, Station Number 1 and administrative offices are located at 302 West House Street. Station Number 2 is located at 110 Medic Lane; and Station Number 3 at 2700 FM 1462. Note that both Figures 5.1 and 5.2 depict a one and one-half mile radius outward from each fire station, to illustrate coverage. The ISO establishes "standard response districts" around each existing fire station. The standard response district for an engine company is a polygon defined by streets leading from the fire station out to a distance of 1.5 road miles. For a ladder-service company, the standard response district is a polygon defined by streets out to a distance of 2.5 road miles.

To accommodate Alvin's projected growth over the next 20 years, Fire Station No. 1 will need to be replaced. The station is 50 years old and does not contain living quarters for the fire fighters. The station needs to be more centrally located within the City in order to provide more efficient access to underserved areas of the city. As illustrated in **Figure 5.2, *Proposed Fire Department Locations***, it is recommended that in the near future, Station No. 1 should be closed and a new station be re-located to a site in proximity of intersection of South Street and the SH 35 Bypass. As a result of significant growth to the north, around the Kendall Lakes area, and to maintain the City's ISO rating of 2 well into the future, it is recommended that Station No. 2 should be relocated to a City-owned parcel across SH 35 from the proposed hospital site. Station No. 3 remains in a good location to accommodate future growth and the building's offices could be renovated to support living quarters.

Emergency Medical Services

Alvin's Emergency Medical Services (EMS) Department is comprised of three full-time employees, including the Director, Assistant Director and Administrative Assistant. The service is also comprised of 27 part-time paramedics and 25 emergency medical technicians (EMTs). The EMS Department is currently located at House Street. The central station was

Figure 5.1, Fire Department Locations

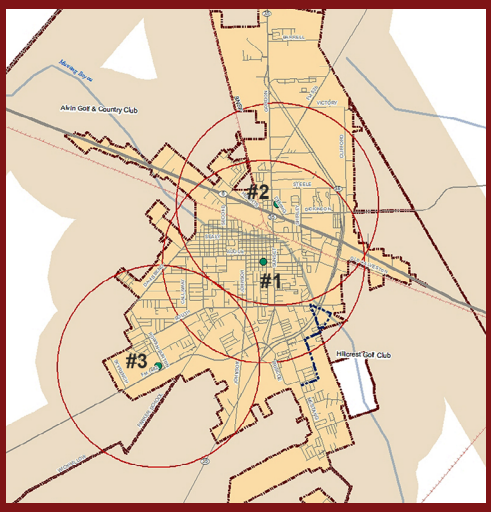
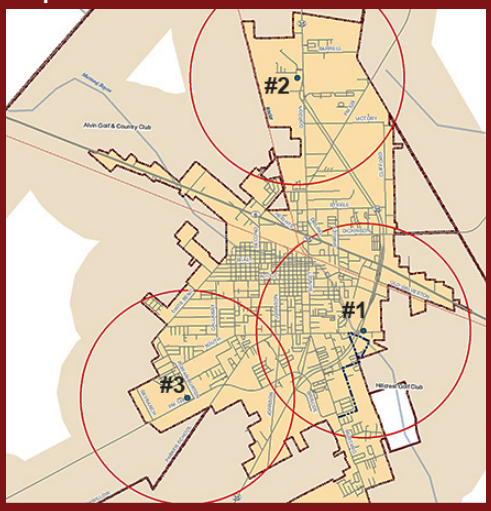


Figure 5.2, Proposed Fire Department Locations



constructed in the mid-1980s and underwent a major renovation in 1999.

The Alvin EMS responds to more than 4,000 calls each year and provides Mobile Intensive Care Units to the majority of the calls. The department operates five ambulances and three response cars. The ambulances are equipped with advanced life support supplies including emergency medications, intravenous fluids (IVs), advanced airway equipment and cardiac monitors/defibrillators.

Alvin EMS Mission Statement

The staff of the City of Alvin Emergency Medical Service hereby declare the motive, which impels them to unify in service for the relief of suffering and the support of our fellow man in their time of need. As members of the City of Alvin Emergency Medical Service, we commit our knowledge, skills, and abilities to provide emergency medical service for the greater Alvin area that exceeds the needs and expectations of those who require our assistance. We will accomplish our mission by remaining mutually committed to the support and advancement of our attributes while trusting in divine providence for the continuance of our well-being.

In anticipation of Alvin's projected growth over the next 20 years, the EMS Department will require either a larger central station or an additional EMS building. The facility will require larger sleeping facilities, a training room, and a larger ambulance bay, to accommodate two additional ambulances, one of which must currently be parked outside. The EMS Department will also require an additional staffed ambulance (personnel plus vehicle and equipment).

In addition to public safety services, the municipal administration of the City will likely require changes, over time, to respond to shifts in demands. This may require added personnel or a reassignment of staff, along with the associated impacts concerning the needs for space, equipment, and facilities. Consideration may be warranted for future expansion of City Hall or possible construction of new space.

Goals and Objectives

The goals, objectives, and subsequent action recommendations respond directly to the above issues, which were discovered through technical analyses of the existing land use and projected future development patterns, existing capacities and planned improvements of the water and wastewater systems, and identified public service needs. They also reflect the issues and concerns raised by residents through the public involvement process.

GOAL 5.1: COMPACT DEVELOPMENT THAT MAY BE EFFICIENTLY SERVED BY PUBLIC FACILITIES AND SERVICES.

Objectives and Actions

- ***Objective 5.1.1: Review the City's development regulations to allow efficient types and patterns of development.***

    1. Revise the subdivision regulations to encourage alternative types of development, such as cluster, conservation, and preservation development. Doing so may be accomplished with density bonuses and other incentives thereby making it an attractive option for landowners and developers. Such an approach will aid in the development of constrained properties, particularly those with or immediately abutting existing development, since the allowable densities can make the project economically feasible. Use of a site capacity calculation will help to ensure that development does not

overburden the capacity of it to sustain development. Such calculation also needs to be incorporated into the City's subdivision regulations, as proposed for consolidation into a unified development ordinance. A desirable outcome of alternative subdivision designs is an increase in public open space, which may be maintained by a homeowner's association or placed in a permanent conservation easement.

2. Establish incentives for infill development, such as density bonuses if certain performance standards are met. For instance, increased density may be allowed in steps for accomplishing community objectives, such as a minimum open space ratio, preservation of trees, conservation of natural resources, sensitivity to adjacent uses, heightened development standards, inclusion of amenities such as parks, trails, and attractions, and any other standard of development that is important to the community.
3. Overcome the constraints to development or redevelopment of areas within the City limits, including common issues that cause difficulty for building on infill sites, such as alleviating flooding, provision of street and utility infrastructure, and strict compliance with flood detention requirements, on-site parking, and other dimensional provisions. Requirements pertaining to setbacks, lot coverage, and building height may need to be relaxed or overcome through other performance standards to allow feasible development of constrained sites.

- ***Objective 5.1.2: Adopt a policy regarding adequate and timely provision of infrastructure for priority areas within the community.***

1. The City should use its Capital Improvements Program (CIP) to direct infrastructure improvements to the areas where development is most desired. It should direct its improvements to underserved areas within the City limits as the highest priority, followed by the areas immediately adjacent to the City limits. Such an approach will encourage a logical sequencing of development contiguous with existing development. Provision of municipal infrastructure beyond the City limits should be in strict accordance with adopted City policy, and should be handled through a development agreement where the City may establish a condition for timely annexation and enact certain development controls.
2. In addition to coordinating CIP projects to occur in a manner so as to direct the pattern of future community growth, it should also be used to ensure that there are adequate facilities and infrastructure within the established areas of the City. Doing so requires an ongoing program of annual rehabilitation and replacement for the water distribution and wastewater collection systems. Street and sidewalk improvements should also occur within the main body of the City as the highest priority, with an outward progression from the central city.
3. The City should adopt a policy for establishment of MUDs both within the City and in the extraterritorial jurisdiction that

takes into account the City's long-range annexation goals. A threshold question in MUD approval should be whether the proposed MUD is being proposed in a logical growth area, or if it is far away from any development - for example, at the outer edge of ETJ. Another consideration is whether the City can serve, or extend services to the development and eliminate additional taxes for those homeowners. For in-City MUDs, the City should adopt a policy about granting tax rebates to MUDs, often requested by developers to alleviate the dual tax burden. The long-range issue for ETJ MUDs is that if the City wishes to annex the area in the future, it must either take on any debt held by the MUD, or wait until there is no debt. Given that MUDs often issue 30-year bonds, this could impair annexation of the area.

GOAL 5.2: A WELL-MANAGED PATTERN OF DEVELOPMENT THAT IS FISCALLY RESPONSIBLE.

Objectives and Actions

- ***Objective 5.2.1: Effectively manage the quality of development and provision of adequate facilities and services.***
  1. Develop and adopt a growth sequencing plan and management strategy that identifies areas of development for the next five, 10, 15 and 20 years to accommodate the targeted population of 33,472 persons in the Year 2035. These sequential areas identify when and where capital improvements and services should be directed.
  2. Evaluate the City's capital improvement program (CIP) against the growth sequencing plan to ensure utility extensions and capacity improvement projects are consistent with the defined growth area. The capital improvement program should be prioritized in accordance with the sequencing and timing of development.
  3. The City should exercise its authority to conduct subdivision plat review throughout the entire ETJ, or alternatively, consider relinquishing portions of the ETJ for which the City cannot adequately provide services within a reasonable amount of time. State law requires municipal service provision of an equal standard to that currently provided within a timeframe of two and one-half years from the time of annexation. Due to the expanse of the City's ETJ, this is not reasonable or feasible for large portions of this area. Without the ability to ensure that subdivisions within the ETJ but beyond the area of the City's subdivision authority comply with the municipal development standards, such as streets and utilities, it is not in the City's interest to ever incorporate these areas. Incorporation brings with it an obligation to accept responsibility for maintenance of the infrastructure, which was likely constructed using inadequate construction methods and standards. The costs of such proposition are ill-feasible.
  4. The City should amend its subdivision regulations to create standards of development for rural and urban subdivisions.

Such standards would account for the unique circumstances within the outlying portions of the ETJ. The standards would address allowable densities (tied to the adequacy of infrastructure), size, arrangement, and the dimensional requirements of lots, street right-of-way widths and cross-sections, drainage improvements, and other technical design criteria and specifications that may be handled differently within a very low-density rural area.

5. Should the City decide to maintain the current arrangement whereby the authority to review subdivisions is delegated to Brazoria County; at a minimum there should be a comprehensive assessment and comparison between the County's and the City's respective standards and codes, with the intent of narrowing the gap between the standards of development.
6. It is advisable for the City to create an impact model enabling the ability to quantify the fiscal consequences of development and, subsequently, adopt policies to ensure responsible outcomes. Such model would allow alternative developments and uses to be tested as to whether the projected revenues offset the required expenditures for provision and ongoing maintenance of infrastructure. This would allow the City to educate itself about the costs associated with increased development, and particularly those requiring substantial public investment, and subsequently make informed decisions as to the feasibility of establishing a municipal utility district or incorporation into the City.

- ***Objective 5.2.2: Expand the corporate limits in a well-managed and fiscally responsible manner.***

1. Formally adopt annexation policies, which will guide the decisionmaking of the City Council, both for City-initiated annexations as well as voluntary requested annexations. The outline of policies in this plan pertain to the coordination of adequate infrastructure, ongoing service planning, managing the urban development pattern, use of fiscal impact analyses, identification of intangible benefits, protection of critical areas, and the use of negotiated agreements. The adopted policies should be re-examined on a regular basis to account for changing circumstances.
2. Consider policy amendments for the use of impact fees to incentivize developing in areas where adequate infrastructure is currently available, or programmed for improvement within the City's CIP. The impact fees could be structured to serve as a disincentive for development proposed to occur in the outlying areas of the ETJ where there are inadequate facilities and services. Furthermore, impact fees could capture the lost revenue for constructing and maintaining municipal facilities and services, which, in part, are providing benefit to these outlying areas.
3. Conduct studies periodically to identify and monitor prime growth areas within the ETJ, particularly adjacent to major

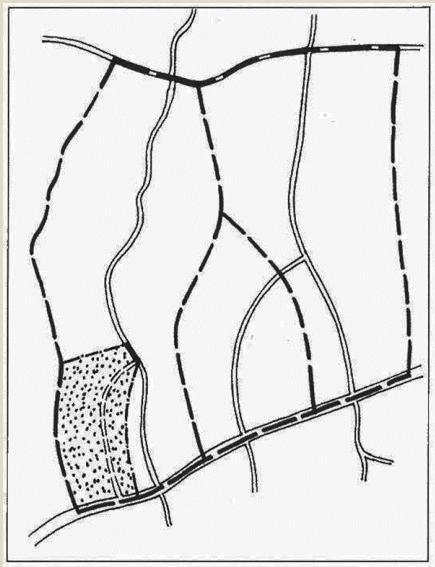
What are Impact Fees?

Impact fees are mechanisms through which the City can recover some of the up-front costs of additional infrastructure necessitated by new residential, commercial or industrial development. An impact fee is a fee charged to a developer (usually upon subdivision approval) or to a home buyer (usually upon purchase of a lot or upon connection to a utility) to recover that portion of the cost of certain off-site improvements or facilities, that is attributable to the subdivision or lot. The impetus for impact fees comes from the substantial fiscal effects of new development: if the infrastructure needed to support new developments were funded by the entire community, residents would be likely to protest the substantial increases in property tax rates and water and sewer charges. Impact fees shift the costs to the new development.

What are traffic sheds?

Somewhat analogous to the familiar concept of a watershed, the traffic shed concept stems from the premise that rural residents use the county roadways to get to major arterials (typically state or federal highways) upon which they commute to their jobs. It is essential to the traffic shed concept that the commutation pattern on the arterials be largely uni-directional. Thus, the flow of traffic down the rural road to a major arterial is similar to the flow of water downstream from a creek to a river – hence, the term "traffic shed" (refer to **Figure 5.3, *Traffic Sheds***) Determining road capacity is the first critical element of conducting a traffic shed analysis. The second critical element is determining the traffic shed area for each rural road. Knowing the area of the traffic shed and the capacity of the receiving rural road makes it possible to determine the amount of development that can be supported overall. The traffic shed analysis is also a planning tool that can educate officials about the relationship between planning, land use, and road capacity. Where road capacity is limited, the two major options for avoiding congestion or dangerous conditions are to build new infrastructure or to limit density.

Figure 5.3, Traffic Sheds



From: Kendig, Lane. And Stephen Tocknell (1999). Traffic Sheds, Rural Highway Capacity, and Growth Management (American Planning Association: Planning Advisory Service Report).

transportation corridors within the designated urban area, where the City's land use management capabilities are most needed. These studies should consider anticipated infrastructure improvements that may create an opportunity or demand for new urban development. Based on these studies and evaluation of potential annexation options, an annexation plan should be developed and periodically updated, which would become the basis for developing annual or periodic annexation proposals. The annexation plan should identify specific properties targeted for eventual incorporation, and should be based on careful research as to the available utilities and infrastructure and existing land use in the area.

GOAL 5.3: LOGICAL SEQUENCING AND TIMELY PROVISION OF ADEQUATE PUBLIC FACILITIES AND SERVICES.

Objectives and Actions

- ***Objective 5.3.1: Utilize the provision of facilities and services to guide the timing and sequencing of future development.***

  1. Consider amending the subdivision regulations during the process of preparing a unified development ordinance to incorporate provisions requiring the availability of adequate facilities concurrent with proposed new development. Of particular importance in the outlying areas of the ETJ is the condition of existing roadways and their ability to safely support increased traffic volumes. An advisable approach is to use traffic sheds, which quantify the volume of traffic that may be accommodated on the abutting roadway(s) and limiting the amount of development that can occur commensurate with the roadway design capacity. This approach allows the allowable density to be spread across the traffic shed, rather than on a first-come/first-serve basis as allowed by a concurrency management approach.
  2. Adopt and incorporate into a unified development ordinance provisions allowing transfer of development rights (TDR) within a specific area, such as a defined traffic shed. Such code allows a property owner to transfer their proportional density allocation to other landowners within the same area/traffic shed thereby allowing them to capitalize on the development value of the land.
  3. Amend the subdivision regulations to allow development clustering, which enables the allowable density to be grouped in a small portion of a larger parcel thereby allowing for continued development as infrastructure improvements are completed.
  4. Utilize and supplement as necessary the Brazoria County Mobility Plan to gather information about existing roadway conditions, including property ownership patterns; right-of-way and pavement widths; pavement type; existence of shoulders; drainage improvements (ditches or curb and gutter); and design encumbrances such as creeks, floodplains,

and other topographic features. Such study may be used to determine the design capacities of each roadway thereby allowing quantification of allowable development densities within the shed areas abutting these roadways.

5. Update the City of Alvin's Thoroughfare Plan. Revise the City's access management provisions to include full consideration of the Grand Parkway's Segment B and potential expansion of SH 35. Amend the City's Comprehensive Plan Update to include a Mobility plan element, which would include multi-modal circulation options and facilities.

- ***Objective 5.3.2: Provide for the long-term supply of potable water, reliable treatment and distribution systems, and compliance with the forthcoming regulatory switch to surface water.***

1. There are several recommendations to sustain the quantity and quality of potable water to meet the needs of the City's future population and economic growth. Since the primary source of water is from groundwater wells, additional rights must be secured for additional well sites. However, with the anticipation of a conversion from ground to surface water, provisions must also be made to secure surface water rights. The City should secure sufficient rights to meet their long-range water demands and needs upon build-out.
2. Amend the development regulations to include measures to protect the wellheads and cone-of-influence areas from the introduction of contaminants. Such objectives may be met with standards relating to non-structural best management practices, such as managing development density, controlling the amount of allowable impervious surface cover, and allowing for adequate recharge areas. The standards should also include specifications for structural improvements, including detention/retention basins and appropriate channel improvements. A public awareness campaign should also be developed to educate the public as to the benefits of proper stewardship of water resources.

- ***Objective 5.3.3: Continue to provide adequate wastewater treatment capacity and an efficient collection network.***

1. Incorporate the recommendations of the Wastewater Master Plan in a five-year capital improvement program, including replacement of wastewater collection mains based upon a priority ranking system. Continue to regularly upgrade and replace aging and failing wastewater collection lines and lift stations. Furthermore, complete a joint study and venture with the drainage district on the M-1 ditch to identify necessary improvements.
2. Identify "best management practice" piping, manhole, bedding, and backfill methods and materials and incorporate their use into a revised technical specification for use on all new construction projects. Subsequently, implement a testing and inspection program to ensure adherence to construction method and material specifications for all projects.

3. Identify and eliminate any unauthorized connections to the wastewater collection system and continue to bring down the unaccounted-for water consumption. Subsequently, prepare a public awareness program to alert the public to the illegality of unauthorized dumping into the wastewater system and its associated costs to the City.
4. Publicize and amend the drainage and flooding regulations to take into consideration the FEMA remapping.

