



## **JOINT PUBLIC HEARING**

THE CITY COUNCIL CITY AND THE PLANNING AND ZONING COMMISSION OF  
THE CITY OF PEARLAND, TEXAS,

**MONDAY, AUGUST 17, 2015, AT 6:30 P.M.**

COUNCIL CHAMBERS - CITY HALL-3519 LIBERTY DRIVE

- I. CALL TO ORDER**
- II. PURPOSE OF HEARING**  
2015 Compréhensive Plan adoption.
- III. APPLICATION INFORMATION AND CASE SUMMARY**
  - A. STAFF REPORT
  - B. CONSULTANT PRESENTATION
  - C. STAFF WRAP UP
- IV. PERSONS WISHING TO SPEAK FOR OR AGAINST THE PROPOSED REQUEST**
- V. COUNCIL/PLANNING COMMISSION/STAFF DISCUSSION**
- VI. ADJOURNMENT**

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## Staff Report

To: City Council and Planning and Zoning Commission

From: Community Development Department

Date: August 7, 2015

Re: 2015 Comprehensive Plan Adoption

### **Summary of Request**

The City of Pearland has been working with the Planning firm of Kendig Keast Collaborative to update the Comprehensive Plan. A joint workshop with the City Council and the Planning and Zoning Commission was held on July 6, 2015 to discuss the findings and recommendations of the 2015 Comprehensive Plan.

Subsequently, a public Open House (Big Picture Outreach Workshop) was conducted on July 16, 2015, to share the findings and recommendations with the community. Attendees included residents, Chamber of Commerce representative, State Representative, Houston Chronicle, former City Council members, representatives from various city committees, developers, realtors and engineering firms, in addition to staff members. Maps were displayed in the lobby and findings and recommendations were presented by staff and the consultant. The attached 2015 Comprehensive Plan incorporates the comments from the joint workshop and the open house.

Extensive efforts have been made to share the 2015 Comprehensive Plan with the community, including newspaper articles, Web site notifications in multiple areas, fliers distributed in all city facilities, posting on PearNet, notice in Pearland in Motion, and reminder in utility bills. A copy of the 2015 Comprehensive Plan along with additional information and details regarding all of the citizen input processes have been available on the City's web site at [pearlandtx.gov/compplan](http://pearlandtx.gov/compplan), since the past few weeks.

### **Comments from the Workshop and Open House**

Since the presentations at the joint workshop and Open House, the following information has been incorporated in the revised version of the 2015 Comprehensive Plan:

1. Information from the Asset Management Study regarding street rehabilitation needs and prioritization.

2. Information regarding Police Department planning and forthcoming staffing and utilization study.
3. Unified Development Code updates be made a Year 1 action item versus Years 2-3 in the Priority Action Tasks table.
4. More comparison between Pearland and other cities regarding housing mix.
5. Clarification regarding METRO and the travel demand modeling information included in the 2015 Comprehensive Plan.
6. City-county partnership regarding library services.
7. Distribution of single-family housing lots by size and valuation.
8. Information from the 2015 National Citizen Survey.
9. Information/map regarding pipelines.

### **Public Notification**

A legal notice of the public hearing was published in the local newspaper, and the joint public hearing was advertised on the City's web page.

### **Opposition to or Support of Proposed Request**

Staff has not received any Comments.

### **Exhibits**

1. Agenda packet from the Joint workshop of July 6, 2015.
2. 2015 Comprehensive Plan and changes since the joint workshop and open house.

2015

# Pearland

COMPREHENSIVE PLAN



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*Acknowledgments [to be added later]*

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2015

# Pearland

COMPREHENSIVE PLAN



Pearland Recreation Center

## SECTION 1

# Introduction

The *2015 Pearland Comprehensive Plan* is intended to guide and balance future development, redevelopment, infill development, and community enhancement efforts in the City over the next 20 years through 2035. This plan acts as a framework for thoughtful community discussion on the real and perceived challenges facing Pearland currently – as well as the upcoming opportunities that will shape the City's future. Today, the City is positioned for continued physical and economic growth. Through long-range planning efforts, the community can accommodate its projected growth in a manner that preserves its history and culture and enhances overall quality of life for current and future residents and businesses.



The 2015 Pearland Comprehensive Plan resulted from a two-year planning and citizen involvement process. The plan's findings and recommendations focus on the physical and economic aspects of the City's projected growth and development in the coming years.

## Purpose

### GUIDING GROWTH

A comprehensive plan is usually the most important policy document a municipal government prepares and maintains. This is because the plan:

- lays out a "big picture" vision regarding the future growth and enhancement of the community;
- considers at once the entire geographic area of the community, including areas where new development and redevelopment may occur; and,
- assesses near- and longer-term needs and desires across a variety of inter-related topics that represent the key "building blocks" of a community (e.g., land use, transportation, urban design, economic development, redevelopment, housing, neighborhoods, parks and recreation, utility infrastructure, public facilities and services, cultural facilities, etc.).

### USE OF THIS PLAN

A comprehensive plan, if on target and embraced by the City and its leadership, has the potential to take a community to a whole new level in terms of livability and tangible accomplishments. The plan is ultimately a guidance document for City officials and staff, who must make decisions on a daily basis that will determine the future direction, financial health, and "look and feel" of the community. These decisions are carried out through:

- targeted programs and expenditures prioritized through the City's annual budget process, including routine but essential functions such as code compliance;
- major public improvements and land acquisitions financed through the City's capital improvements program and related bond initiatives;
- new and amended City ordinances and regulations closely linked to comprehensive plan objectives (and associated review and approval procedures in the case of land development, subdivisions, and zoning matters);
- departmental work plans and resources in key areas;
- support for ongoing planning and studies that will further clarify needs, costs, benefits, and strategies;
- pursuit of external grant funding to supplement local budgets and/or expedite certain projects; and
- initiatives pursued in conjunction with other public and private partners to leverage resources and achieve successes neither could accomplish on their own.

Despite these many avenues for action, a comprehensive plan should not be considered a "cure all" for every tough problem a community faces. These plans tend to focus on the responsibilities of City government in the physical planning arena, where cities normally have a more direct and extensive role than in other areas that residents value, such as education and social services. Of necessity, comprehensive plans, as vision and policy documents, also must remain relatively general and conceptual. The resulting plan may not touch on every challenge before the community, but it is meant to set a tone and motivate concerted efforts to move the community forward in coming years.

It is also important to distinguish between the function of the comprehensive plan relative to the City's development regulations, such as the zoning and subdivision regulations. The plan establishes overall policy for future land use, infrastructure improvements, and other aspects of community growth and enhancement. The City's zoning regulations and official zoning map then implement the plan in terms of specific land uses and building and site development standards. The City's subdivision regulations also establish standards in conformance with the plan for the physical subdivision of land. Other standards in the subdivision regulations address the layout of new or redeveloped streets and building sites, the design and construction of roads, water and sewer lines, storm drainage, and other infrastructure that will be dedicated to the City for long term maintenance.

### PLANNING AUTHORITY

Unlike some other states, municipalities in Texas are not mandated by state government to prepare and maintain local comprehensive plans -- although Chapter 211 of the Texas Local Government Code specifies that zoning regulations must be adopted "in accordance with a comprehensive plan." In Section 213, the Code provides that, "The governing body of a municipality may adopt a comprehensive plan for the long-range development of the municipality." The Code also cites the basic reasons for long-range, comprehensive community planning by stating that, "The powers granted under this chapter are for the purposes of promoting sound development of municipalities and promoting public health, safety and welfare." The Code also gives Texas municipalities the freedom to "define the content and design" of their plans, although Section 213 suggests that a comprehensive plan may:

1. include but is not limited to provisions on land use, transportation, and public facilities;
2. consist of a single plan or a coordinated set of plans organized by subject and geographic area; and,
3. be used to coordinate and guide the establishment of development regulations.

The Pearland City Charter, at Section 7.01(d)(1), authorizes and requires the Planning and Zoning Commission to "amend, extend and add to the master plan for the physical development of the City."

### WHY PLAN?

Local planning allows the City of Pearland to have a greater measure of control over its future rather than simply reacting to change. Planning enables the City to manage future growth and development actively as opposed to reacting to development and redevelopment proposals on a case-by-case basis without adequate and necessary consideration of community-wide issues. The process used to develop the *2015 Pearland Comprehensive Plan* may prove more valuable to the community than the plan itself since the document is ultimately only a snapshot in time. The planning process involves major community decisions about where development and redevelopment will occur, the nature and extent of future development, and the community's capability to provide the necessary public services and facilities to support this development. This leads to pivotal discussions about what is "best" for the community and how everything from taxes to quality of life will be affected.