- ***Objective 5.3.4: Adopt low-impact development (LID) strategies, tools and techniques to reduce throughput and consumption of freshwater resources.***
  1. Encourage development patterns that respect natural systems such as watersheds and wildlife corridors. "Site fingerprinting," a term that refers to implementing minimal site disturbance techniques, can be used to further reduce the limits of clearing and grading on a greenfield site, thereby minimizing the hydrologic impacts. Site fingerprinting includes restricting ground disturbance by identifying the smallest possible area and clearly delineating it on the site. Land-cover impacts can be reduced through minimal disturbance techniques that include the following:
     - Reduce paving and compaction of highly permeable soils;
     - Minimize the size of construction easements and material storage areas;
     - Site stockpiles within the development envelope during the construction phase of a project;
     - Site building layout and clearing and grading to avoid removal of existing trees where possible; and
     - Delineate and flag the smallest site disturbance area possible to minimize soil compaction on the site and restricting temporary storage of construction equipment in these areas.
  2. Design and install grassed filter strips and vegetated (bio) swales into site plans and rights-of-way to filter pollutants from stormwater. LID filtration systems use soils and vegetation to remove pollutants from stormwater and include ways of capturing and removing trash, debris and sediment from stormwater before it reaches streams and other tributaries. Common filtration techniques incorporate natural features (i.e., wetlands, riparian corridors, mature forests) into site development plans. It is estimated that bioswales can remove between 80 and 100 percent of total suspended solids, zinc, and lead from stormwater as well as between 40 and 60 percent of total phosphorus and nitrogen.
  3. Require and/or incentivize the installation of pervious paving materials in at least 20 percent of the area of new parking lots and other hardscape areas to reduce the total site imperviousness and stormwater runoff. Provisions could be added requiring this for all parking that exceeds the minimum required by City regulations. Utilize infiltration systems

The "75 / 90" Rule

The Texas Commission on Environmental Quality (TCEQ) regulations require that a waste water permittee commence engineering design and financial planning for expansion when a plant reaches 75 percent of permitted average daily flow for a consecutive three-month period. This rule further requires that the permittee gain regulatory approval and begin construction of expanded facilities when a plant reaches 90 percent of the permitted average daily flow for a consecutive three-month period.

Source: TCEQ

which encourage the downward movement of water to reduce the total quantity of overland runoff and pollutants from impervious surfaces.

- Design and implement systems for on-site detention and micro-detention;
- Revise subdivision regulations to incorporate the use of shared driveways whenever possible, but especially in sensitive areas;
- Limit driveway width to nine feet (for both single and shared driveways); and
- Minimize building setbacks, where possible to reduce driveway length.

4. In compliance with the EPA's National Pollution Discharge Elimination System (NPDES) Regulations for Stormwater Discharge (40 CFR 122) for industrial facilities discharging stormwater, install oil – water separators to filter stormwater runoff before it is collected in the primary storm drain outfall. Require automotive repair facilities and paint shops, dealerships, gas stations, equipment degreasing areas, parking structures/areas, and other facilities generating wastewater with significant oil and grease content to pretreat these wastes before discharging to the City or storm drain systems.
5. Install high-performance, green building best practices into all new City initiated and financed construction projects. Stormwater storage reduces the quantity of stormwater being flushed through the system. Green roofs, cisterns (above-ground and underground), and vegetated swales provide an excellent method of storing stormwater on-site, to prevent it from overloading natural systems, as well as to use for irrigation of landscaped areas. Existing buildings can utilize rain barrels under downspouts to collect, store and reuse stormwater. It is estimated that one 42-gallon rain barrel can provide storage for 0.5 inch of runoff from a rooftop measuring 133 square feet (3).
6. Revise subdivision regulations to incorporate xeriscaping landscape design and maintenance practices. Consider requiring or incentivizing adherence to the Texas Water Development Board's, "A Watering Guide for Texas Landscape."
7. Develop a municipal landscape ordinance that requires all landscape sitework and planting to adhere to xeriscape requirements.
8. Continue to provide Alvin residents, commercial, institutional and industrial water users with guides regarding how to conserve water. Update educational resources with information provided by the Alliance for Water Efficiency and other organizations that promote water conservation strategies and techniques. To raise awareness of water sector interdependencies and to increase preparedness and resiliency of drinking water and wastewater utilities into community

emergency preparedness and response efforts, integrate the EPA's Community-Based Water Resiliency (CBWR) program information and relevant materials into City educational resources.

9. The City should work with heavy water users to determine cost effective methods through which the quantity of water consumption can be decreased, thus saving the water user money. This would involve conducting a water footprint audit to analyze their facility's water use and identify ways to make it more efficient. Water audits review domestic, sanitary, landscaping, and process water use and identify ways to increase a facility's water-use efficiency. They are often performed for free and can save businesses money by reducing water use and its associated costs. Some utilities conduct free water audits.

GOAL 5.4: CONTINUOUS IMPROVEMENT AND DELIVERY OF HIGH-QUALITY AND RELIABLE EMERGENCY SERVICES.

Objectives and Actions

- ***Objective 5.4.1: Provide for the ongoing needs of the police department to ensure adequate protection of the population.***

  1. Periodically review the department's personnel needs and hire additional staff to accommodate an expanded service area and increased calls for service. Utilize the U.S. Department of Justice, Federal Bureau of Investigations (FBI) staffing survey as a measurable comparison for full-time law enforcement professionals and civilian staffing needs. In addition, provide continuous training and education programs to meet and maintain the standards of the Texas Department of Public Safety (DPS). Support the department's involvement in community relations and special programs, as well as public speaking, and department tours.
  2. Establish a formalized replacement and procurement program for vehicles and equipment to keep pace with state-of-the-art law enforcement technology and capabilities.

- ***Objective 5.4.2: Sustain the fire protection capabilities of the Alvin Volunteer Fire Department in conjunction with the Brazoria County Emergency Services District.***

  1. Continue working with Brazoria County Emergency Services District No. 3 to find ways to fund the requirements of the Volunteer Fire Department in order to maintain low ISO ratings and protect life and property. Lowering the ISO rating results in reduced insurance rates. Consideration should be given to capital projects that help to improve the ISO rating, including increased fire flows, looped water systems, new hydrants, etc. Coordinating community growth to locate station sites in advance of ensuing development is also important for optimizing future response times.
  2. Support the Department's efforts to convey the message of

fire prevention through efforts such as open houses and video presentation.

- ***Objective 5.4.3: Sustain the emergency medical services capabilities of the Alvin Emergency Medical Services (EMS) Department in conjunction with the Brazoria County Emergency Services District.***
  1. Ensure that the Alvin EMS has adequate staff, medical and transportation-related equipment to service the residents of Alvin and those within the Brazoria Emergency Services District No. 3.
  2. Support the EMS Department's efforts to communicate preventative health care and emergency medical relief practices within the home, neighborhood and community.

Sensible Future Development

Typical development patterns are based upon the simple notion of creating development that is both marketable and profitable. Often, little thought is given to the cumulative impact of development until it has occurred and the impacts are realized. Sprawl is defined as an inefficient consumption of land, which spreads from urban and suburban areas to undeveloped rural land that results in an inefficient use of land and infrastructure. While sprawl is marketable to the general public, equating to larger lots and lower home prices, as well as the financial institutions that fund development projects, from the perspective of the community, it is short-sighted and of long-term consequence.

In recent years, communities are adopting development practices that still allow for marketability and profit, but also aid the community in achieving efficiency and improving quality of life. While the popular term of "Smart Growth" has been attached to this notion, it is really nothing more than sensible planning that better reflects the interest of the community and its residents. The tenets of planning for sensible development seek to balance the need to support economic development, while protecting the environment, directing development to the areas for which public services and utilities are readily available, encouraging infill development on vacant or underutilized properties where existing infrastructure may be more efficiently utilized, promoting a more compact development pattern to reduce the need for costly infrastructure and minimize the loss of raw productive land, maintaining a highly efficient street network and infrastructure systems, and providing community gathering areas and pedestrian-friendly destinations.

GROWTH POLICIES

A policy framework is useful to guide decisions about the timing and pattern of future development. These policies may be used to either support or deny applications for development around the periphery of the community where facilities and services are not readily available or capable of supporting increased development densities. Policies for helping the community achieve attractive and fiscally responsible future development include:

Policy 1: The efficiency of existing infrastructure must be maximized by directing development to occur within the City limits or the area likely for annexation, rather than allowing peripheral development in the remote ETJ areas that require costly infrastructure extensions and expansion of the service area.

Policy 2: Future growth must occur in more compact development patterns where infrastructure is readily available and its efficiency is greatly improved.

Policy 3: Development must be staged in a deliberate sequence so as to enable timely provision of adequate public facilities and services. Incentives must be provided to encourage development of vacant and underutilized areas that are already served by infrastructure before development occurs in the fringe and peripheral areas of the community.

Policy 4: The outlying rural areas and natural amenities must be preserved as agricultural lands or permanent open space and, thus, protected from the encroachment of premature urban development. Certain densities of development may be accommodated provided they do not unduly overburden the capacity of the existing infrastructure.

Policy 5: Partnerships must be established with other jurisdictional authorities and service providers such as Brazoria County Emergency Services District No. 3, Brazoria County Drainage District 4, other area cities, and Brazoria County to develop long-term growth management strategies that will conserve resources and sustain adequate service provision.

Policy 6: A policy or regulatory statement must be created that guides how the City considers and approves MUDs or special districts in the City or in the ETJ, and what terms are appropriate for such agreements to ensure the best development for the City and future residents of those districts, taking into account the tax implications of such districts.

Policy 7: The development of water, wastewater, and drainage systems must be closely coordinated with the planned pattern of new development and in areas that are suitable and desirable for future growth.

Policy 8: Adequate facilities and services must be constructed and sustained to meet the increasing public need. Such facilities and services must be coordinated to occur in a manner that leads a fiscally responsible pattern of development.

Policy 9: Relationships must be formalized with governmental and other entities through joint projects, inter-local agreements, and memoranda of understanding to provide more cost effective coordination of services and growth management policies.

Policy 10: A variety of housing types and prices must be offered to meet varied family needs.

Managing Growth

Evolving land use patterns within and around the community have exhibited sprawl characteristics. While the amount of development has been steady, based on planning activities such as applications for subdivision plats, the pace is expected to increase, and it is, therefore, an important land use planning consideration that will, over time, have implications on the public health, safety, and welfare. Sprawl is a highly inefficient pattern of growth. Costs associated with the provision of both capital and social infrastructure are much higher than they are for more compact patterns of development. This is particularly relevant and important when the community is confronted by limited fiscal resources and increasing demands for service.

Sprawl has many costs. In addition to its fiscal consequences, it encourages the degradation of natural resources by prematurely committing vast areas to the impacts of urban development. Phased, orderly growth mitigates this situation by comprehensively addressing the impacts of development on the natural systems. Leap-frog development- recognized by the large-lot, rural subdivisions developing around the periphery of Alvin - is piecemeal in nature, which is detrimental to any type of comprehensive framework.

Sprawl also has long term costs to the residents of special districts or City taxpayers, as special districts are formed to pay for the costs of development, and if those areas are annexed into the City over time, then the taxpayers of the City may have additional significant costs in maintaining or upgrading infrastructure that was not built in conformance with the City standards, particularly where it was in the ETJ, and approved only under the County regulations.

Another significant aspect of sprawl is the tendency toward strip commercial development, such as that seen along SH 6, SH 35 Bypass, and SH 35, and increasingly along other arterial roadways. This pattern of commercial development occurs as infill between sporadically placed residential developments. As an example, depending on the final alignment of the Grand Parkway, development would likely follow such a major public investment due to the market formed simply by traffic volumes. A typical pattern of commercial development would stretch along the major arterials and highways from the current edge of development to the parkway. This form of development has a multitude of negative impacts, including traffic safety and community aesthetics associated with advertising signs, etc. While many of these impacts are commonly handled by single-issue regulatory means, a coordinated and unified set of land development regulations offer an approach to prevent, rather than remedy, the problem.

Infrastructure Provision

An effective approach for managing the type, pattern, and density of the community's future growth is allowing development to occur only as adequate municipal facilities are available. One means of ensuring that growth occurs in areas where infrastructure is either present or desired includes the creation of an Adequate Public Facilities Ordinance (APFO). Also known as concurrency requirements, this mechanism ensures

that infrastructure is available prior to or concurrent with development. Other means are also available - and actually more effective - such as the development of traffic sheds. This method estimates roadway design capacity and the properties generating the traffic volumes, and then paces development concurrent with improved roadway capacity. In effect, this prevents the overcrowding of available public infrastructure by one or two landowners, and directs where and how fast development may come so that traffic problems are minimized. Additionally, adoption of a policy on MUDs and special districts will enable the City to control and direct where such additional taxing districts are established, what terms are appropriate in the agreement or formation of such districts, to best ensure the long-term protection of the people who will reside there, and eventually become taxpayers of the City.

Adequate Public Facilities Ordinances require applicants for new development to demonstrate that facilities and services will be available to serve the project at the time the development is available for occupancy. Utilizing this system, the community is able to adopt level-of-service standards, which can be used as criterion for approving or denying applications, depending on conformance to the standards. Issuance of building permits is based upon the established existence of public improvements or capital facilities. As an alternative, higher impact fees and greater developer participation in infrastructure construction and financing may be necessary to shorten development timeframes.

This approach is both practical and defensible. The key to effectively employing this system is being rational in making determinations as to the adequacy or inadequacy of public facilities. The strength of this approach is its ability to allow the community to establish a direct, causal link between the provisions of facilities and the public health, safety, and welfare. The general components of such an ordinance include:

- Determining a service threshold or point at which demand exceeds the desired capacity of public facilities, whether it is water and wastewater systems, roadways, parks, or schools. Generally, the difference between the established threshold and the existing level of service is the amount available to development. Some of these thresholds are established in state law and are not subject to local determination, however, establishing such a policy allows the City a means to monitor use and assist in capital improvements planning.
- Determining if there are projects that will be exempted or receive flexibility in meeting the threshold requirements by way of achieving other community objectives, such as infill development, mixed use, affordable housing, resource protection, land preservation, etc.
- Determining the measures to remedy situations when the threshold is exceeded, including delay of development until such time as the project no longer exceeds the threshold, reducing the project's impact to the point that it meets requirements, or mitigating the impact of the project by upgrading public facilities or infrastructure. There may also be a transfer of development rights allowing density to be transferred to a property that has excess capacity.

- Reserving the amount of capacity projected for development during the time between approval of a project and its completion, which counts against the total capacity of public facilities in future applications for development. An expiration date for approved projects may be necessary so as not to unnecessarily burden or deny other projects.

Annexation and Municipal Boundaries

Annexation allows the community to extend its municipal services, regulations, voting privileges, and taxing authority to new territory. It is a mechanism, regulated by state law, for promoting the orderly growth and urbanization by coordinating private land development with construction or improvement of public facilities (streets, water, sewer, drainage, etc.) and provision of adequate public services through phased expansion of the City's corporate limits. The City may also use its annexation authority to expand the tax base in line with increasing service demands. This is especially important when residents and businesses outside the City limits benefit from access to municipal facilities and services, such as parks, trails, libraries, and other community facilities, but do not share the tax burden associated with constructing and maintaining those facilities and services.

The City's annexation program should include an ongoing process of appropriate planning and preparation for future annexations in compliance with the requirements of State law and consistent with this Comprehensive Plan. The City should conduct studies periodically to identify and monitor prime growth areas within the ETJ, particularly adjacent to major transportation corridors within the designated urban area, where the City's land use management capabilities are most needed. These studies should consider anticipated infrastructure improvements that may create an opportunity or demand for new urban development. Based on these studies and evaluation of potential annexation options, an annexation plan should be developed and periodically updated, which would become the basis for developing annual or periodic annexation proposals. The annexation plan should identify specific properties targeted for eventual incorporation, and should be based on careful research as to the available utilities and infrastructure and existing land use in the area. Potential constraints to the development of infrastructure or extension of services should be a primary consideration, such as floodplain areas and the potential limits of gravity wastewater service. Coordination with utility providers may be necessary to determine future service areas and the potential need for service agreements.

The annexation planning process should be conducted in conjunction with annual review and updates to this Comprehensive Plan. The Comprehensive Plan should be updated, as needed, to support the City's annexation program. Timely preparation of an annexation plan is essential to identify properties within the designated urban area that are in the City's interest to annex prior to development.

In addition to preparing for City-initiated annexations, the City should establish clear policies and guidelines to determine when future land owner petitions for annexation within the designated urban area will be accepted. Potential considerations include:

1. The results of a fiscal impact assessment;
2. Proximity to the city's existing service areas and the feasibility of extending adequate facilities and services in a timely manner;
3. Capital budget limitations; and,
4. Intangible costs and benefits.

ANNEXATION POLICIES

As a general policy statement, annexation should occur prior to or concurrent with development at the City boundary line to properly plan for and coordinate the extension of adequate public facilities and services. The following policies should be considered in guiding the City's decisions for annexing additional territory:

Policy 1: The City will annex territory in compliance with state law and in accordance with the policies of this Comprehensive Plan.

Policy 2: The City will anticipate and effectively manage its long-term pattern of growth in a forward-looking and fiscally responsible manner, while balancing the needs of current residents and existing infrastructure investments.

Policy 3: The City will ensure that future growth is closely coordinated with infrastructure investments, compatible with existing development, environmentally sensitive, and fiscally responsible.

Policy 4: The City will establish criteria for considering the suitability of requested extensions to the corporate limits.

Policy 5: The City will prepare and maintain an annexation plan and conduct associated service planning for gradual expansion of the corporate limits and extension of municipal facilities and services, where determined feasible and beneficial to the City. The plan will be periodically updated to account for changing development conditions and new infrastructure development.

Policy 6: In order to maximize the efficiency of the existing infrastructure, the City will direct growth toward developable and under-utilized areas within the current corporate limits before additional territory in the ETJ is considered for annexation.

Policy 7: The City will focus its annexation strategy toward the growth areas at the fringe of the current City limits to extend municipal services and manage development quality.

Policy 8: The City will use fiscal impact analyses to assess the projected costs of providing municipal services and weigh them against the anticipated revenues of each annexation proposal, whether initiated by the City or a property owner. Fiscal impacts will be assessed on a multi-year timeframe, recognizing that first-year costs may exceed revenues because of up-front service extension costs and capital expenditures, as well as the lag time before initial collection of taxes and fees. Intangible benefits of proposed annexations will also be evaluated.

Policy 9: The City will utilize its annexation authority to extend its jurisdiction to encompass critical areas, such as major transportation corridors, public facilities, and areas provided municipal services subject to the policies of this plan, which may require regulatory protection and control of development:

Policy 10: Where short-term annexation is not feasible, the City will consider the option of negotiated agreements with land owners, developers, or other entities in lieu of annexation to provide for interim service arrangements, cost-sharing or fee mechanisms, and potential adherence to development guidelines to ensure desired development outcomes in areas subject to possible future incorporation.

ANNEXATION CRITERIA

Important criteria for use in considering whether annexation of land is warranted and fiscally responsible include the following:

- The subject parcel(s) are within or immediately adjacent to the current City limits.
- The land requested for annexation is certified by the City Engineer to be within the City's utility service area, with proven feasibility of efficiently extending water and sewer mains.
- All parcels could be adequately served by municipal police, volunteer fire, ambulance, and road maintenance meeting City standards.
- All public improvements, off-site as well as on-site, necessary to serve the density of the annexed area will be constructed and financed in accordance with City standards and policy.
- As determined by the City, the actual financial impact for providing police, fire, road maintenance, and other public improvements is favorable to the tax base and offsets the necessary costs.

MUNICIPAL BOUNDARIES

Due to the 1960 strip annexation, the City has an over-sized ETJ. The City cannot provide services to the entire ETJ as it presently exists, made clear from the Capital Improvements Plan, recent studies on water and wastewater systems, and the absence of an annexation plan for all but the most valuable developing portions of the ETJ. The City should carefully consider whether it can adequately retain and exercise jurisdiction over the entirety of the area, or whether it makes sense to relinquish portions of the ETJ in a boundary line readjustment. The City was the prevailing party in a lawsuit recently, which upheld the annexation, and legal counsel for the City should be consulted to ensure that any subsequent release of territory does not throw that decision into question. However, the benefit of adjusting municipal boundaries includes a more manageable municipal area, the ability to monitor and regulate what will eventually and realistically be the future build-out of the City of Alvin, and ensure development that is properly timed and adequately served by necessary infrastructure, and more compatible and in keeping with the long-term development goals of the citizens.

Chapter 6

Implementation

Plans are never intended to simply exist as a binder that is forever sitting on the shelf. These are collaborative works that involve many different contributors and include directions for many aspects of City development. Indeed, a great many people routinely put time and effort into chronicling 'the next step' for the City of Alvin. At the same time, experience dictates that plans become unused and reduced to shelf clutter. The addition of this Implementation chapter is intended to avoid that near term fate. Using this Plan on a frequent basis for policy, planning, regulatory, and capital decisions will lead to its commonplace acceptance and reference. This is the goal of this chapter and moreover, this Comprehensive Plan Update as a whole.

The Comprehensive Plan should be viewed and used as a "living document," that is, a document that is frequently referred to for guidance in community decision-making, and adapted to meet the changing needs of the community. Its assumptions, goals, policies and action strategies should be revisited periodically to ensure that it is providing clear and reliable direction on a range of matters, including land development issues and public investments in infrastructure and services. Implementation is not just about a list of action items. It is a challenging process that will require the commitment of the City's elected and appointed officials, staff, residents, business owners, major institutions, other levels of government, and other organizations and individuals who will serve as champions of the plan and its particular direction and strategies. Equally important are formalized procedures for the ongoing monitoring and reporting of successes achieved, difficulties

encountered, new opportunities, and challenges that have emerged. This is in addition to any other change in circumstances, which may require rethinking of Plan priorities.

Plans that are effective in achieving their goals and objectives include an implementation framework that outlines the general strategies, directions, and priorities of the community. As such, the policy direction provided for in this plan is coupled with short- and long-term implementation strategies to help realize policies into actionable programs, development activities, and other strategic efforts by the City's leadership and citizens.

The purpose of this chapter is to integrate the different elements of the plan in such a way as to provide a clear path for sound decision-making. This chapter outlines the organizational structure necessary to implement the plan, including roles and responsibilities, processes for annual and periodic evaluation and appraisal of the plan, and a five-year action plan.

Elements of Successful Implementation

While this chapter lays out a framework for implementation, it is simply that. A framework alone will not ensure that the community's vision and the policies contained within this plan will be implemented. Described below are the elements that will be essential to successful implementation of Alvin's Comprehensive Plan.

- **Dedication of the City's Leadership** - The City's leadership, including the Mayor, City Council, Planning Commission, and the directors and staff of City departments, must be committed to implementation in order for it to be realized. To ensure implementation over the short- and long term, all departments within the City must accept the plan and commit to incorporating its actions in their annual budgets and work programs. The community's leadership must also be dedicated to giving their support to maintain public involvement and enhance and maintain community awareness as the plan is implemented over the next 20 years.
- **Public Involvement** - Throughout the plan update process, the City carried out a public participation program that was designed to seek input from the public, but also, build a constituency of persons willing to make a commitment to implementing the plan. This constituency, including citizens, landowners and developers, business owners and managers, civic clubs and organizations, and other key stakeholders, must be maintained and empowered to implement the plan on an ongoing basis. This can be achieved in part through advisory committees, public meetings, community workshops, open houses, public forums, newsletters, social media (Facebook, LinkedIn, Twitter), the City's website, media releases, and public notices.
- **Integration** - In order to successfully implement this plan and achieve the community's vision, horizontal and vertical integration must occur. In other words, the recommendations must be integrated into governmental practices and programs. For example, the recommendations should be widely used in decisions pertaining to infrastructure improvements, proposed

new development and redevelopment, enhancement of the parks and recreation system, and the annual capital budgeting process. It must also be vertically integrated with the plans and programs of the State of Texas, Houston-Galveston Area Council, Brazoria County, and the Alvin Independent School District (AlSD). The involvement of these stakeholders may take the shape of funding, planning coordination, project management and administration, regulation and enforcement, or shared provision of facilities and services, among other actions.

- **Evaluation** - The plan will need to be reviewed on an annual basis to ensure that the goals, objectives, and recommendations reflect the changing needs and attitudes of the community. Annual reviews will help to ensure that the recommended actions are viable and realistic. These reviews will also help to measure progress toward achieving the goals, objectives, and actions set forth. A more formal evaluation and update should be undertaken at least every five years.
- **Success** - Demonstrating success early in the implementation process is a means to show stakeholders the benefits of their involvement, while at the same time building momentum for continued excitement and involvement. In this implementation plan, there are various recommendations that do not bear significant budgetary obligation. These programs and activities provide an immediate opportunity to make an impact on the community and in turn, on successful implementation of this plan.

PLAN IMPLEMENTATION METHODS

Simply setting out an implementation framework in this chapter is not enough to ensure that the action items of this plan will be carried out and the community's vision and goals ultimately achieved. The policies and action priorities in this plan should be consulted frequently and should be widely used by decision-makers as a basis for judgments regarding:

- The timing and availability of infrastructure improvements;
- Proposed development and redevelopment applications;
- City-initiated and landowner-requested annexations;
- Expansion of public facilities, services and programs;
- Annual capital budgeting;
- Intergovernmental coordination and agreements; and
- Operations, capital improvements, and programming related to individual city departments.

There are seven general methods for plan implementation:

- Policy-based decisions;
- Land development regulations and engineering standards;
- Capital improvements programming;
- Coordination and partnerships;
- Special projects, programs, and initiatives; and
- Specific plans and studies; and
- Formation of new policies.

Plan Influence

The policies and action priorities documented throughout this plan should serve as the foundation for decision-making and judgment regarding:

- The timing and availability of infrastructure improvements to serve new development;
- The appropriateness of proposed development and redevelopment applications;
- The warrant for and timing of city-initiated and landowner-requested annexations;
- Expansion of public facilities, services, and programs to meet current needs and future demands;
- Priorities for annual capital budgeting;
- Potential re-writes and amendments to the city's land development ordinances and related code elements;
- Intergovernmental (including inter-city and city/county) coordination and agreements. Operations, capital improvements, and

1. Policy-based Decisions

Land use and development decisions should be made based on the policies that are set out in this Comprehensive Plan. In some measure, the adoption of new or amended land development regulations (e.g., subdivision, landscaping, sign controls, etc.) will establish a specific framework for evaluating private development proposals against the City's articulated policies. However, decisions regarding annexation, infrastructure investment, and right-of-way acquisitions are generally left to the broad discretion of the City Council. This plan provides the common policy threads that should connect those decisions.

2. Land Development Regulations and Engineering Standards

Land development regulations and engineering standards are fundamentals for plan implementation. It is plain—but often underappreciated—that private investment decisions account for the vast majority of any City's physical form. Consequently, subdivision regulations and associated land development criteria and technical engineering standards are the basic keys to ensuring that the form, character and quality of development reflect the City's planning objectives.

These ordinances should reflect the community's desire for quality development outcomes while recognizing economic and market-driven factors. They should not delay or interfere unnecessarily with appropriate new development or redevelopment that is consistent with plan goals and policies.

3. Capital Improvements Programming

A capital improvements program, or "CIP," is a multi-year plan (typically five years) that identifies budgeted capital projects, including street infrastructure; water, wastewater and drainage facilities; open space, trails and recreation facility construction and upgrades; construction of public buildings; and purchase of major equipment. Identifying and budgeting for major capital improvements will be essential to implementing this plan. Decisions regarding the prioritization of proposed capital improvements should take into account the policy and management directives of this plan.

4. Coordination and Partnerships

Some community initiatives identified in the Comprehensive Plan cannot be accomplished by City government on its own. They may require direct coordination, intergovernmental agreements, or funding support from other public entities or levels of government. Additionally, the unique role of potential private and non-profit partners to advance the community's action agenda should not be underestimated. This may occur through cooperative efforts, volunteer activities and in-kind services (which can count toward the local match requirements for various grant opportunities), and public/private financing of community improvements. Indeed, the role of committees, commissions and organizations in the successful and sustainable implementation of the plan cannot be understated.

5. Special Projects, Programs and Initiatives

Special projects or initiatives may include initiating or adjusting City programs; entering into interlocal agreements; expanding citizen participation programs; providing training; and other types of special projects.

6. Specific Plans and Studies

There are a number of areas where additional planning work is recommended, at a "finer grain" level of detail than is appropriate in a Comprehensive Plan. As such, some parts of this plan will be implemented only after some additional planning or special study.

7. Formation of New Policies

As new development or redevelopment plans are proposed, staff and the City's advisory boards, together with the City Council, must take the policies and recommendations of this plan into consideration. The text within this chapter regarding the prioritization of programs, and projects, coupled with the land use recommendations within Chapter 3, *Land Use*; and the growth considerations and infrastructure requirements outlined within Chapter 5, *Growth Strategies*, should weigh heavily in future decisions by the City officials, residents and other stakeholders in achieving the shared community vision.

PLAN ADMINISTRATION

During the development of the plan, representatives of government, business, neighborhoods, civic groups, and others came together to inform the planning process. These community leaders, and new ones to emerge over the horizon of this plan, must maintain their commitment to the ongoing implementation of the plan's policies—and to the periodic updating of the plan to adapt to changing conditions or unforeseen events.

Education

Although comprehensive plans are relatively general in nature, remaining at the "30,000 foot" level to a large extent, they are still complex policy documents that account for interrelationships among various policy choices. As such, educating decision-makers and administrators about plan implementation is an important first step after plan adoption. As the principal groups that will implement the plan, the City Council, Planning Commission, and City department heads should all be "on the same page" with regard to priorities, responsibilities and interpretations.

Consequently, an education initiative should be undertaken immediately after plan adoption, which should include:

- A discussion of the individual roles and responsibilities of the city council, planning commission (and other advisory bodies), and individual staff members;
- A thorough overview of the entire comprehensive plan update, with emphasis on the parts of the plan that relate to each individual group;
- Implementation tasking and priority setting, which should lead to each group establishing a one-year and five-year implementation agenda; and

- An in-depth question and answer session, with support from planning personnel, the city manager, and other key staff.

Key Stakeholders in Plan Implementation

CITY COUNCIL

As the community's elected officials, the City Council will assume the lead role in implementation of this plan. The key responsibilities of the City Council are to decide and establish priorities, set timeframes by which each action will be initiated and completed, and determine the budget to be made available for implementation efforts. In conjunction with the City Manager, City Council must also ensure effective coordination among the various groups that are responsible for carrying out the Comprehensive Plan's recommendations.

Specifically, the City Council will:

- Act as a "champion" of the plan;
- Adopt and amend the plan by City Ordinance, after recommendation by the Planning Commission;
- Adopt new or amended land development regulations to implement the plan;
- Approve interlocal agreements that implement the plan;
- Establish the action priorities and timeframes by which each action for every corresponding goal and objective of the plan will be initiated and completed.
- Consider funding commitments that will be required to realize the community's vision, whether it involves capital improvements, new facilities and expanded services, additional staffing, more studies, or programmatic changes such as the City's development codes and procedures.
- Offer final approval of projects/activities and associated costs during the budget process, keeping in mind the need for consistency with the plan and its policies.
- Provide direction to the Planning Commission, manage the administrator of the plan and other departmental staff, and oversee the activities and progress of the proposed Action Task Force.

PLANNING COMMISSION

Concurrent with the approval of the plan, the City Council should clearly identify their expectations for the role of the Planning Commission in the management of the implementation program. While the City Council should assume the role of "champion of the plan, it should be the Planning Commission's role to be the "caretaker" of the plan. As the appointed commission responsible for the community's growth and development, they must be given the ability to oversee implementation, and empowered to make ongoing decisions. Periodically, the Commission should propose a docket of initiatives for City Council consideration. In addition to the following responsibilities, the Planning Commission should also host the education initiative previously described in the Education section of this chapter. The role of the Planning Commission

will be as follows:

- Periodically obtain public input to keep the plan up to date, using a variety of community outreach and citizen and stakeholder involvement methods;
- Recommend to City Council an annual program of actions to be implemented, including a recommendation for adequate resources and direction to successfully accomplish the actions. Ensure that recommendations forwarded to the City Council are reflective of plan principles, policies, and action recommendations. This relates particularly to decisions involving development review and approval, zone change requests, and ordinance amendments;
- After holding one or more public hearings annually to discuss new or evolving community issues and needs, and having discussed with City staff any and all legal underpinnings, prepare an Annual Progress Report for submittal and presentation to the Mayor and City Council (see Evaluation of the Plan for more details) which outlines recommendations regarding an annual program of actions and priority initiatives to be implemented, including a recommendation for adequate resources and direction to
- Ensure that the plan impacts daily decisions and actions by other stakeholders.

ACTION TASK FORCE

While the Planning Commission will play a critical role, it cannot expend all of its efforts toward ensuring continued implementation of the plan. As such, an Action Task Force should be appointed by City Council with the express purpose of ensuring that programs and activities are carried out to implement the plan. The Action Task Force's role will be to refine and prioritize the implementation plan and initiate action over the short-term, on the basis of annual work programs and five-year projected time frames.

Further to the actual implementation plan, the Action Task Force will be responsible for identifying specific actions beyond the information provided in this plan. The Action Task Force will determine methods or programs to be used to implement the proposed actions, specifically identifying which agencies and/or departments will be responsible for their implementation, estimating costs, identifying proposed sources of funding, and establishing time frames in which the recommended actions will be accomplished.

On the basis of the above, the Action Task Force will present a proposal containing a recommended list of programs and actions to be implemented annually; as well as a prioritized list of programs and actions to be implemented over a five-year period. Departments and organizations charged with completing tasks associated with these programs and actions can use the proposal in the budget process and in determining other needed resources. City Council and other governing bodies can use the Action Task Force's proposal for overall budget and resource decisions, as well as to establish benchmarks for departmental performance.

While appointed by City Council, the Action Task Force will

report directly to the Planning Commission, who in turn, will make recommendations to Council. Further to its interaction with the Planning Commission, the Task Force will interact directly with a committee of departmental managers who will provide the necessary technical input and guidance for the program tasks and activities.

Individual members of the Action Task Force should assume responsibilities in the areas of governance, current and long-range planning, growth and infrastructure provision, economic development, and parks and recreation. The following describes the different areas of responsibility for individual Action Task force members:

- **Governance** – The primary role of the individuals who are tasked with the governance aspect of implementation will be to ensure projects are consistent with the objectives and missions of other orders of government (e.g., Brazoria County) and agencies (e.g., Alvin ISD and others). He and/or she will be charged with identifying opportunities to collaborate on projects that may be jointly funded, constructed, or operated, and will also be responsible for negotiating amenable terms and agreements, as necessary. Internally, the individual will be responsible for coordinating with the City Manager on tasks requiring its direct involvement and decision-making powers.
- **Current and Long-Range Planning** – The persons who are responsible for the current and long-range planning aspect of implementation will work closely with the Planning Commission, assuming responsibility for implementing its projects and initiatives. He and/or she will coordinate closely with the administrator of the plan (see below), and maintain a line of communication with the community to monitor shifting priorities and needs. The responsibilities of this position are identified in the recommended actions in Chapter 3, Land Use.
- **Parks and Recreation** – The individuals who are responsible for parks and recreation implementation will be responsible for projects and improvements related to parks, hike and bike trails, public open space, and natural areas preservation. The individuals would be responsible for implementing the recommendations contained within Chapter 4, Parks and Recreation, and coordinating closely with the City's Parks Director and Parks Board to implement the City's Parks and Recreation Master Plan as well.
- **Growth and Infrastructure Provision** – Given the link between community growth and the provision of infrastructure (e.g., sewer, water, roads) and services (e.g., police, fire, emergency medical), this position will be responsible for all improvements or projects dealing with infrastructure. As such, this will require technical knowledge, as well as expertise with utility and other infrastructure systems, including their funding methods. This position will be responsible for the recommended actions in Chapter 5, Growth Strategies.
- **Economic Development** – The individuals who focus on economic development will play an active role in pursuing projects that contribute to the community's economic development. He

and/or she will coordinate closely with the City's economic development department, and local businesses and developers. It will be critical for this position to coordinate with other implementation areas of focus so as to ensure maximum benefit to existing businesses and new investors in the community. The position would be responsible for implementing the recommendations related to economic development that are contained in each chapter of the plan.

CITY STAFF

City staff manages day to-day implementation of the plan. In particular, the Office of the City Manager and the Economic Development Department are responsible for supporting the Planning Commission and City Council and generally shepherding plan implementation. Specific staff responsibilities include:

- Supporting and carrying out capital improvements planning efforts;
- Overseeing the drafting of land development regulations, working with the appropriate boards and commissions;
- Conducting studies and developing additional plans (including management of consultant efforts, as necessary).
- Reviewing applications for consistency with the comprehensive plan, a provision that should be required by the city's land development regulations;
- In coordination with the city council and city management, negotiating the specifics of interlocal agreements;
- Administering collaborative programs and ensuring open channels of communication with various private, public, and non-profit implementation partners;
- Providing briefings on plan implementation progress and activities to the planning commission and city council no less than annually; and
- Maintaining an inventory of potential plan amendments, as suggested by city staff and others, for consideration during annual and periodic plan review and update processes.

While it is understood that the capacity of the current staff to administer the plan and provide the necessary support to the Planning Commission, Action Task Force, other City departments, and City Council is limited given other existing responsibilities and commitments, it is highly recommended that the City assign a staff person, hire additional personnel, or contract with a local planning consultant to manage the day-to-day administration and ongoing implementation of the Comprehensive Plan.

The Plan Administrator would be an independent staff member who would report directly to the Mayor and City Council. Generally, he or she would function as a department manager that would coordinate closely with each of the other City departments, and provide direct support to the Action Task Force and Planning Commission.

CITIZENS

The citizens of Alvin played a key role in providing input into the Plan through the Citizens Advisory Committee (CAC). The public's interest and the general momentum of the plan process should not be allowed to subside, but rather enhanced through encouraged participation in its ongoing implementation. The Action Task Force should use stakeholder groups, public meetings, community workshops, design charrettes, the City's website, media releases, social media, public notices, and newsletters to inform and actively engage citizens in plan implementation.

Evaluation of the Plan

PLAN AMENDMENT PROCESS

The City of Alvin Comprehensive Plan Update is meant to be a flexible document allowing for adjustment to changing conditions over time. Shifts in political, economic, physical, technological, and social conditions, as well as other unforeseen circumstances, may influence and change the priorities and fiscal outlook of the community. As the City grows and evolves, new issues will emerge while others will no longer be as relevant. Some action statements will be found impractical or outdated while other plausible solutions will arise. To ensure that the Plan continues to reflect the overall goals of the community and remains relevant and resourceful over time, the Plan must be revisited on a regular basis to confirm that the plan elements are still on point and the associated goals, policies and action statements are still appropriate.

Revisions to the Comprehensive Plan are two-fold, with minor plan amendments occurring as needed and more significant modifications and updates occurring every five to 10 years. Minor amendments could include revisions to certain elements of the plan as a result of the adoption of another specialized plan such as a Future Land Use and Character map and/or a Thoroughfare Plan. Major updates will involve reviewing the base conditions and anticipated growth trends; re-evaluating the goals, policies and recommendations in the plan - and formulating new ones as necessary; and adding, revising or removing action statements in the plan based on implementation progress.

ANNUAL PROGRESS REPORT

The Planning Commission with the assistance of City staff, must prepare an Annual Progress Report for submittal and presentation to the Mayor and City Council. This ensures that the plan is consistently reviewed, and allows for any identified need for minor plan updates and revisions, such as changes to policies or recommended actions, and review of plan consistency with ordinances and regulations.[1]

The Annual Progress Report should be coordinated with the annual budgeting process so that recommendations can be made available early in the budgeting cycle, and requests for capital improvements and major programs can be reviewed in light of the plan's progress.

The Annual Progress Report should be written such that the status of

1: The identification of potential plan amendments by the Planning Commission, City staff, citizens, property owners, community organizations, and other governmental entities, may occur on an ongoing basis.

implementation for each programmed task of the Comprehensive Plan is central to the report. Significant actions and accomplishments during the past year should be recognized, and recommendations should be made for needed actions, programs, and procedures to be developed and implemented in the coming year.