### Reasons for LONG-RANGE PLANNING

- To provide a balance of land uses and services throughout the community to meet the needs and desires of the City's population.
- To ensure adequate public facilities to meet the demands of future development and redevelopment.
- To achieve and maintain a development pattern that reflects the values of the community, and which ensures a balanced tax base between residential and nonresidential development.
- To ensure the long-term protection and enhancement of the image and visual appearance of the community.
- To involve local citizens in the decision-making process and reach consensus on the future vision for Pearland and its ongoing development.
- To guide annual work programs and prioritize improvements consistent with the comprehensive plan.
- To enhance the quality of life of Pearland residents.

## HISTORICAL CONTEXT

- 1892** William Zychlinski bought 2,560 acres of land surrounding the Mark Belt outpost along the Gulf, Colorado, and Santa Fe rail line.
- 1894** Zychlinski platted the original town site for Pearland.
- 1895** The Southern Homestead Company took over the promotion of Pearland to people in the farm-belt states. The area was promoted as having fertile land bringing people from the Midwest to settle in Pearland. Early on, a business district was formed providing basic needs that supported the community.
- 1900** The Great Hurricane of 1900 destroyed nearly all of the town of Pearland and drastically cut its population by almost three-quarters. To bring population back, the Allison-Richey Land Company began promoting the new development of Suburban Gardens, a model community west of the railroad tracks.
- 1912** A two-story high school was completed as well as roads that began connecting Pearland to other nearby communities.
- 1915** Pearland was re-populated as new residents moved into the area, and cattle, hay, family-owned dairies, and fig production emerged as key activities. However, a second Gulf Coast hurricane caused damage and out-migration as significant as in 1900.
- 1917** Modernization and infrastructure defined the second rebuilding of Pearland. Telephone lines were strung and a public phone booth was erected.
- 1930s** Pearland profited from the discovery of oil right outside of its boundaries as well as the rise in rice production.
- 1940s** Throughout the decade, Pearland began to grow back to a similar population as before the 1900 hurricane.
- 1949** Pearland took its first steps toward becoming a town with the development of the Brazoria County Water Control and Improvement District Number Three. This helped to generate the funding for Pearland's water and sewer systems.
- 1950s** The Lions Club became responsible for a number of improvements to Pearland, including garbage collection, sidewalk improvements, and streetlights.
- 1959** The City of Pearland is incorporated.
- 1960** Pearland's population had tripled since 1940, and the City now had a Mayor, City Council, and City Marshal.
- 1984** Construction was completed on South Freeway (SH 288) from downtown Houston. The "expressway" portions south of Loop 610 were gradually upgraded to full freeway standards through the 1990s.
- 1987** City Hall moved from the Old Townsite to Liberty Drive alongside the train depot.
- 1990s** The master-planned Silverlake development was initiated in the early 1990s. The Shadow Creek Ranch master-planned development followed in the late 1990s.
- 1995** Pearland Economic Development Corporation established through voter approval.
- 1997** Construction was completed on the south segment of Beltway 8.
- 2003** Pearland Parkway was completed, providing north-south traffic relief and an attractive new entry into Pearland from Beltway 8.
- 2009** Pearland Town Center opened as a major new mixed-use development near the intersection of SH 288 and Broadway / FM 518.
- 2010** Recreation Center and Natatorium opened on Bailey Road, through a partnership between the City, Pearland Independent School District and Pearland Economic Development Corporation.
- 2010** Pearland campus of University of Houston-Clear Lake established along Pearland Parkway.

## PAST PLANNING EFFORTS



### Comprehensive Plans

- **1968** Comprehensive Plan (1st)
- **1978** Comprehensive Plan Update
- **1993** Comprehensive Plan Update
- **1999** Comprehensive Plan Update
- **2004** Comprehensive Plan Update



### Plan Addenda

- **2011** Grand Boulevard: Pearland Old Townsite Master Plan
- **2011** Proposed Form-Based Code For Lower Kirby Urban Center



### Other Planning Initiatives

- **2005** Old Townsite Downtown Development District Plan
- **2006** Unified Development Code
- **2009** Land Use Plan Update
- **2012** Pearland EDC Competitive Assessment
- **2013** Pearland EDC Strategic Plan and Implementation Guidelines

## Plan Outline

# 1

### Introduction and Community Overview

Section 1 sets the context for long-range and strategic community planning by presenting the purpose and function of the comprehensive plan; documenting community participation and input; and identifying key community indicators and trends that will guide future decision-making.

# 2

### Growth Capacity and Infrastructure

Section 2 addresses the City's intent and policy regarding how growth, new development and redevelopment will be accommodated. This section aims for growth to be consistent with other fiscal and community considerations. In particular, efficient utilization of land and associated water, wastewater and drainage infrastructure is essential to maintain and achieve a desired urban form and character. This section also includes an evaluation of existing utility infrastructure and public safety capacities and "planning-level" improvement needs.