The Annual Progress Report should include and highlight:

- Significant actions and accomplishments during the past year, including the status of implementation for each programmed task in the comprehensive plan;
- Obstacles or problems in the implementation of the plan, including those encountered in administering the land use and transportation aspects, as well as any other policies of the plan; and
- Recommendations for needed actions, programs, and procedures to be developed and implemented in the coming year, including recommendation of projects to be included in the city's capital improvement program (cip), other programs/projects to be funded, and priority coordination needs with public and private implementation partners.

The Annual Progress Report should also include proposed amendments that have come forward during the course of the year. In other words, proposed amendments to the plan shall be considered by the Planning Commission no more frequently than once each year. This allows proposed amendments to be considered concurrently so that the cumulative effect of all amendments may be understood. The exception to this approach would apply in the following circumstances:

- Resolution of an emergency condition or situation that involves public health, safety, or welfare;
- Technical, non-substantive corrections to the content of the chapters, including update of statistics, demographic information, and other time sensitive information;
- Resolution of a decision by an administrative agency or court of competent jurisdiction; and,
- Special use permits for essential public facilities.

Every year the Plan Administrator shall maintain the annual list of amendments that have been suggested by City staff, the Action Task Force, and citizens. This list shall be made available to the public upon request. By the end of the second business week of June each year, this list shall be compiled into a preliminary docket. This docket should contain all proposals for formal site-specific amendments, and all proposals for suggested amendments.

The Plan Administrator shall review the suggested amendments in the preliminary docket and prepare a report that outlines which suggested amendments should be included in the final docket. The City Council and Planning Commission may, but are not required to, hold a joint workshop to gather information on the preliminary docket and the Plan Administrator's report.

A noticed public meeting shall be held by the Planning Commission to accept public comment on the preliminary docket. Following the

Types of Amendments

Two types of revisions to the Comprehensive Plan may occur: (1) minor amendments and (2) major updates.

Minor Amendments:

This type of amendment may be proposed at any time, such as specific adjustments to the Future Land Use and Character Map related to particular land development applications or public improvement projects. Minor amendments can be addressed by the City in short order or, if not pressing, be documented and compiled for a more holistic evaluation through an annual plan review process. This is also how and when the results of another specialized plan or study should be incorporated into relevant sections of the plan.

Major Updates:

More significant plan modifications and updates should occur no more than every five years. Major updates involve reviewing the base conditions and anticipated growth trends; re-evaluating the guiding principles and recommendations in the plan—and formulating new ones as necessary; and adding, revising, or removing action statements in the plan based on implementation progress.

hearing, the Planning Commission shall prepare a report for submission to City Council. The report shall include a recommended final docket that outlines specific amendments for consideration during the annual amendment process.

City Council shall review and consider the Planning Commission's report and final docket in July of each year. City Council shall hold a public hearing prior to adoption of the Planning Commission's recommended final docket. The final docket, as adopted by the City Council, shall include all applications for formal amendments, and any proposals for suggested amendments which the City Council elects to consider during the annual amendment process.

The decision to adopt the final docket does not constitute a decision or recommendation that the substance of any amendment should be adopted. City Council must consider the Planning Commission's findings and conclusions, which shall include a recommendation to the City Council that the proposed amendment(s) be denied, approved, or approved with conditions or modifications.

BI-ANNUAL AMENDMENT PROCESS

Based on the annual progress report, the opinions of City staff, Planning Commission and others, a determination will be made as to whether there is a need for a plan amendment. When considering a plan amendment, the City should ensure the proposed amendment is consistent with the goals and policies set forth in the Plan regarding character protection, development compatibility, infrastructure availability, conservation of environmentally sensitive areas, and other community priorities. Careful consideration should also be given to guarding against site specific plan changes that could negatively impact adjacent areas and uses or detract from the overall character of the area. Factors that should be considered in deciding on a proposed plan amendment include:

- Consistency with the goals and policies set forth in the plan;
- Adherence with the future land use and/or thoroughfare plans;
- Compatibility with the surrounding area;
- Impacts on infrastructure provision including water, wastewater, drainage, and the transportation network;
- Impact on the city's ability to provide, fund, and maintain services;
- Impact on environmentally sensitive and natural areas; and
- Whether the proposed amendment contributes to the overall direction and character of the community as captured in the plan vision and goals (and ongoing public input).

FIVE-YEAR UPDATE / EVALUATION AND APPRAISAL REPORT

An evaluation and appraisal report should be prepared every five years. This report should be prepared by City staff, having received input from various City departments, the Planning Commission, other boards and commissions, and third-party consultation. The report process involves evaluating the existing plan and assessing how successful it has been in achieving the community's goals. The purpose of the report is to identify

the successes and shortcomings of the plan, look at what has changed over the last five years, and make recommendations on how the plan should be modified in light of those changes.

The report should review baseline conditions and assumptions about trends and growth indicators. It should also evaluate implementation potential and/or obstacles related to any unmet goals, policies and recommendations. The evaluation report and process should result in an amended Comprehensive Plan, including identification of new or revised information that may lead to updated goals, policies and/or action recommendations. More specifically, the report should identify and evaluate the following:

1. Summary of major actions and interim plan amendments undertaken over the last five years.
2. Major issues in the community and how these issues have changed over time.
3. Changes in the assumptions, trends and base studies data, including the following:
    - The rate at which growth and development is occurring relative to the projections put forward in the plan;
    - Shifts in demographics and other growth trends;
    - The area of land that is designated and zoned for urban development and its capacity to meet projected demands and needs;
    - City-wide attitudes and whether apparent shifts, if significant, necessitate amendments to the stated goals or strategies of the plan; and
    - Other changes in political, social, economic, technological, or environmental conditions that indicate a need for plan amendments.
4. Ability of the plan to continue to support progress toward achieving the community's goals. The following should be evaluated and revised as needed:
    - Individual statements or sections of the plan must be reviewed and rewritten, as necessary, to ensure that the plan provides sufficient information and direction to achieve the intended outcome;
    - Conflicts between goals and policies that have been discovered in the implementation and administration of the plan must be pointed out and resolved;
    - The action agenda must be reviewed and major accomplishments highlighted. Those not completed by the specified timeframe should be re-evaluated to ensure their continued relevance and/or to revise them appropriately;
    - As conditions change, the timeframes for implementing the individual actions of the plan should be re-evaluated where necessary. Some actions may emerge as a higher priority given new or changed circumstances while others may become less important to achieving the goals and development objectives of the community;

- Changes in laws, procedures and missions may impact the ability of the community to achieve its goals. The plan review must assess these changes and their impacts on the success of implementation, leading to any suggested revisions in strategies or priorities.

ONGOING COMMUNITY OUTREACH AND ENGAGEMENT

All review and updating processes related to the Comprehensive Plan should emphasize and incorporate ongoing public input. The annual and continual plan evaluation and reporting process should also incorporate specific performance measures and quantitative indicators that can be compiled and communicated both internally and to elected officials and citizens in a "report card" fashion. Examples might include:

- Acres of new development (plus number of residential units and square footage of commercial and industrial space) approved and constructed in conformance with this plan and related City codes.
- Various measures of service capacity (gallons, kilowatts, acre-feet, etc.) added to the City's major utility systems as indicated in this plan and associated utility master plans—and the millions of dollars allocated to fund the necessary capital projects.
- Acres of new open space and miles of trail developed or improved in accordance with an updated Parks and Recreation Master Plan.
- Indicators of City efforts to ensure neighborhood integrity as emphasized in this Plan (e.g., code enforcement activity, number of homes receiving improvements and weatherization, number of historic designations made for homes/neighborhoods, etc.).
- Miles of new bike routes and sidewalks added to the City's transportation system to provide alternative mobility options as recommended in the bicycle mobility plan component of the Plan.
- Indicators of the benefits of redeveloped sites and structures (appraised value, increased property and/or sales tax revenue, new residential units, and retail and office spaces in urban mixed-use settings, etc.) as envisioned through this Plan.
- The estimated dollar value of operating cost savings from reduced energy and water use, heating/cooling, etc., from green building and low-impact development practices and related conservation efforts in new and existing City facilities, as suggested in this Plan.
- The numbers of residents and other stakeholders engaged through City-sponsored education and outreach events related to Comprehensive Plan implementation and periodic review and updating, as outlined in this chapter.

EVALUATION AND APPRAISAL REPORT

An approved Comprehensive Plan can be reviewed at any time; however, City Council must hold a public meeting at least once each five years to determine whether the plan needs to be amended. Beginning in 2005, and every five years thereafter, an Evaluation and Appraisal Report should be prepared by the Plan Administrator, with input from City staff, the Planning Commission, and the Action Task Force. The objective

of the Evaluation and Appraisal Report is to assess growth indicators, evaluate implementation potential, identify proposed amendments, and if necessary, recommend amendments to the plan.

Growth indicators that should be assessed include, but are not limited to, the following:

- The rate at which growth and development is occurring relative to the projections put forward in the plan;
- Shifts in demographic, socio-economic, and other trends;
- The capacity of the City to provide adequate facilities and services, including both infrastructure and fiscal capacity;
- The area of urbanized land that is designated and its capacity to meet projected population needs and employment demands;
- The assumptions upon which the plan is based and whether they continue be valid;
- City-wide attitudes and whether changes (if any) necessitate amendments to the vision statement and plan goals;
- Inconsistencies between the plan and other local, regional, and/or statewide plans; and,
- Changes in circumstances that dictate a need for amendments.

Further to the growth indicators, it is necessary that factors which may impact implementation also be reviewed, as described below:

- Individual statements or sections of the plan must be reviewed and rewritten, as necessary, to ensure that the plan provides sufficient information and direction to achieve the intended outcome;
- Any conflicts between policies or objectives that have been discovered in the implementation and administration of the plan must be identified and resolved;
- As conditions change over time, it will be necessary to re-evaluate the timeframes for implementing the individual actions. Some actions may emerge as a higher priority given new or changed circumstances, while others may become less important to achieving the vision and development objectives of the City.
- Based upon organizational, programmatic, and procedural factors, as well as the status of previously assigned tasks, the implementation task assignments must be reviewed and altered to ensure timely accomplishment of the plan's recommended actions.
- Changes in laws, procedures, and missions may impact the ability of the community to achieve its goals. The review must assess these changes and their impacts on the success of implementation and, subsequently, suggest revisions to strategies.

The Planning Commission must complete its assessment of the plan by April 15th of every fifth year. Any amendments that are recommended by a majority vote of the Planning Commission shall be forwarded to the Plan Administrator by the first day of May.

The same annual review process described above would be followed for consideration of amendments during years in the planning period when the plan is formally reviewed. The difference being that the

list of amendments that is compiled by the Plan Administrator would contain all amendments recommended by the Planning Commission that were forwarded by May 1st of every fifth year. In addition, the final docket, as adopted by the City Council, would include, in addition to all applications for formal amendments and any proposals for suggested amendments which the City Council elects to consider during the annual amendment process, any amendments recommended by the Planning Commission during its five-year assessment of the plan that the City Council elects to consider during the amendment process.

By keeping the plan current and responsive to change through a five-year review process, the expectation is that it will continue to be relevant and useful to the Planning Commission, City Council, and City staff throughout the course of the planning period.

Implementation

The intent of the implementation program is to set forth a realistic way in which goals and objectives of this Plan can be launched into action. The following means may be used to implement the Plan:

- **Regulations** -The Comprehensive Plan includes numerous recommendations for amending the current development ordinances to accomplish the community vision. The plan provides the policy framework to support these changes.
- **Economic Incentives** - This Comprehensive Plan may be used as a basis for determining how economic incentives will be offered. Business improvement areas, infill development areas, and redevelopment sites should receive economic incentives so that new economic development opportunities may be directed to areas that can be most efficiently served by utilities and infrastructure, as well as meeting other community objectives.
- **Internal and External Funding** - Implementation of the plan will require adequate funding, which may come from current revenue sources, a dedicated funding source, or outside grant funds from other orders of government. It is expected that annual appropriations and capital improvement funds will likely require reallocation to implement the plan's recommendations.

IMPLEMENTATION PROGRAM

The following implementation program identifies the actions that are to be accomplished within the next several years. The priorities are established by the identified timeframe. To ensure accountability, a lead agency is identified, who may coordinate with other agencies to accomplish the task, but who is ultimately responsible for its timely and successful implementation. The Plan Administrator will be tasked to work with these lead agencies to ensure plan implementation. For each action a primary source of funds is identified, which may be matched with other funds, such as state and federal grants, dedications, and in-kind services.

Table 6.1, *Implementation Action Plan*, includes a prioritized list of action recommendations derived from the various plan elements of this comprehensive plan update. The synthesized table does not include

every action recommendation found throughout the plan. As configured, the Implementation Action Plan details the "to do" list of priority action items showing the general time frame for initial implementation and who is responsible for initiating, administering and participating in the implementation process.

Additionally, action items have been categorized regarding those actions that will require capital improvements; and actions that require changes in policies, regulations, standards and operations. All of the action items that require capital in order to be implemented may also require, to some degree, additional feasibility analyses, and in some cases, construction documentation, specifications and detailed cost estimates.

Participants, including the Citizens Advisory Committee (CAC), the City's departmental heads, and other contributors, were given a series of sticky dots which equated to points - 15 one-point sticky dots, and three five-point sticky dots. The latter dots were to be used to identify particularly important recommendations. Only one dot could be used per recommendation. To accommodate participants' frustration about not receiving enough points to adequately prioritize recommendations, participants were then given five extra one-point sticky dots. So each participant could effectively "vote" (prioritize) on 23 of the 71 recommendations within the following, Table 6.1, *Implementation Action Plan*. Points were then tallied and the "Top 10 Recommendations" were identified (listed below). Because particular recommendations did not receive high scores does not mean that they should not be implemented.

As mentioned, Table 6.1, *Implementation Action Plan*, provides a starting point for determining immediate, near-term, and longer term task priorities. This is an important first step toward Plan implementation and should occur in conjunction with the City's annual budget process, during Capital Improvements Program (CIP) preparation, and in support of departmental work planning. Then, the City staff member designated as the Comprehensive Plan Administrator should initiate a first year work program in conjunction with City management, other departments, and other public and private implementation partners.

The near-term action priorities should be revisited by City officials and staff annually to recognize accomplishments, highlight areas where further attention and effort are needed, and determine whether some items have moved up or down on the priority list given changing circumstances and emerging needs. It should be kept in mind that early implementation of certain items, while perhaps not the uppermost priorities, may be expedited by the availability of related grant opportunities, by a state or federal mandate, or by the eagerness of one or more partners to pursue an initiative with the City. On the other hand, some high-priority items may prove difficult to tackle in the near term due to budget constraints, the lack of an obvious lead entity or individual to carry the initiative forward, or by the community's readiness to take on a potentially controversial new program.

Progress on the Year 1-2 items, in particular, should be the focus of the first annual review and report a year after Comprehensive Plan adoption, as described earlier in this chapter. Then, similar to multi-year capital improvements programming, the entire action agenda list in Table 6.1—and all other action items dispersed throughout the plan chapters—

should be revisited annually to decide if any additional items are ready to move into the next near-term action timeframe, and what the priority should be.

The prioritization exercise that culminated in the Table 6.1, *Implementation Action Plan*, confirmed much of what has been discussed during the CAC and stakeholder meetings, and once again illuminates several key issues. There is significant interest in the City preparing for growth by ensuring that the requisite land development regulations are organized, revised, and enforced to ensure and sustain high-quality, predictable development. It is also recognized that several growth engines, such as Segment B of the proposed Grand Parkway, require preemptive and anticipatory planning measures, including a Mobility plan element for the City's Comprehensive Plan, complete with access management provisions, to guide and direct the nature of growth. Developing a growth sequencing program that informs the City's Capital Improvement Program (CIP) budgeting process also ranked high on the list. Additionally, the importance of proactive enforcement of the City's existing Code of Ordinances in order to clean-up blighted commercial and residential areas; and development of new parks and recreational open space to reinvigorate the City's neighborhoods cannot be over-emphasized. The Comprehensive Plan's top 10 recommendations and relative scoring include the following:

1. Revise local health, building, and development codes, as needed, to streamline the process for addressing unsafe or dilapidated structures and other potential health and safety risks, such as inoperable vehicles, weeds, and heavy trash (Score: 37).
2. Update the City of Alvin's Thoroughfare Plan. Revise the City's access management provisions to include full consideration of the Grand Parkway and potential expansion of S.H. 35. Amend the City's Comprehensive Plan Update to include a Mobility plan element, which would include multi-modal circulation options and facilities (Score: 37).
3. Prepare and adopt a unified development ordinance (Score: 27).
4. Develop and adopt a growth sequencing plan and management strategy that identifies areas of development for the next five, 10, 15 and 20 years to accommodate the targeted population of 33,472 persons in the Year 2035. These sequential areas identify when and where capital improvements and services should be directed (Score: 27).
5. Employ a pro-active code enforcement strategy that first offers helpful assistance to property owners in complying with municipal codes rather than a punitive approach, so that enforcement resources may be targeted to the worst areas and offenders (Score: 24).
6. Amend the City's subdivision regulations to incorporate parkland dedication provisions and parkland development fund requirements to require that parkland dedication and subsequent improvements occur during the first phase of subdivision development (Score: 24).

7. Form a target-area capital investment program focused on infrastructure improvements within at-risk neighborhoods (Score: 22).
8. Evaluate the City's capital improvement program (CIP) and annual capital plan against the growth sequencing plan to ensure utility extensions and capacity improvement projects are consistent with the defined growth area. The capital improvement program and capital plan should be prioritized in accordance with the sequencing and timing of development (Score: 21).
9. Formally adopt annexation policies, which will guide the decision-making of the City Council, both for City-initiated annexations as well as voluntary requested annexations (Score: 18).
10. Focus on park and recreation improvements as a means for elevating neighborhood viability (Score: 18).

While the prioritization exercise which resulted in Table 6.1, *Implementation Action Plan*, set out a proposed timeframe for implementing key recommendations it must be stressed that this program of strategic actions should be revisited every few years to determine whether changing conditions require a re-ordering of strategies and actions in order to fulfill community revitalization goals.

Table 6.1, Implementation Action Plan

Programs and Projects	Years			Involved Entities	Chapter Reference
	1-2	3-10	10 +		
Actions that Require Capital Improvements					
Form a target-area capital investment program focused on infrastructure improvements within at-risk neighborhoods.	16	6		City Manager / Public Services Department	Chapter 3, Objective 3.2.1
Focus on park and recreation improvements as a means for elevating neighborhood viability.	15	3		Parks Department	Chapter 3, Objective 3.2.1
Identify parcels for potential acquisition for pocket parks or public open space.	2	5	1	Parks Department	Chapter 4, Objective 4.2.2
Identify prime locations at which park and trail gateway signage should be erected.	7	1		Parks Department	Chapter 4, Objective 4.2.2
Identify parcels of property (such as sites along the Mustang Bayou that are within the FEMA floodway and not suitable nor approved for future development) that will serve as public passive recreational open space.	3	5		Parks Department	Chapter 4, Objective 4.2.2
Actions that Require Changes in Policies, Regulations, Standards and Operations					
Prepare and adopt a unified development ordinance.	*26*	*1*		*Economic Development Department / Office of City Manager*	*Chapter 3 Objective 3.1.1*
Improve the walkability of neighborhoods with the installation of sidewalks concurrent with all new development and rehabilitation or construction of new sidewalks in the older neighborhoods, particularly adjacent to schools and parks.	*5*	*5*		*Economic Development and Engineering Departments*	*Chapter 3, Objective 3.2.1*
Improve accessibility for disabled users by adding sidewalk curb cuts and ramps, wheelchair accessible sidewalks and trails, and providing accessible facilities and equipment.	*2*	*6*	*1*	*Engineering Department*	*Chapter 4, Objective 4.2.3*
Increase the budget for park maintenance, management, and administration concurrent with the addition of new parks and increased provision of recreational programs.	*5*	*2*	*1*	*Parks Department*	*Chapter 4, Objective 4.2.3*
Allow a range of development options on individual properties with the use of performance standards to require compatibility for adjacent uses exhibiting varying use intensities.	*3*	*1*		*Economic Development Department*	*Chapter 3 Objective 3.1.1*
Adopt resource protection standards to preserve stands of existing vegetation, which form effective natural buffers within and between uses.	*9*			*Economic Development Department / Parks Department*	*Chapter 3 Objective 3.1.2*
Protect the existing street trees by incorporating provisions for tree preservation into the proposed unified development ordinance. Adopt street repair and improvement specifications that will not disrupt the drip line of existing trees, including provisions for protective construction fencing, limitations on grade changes, and prohibition of storing and dumping materials.	*8*	*1*		*Economic Development Department / Parks Department*	*Chapter 3 Objective 3.1.2*
Preserve the suburban character of the established neighborhoods through compatible adjacent uses, infill development, and redevelopment by adopting regulations and compatibility standards.	7	7		Economic Development Department	Chapter 3, Objective 3.2.1

*Note: Rows that are italicized with grey text represent previously adopted recommendations from the 2005 Comprehensive Plan.

Table 6.1, Implementation Action Plan

Programs and Projects	Years			Involved Entities	Chapter Reference
	1-2	3-10	10 +		
Identify areas of the community that are experiencing or at risk for experiencing particularly high levels of disinvestment and deterioration. Coordinate with Public Services to identify and prioritize needed infrastructure improvements funded by a target-area capital investment program.	11	7		Development Coordinator / Economic Development Department	Chapter 3, Objective 3.2.1
Incorporate into the unified development ordinance provisions allowing a relaxation of specified standards that may prevent or add difficulty to the redevelopment process, given certain precautions and criteria.	3			Development Coordinator / Economic Development and Engineering Departments	Chapter 3, Objective 3.2.1
Emphasize neighborhood outreach and coordination. Pursue multiple ways to maintain communication links to neighborhood leaders and representatives, such as through less formal neighborhood associations and/ or councils where organized homeowners associations have lapsed over time.	12	1	1	Development Coordinator / Economic Development Department	Chapter 3, Objective 3.2.1
Require tree preservation for residential development and especially for infill development and redevelopment in neighborhoods with mature tree canopies.	10	3		Parks and Engineering Departments	Chapter 3, Objective 3.2.2
Require drought-resistant species of street trees in all new residential developments, which must be coordinated with utility placement to avoid problems as the street trees grow.	16	1		Parks and Engineering Departments	Chapter 3, Objective 3.2.1
Require open space ratios for residential districts to allow sufficient common areas to effectively separate and buffer incompatible adjacent uses.	2	2		Parks Department	Chapter 3, Objective 3.2.2
Revise local health, building, and development codes, as needed, to streamline the process for addressing unsafe or dilapidated structures and other potential health and safety risks, such as inoperable vehicles, weeds, and heavy trash.	35	2		Public Services and Code Compliance Departments	Chapter 3, Objective 3.3.1
Employ a pro-active code enforcement strategy that first offers helpful assistance to property owners in complying with municipal codes rather than a punitive approach, so that enforcement resources may be targeted to the worst areas and offenders.	22	2		Public Services Department	Chapter 3, Objective 3.3.1
Study the housing market within the City and extraterritorial area to identify existing and projected future shortages - or surpluses - of available housing in different price ranges, thereby allowing formation of near-term strategies to fulfill the market demands.	8	3		Economic Development Department	Chapter 3, Objective 3.3.2
Amend the existing subdivision manual to incorporate a housing palette into the proposed unified development ordinance, thereby permitting a range of lot sizes within standard development, rather than requiring a planned unit development.	5	2		Economic Development and Engineering Departments	Chapter 3, Objective 3.3.2

*Note: Rows that are italicized with grey text represent previously adopted recommendations from the 2005 Comprehensive Plan.

Table 6.1, Implementation Action Plan

Programs and Projects	Years			Involved Entities	Chapter Reference
	1-2	3-10	10 +		
Allow for varying lot sizes within residential developments without requiring the more rigorous submittal procedures and requirements of a planned unit development.	*13*	*3*		*Economic Development and Engineering Departments*	*Chapter 3, Objective 3.2.2*
Encourage alternative subdivision designs, such as mixed use development, clustered housing, and conservation and preservation development. These alternative neighborhood environments would allow the City to maintain its small-town character, consistent with many of its existing neighborhoods, while protecting its resources.	*3*	*3*	*2*	*Economic Development and Engineering Departments*	*Chapter 3, Objective 3.2.2*
Create incentives such as permit streamlining, fee waivers, tax deferral, and infrastructure cost-sharing for builders and organizations that provide infill construction on vacant lots or parcels in a manner that compliments the immediate and adjacent neighborhoods.	*9*	*4*		*Economic Development Department*	*Chapter 3, Objective 3.2.1*
Prepare a Downtown master plan that is of sufficient detail to result in a regulating plan that illustrates the intended arrangement and form of development.	4	12		Economic Development Department	Chapter 3, Objective 3.4.1
Create a distinct identity of Downtown, including forming an identifiable edge to the district with monuments and gateway treatments at the entries from each direction (particularly along Business 35 at the northern and southern entries and Sealy Street from the west and House Street from the east), along with unifying design elements, such as unique signage and banners, landscaping, decorative lighting, street and sidewalk/crosswalk patterns, and other unique urban design treatments.	*3*	*6*		*Economic Development Department*	*Chapter 3, Objective 3.4.3*
Utilize the Downtown plan to develop allowable parking configurations, such as mid-block only lots, as well as building form standards including building massing, height, building placement, allowable frontage types and conditions, and allowable encroachments.	3	4		Economic Development and Engineering Departments	Chapter 3, Objective 3.4.1
Designate firm boundaries for the Downtown area, within which high-density housing is permitted without encroachment into the abutting low-density single family neighborhoods. Within the defined Downtown area, concentrate higher intensity residential uses within allowances for increased building heights and floor area ratios.	*1*	*3*		*Economic Development Department*	*Chapter 3, Objective 3.4.2*
Adopt design standards for residential uses within the Downtown and its defined fringe areas to ensure their appearance reflects a more urban character. Specific performance standards should be created relating to building design and articulation, orientation, height, setbacks, parking, and resident access to ensure compatibility and cohesiveness with the Downtown environment.	*2*	*1*		*Economic Development and Engineering Departments*	*Chapter 3, Objective 3.4.2*
Amend the subdivision regulations to create alternative street cross sections thereby allowing for increased green space along collector and arterial roadways, with increased density allowances as an incentive to developers.	*1*	*2*	*1*	*Economic Development and Engineering Departments*	
Create attractive incentive packages to entice retailers and employers to locate or relocate within the Downtown district.	*6*	*4*		*Economic Development Department*	*Chapter 3, Objective 3.4.1*

*Note: Rows that are italicized with grey text represent previously adopted recommendations from the 2005 Comprehensive Plan.

Table 6.1, Implementation Action Plan

Programs and Projects	Years			Involved Entities	Chapter Reference
	1-2	3-10	10 +		
Pursue the strategies related to promotion of new residential and mixed-use activity in downtown Alvin. Numerous studies have illustrated that when people live in a relatively "urban" environment, they bring new foot traffic to the area; additional retail, service and entertainment demands which can spur the immediate market; and expectations for a safe and hospitable environment in which to live, recreate, and host guests and visitors.	2	7		Economic Development Department	Chapter 3, Objective 3.4.2
Form a public-private partnership for revitalization and redevelopment of Downtown. Such partnership would include a role for the City in acquiring and assembling larger parcels of land to allow more sizeable development; vacating rights-of-way and easements, as necessary; conducting studies on the local market, traffic and parking, and design options; and being a mutual investor in projects such as a parking garage. Consider the formation and use of a tax increment reinvestment zone (TIRZ) district, which would define the district boundaries and create a source of funds for capital costs of public works or improvements, new buildings, structures, and fixtures; demolition, alteration, remodeling, repair or reconstruction; clearing and grading of land; and costs for financing, professional services, and administration.	*5*	*6*	*1*	*Economic Development Department*	*Chapter 3, Objective 3.4.1*
Delineate development performance zones within which enhanced standards and development guidelines can regulate development quality and ensure compatibility.	8	7		Economic Development Department	Chapter 3, Objective 3.5.2
Create special performance standards for the properties abutting Business 35, S.H. 6 and the S.H. 35 Bypass, including provisions that may be incorporated into the proposed unified development ordinance pertaining to increased landscape surfaces (adjacent to the right-of-way and throughout individual sites) and reduced impervious surface coverage; floor area ratios; requirements for landscaping, screening, and buffering between uses; outdoor storage, display and use activity; the type, size, number and placement of signs; outdoor lighting standards; building placement and orientation; site access and circulation; and building design and appearance.	*2*	*4*		*Economic Development Department*	*Chapter 3, Objective 3.5.1*
Conduct a thorough review and critique of the City's subdivisions and property development manual, subsequent to the adoption of the Comprehensive Plan, to ensure the ability to enact its policies and objectives.	*3*	*2*		*Economic Development Department*	*Chapter 3, Objective 3.6.2*
Develop an eco-tourism program aimed at protecting critical areas and educating the public about the local flora and fauna, as well as how they can participate in its conservation.		2		Parks Department and Convention and Visitors Bureau (CVB)	Chapter 4, Objective 4.1.1

*Note: Rows that are italicized with grey text represent previously adopted recommendations from the 2005 Comprehensive Plan.

Table 6.1, Implementation Action Plan

Programs and Projects	Years			Involved Entities	Chapter Reference
	1-2	3-10	10 +		
Utilize the City's capital improvement program to direct the locations of nodes suitable for intensive nonresidential development based upon the availability, sizing, and timing of adequate water, wastewater, drainage, and transportation improvements. Such programming of capital improvements should be designed and scheduled to accommodate the City's economic development potential.	*1*	*6*		*Office of City Manager / Economic Development / Engineering Departments*	*Chapter 3, Objective 3.5.1*
Develop a "Blue Trails" concept plan and trail network that establishes the Mustang Bayou waterways as a key additions to the larger Alvin Trails Network and capitalizes on local resources as a means of tourism, education, research, and recreation.	4	9		Parks Department	Chapter 4, Objective 4.1.1
Identify, or provide criteria for identifying, critical areas of the bayou (such as navigational exclusion zones, hazards and unusual boating conditions, sensitive wildlife and ecosystems, sites with poor water quality, etc.) that require giving users key information, restricting access, or taking other management actions.	2	2	1	Parks Department	Chapter 4, Objective 4.1.1
Amend the City's subdivision regulations to incorporate parkland dedication provisions and parkland development fund requirements to require that parkland dedication and subsequent improvements occur during the first phase of subdivision development.	22	2		Parks Department / Economic Development Department	Chapter 4, Objective 4.2.1
Revise parkland dedication fees in lieu and development ordinance to establish a fund to allow for community park dedication and subsequent fund allocation so that the City might have more opportunities to acquire larger parcels of land that benefit a larger service area rather than solely requiring dedication within dedication "zones."	4	1		Parks Department / Economic Development Department	Chapter 4, Objective 4.2.1
Aim to comply with the maximum standards displayed in Table 4.4, Existing Acreage Versus Future Demand.		1		Parks Department	Chapter 4, Objective 4.2.1
Develop an annual operation and maintenance plan for Alvin's parks system, including provisions for regular physical condition assessments of grounds and facilities, equipment safety inspections, maintenance scheduling and personnel tracking, and a funding and resource assessment.	*8*	*1*	*1*	*Parks Department*	*Chapter 4, Objective 4.2.3*
Update the City's Park Master Plan, as well as combine the City's Ped-Transit Master Plan with the trails and bike lane concepts into a single document addressing parks, recreation, and trails as a singularly focused initiative rather than separated.	5	5		Parks Department / Engineering Department	Chapter 4, Objective 4.2.1
Proceed in the implementation of the City's Park Master Plan and Needs Assessment, 2002-2012, regarding the recommendations and timeline for action.	2	3		Parks Department	Chapter 4, Objective 4.2.1
Develop a park standards manual that outlines equipment standards (types and finishes), branding guidelines, and design requirements so that the Alvin park system maintains a consistent level of quality, maintenance, and desirable aesthetic appeal.	11	3		Parks Department	Chapter 4, Objective 4.2.2

*Note: Rows that are italicized with grey text represent previously adopted recommendations from the 2005 Comprehensive Plan.

Table 6.1, Implementation Action Plan

Programs and Projects	Years			Involved Entities	Chapter Reference
	1-2	3-10	10 +		
Include language that requires an implementation timetable for the installation of parks to ensure that developers follow-through in their construction in a timely matter.	4	1		Parks Department / Engineering Department	Chapter 4, Objective 4.3.1
Develop a five-year Capital Improvement Program (CIP) for parks and recreation improvements, consistent with the timeline of actions, as amended from time to time, in the most recent and updated iteration of the City's Park Master Plan.	*4*	*4*		*Parks Department / Office of City Manager*	*Chapter 4, Objective 4.4.2*
Adopt an ultimate growth policy, consistent with Chapter 5, Growth Strategies, as to the nature and extent of urban service provision, including water, wastewater, transportation, and drainage infrastructure, into the outlying areas of the extraterritorial jurisdiction.	*2*	*7*		*Economic Development and Engineering Departments*	*Chapter 3, Objective 3.1.3*
The City should exercise its authority to conduct subdivision plat review throughout the entire ETJ, or alternatively, consider relinquishing portions of the ETJ for which the City cannot adequately provide services within a reasonable amount of time.	*2*	*7*		*Office of City Manager / Economic Development Department*	*Chapter 5, Objective 5.2.1*
Should the City decide to maintain the current arrangement whereby the authority to review subdivisions is delegated to Brazoria County; at a minimum there should be a comprehensive assessment and comparison between their the County's and the City's respective standards and codes, with the intent of narrowing the gap between the standards of development.	*6*	*1*		*Office of City Manager / Economic Development Department*	*Chapter 5, Objective 5.2.1*
It is advisable for the City to create an impact model enabling it the ability to quantify the fiscal consequences of development and, subsequently, adopt policies to ensure responsible outcomes.	*1*	*3*		*Office of City Manager / Economic Development Department*	*Chapter 5, Objective 5.2.1*
Develop and adopt a growth sequencing plan and management strategy that identifies areas of development for the next five, 10, 15 and 20 years to accommodate the targeted population of 33,472 persons in the Year 2035. These sequential areas identify when and where capital improvements and services should be directed.	19	7	1	City Manager / Economic Development and Public Services Departments	Chapter 5, Objective 5.2.1
Formally adopt annexation policies, which will guide the decision-making of the City Council, both for City-initiated annexations as well as voluntary requested annexations.	*12*	*6*		*Office of City Manager*	
Consider policy amendments for the use of impact fees whereby there may be incentives to incentivize developing in areas where adequate infrastructure is currently available, or programmed for improvement within the City's CIP.	*5*	*3*		*Economic Development Department / Office of City Manager*	*Chapter 5, Objective 5.2.2*

*Note: Rows that are italicized with grey text represent previously adopted recommendations from the 2005 Comprehensive Plan.

Table 6.1, Implementation Action Plan

Programs and Projects	Years			Involved Entities	Chapter Reference
	1-2	3-10	10 +		
Evaluate the City's capital improvement program (CIP) and annual capital plan against the growth sequencing plan to ensure utility extensions and capacity improvement projects are consistent with the defined growth area. The capital improvement program and capital plan should be prioritized in accordance with the sequencing and timing of development.	13	8		Office of City Manager / Public Services Department / Engineering Department	Chapter 5, Objective 5.2.1
Establish incentives for infill development, such as density bonuses if certain performance standards are met.	*2*	*1*		*Economic Development Department / Office of City Manager*	*Chapter 5, Objective 5.1.1*
Update the City of Alvin's Thoroughfare Plan. Revise the City's access management provisions to include full consideration of the Grand Parkway and potential expansion of S.H. 35. Amend the City's Comprehensive Plan Update to include a Mobility plan element, which would include multi-modal circulation options and facilities.	33	4		Engineering Department	Chapter 5, Objective 5.3.1
Utilize and supplement as necessary the Brazoria County Mobility Plan to gather information about existing roadway conditions, including property ownership patterns; right-of-way and pavement widths; pavement type; existence of shoulders; drainage improvements (ditches or curb and gutter); and design encumbrances such as creeks, floodplains, and other topographic features.	*1*	*2*		*Economic Development / Engineering Departments*	*Chapter 5, Objective 5.3.1*
Encourage development patterns that respect natural systems such as watersheds and wildlife corridors. Site fingerprinting, a term that refers to implementing minimal site disturbance techniques, can be used to further reduce the limits of clearing and grading on a greenfield site, thereby minimizing the hydrologic impacts.	4	3		Engineering Department	Chapter 5, Objective 5.3.4
Design and install grassed filter strips and vegetated (bio)swales into site plans and rights-of-way to filter pollutants from stormwater.	3	3		Public Services Department / Engineering Department	Chapter 5, Objective 5.3.4
Require and/or incentivize the installation of pervious paving materials in at least 20 percent of the area of new parking lots and other hardscape areas to reduce the total site imperviousness and stormwater runoff.	5	2	1	Public Services Department / Engineering Department	Chapter 5, Objective 5.3.4
In compliance with the EPA's National Pollution Discharge Elimination System (NPDES) Regulations for Stormwater Discharge (40 CFR 122) for industrial facilities discharging stormwater, install oil – water separators to filter stormwater runoff before it is collected in the primary storm drain outfall.	1	4	1	Public Services Department / Engineering Department	Chapter 5, Objective 5.3.4
Install high-performance, green building best practices into all new City initiated and financed construction projects. Stormwater storage reduces the quantity of stormwater being flushed through the system.		2	3	Engineering Department	Chapter 5, Objective 5.3.4
Revise subdivision regulations to incorporate xeriscaping landscape design and maintenance practices.	8			Parks Department / Engineering Department	Chapter 5, Objective 5.3.4

*Note: Rows that are italicized with grey text represent previously adopted recommendations from the 2005 Comprehensive Plan.

Table 6.1, Implementation Action Plan

Programs and Projects	Years			Involved Entities	Chapter Reference
	1-2	3-10	10 +		
Develop a municipal landscape ordinance that requires all landscape sitework and planting to adhere to xeriscape requirements.	8	4	1	Parks Department / Engineering Department	Chapter 5, Objective 5.3.4
Require heavy water users to conduct a water footprint audit to analyze their facility's water use and identify ways to make it more efficient.	5	3	1	Public Services Department / Engineering Department	Chapter 5, Objective 5.3.4
Amend the development regulations to include measures to protect the wellheads and cone-of-influence areas from the introduction of contaminants.	*3*	*1*		*Engineering Department*	*Chapter 5, Objective 5.3.2*

*Note: Rows that are italicized with grey text represent previously adopted recommendations from the 2005 Comprehensive Plan.

CROSSROADS 2035

Appendix A

Land Use Supplement

A land use plan is a map – or blue print - to guide the future development of Alvin. However, a plan has little meaning if the City does not have the tools to effectuate the implementation of the plan and achieve the desired outcome. There are a wide range of tools available to achieve the desired development outcomes, and a number of different ways to approach the problem, which will shape the means of implementation needed. When a large scale development, such as Sienna Plantation in Missouri City or Savannah, Shadow Creek, or Silver Creek in Pearland, undertakes a plan they have complete control of the project because once they identify major marketing targets, the plan is followed even as they sell parcels to individual builders. With the installation of roads and facilities the purchaser is committed to the plan even if the land is not platted.

The task is much more difficult for local government due, in part, to segmented land ownership. The land use plan covers the properties of many land owners, often years before the landowner begins to develop their land. There is no logical timing to development, as in the case of a large planned community where the developer has a program for the installation of roads and utilities that guides the sale of individual parcels. While governments occasionally undertake the development of industrial parks or redevelopment of blighted areas, the City's plan needs to guide the decisions of possibly hundreds of independent land owners and developers who buy land for specific residential, commercial, or industrial purposes.