# 3

### Mobility

Section 3 focuses on the orderly development of the transportation system. It considers not only facilities for automobiles but other modes of transportation including pedestrian and bicycle circulation, freight movement facilities, public transportation, local and regional airports, and associated needs. This element is closely coordinated with growth and infrastructure planning and future land use planning to evaluate the impacts of different transportation investment decisions on future development, urban form, and community character.

# 4

### Housing and Neighborhoods

Section 4 assesses the local housing market to confirm an adequate supply of housing to accommodate persons desiring to relocate within or to the community. Neighborhood design strategies help to ensure that residential development outcomes are meeting community expectations for quality living environments, and are compatible with adjacent uses and area character. This plan element also emphasizes policies and initiatives for sustaining Pearland's value as an attractive place to live, including neighborhood conservation strategies for older, established residential areas.

## KEY ENGAGEMENT POINTS



### “Issues and Needs” Workshop

This workshop oriented the City Council and Planning and Zoning Commission to the comprehensive planning process. The workshop also yielded early leadership input and set direction and priorities for the planning effort.



### Informal “Listening Sessions”

These four small-group sessions engaged residents, business and property owners, public officials, the development community, and community organizations to hear their hopes, concerns, and priorities for the City’s future.



### Virtual Town Hall (MindMixer)

This public outreach tool was organized as an online discussion forum intended to solicit community input at times and locations convenient for individual users.



### “Big Picture” Outreach Workshops

These two workshops were focused on broad public participation organized around the plan’s Vision and Principles and Action Agenda and Priorities.



### Workshop Meetings

A Comprehensive Plan Advisory Committee (CPAC) vetted all elements of the updated plan through five work sessions.



### Joint Workshop

This workshop allowed the City Council, Planning and Zoning Commission and CPAC to review the complete draft plan and prioritize strategic recommendations.

## 5

### Economic Development

Section 5 ensures the City’s comprehensive plan is consistent with the objectives, priorities and initiatives of the Pearland Economic Development Corporation (PEDC). These strategies were identified in the *Pearland 20/20 Strategic Plan*, completed in 2013, and are already moving forward. Of particular importance to this plan element are the physical planning components that contribute to the community’s readiness to accommodate new development and reinvestment.

## 6

### Land Use and Character

Section 6 assesses Pearland’s long-range development outlook and context to establish the necessary policy guidance for making decisions about the compatibility and appropriateness of individual developments and proposed redevelopment and infill projects. An updated Future Land Use Plan map illustrates the type, pattern, and character of desired development outcomes – rather than focusing only on uses and relative densities. Both the plan element and map align with community objectives for growth and urban form, and with associated planning for capital improvements and amenities.

## 7

### Parks and Tourism

Section 7 highlights and provides guidance for enhancing the community’s quality of life amenities. These include Pearland’s park and recreation facilities, open space areas and views, historic and cultural resources, educational assets and continuing education options, and other leisure opportunities. All of these assets are also crucial to ongoing efforts to expand Pearland’s appeal as a tourism destination.

## 8

### Implementation

Section 8 utilizes the recommendations of the individual plan elements to consolidate an overall strategy for executing the *2015 Pearland Comprehensive Plan*. This strategy encompasses the highest-priority initiatives that will be first on the community’s action agenda, as well as a longer-term series of implementation efforts anticipated over the next decade. This plan element also outlines crucial procedures for monitoring and revisiting the plan policies and action priorities every year, and for completing future plan updates at appropriate milestones.