This supplement to Chapter 3, *Land Use*, of the Comprehensive Plan focuses on the tools that the City may use to implement the plan. There are six general categories of tools that may apply, including:

- Capital improvements;
- Street access controls;
- Subdivision and land development regulations;
- Design guidelines;
- Zoning; and,
- Licensing.

The two regulations used most often by communities are zoning and subdivision land use controls. It is important to acknowledge that there is a certain degree of overlap between these two tools, which offers the City some flexibility. For instance, provisions such as setbacks and other dimensional requirements that are most commonly found in a zoning ordinance may be incorporated within the subdivision regulations should a community not be zoned.

An important dimension to the issue of land use control is the degree of flexibility of the controls. A flexible set of regulations seeks to achieve governmental objectives while providing a variety of development options to developers. Conversely, rigid regulations generally achieve governmental objectives, but may not meet the objectives of landowners and may burden their ability to develop. Rigid regulations prohibit or set a single standard that must be met whereas a flexible standard can provide a range of options or may set a standard of performance that may be met in several ways - at the discretion of the landowner.

Implementation Tools

There are a range of tools that planners generally use to implement a land use plan. Several are focused on a limited aspect of a plan. In the following sections each of the above listed categories of implementation tools are described and discussed (including capital improvements, street access controls, subdivision and land development controls, design guidelines, zoning, and licensing).

Capital Improvements

This is one of the primary controls of large-scale developers, and less frequently local governments. By making a major investment in infrastructure, developers are able to exercise land use control even where there are no governmental land use controls. Use of this tool is limited in its effectiveness when used by local governments to implement a plan. Its strength for a local government lies is determining the direction in which growth occurs. Widening and improving a road or extending water or sewer both have an influence on land values, increasing the value of land with urban services, versus those without available infrastructure. An aggressive community can control the timing and direction of growth at the periphery of the community with a coordinated and deliberate capital program for road and utility (water and sewer) improvements.

Developers typically seek land with available services as opposed to providing it themselves at an increased cost to the development. This has always been a difficult tool for local government, because capital improvements are costly given limited resources. With the desire to maintain reasonable local taxes, the use of capital improvements as a management tool has become even more difficult. However, it is effective since it impacts the economics of development. The developer who builds where new services have just been provided has a competitive advantage over those who must pay to extend services to their property. Unlike the large scale developer, local government gains no control over the type or quality of land use by extending services alone. In fact, if local government does not control the infrastructure, but depends on a quasi-independent utility such as a rural water provider or municipal utility district, it may not even be able to maintain adequate service.

Street Access Controls

Street rights-of-way are government owned. The City may provide controls on access for local streets, which may have a minimal to strong impact on the use of land. A minimum level of control is what is referred to as a "curb cut permit", which looks at the location and number of driveways and their width and spacing along the property frontage. Commonly, site access is kept to a required minimum distance away from intersections (75 feet for collector/commercial/minor streets and 125 feet for thoroughfares, according to Section VI of the Subdivision Design Requirements). Often, such controls permit each property to have an access point unless there are safety issues that cannot be overcome.

Another form of access control is used to preserve the rights-of-way of future road alignments. The City's adopted Thoroughfare Plan addresses the location of streets, which sets the pattern for the location of commercial uses since they seek to locate along major roads, such as Business 35, S.H. 35 Bypass, and S.H. 6. Because major roads require capital investment, there are limits to its effectiveness as a land use control. Other access controls such as those described below seek to manage the impact of access on the flow of traffic. The following measures offer opportunities for land use control, with varying degrees of success:

- Permits for curb cuts are a relatively weak tool for land use purposes. They serve to limit the number of curb cuts on a road and, in some cases, the number of curb cuts on an individual property. This regulation impacts the quality of traffic and circulation only and has no effect on land use planning.
- A thoroughfare plan typically shows the intended locations and right-of way standards for major thoroughfares/boulevards and collector roadways. Once adopted, developers are required to dedicate the necessary right-of-way abutting their property in proportion to the impact of their development and to comply with the building setback requirements to avoid construction within or too near the right-of-way. Therefore, the thoroughfare plan acts to give the City the right to hold development to certain standards pertaining to the abutting public right of-way. Many - if not most - developers are

willing to dedicate the right of-way for roads since better access will make the property more valuable. Thus, it helps to create market conditions that are favorable to certain land uses. It is an ineffective tool, however, in that a developer is not restricted from building residential development along the road frontage even if the municipal plan calls for commercial or industrial uses.

The thoroughfare plan may be carried to a more extreme level. There is nothing that restricts the thoroughfare plan concept from being applied to minor (local residential) streets. For instance, the Town of Franklin, Wisconsin not only developed a minor street pattern, but the placement of utilities as well. This begins to set land use patterns. For instance, the size of a block has impact on the type of lots that can be built on that block. Blocks having a larger area and width will generally result in larger lots. A block that is only 200 feet wide may divide into lots with a depth of 100 feet, which works for small single family lots, while a block with a width of 600 feet could support one acre lots. In combination with utility plans that match sewer and/or water capacity to the road pattern, this approach is somewhat effective.

This approach, however, has limits as a land use control. The small block would support 5,000 to 6,000 square foot single family lots, town houses, or even apartments having very different characters and densities. Comparatively, the 600-foot block would easily support apartments as well as single family development unless the utility capacity limits the level of allowable development density. While it works well to commit the location of minor streets - even if the developer must install them at their own cost - the local government must have an infrastructure plan to determine the required capacity of utilities to be installed by developers via impact fees or a pro rata share of the improvement costs.

- Access control goes beyond the curb-cut approach by limiting the frequency of curb cuts, principally on thoroughfares and collector roadways. The distance between curb cuts is based on the classification and design of the roadway as well as the posted speed limit. For example, this precludes lots containing single-family detached housing from connecting to a major thoroughfare. It can be demonstrated that such techniques avoid endless turning movements that congest traffic and often result in dangerous situations of people backing onto a heavily traveled four-lane thoroughfare. In rural areas, such as those in the outlying extraterritorial jurisdiction, if the thoroughfare plan anticipates farm-to-market or county roads becoming thoroughfares or major collectors - as they will with increased suburbanization - access controls can require initial development to access internal rather than abutting major streets, which will improve safety and preserve widening options as suburban development occurs.

  A second level of access control is based on traffic volume. Developments generating a certain traffic volume would have to make both on- and off-site improvements at identified access points. This is useful to ensure that traffic is unimpeded and flows smoothly. Access control can be carried a step further to require dedication of additional rights-of-way for thoroughfares and required off-site

improvements. Both of these levels remain focused on transportation planning rather than land use.

Carried one step further, however, access control may provide land use control. Commercial, office, and industrial uses could be prohibited from obtaining curb cuts on minor (local residential) streets or residential collector roadways. This ensures that businesses would not be located in the heart of a residential neighborhood. Since it is based on road capacity, there is a rational basis for the regulation. Care is needed where the minor streets intersect with major collectors or thoroughfares. In some cases it is more desirable to allow commercial traffic to have access to a side street rather than having multiple curb cuts on the main road. This type of control would be more effective in conjunction with an adopted thoroughfare plan since there would be a visual document identifying all levels of roads.

Subdivision and Land Development Regulations

Subdivision regulations were originally intended to control the subdivision process and ensure that subdivision plats met minimum standards and land could be properly recorded for tax and title purposes. In addition, they also contained design standards for lots, streets, and utilities. The process of getting a plat approved was also a part of the subdivision regulations. In the latter part of the 20th Century properties that were not being subdivided, particularly nonresidential development, were included in the scope of subdivision regulations. Increasingly, other design elements have been added so that the subdivision and land development regulations now have many elements that more directly impact land development patterns. This is particularly true in communities that do not have zoning where regulations that could arguably be in either subdivision or zoning regulations are placed in the subdivision and land development ordinance.

According to Chapter 212, Municipal Regulation of Subdivisions and Property Development, of the Texas Local Government Code, "municipalities may adopt rules governing plats and subdivisions of land within the municipality's jurisdiction to promote the health, safety, morals, or general welfare of the municipality and the safe, orderly, and healthful development of the municipality." These rules give broad authority of a municipality for regulating development within its jurisdiction. While a municipality may extend its subdivision authority to its extraterritorial jurisdiction (ETJ), its authority within the ETJ is restricted in its ability to regulate:

- The use of any building or property for business, industrial, residential, or other purposes;
- The bulk, height, or number of buildings constructed on a particular tract of land;
- The size of a building that can be constructed on a particular tract of land, including without limitation any restriction on the ratio or building floor space to the land square footage;
- The number of residential units that can be built per acre; or,

- The size, type, or method of construction of a water or wastewater facility that can be constructed to serve a developed tract, subject to specified minimum standards.

The City of Victoria, Texas offers an example of a community which does not have zoning, but adopted a subdivision and development ordinance that includes provisions beyond those commonly contained in subdivision-land development regulations. For instance, within their development guidelines there are land use designations (single family residential; duplex/two family residential; patio home residential; multiple family residential; townhouse residential; manufactured home residential; rural residential; general commercial; planned shopping center; office; industrial; quasi public/institutional; park, recreation or open space) that must be indicated on the face of plats. Each of the designated land use types have development guidelines pertaining to lot sizes, dimensions and setbacks; parking, loading, and driveways; site access; minimum space between buildings; minimum size of project; screening and landscaping; and standards for specific developments. These requirements are contained within a unified development code applying to the City limits and extraterritorial jurisdiction.

BASIC SUBDIVISION-LAND DEVELOPMENT REGULATIONS

A basic subdivision ordinance covers the subdivision of land into lots - regardless of use - and the development of individual properties. The base standards cover lot and infrastructure design for subdivisions and access standards for properties not being subdivided. The lot design standards addresses lot configuration, block size and length, cul-de-sac length, and street intersections. A series of standards also address earth moving, design and construction of streets, sidewalks, water, sewer or septic tanks, and stormwater management (drainage, detention, etc.). These core standards do little to control land use. There is some discretion in the approval of a plat or land development to require a more detailed site plan, although most ordinances do not have good standards upon which the review is conducted, and few planning commissions have the technical knowledge to make recommendations that improve the design.

Over the years many elements have been added to subdivision-land development regulations, including provisions for street trees, parking lot landscaping, site landscaping, buffer yards, and environmental protection standards.

- Street trees make a great improvement in the character and quality of development both residential and nonresidential. The impact is typically not seen for three to eight years as it takes trees time to overcome the shock of transplanting and grow larger. Standards for residential areas are generally two to three trees per 100 feet of street frontage. In commercial areas, two trees per 100 feet is a more typical standard. Trees in residential areas will ultimately shade the street - as is common throughout many of the well-established neighborhoods in Alvin - and is an important element in the desirability of an area. In nonresidential areas, street trees serve to screen and soften the impact of buildings and parking fields.

- Parking lot landscaping helps to improve one of, if not the most, unsightly aspects of nonresidential developments. Mandating a minimum number of trees makes these areas far more attractive. Typically, this is done by requiring one tree for every specific number of parking spaces. This commonly ranges from one tree per 24 spaces to one tree per 10 parking spaces. Parking lot landscaping effectively camouflages the use so that its visual impact on neighboring properties is reduced. However, it does nothing for its location.
- Site Landscaping in the front yards of residential properties is a second level of landscape effort. Like all landscaping, it enhances the character of The area and tends to camouflage the unsightly aspects of housing. In office developments, it greatly enhances the attractiveness of an office park and makes it substantially more valuable while also protecting neighbors.
- Bufferyards are a landscaping technique that is designed to have an impact on locational decisions. It is based on the notion that there is a hierarchy of land uses from the highest and best to the lowest and worst in terms of its potential as a neighbor to residential uses. The highest use is low-density residential dwellings and the worst or lowest use is heavy industry. The further two adjoining uses are in the hierarchy, the worse the nuisance potential. The theory of buffer yards is that a landscaped area that separates the uses can do much to mitigate the potential nuisance. The buffer yard design, incorporates four things, including distance, plant material, plant density, and structures such as screening walls to protect the adjoining land use.

In subdivision regulations, mitigating nuisances is based on good design, ensuring that development is laid out to avoid nuisances. The use of buffer yards may be on an individual development or subdivision basis. The developer must identify the uses that are on his development and adjoining properties. For the easiest and most effective use of this tool, a relatively few classifications are recommended, including one or two residential land uses by density, commercial, business, and heavy business uses. The protection is oriented to protecting residential uses. The top photograph depicts what often happens when a residential property owner has to protect themselves. The lower photograph shows the buffer required to be installed by the commercial development to buffer and protect neighboring property values.

The code would have a chart that indicates the level of buffer needed to protect residential use from different use types. Thus, protection is certain. The regulations require protection by developing uses thereby easing protection of existing residential uses abutting undeveloped property. This means that residential development locating next to commercial or industrial uses is responsible for the buffer.

Resource protection standards allow protection of natural resources to avoid property damage from flooding as well as to protect wildlife habitats. Natural resources also enhance a City's character. Subdivision regulations can establish standards for the protection of resources. The first point in adopting these regulations is to carefully define the resource to lessen the potential for argument about when the regulations apply.

Preliminary plats and land developments are then required to map the resources on the site. Lastly, resource protection standards set a level of protection in terms of the percentage of the resource area that must be left in open space, which is referred to as an open space ratio (OSR). An OSR is the area of the resource to be preserved, divided by the total area of the resource. For the most sensitive resources, the OSR would be 1.00 indicating 100 percent of the resource should be preserved. The regulations are written to allow higher density on the remaining portions of the site thereby equitably compensating the landowner for the loss of developable acreage.

This approach is precise and leaves no room for individual views as would a more generic design or policy goal such as "protect natural resources on the site." Every member of the public, public officials and developers, has different concepts of what that statement means. Experience with environmental impact studies has shown that general standards do not consistently protect resources. Instead, they typically result in a negotiation process in which different views are presented and elected officials are required to make a decision. This occurs on a case-by case basis on every plat or land development and is a very costly process for both the city and developer.

Illustrated in **Table A-1, *Resource Protection Standards***, is a set of resource protection standards. In this illustration, the floodplain is divided into the regulatory floodway and the actual 100-year floodplain. The floodway is the area where velocities of flow can cause structural damage and where obstructions lead to rapid backups of water. If there are large areas of woodland, forest, or groves of trees, the preservation of trees is good for wildlife, an amenity for the community, and improves the microclimate. Preserving large trees enhances property values, so this is an area that Alvin could look to in order to create an enhanced community image. Drainage ways soils are those deposited by water and where water tables may be high during wet seasons. These areas are natural for stormwater detention and, if surface drainage is used, reduce downstream flooding, if protected.

Table A-1, Resource Protection Standards

Resource	Open Space Ratio (OSR)
Floodway	1.00
Floodplain	0.95*
Wetlands	1.00
Forests or Groves of Trees	0.60
Drainage way Soils	0.50**

*Development is permitted up to 5% provided the depth of filling is less than one foot and there is compensatory storage for the filling.
**This requires the area to be used for detention and preserving stream flows.

Design Guidelines

Design guidelines are oriented toward the design of development, most often focusing on landscaping and architecture. They also often extend to the design of subdivisions. More often than not the standards are intended to be performance oriented. The early design guidelines often compared a poor development practice versus the desired practice. Originally, the intent was divided among public education and development regulation, as emphasized by the term "guidelines." A regulation requires compliance while guideline is a suggested measure of performance. Guidelines are ineffective because they are desired behaviors, not regulations. Local governments often resort to "arm-twisting" developers into compliance, by slowing the review process and indicating that the plan fails to meet the guidelines.

There is nothing that prohibits a design standard from being a regulation. The limitation of design guidelines is that they are not regulations. They are far more effective when they are enforceable rather than having to rely on arm-twisting. Flexibility can be created in several ways. Some communities use point systems to indicate performance allowing the developer to choose from a menu of design options to be applied, but providing a minimum score that must be met. A second approach requires compliance with a series of standards while providing multiple ways to achieve them.

The guideline or standard approach could be extended to land use controls by indicating where the location of different land uses are allowed, as shown by the City's adopted land use plan. Given that commercial, office, and industrial land uses typically require access to thoroughfares, as reflected on the City's land use plan, a majority of developers would likely not contest the guidelines. However, this may be more difficult to manage with smaller businesses wanting to start on lower-priced land that is most likely adjacent to or within residential areas.

Zoning

In Texas, and particularly in the Houston area, there is a fear of zoning. Reasons commonly cited for this fear are as follows:

- Zoning will prevent me from using my land as I wish.
- My land values will be lowered by zoning.
- Zoning officials can force their way into my home.
- Zoning will create a large bureaucracy to manage it.

Zoning will prevent me from using my land as I wish. In some instances this may be true. However, under common law, nobody has a right to be a nuisance. The single largest investment most families make is their home. Zoning has always been a tool to protect the investments of residents within neighborhoods. Zoning regulations define what the community sees as a potential nuisance. For most properties that are not on a major road, the real estate market has already made it unlikely that a whole host of uses will ever be proposed for that property. Zoning a property residential may have no impact on what landowners can realistically expect to do with their property.

My land values will be lowered by zoning. Studies have actually shown that strict zoning controls lead to higher land values. For example, Portland, Oregon severely limited the supply of land for development as part of the zoning that implements their growth management system. The result has been increased property values. This occurs in every community with very strict land use or growth management controls in their zoning ordinances. Strict regulations protect the value of property, which means it appreciates more rapidly than un-zoned land in an equal location. Further, it is clear that a nuisance in a neighborhood lowers property values. Zoning can insure nuisances are not built in your neighborhood.

Zoning officials can force their way into my home. This is a familiar scare tactic used to make zoning seem scary put out by anti-zoning lobbyists. The facts, as in most scare tactics, are the opposite. Zoning inspectors cannot go onto private property without permission. Property rights are, thus, protected and landowners do not need to fear for the family as opponents would have you believe.

Zoning will create a large bureaucracy to manage it. If a community is completing subdivision review adequately, it takes no additional staff to review plans for zoning conformance, unless most use decisions require hearings and negotiations. Likewise, building officials can normally handle zoning requests. Currently, Alvin most likely has adequate staff to handle land development regulations although additional qualifications may be necessary.

What is zoning?

Zoning is very different from subdivision regulations. It is designed to protect property values of neighborhoods from the adverse impacts of development on adjoining land. Residential uses are traditionally separated from commercial and industrial uses, thus, protected from the nuisance of effects of high volumes of traffic, light and glare, noise, dirt, and unsightly conditions. This is accomplished by creating zoning districts that control the type and location of uses through multiple districts, each of which permit different mixes of uses. These are shown on a map designating the boundaries of the districts within the community. Height and area standards within the districts regulate the intensity or density of use. Over time, zoning has become the primary tool for implementing comprehensive plans and land use plans.

The theoretical underpinning of zoning is that there is a hierarchy of uses from the highest and best use to the lowest and worst use. The highest use is that which warrants the most protection. The lowest use is that which has the greatest nuisance potential for degrading the highest use. Thus, low density single family residential use is considered the highest use while heavy industry, such as a chemical plant, is the lowest or worst use in the hierarchy. The greatest single investment most families make is in their home. They buy land, build a dwelling, and have an expectation that their investment will be protected and ever increasing in value, which is what zoning, was created to accomplish. The nation's first zoning regulations in New York City were focused on halting the spread of an industry into residential and retail areas. Hence, the zoning map is the regulatory version of the future land use map. If the land use plan is to be realized, zoning is a logical way to regulate land use and ensure conformance with the plan.

Today, zoning runs the gamut from extremely detailed, rigid regulations to very flexible regulations. The first zoning ordinances dealt with only very basic districts with four use categories; residential, commercial retail, business, and industrial. Over time, the number of districts has multiplied. For example, until a recent update, the City of Milwaukee had 99 zoning districts. Other communities, such as Savannah, Georgia, have special approvals known as planned development. The City of Savannah has over 100 combinations of zoning and planned developments. A city such as Alvin could function adequately with three to 10 districts, depending on the format and structure of an adopted land use plan. It is helpful to understand and consider different structures of zoning and their individual merits for handling land use issues. There are a number of zoning structures in use by cities of varying sizes and complexities, including the following:

- Pyramidal zoning, common of the first zoning ordinances, attempted to protect only the higher uses in the highest zone. Thus, residential districts permitted only residential uses along with a few select uses such as churches and schools. In a commercial district either residential or commercial buildings could be constructed. Most buildings at the time had residential on floors above commercial uses. The business zone, which was the next level in the hierarchy, allowed residential, commercial, and business uses. Finally, the industrial district permitted any of the four basic use groups. Thus, if a person wanted to build a house and start an industry in the garage, it was permitted in the industrial district. In the residential district no uses with a high nuisance potential were permitted.

  The advantage of this system is that it is a relatively simple system that provides great flexibility in most districts. Clovis, New Mexico, for example, has a modern version of a pyramidal zoning system with six districts, including ratcheted, residential single-family, residential, mixed, urban/downtown, and industrial. There is also a planned overlay district intended to provide for urban infill and redevelopment projects where densities and uses had to be developed with a specific plan. A neighborhood conservation district was used to preserve seven lot size residential designations that were eliminated in simplifying the code, which ensured that no home built under the prior zoning would become non-conforming.

  Modern thinking is that residential above retail use is desirable. Business uses such as offices are considered a good neighbor as a vast majority of office developments have good landscaping and are attractive neighbors with little night-time activity. The pyramid zoning strategy allows one to protect residential neighborhoods, but leaves the market free to make most land use choices in the other districts. While industry has become much cleaner, it makes sense to prohibit residential uses in heavy industrial areas.

- Single purpose districts - Over time, and with good reason, it has been determined that permitting residential uses in an industrial area is not sound planning since is exposes residents to a myriad of safety and health issues. This thinking has since been extended to the business and commercial districts. Thus, the districts were made more pure, so only industry was permitted in an industrial

area and commercial uses in commercial areas. This greatly narrowed the range of uses in each district. The down-side of this strategy is two-fold. First, the number of districts, increased, and secondly, desirable mixtures of land uses in a district were prohibited. For example, restaurants and motels might be prohibited in an industrial area even when it is clear the uses were a service to the industry.

New districts were created for two very different reasons. The first was a reaction to a use that the neighboring use or City officials felt was a problem. For instance, gasoline service stations are noisy and have lighting, signs, and other nuisances, causing officials in many cities to create a new commercial district permitting gas stations thereby prohibiting them in the base commercial district. Whether the use was a real problem or not, this trend often continues to the point where there are too many districts and restrictions on use are extreme. The second reason for creating new districts, principally residential districts, came from developers wanting a slightly higher density than that allowed in an existing district. The developer sought a density between that permitted in two existing residential districts. Thus, residential districts multiplied based on density.

It should be noted that these changes were not intended to over-regulate, but were perceived as a response to a real problem of land use or social issues. Normally, the elected officials were responding to a citizen complaint about a particular land use or development situation. Thus, overly bright lights at gas stations, fast food restaurants, and other uses led to regulations limiting where these uses could be built. This spread to uses that were discriminated against for a variety of social reasons or by perceptions of a particular use as being bad. The results were often outlandish. In one case a county had three commercial districts, each with different uses permitted and different setbacks. All three districts could be found along a major highway. A vacant property was the subject of three zoning changes to accommodate different prospective buyers before finally being built. The overly restrictive use list was the cause.

- Conditional approvals are a response to zoning being so rigid that the community needed a procedure to deal with difficult uses in a more flexible manner. Instead of creating more districts, the community identified the difficult uses and created a special approval process for these uses to provide additional review. The troublesome uses were classified as special uses rather than permitted or prohibited uses. Approval of a special use required a public hearing before a use could be approved. In theory, the use was a needed use, but one whose impact required special review to ensure the site was suitable or that mitigation of potential nuisances was put in place. The community attached conditions that protected neighbors and the community as a condition of approval. Over time, the citizens found that they could use the public hearings to pressure the elected officials to deny the proposed special use. The conditional use system has merit when a use has real nuisance potential, as with the case of a landfill or rock quarry. It is difficult to create a district for these uses without developing a plan for them. A special use process provided the

time and public input needed for these types of uses.

Too often communities have applied the special exception to common uses, such as fast food restaurants, gas stations, and hotels. While the special exception theoretically provided flexibility, it greatly complicated the approval process and introduced uncertainty. One of the original hallmarks of zoning was certainty - a use was either permitted or prohibited. Unfortunately, the good intentions of the special exception process evolved from a discussion of how to make a use compatible and appropriate to a public hearing battle between neighbors and developers all of whom are uncertain as to the outcome.

The process was also applied to planned unit developments (PUD). Whether they have multiple housing types or were merely a single-family cluster development the desire for better design led to adoption of special rules for processing these development types by the same process used for special exceptions. Initially, nobody had done a PUD so a special process made sense with both the developer and city feeling their way.

Forty years later, even though everybody understands that better design can be achieved, the developments are still subjected to a more difficult approval process than is a project that is of lower quality and character as a result of using the rigid code standards.

- Performance standards - A primary concern of many planners was the poor quality of design produced by many zoning codes and the resultant loss of community character. The second concern was that the result of too many zoning districts forced developers to seek a zoning change for many developments. A third concern was that conditional approval - like the special use or planned unit development (PUD) - failed to provide certain protections and was overly time consuming. A last concern was that few zoning standards addressed either the character of the community or the concern of problematic uses.

  Performance zoning was intended to focus on how a proposed land use related to neighbors, roads, and natural resources and how the use is located on the land, as opposed to a focus on use and lot size. Performance codes do this by reducing the number of districts and increasing the choice of uses in each district to provide flexibility and encourage good design. At the same time, performance standards are written into the code to protect neighbors and the values of the community. Any use that meets the district and performance standards is a permitted use.

  Problematic uses such as gas stations can be studied and the problems identified. Analysis of typical problems may identify signs, lighting, curb cut locations, and noise as nuisances to nearby residences. Performance standards may then be developed to directly address each of the identified problems. The concerns that can be addressed by performance standards are virtually unlimited, so the vast majority of common uses can be managed by performance standards. Only where there are highly complex issues, such as those associated with landfills or quarries, is the special exception necessary. This means that regulation shifts from where a use is permitted or not permitted,

to the use of standards to ensure the use does not create problems.

An example of this approach is lighting of gas stations or car dealerships, as shown by the embedded photographs. Light and glare are problems for both neighbors and street users. Performance standards apply to lighting throughout the community. They set maximum illumination levels at property lines. In addition, they require the use of cut-off fixtures to prevent glare. Bufferyards can be required that cut off views, noise, and vehicle lights as well. Traffic concerns can be addressed by limiting the type of roads to which a gas station has access, or by regulating the distance of curb-cuts from intersections.

Performance zoning measures include the following:

- Intensity and density - Zoning is intended to implement the comprehensive plan. In addition to the zoning district use, a primary element of all forms of zoning is regulating the intensity or density of development. Plans often refer to low, medium, and high density residential use. The low density may refer to a one-half acre single-family lot whereas one quarter acre lots would be medium density, and attached housing and multi-family would relate to high density. Nearly all land use plans have multiple levels of residential density and commercial land uses. Zoning has been the tool by which the achievement of the desired intensities is secured. All of the four basic approaches can achieve these results.
- Community character - One of the purposes of zoning from its earliest days to present times has been to protect the character of neighborhoods and the community. This is certainly the expectation of citizens as to what zoning is to achieve. The Alvin Comprehensive plan suggests broad classifications of land use character, including rural, suburban, and urban. Density and land use are relatively poor for protecting character since they are one-dimensional. Thus, the pyramidal and single district zoning do a relatively poor job in promoting character. In addition, these two approaches are much too rigid to promote quality site planning. A basis of performance codes is community character. The performance ordinances provide for much greater flexibility in designing a development while still maintaining control of character.
- Scale of use - Performance standards introduce a new regulatory technique; the scale of a development. Retail uses are designed to serve neighborhood, community, sub-regional, and regional markets. With the exception of some highway uses that are located due to the volume of traffic on the adjacent road, the traffic generated by a use is directly related to the market it serves. For instance, a downtown bank and Super Wal-Mart both are retail establishments, yet they have very different impacts on neighborhoods due to their traffic, building size and height, truck loading/unloading, and parking areas. Rather than

trying to define neighborhood uses and prohibit them adjacent to residential areas, the scale of the building is regulated as to the level of street upon which it must take access, which automatically excludes uses that do not serve the neighborhood. This approach prevents large-scale uses whose traffic would harm the value of adjacent property in neighborhoods and congest • residential streets.

- Landscaping - Landscaping can be added as requirements to any zoning approach (see more detailed discussion of various types of landscaping in the subdivision section). The advantage zoning has is that it can be varied from district to district. For example, a street tree requirement in the central commercial area may be different than in residential or industrial areas.
- Bufferyards - These have long been a requirement in zoning ordinances. Performance zoning created a more rational buffering standard based on opacity. This is an approach that allows the developer to choose among options for buffer width, plant material, fences, or berms to achieve the desired opacity rating, which provides both protection and flexibility. With zoning, bufferyards can be made • less burdensome because most can be concentrated on district boundaries where use and intensity change, rather than around every site perimeter if they are applied in subdivision regulations.
- Use transitions - Bufferyards are small-scale transitions between uses that are intended to mitigate the differences within a limited space and distance. In the early history of zoning it was anticipated that incompatible uses would never be next to each other so that industry would be buffered from residential by business and commercial uses, which did not happen. It is possible to build in transitions in terms of use, intensity, height, as well as buffers in performance zoning ordinances. Instead of creating multiple residential districts, it is possible for a single district to have transitions that permit higher densities within a specified distance (for example 300 feet) of retail or office districts. Placing higher density where it reduces long trips without creating a new zoning district is a sound planning strategy. In the buffering context, it is possible to have height regulations that vary by distance from residential uses so tall buildings do not create a nuisance for neighboring single family homes.
- Resource protection - The protection of natural resources is difficult to achieve without the use of performance zoning because the protection standards normally result in a loss of density due to the rigid nature of conventional zoning districts and their lot size requirements. Performance zoning allows a wide range of permitted development options thereby allowing designers to creatively protect resources while at the same time retaining the desired intensity of development.

In many performance ordinances a site capacity calculation is required as part of the development plan. This tool adjusts the intensity of development to the actual site limitations, mimicking what a farmer does when purchasing farmland. They look at yields of the farms soils to determine the land value. This avoids the problem of poor sites being skipped over due to resource limitations and later developing with a higher density than the surrounding developed properties.

Licensing

Communities have the ability to license businesses, though this may be limited to certain types of businesses. Restaurants and more recently, sexually oriented businesses are among the most common uses regulated by licensing. Licensing is more powerful than zoning because there are questions that can be asked in a licensing hearing that would not be permissible in a zoning hearing, such as criminal records, which is illegal to ask in a zoning hearing. There is nothing that would prevent zoning standards from becoming physical licensing standards. Licensing is best used to regulate troublesome uses that have the potential for criminal activity. Attempting to use it in place of zoning to control business development would be very difficult and risks being arbitrary as the procedures are not designed to handle development, and this mechanism protects different interests. The advantage is that it places enforcement responsibility on police and legal agencies that cover the community 24/7 and are better equipped to address these types of violations than zoning officials.

Selecting an Implementation Strategy

Planning is meaningless without adequate implementation. The best planning would involve all of the techniques discussed in the previous sections, which would provide local government with the finest and most tailored implementation package. In our initial recommendations most of the options include some form of zoning. There are communities that have official maps, access ordinances, sign ordinances, subdivision regulations, design guidelines, zoning, licensing, and often several other ordinances that all apply to the regulation of development. However, too many regulations in different documents are confusing and often result in conflicts or conflicting language. Therefore, use of a single unified land development code is an advisable approach. A unified development code combines all land use controls into a single document with a logical structure that is friendly for its users. The building code would remain as a separate document simply due to its volume.

The unified development code is our recommendation. We believe that the code can have relatively few districts with generally two options for consideration; minimal districts and more controlling districts.

- Minimal districts - The lowest number of districts would be three, including urban, suburban, and open. This assumes that the City does not want to promote large-lot estate or rural character types within the ETJ, which would require a fourth district. The urban district would be for the downtown area permitting a full range of commercial, residential, and possibly limited industrial uses, all of

which would be subject to intense urban standards. Suburban, too, could permit all uses but would maintain the suburban character of Brighton Place or the newly developing Forest Heights. In both the urban and suburban districts, location of non-residential uses would be primarily controlled by performance standards that limited access to streets. Buffering on a development basis would be used to eliminate potential nuisance factors. Within the districts, density and open space would be specified for a minimum of three development options. The open district would permit the most intensive industrial uses, but also any other use. The boundaries would be screened with buffers designed to camouflage their unattractive qualities. Residential uses would be permitted under controlled conditions in the industrial area.

The minimal district option was described in the Performance Zoning section above, which has been used extensively in other communities. Most communities want to distinguish between commercial, residential, and industrial uses. Another common reason for more districts is despite designing the standards in such a manner that commercial, office, or light industry are of a character that is compatible with residential use; the perception is what is commonly seen, as displayed by the top photograph, despite the fact that the regulations require its appearance to look like the bottom photograph. If staff understands this and periodically refreshes the minds of citizens, planning commissioners, and City Council members, a minimum number of districts may be effective.

This approach would result in a land development code, so elements of zoning and subdivision, at a minimum, would be included. If the City wishes to incorporate their existing sign ordinance it, too, would be included.

- More controlled districts - Even though there would be no significant difference in how a community would develop with a minimal district approach and a more controlled district approach, most communities have opted for more districts for the reasons described above. Thus, the three districts proposed in the minimal district option could be expanded in the more controlled districts approach to six districts, including urban commercial, urban residential, Business Park, industrial, suburban residential and suburban commercial. A major difference is that bufferyards would be required only on district boundaries instead of around the border of each property. This has the advantage of making more land available for development. The requirements to locate heavy traffic uses on major streets would remain to guide zoning amendments. The residential and design standards would remain the same.

  Another reason for more districts would be to reserve land area for uses that have specific requirements or needs. Alvin Community College, for example, may want to enlarge its campus with different uses where access to the campus becomes a primary consideration. This is a legitimate reason for a district around the facility that promoted concentration of the use. Natural resources such as the gas well fields to the north of the community may be a reason for having a special district to preserve the resource. There are no reasons to have multiple residential districts other than to provide a specific

type of community character. As discussed with the minimal districts option, a rural character type may be desired for use in the ETJ.

- Other options considered - A single district zoning code with transition areas primarily along the S.H. 35 Bypass, Business 35, and S.H. 6 and next to industrial and commercial land uses is possible. The major limitation is that the desire for community character must be either urban or suburban with no variations. If the City wants an urban character in the downtown, suburban, and any other character type, then there will need to be districts for each. Another option is to use a combination of the subdivision regulations, access control, and the Thoroughfare Plan to gain the desired land use control. Two examples of these are Victoria, Texas as discussed elsewhere in this paper and Sealy, Texas, which has zoning district regulations within delineated districts on a map.

CROSSROADS 2035

Appendix B

Development Guidelines

As outlined within Appendix A, Land Use Supplement, there are several methods of regulating the character and quality of land development to ensure that it remains predictable and compatible with existing land uses.

Formulation of New Policies

SITE DESIGN, STREET AND BLOCK PATTERN

Guidelines should be developed to ensure that internal streets are multi-modal in nature, and are especially designed to provide pedestrian comfort, safety, and interest. Buildings should be sited to create opportunities for plazas, courtyards, patios, or outdoor dining. Site plans for campus-style office park sites should be designed to meet the following criteria:

- Orient buildings so that building entries, office areas, and pedestrian-scale amenities are on the exposed sides of the facility;
- Provide sufficient buffer space and landscape treatment to mitigate noise, visual clutter, or other negative impacts.
- Locate unsightly and noise-generating elements away from adjacent residential (existing or zoned) property. This applies to:
    - Service lanes (drive-through) and loading zones;
    - Dumpsters and outdoor storage;

- Loudspeakers, and other noise-generating uses.

- The design of all streets shall incorporate Complete Streets principles and accommodate multiple modes of pedestrian and vehicular transit; with the street design physically reinforcing slower auto traffic speeds.
- Streets should be connected to publicly accessible rights-of-way at both ends (dead-ends and cul-de-sacs should be discouraged), including connections to streets, alleys, pathways or open spaces.
- Internal streets should feature narrow curb-to-curb widths, corner-bulb-outs and other features that physically calm auto traffic.
- A streetscape master plan should be developed that outlines the design character (material, color, finishes, etc.) and location of a variety of street furnishings, including benches, bollards, waste receptacles, drinking fountains, special pavement, etc.

BUILDING MASSING, FAÇADE TREATMENT, AND PERFORMANCE

Proposed commercial development should create an exciting built form when seen from a distance, and with an intimate, fine grained scale to the pedestrian when experienced from the street.

- Where consistent with the proposed street network, new buildings should be oriented and designed to provide passive solar energy gain.
- Site and building design should use natural ventilation and landscaping to reduce interior space cooling requirements.
- Project proposals should outline the construction materials proposed for use and should include green construction materials including, materials with high recycled content, natural or renewable materials, locally manufactured building products (within 500 miles of the site) salvaged and refurbished materials, and materials that can be reused or recycled at the end of their useful life, consistent with the U.S. Green Building Council's (USGBC) LEED-CS (Core and Shell) Guidelines.
- Whether utilizing traditional or more modern architecture, the design of office buildings should generally embody the proper use of architectural design fundamentals, including:
    - ***Scale.*** Generally, the perceived scale of a building may be controlled through careful siting and the architectural treatment at the ground level. Scale and visual impact may also be controlled by breaking larger volumes into smaller components through the use of architectural detailing which relates:
        - » The size of building parts (wings and additions) relative to the whole building (buildings are encouraged to be articulated vertically as well as horizontally, in order to break up their mass);
        - » The size of building parts compared to the human figure (buildings are encouraged to have a human scale at the street level);

» The size of the building in relationship to its setting.

- ***Visual order.*** Generally, visual order is the consistency of balance, rhythm, and proportion among architectural components. Order understands the relationships between the parts of a building as well as relationships between buildings in a complex. Additionally, the use of consistent window and door heights can contribute to overall unity of the design.
- ***Balance.*** Generally, balance is achieved through the use of rhythm, repetition, and symmetry. The building architecture should incorporate either a central focal point or, in the case of an asymmetrical façade, more localized symmetry of building parts.
- ***Rhythm.*** Generally, rhythm is a consistent repetition of building forms or architectural components. Orderly repetition of building elements, including windows, doors, and detailing, contribute to the perceived balance and/or order. By the same token, variations in rhythm are encouraged to be provided to develop visual interest and focal points. Buildings are encouraged to incorporate multiple rhythms or cadences (rather than a single repetitive rhythm). These multiple rhythms break down the scale of the building and create an interesting and rich facade.
- ***Proportion.*** Generally, proportion is the relationship between building elements. This includes window-to-wall ratios (solid-to-void), window width-to-height ratios, and proportions of buildings to distinct environmental features. Building size should be proportional to the scale of streets and pathways to provide a well-defined street wall while still allowing adequate sun access and sky to the ground. Buildings should be designed with a clearly articulated organizational structure, including the inclusion of a recognizable base, middle, and top, and a strong emphasis on horizontal modulation.
- ***Color and Light***. Generally, Color and light are two of the most important tools for an architect in trying to better define the fundamental principles of architecture. The proper use of color and light can better define a building's visual order as well as provide an interesting facade. The improper use of color and light can likewise create a visually and architecturally unappealing building that is a detriment to the natural environment and the community at large. Sun and shadow patterns are often considered in order to better define the design fundamentals. The building architecture is encouraged to incorporate state-of-the-art building technologies with the finest design and support facilities available. In response to an ever-changing market, buildings are encouraged to be highly functional and flexible, to create timeless architecture.

- Buildings should maximize natural lighting, including daylight through windows, skylights, and clerestories to all occupied interior spaces.
- Buildings immediately adjacent to existing thoroughfares should be designed to ensure adequate buffering from traffic-related emissions and noise.
- Corner buildings should actively face onto both streets with pedestrian-friendly entries and similar fenestration patterns on both frontages. Creative corner treatments such as rounded or cut corners that mark the corner are strongly encouraged.
- The building architecture is encouraged to contain a series of overlain orders. Belt courses, horizontal expressions such as a frieze band, cornice line at the parapet or eave of the roof, water tables, stone or brick ornamentation as well as details at the head and sill of windows are strongly encouraged to achieve these ends.
- The "top" of the building shall emphasize a distinct profile or outline with elements such as an extended, cantilevered cornices, upper level setback, or pitched roofline.
- Building facades should be articulated with a strong rhythm of horizontal elements and three-dimensional detailing to cast shadow and create visual interest.
- **Building Materials.** Generally, Materials should be durable and high quality. Buildings are preferred to be predominately of masonry construction; appropriate materials include stone, masonry, ceramic tile, pre-cast concrete, and high grade traditional "hard coat" Portland Cement-based stucco. Inappropriate materials include vinyl siding and lower grades of stucco, including Exterior Insulation and Finish Systems (EIFS). Use of stucco should be used moderately and not relied upon as the singular or major finishing material.
- **Building openings.** Building entries should be located so that they are easily identifiable with convenient public access. Each project should provide a well-defined entry sequence for pedestrian and vehicular uses from the street to the building. Exterior openings may vary in size and pattern but are encouraged to be of vertical proportion of one horizontal to two vertical (1:2).
- **Windows.** Generally, windows should be operable and organized in strong horizontal bands. Smaller, equally proportioned windows should be used as accents only. Punched window (windows other than storefront or curtain wall systems) must be recessed by at least three inches from the wall plane.
    - Windows should incorporate treatments to control / improve heat loss/gain (glass type, window film, etc.). Treatments should allow for visibility from the outside (no mirror finishes, etc.).
    - Reflective glass is also strongly discouraged, as is aluminum siding, vinyl siding, glass curtain walls, or concrete masonry unit building walls.
- Expansive blank and blind walls at the ground floor should be

prohibited. Frontage should not be used for utilities, storage, and refuse collection wherever possible; where they must be on the street, they should be integrated into the overall articulation and fenestration of the façade or hidden with notched-in sidewalls perpendicular to the street.

- **360 degree architecture**. Generally, to ensure that buildings do not display unembellished walls visible from key public travel corridors, all sides of a building shall be given architectural treatment to meet the intent of this section by using two or more of the following:
    - Varying rooflines with one foot or greater changes of height at least every fifty feet;
    - Transparent windows that comprise at least 25 percent of the visible façade;
    - Secondary entrances that include glazing and landscape treatment;
    - Awning/canopy;
    - Planted trellises;
    - At least two surface treatments, including masonry, stone, stucco or other textured surfaces;
    - Projecting eaves at least 36 inches from façade;
    - Variation in form and materials approved as meeting the intent.
- Privately developed new construction projects and major alteration to existing buildings shall meet or exceed the highest level of current green building standards.
- Architectural details, ornamentation, articulations and projections should be used to create visual interest from the street; should create a harmonious building composition; and be consistent throughout the building, so that the building appears as a unified whole, and not as a collection of unrelated parts that add to the impression of bulk.
- Lighting fixtures attached to a building or utilized elsewhere on site are encouraged to be architecturally compatible with the building style, with each other, and with the adjacent public streetscape.
- The use of exterior shading devices above the ground level at proper orientations to augment passive solar design and to provide solar control is strongly encouraged.
- Where rooftop solar panels are not installed and are not greened, use roofing materials that have a Solar Reflectance Index (SRI) equal to or greater than 78 for low sloped roofs (> .2.12) and 29 for steeply sloped roofs (< 2.12) for a minimum of 75% of the roof surface of all buildings within the project.
- Physically intimidating security measures such as window grills or spiked gates should be avoided; security concerns should be addressed by creating well-lit, well-used streets and active residential frontages that encourage ‘eyes on the street.’

PUBLIC OPEN SPACE

As a part of the public realm network, the proposed open spaces shall be designed to increase the sense of connectivity and access between adjacent neighborhood development and community parks, greenways and other designed open space areas. The smaller urban spaces should complement the expansive nature-oriented open spaces on either side of a commercial or office park campus.

- Public open space within an office park campus should be intimate in scale and tie fluidly into the street network. As a part of the public realm network, the proposed open spaces are to increase the sense of connectivity and access between buildings. The small, intimate urban spaces should complement the expansive nature-oriented open spaces within the campus.
- Open space should be maximized and provided in cohesive, usable spaces that become an organizing principle for surrounding development, not in the left over spaces between buildings. Open spaces should be part of a larger network of pedestrian connections that help lead residents and visitors through the neighborhood and connect to larger City and regional open space resources such as Alvin's Tom Blakeney, Jr. Hike and Bike Trail.
- The development's provision of open space should emphasize public space over private space. Open space should be visually and physically accessible to the public from at least one, and preferably more, streets, sidewalks and recreational trails, with the interior of the open space visible from the street. It should not be gated.
- Designated public open spaces should be active, accessible and safe. Open spaces should be publicly accessible at all hours; security fences and gates should not be used in the design of public open spaces.
- Open spaces should be designed to help manage stormwater runoff from streets or private parcels with best management practices (BMPs) such as pervious paving, rain gardens, retention ponds, and vegetated swales, according to the landscape standards outlined within the Landscaping and Irrigation Standards section, below.

PEDESTRIAN ACTIVITY AREAS

Pedestrian-oriented amenities should provide continuous, safe, and consistent street frontage character within and adjacent to the street right-of-way.

- Pedestrian activity areas shall be sited to be sheltered from prevailing winds or designed with features such as wind breaks that mitigate wind.
- Pedestrian walkways or sidewalks five feet in width shall provide for continuity between developments and connectivity between parking facilities and buildings.
- Sidewalks should abut the back of street curb so as to avoid a grass mowing strip.
- Open spaces should be well lit with downward facing, pedestrian-scale lighting.

PEDESTRIAN CONNECTIONS

Safe, effective, and attractive pedestrian-friendly transportation systems should be established which interconnect with residential, commercial, and recreational areas.

- Clearly defined pedestrian connections should be provided:
    - Between public sidewalks and building entrances when buildings are located directly adjacent to the sidewalk;
    - Between parking lots and building entrances;
    - That connect neighborhood pedestrian paths to adjacent neighborhood and commercial areas.
- Where transit stops occur in the public right-of-way, pedestrian walkways shall provide a clear and direct connection from the main building entrance to the transit stop.
- Pedestrian walkways within parking areas may be included as part of the minimum requirements for interior parking lot landscaping if landscape treatment is provided on one side.
- For parking lots that contain greater than fifty vehicle parking spaces, pedestrian connections through the parking lot shall be clearly defined in at least one of the following ways (except as walkways cross vehicular travel lanes):
    - A raised walkway
    - Buttons or painted markings
    - Special paving, such as concrete masonry unit (cmu) pavers in an asphalt area
    - A continuous landscape area, a minimum of four feet wide along at least one side of the walkway.
- Fencing shall not be used to separate pedestrians from vehicular traffic.

PARKING AND LOADING

The relationship between the public realm, parking and loading, and vehicular access must be carefully planned and thought out. Such auto-oriented features must be minimized so that sidewalks and streets and not overwhelmed. Parking should be designed to minimize conflicts between automobiles and pedestrians and create a clearly organized system of entrances, driveways, and parking lots, while still providing adequate and convenient parking spaces.

- Parking and loading should be designed to mitigate impacts to the urban design quality of building frontages. In no case should parking and loading entries have more than 24 feet of building width dedicated to auto and loading ingress and egress per block. In no case should individual garage doors and driveways be no more than 11 feet for parking, or 12 feet for parking and loading jointly.
- Parking areas should be well-lit and well landscaped to create the appearance of “cars in a forest” rather than trees in a parking lot.
- Parking lots, plazas and hardscape open space shall utilize paving material with a Solar Reflectance Index (SRI) of at least 29 and

reduce the amount of surface area exposed to the sun.

- Off-street bike racks should be provided in parking lots, or entry plazas.

PARKING LOT SCREENING

Use landscape buffers or architectural screening features to reduce the visual impact of parking lots. Parking lots that abut the public right-of-way shall be screened with one or a combination of the following treatments:

- Low walls made of concrete, masonry, or other similar material and not exceeding a maximum height of three feet;
- Raised planter walls planted with a minimum of eighty percent evergreen plant materials not to exceed a total height of three feet, including the plant material planted on top, at least a two-foot width;
- Landscape planting consisting of eighty percent evergreen trees, shrubs, and groundcovers, generally of a five-foot width or more.
- Walls and raised planters shall not exceed a maximum height of three feet, unless all of the following are provided:
    - Screen treatment does not create a safety hazard;
    - Portion of treatment that is above three feet in height is a minimum of seventy-five percent transparent (i.E. See-through metal railing or other similar treatment).
    - Chain link fencing shall not be permitted to screen or enclose parking.

PARKING LOT LIGHTING

Provide adequate lighting to maintain a safe and secure pedestrian environment.

- Parking lot lighting shall be appropriate to create adequate visibility at night and evenly distributed to increase security.
- Night lighting shall be provided where stairs, curbs, ramps, abrupt changes in walk direction, and crossing vehicle lanes occur.
- All lighting shall be energy-efficient, glare-free and shielded from the night sky and adjacent properties to reduce off-site spill-over and preserve dark sky aesthetics.
- All lighting to maintain the same lamp type and wattage.

SCREENING OF SITE SERVICE ELEMENTS

Provide screening to reduce the visual impact of trash, service, loading and storage areas, and at grade mechanical/electrical equipment.

- On-site service facilities, such as loading docks, dumpsters, etc., shall be located in an area that is least visible from existing thoroughfare rights-of-way or common outdoor spaces. If service areas are located in a significantly visible area due to site constraints, they shall be screened from public view using landscaping or screen walls to the extent possible.
- When located next to a parking lot, service areas shall be placed in

such a way as to be as visibly unobtrusive as possible from primary pedestrian walkways and the main parking area.

- All loading, and trash collection areas that are within 20 feet of a public right-of-way or an internal pedestrian walkway shall be screened by a combination of masonry, wood, and/or planting areas. Full screening shall be at least six feet high or as necessary to screen site service element(s).

LANDSCAPING AND IRRIGATION STANDARDS

Landscaping should be used to define areas such as entrances to buildings and parking lots, provide transition between neighboring properties (buffering), and provide screening for outdoor storage, loading and equipment areas.

- Native perennials, ornamental grasses and other prairie vegetation are encouraged to provide special interest and highlight pedestrian areas such as building and site entrances, public open space, plazas, and major pedestrian connections.
- Rocks, pebbles, sand, and similar non-living materials shall not be used as groundcover substitutes, but may be used as accent features provided such features do not exceed a maximum five percent of the total landscape area.
- All areas not otherwise devoted to landscape required by these standards, or by parking, structures, or other site improvements shall be planted or remain in native, non-invasive vegetation.
- Harvested rainwater, and recycled (gray) water should be retained and used for landscape irrigation and other uses, as permitted by health and building codes, rather than a potable water source.
- To reduce the requirement for irrigation, native and low water-use vegetation that does not require permanent irrigation systems should be used in public and private open spaces.
- Drip irrigation and bubblers should be installed at non-turf landscape areas to reduce water needs.
- Street trees should be planted according to a streetscape master plan for a commercial or office park development. In general, street trees should be planted 40 feet on center. Where this spacing is not feasible due to a driveway or other obstruction, spacing elsewhere should be reduced or other means should be taken to achieve at least the same number of trees as would be provided at the 30-foot interval.
- Street trees planted within expanses of hardscape shall be located in tree pits with grates or in a continuous planting strip with other plant material.
- Where tree grates are required, they shall be ADA accessible and of a similar size and material as tree grates found in adjacent developments.

STORMWATER MANAGEMENT

In order to maintain and/or restore the pre-development hydrologic regime of the site without solely using traditional storm drainage conveyance systems (e.g., gray infrastructure – pipes and culverts),

and to satisfy drainage and flood mitigation requirements, small-scale, low impact development strategies, tools and techniques, such as constructed green spaces, bioretention swales, native landscaping, and other infiltration techniques should be used to capture and manage stormwater on-site and reduce peak runoff. Low impact development techniques enable rainwater to soak into the ground, evaporate into the air, or collect in storage receptacles for irrigation and other beneficial uses. In areas with slow drainage or infiltration, capture the first flush before excess stormwater and divert into traditional storm conveyance systems.

- Where possible, install pervious pavement on sidewalks, pedestrian walkways, overflow parking areas, and other paved surfaces to reduce storm water runoff, and allow rainfall to recharge groundwater. Pervious paving that includes the use of liners and under drains can be successfully implemented in areas where infiltration restrictions exist.
- Where paved surfaces are not permeable, direct storm water flow across streets and sidewalks to bioswales or to central collection points such as cisterns or permeable areas with well-drained sands, gravels and soils with moderately coarse textures, to collect, absorb and filter rainwater.
- Where possible, incorporate on-site micro-detention basins (e.g., rain gardens), storm water planters, and bioretention swales adjacent to plaza, sidewalk, and off-street surface parking lot areas.
- Building roofs should incorporate one or more devices for rainfall collection, storage and reuse. They may include, but not be limited to:
    - Green roofs;
    - Roof decks and terraces that provide equipment to harvest, filter and store rainfall;
    - Rain barrels, water cisterns installed above or below ground (if technically feasible due to remediation efforts), or other systems that can filter and store water for use on-site, rather than direct water to a combined sewer system.

SIGN DESIGN GUIDELINES

Intent: The guidelines set out in this Section address issues related to sign compatibility, legibility, placement, color, and illumination, and are intended to complement previously identified recommendations.

- **Compatibility.** Signs that are well-designed are those that complement rather than detract from a building's architecture. Generally, all signs must be designed in a manner so as to be compatible with the building and property for which they are attached or located.
- **Quality Design and Materials.** Signs should contribute positively to the streetscape aesthetic and the character of development.
- **Proportional Size and Scale.** The scale of a sign relative to the building and other site improvements should be appropriate for the building on which it is placed and the area where it is located.

- **Integrated Signs.** Signs should be designed as an integrated element of the building whereby its materials, colors, and shapes, and finishes complement the building architecture. New signs proposed for existing multi-tenant buildings should be compatible in size, scale, and type with the existing signage of other tenants.
- **Legibility.** A sign that is effective in conveying its message should be designed to communicate its message clearly. To a large degree, this is accomplished by the readability of words and phrases. The most significant influence on legibility is lettering style and spacing. Legible signs tend to:
    - Use a brief message as it is less cluttered and easier to read.
    - Use common typefaces.
    - Limit the number of lettering styles to no more than two for most signs.
    - Occupy no less than 50 percent and no more than 75 percent of the sign area.
    - Use recognizable symbols and logos.
    - Use regular shapes.
    - Use substantially contrasting colors and materials between the background and the letters or symbols.
- **Placement.** The placement of signs on buildings should be clearly visible and in logical locations where most patrons would expect to see a sign. Appropriate sign locations:
    - ***Respect building architecture***. To the extent practicable, signs should align to and be compatible with the architectural details of the building's façade.
    - ***Create visual interest***. On buildings that have a monolithic or plain façade, signs can be used to establish or continue appropriate design rhythm, scale, and proportion. Well-designed signs create visual interest, a positive image of the business and its products or services, and continuity with other storefronts on the same or adjacent buildings.
- **Place within Structural Boundaries.** Signs shall not project above the edge of the rooflines or building walls.
- **Mark Main Building Entries.** Signs should be placed at or near the main entrance to a building or parking area to indicate the most direct access to the business.
- **Colors.** Color is an important consideration in attracting attention while at the same time clearly communicating the name and nature of the business.
    - ***Use Contrasting Colors***. Signs should feature substantial contrasts between the colors and materials of the background and text or symbols. Light letters on a dark background or dark letters on a light background (required for illuminated signs) are most legible.
    - ***Use Complementary Colors***. Sign colors should complement the materials and colors on the subject and

adjacent buildings, including their accent and trim colors.

- ***Avoid Use of Too Many Colors***. The most legible signs are those with a limited use of accent colors.
- ***Avoid Florescent Colors***. Florescent colors are distracting, and do not blend well with other background colors.

- **Illumination.** Well-designed signs are appropriately illuminated with careful consideration as to the type and strength of illumination.
  - ***Use Illumination Only as Necessary***. Not all signs warrant illumination. In fact, non-illuminated signs and window displays may be sufficient to identify many businesses.
  - ***Use a Projected Light Source***. Illumination by a projected light, such as an indirect spotlight or gooseneck down light, is preferred to internal illumination. External lighting fixtures should be small and unobtrusive and should not cast light or glare above the horizontal plane of the top of the sign in any direction other than the elements of the sign. Such lighting shall be carefully placed so as to provide even illumination to the signage and to avoid hot spots or dark areas on the signage.
  - ***Shield the Light Source***. The light source, whether internal or external, should be shielded from view or directed so that the light intensity or brightness is not objectionable to surrounding areas. Signs should feature the minimum level required for nighttime readability. Ground-mounted external flood lighting must be shielded and properly placed and directed to avoid direct visibility of the directed light to passing motorists.
  - ***Illuminated Signs.*** Individually illuminated letters, either internally illuminated or backlit (halo lit) solid letters (reverse channel) are preferred. Signs comprised of individual letters mounted directly on a structure can often use a distinctive element of the structure's façade as a backdrop, better integrating them with the structure.
  - ***Neon Lighting***. Generally, neon lighting is discouraged. Where artistically appropriate, exposed neon tubing may be used in conjunction with other types of materials to attractively emphasize the business name and/or logo. Linear exposed neon lighting outlining the perimeters or architectural features of buildings may be permitted by the Commission provided:

- **Sign Electrical Raceways and Conduits:**
  - Electrical transformer boxes and raceways should be concealed from public view. If a raceway cannot be mounted internally behind the finished exterior wall, the exposed metal surfaces of the raceway should be finished to match the background wall or integrated into the overall sign design.
  - If raceways are necessary, they should be as thin and

narrow as possible and should never extend in width or height beyond the area of the sign's lettering or graphics.

- **Design Enhancements.** Design enhancements for site and building signage include the following applications:
- **Architecture.** The design of the sign and its shapes, colors, and finishes mimic or reinforce the architectural lines and distinctive features of the building or development. This creates a natural connection between the sign and the building and reinforces the brand image.
- **Landscaping.** A landscaped planting area at the base of a sign shall consist of a raised border of at least eight inches in height from the natural grade and constructed of landscape timbers brick, landscaping stone, or rock. This planting area shall be filled with mulch or a ground cover and planted with low-growing perennials. The area of the planting area must be a minimum of 32 square feet.
    - ***Organic and Natural Materials***. A blend of natural materials (e.g. stone, brick), together with metals and plastic components of the sign can soften the image and make for an interesting and attractive sign.
    - ***Earthern Berm***. An earthen berm with a maximum height of two feet above natural grade beneath the base of a sign creates a pedestal that may be landscaped with low-growing groundcover or foliage.
    - ***Accent Lighting***. Concealed up lighting, down lighting, or concealed cove lighting accents onto a pole cover and selected segments of a sign can create dramatic effects to an otherwise plain sign design.
    - ***Decorative Elements***. Decorative elements added to the design of a sign, such as, but not limited to, decorative lamp fixtures, sconce light fixtures, wrought iron gates or scrolled embellishments, and three-dimensional elements add character to a sign while creating a memorable image for potential customers.