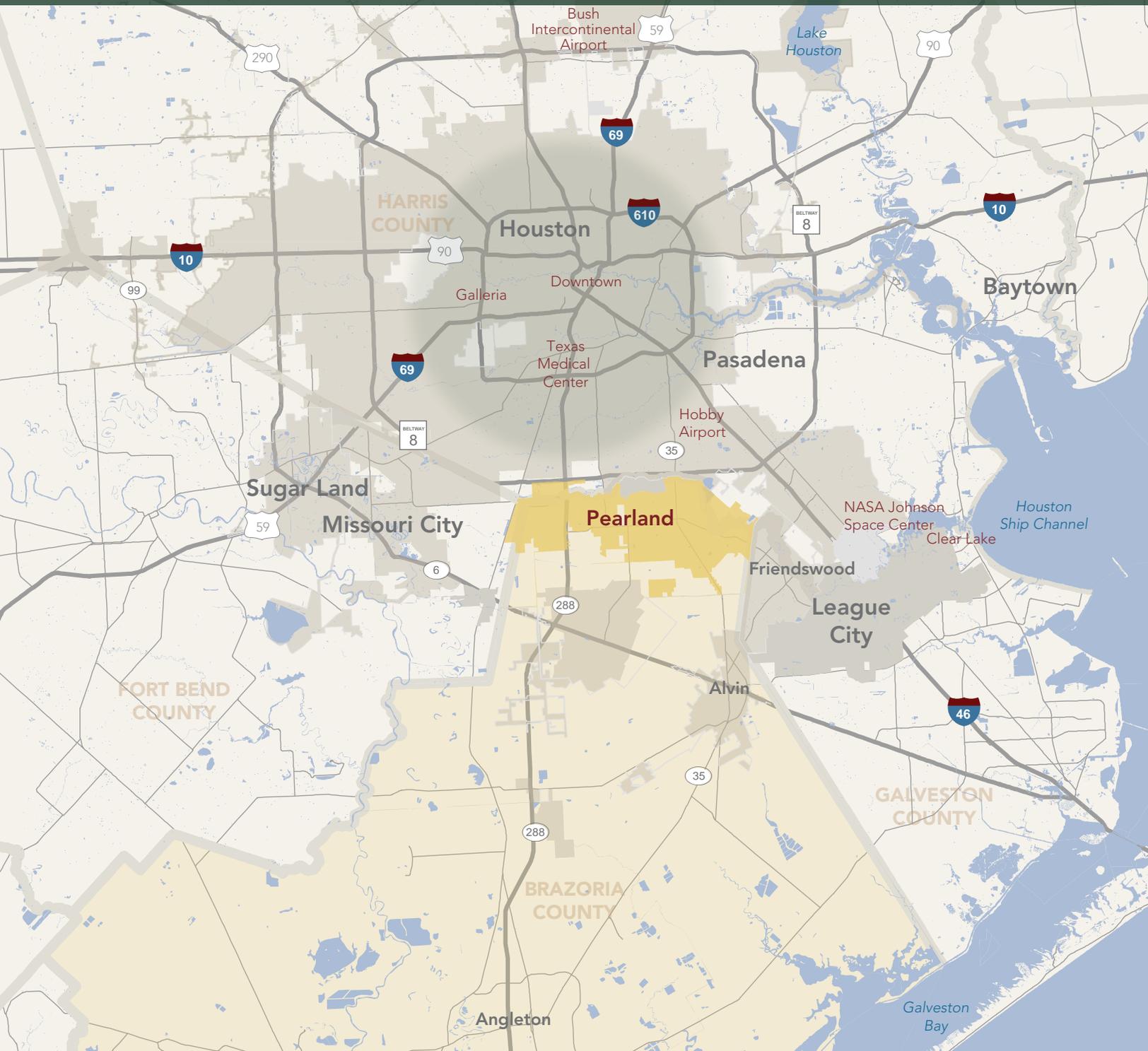
Welcome to  
PEARLAND  
Town Center

“Our ‘To-Do List’ includes moving the City to the next level by building on **Pearland’s growth and achievements and recognition** as one of the three ‘Land’ communities around Houston (along with Sugar Land and The Woodlands).”

-Mayor Tom Reid in his 2013 State of the City Address

## REGIONAL CONTEXT

Pearland is primarily within and occupies the northernmost portion of Brazoria County, but also has small portions of its City limits within Fort Bend and Harris counties. This places Pearland just 16 miles south of downtown Houston, which is at the core of a region that surpassed the six million population mark soon after the 2010 Census. A distinguishing feature of the Houston metropolitan area is that a single major city dominates both in population and geographic size due to a long history of expansion by annexation. As of the 2010 Census, the City of Houston had 2.1 million residents, and the next largest city was Pasadena with 149,043 persons. Pearland was third in size with 91,252 residents, and one of eight cities in the region with 50,000 or more inhabitants including, in rank order after Pearland: League City (83,560), Sugar Land (78,817), Baytown (71,802), Missouri City (67,358), and Conroe (56,207). Three unincorporated population clusters would appear within this list if counted: The Woodlands in southern Montgomery County (93,847), the Atascocita area near Lake Houston (65,844), and the Spring area in far north Harris County (54,298). The nearby cities of Friendswood (35,805) and Alvin (24,236) ranked as the region's 12th and 17th largest cities.

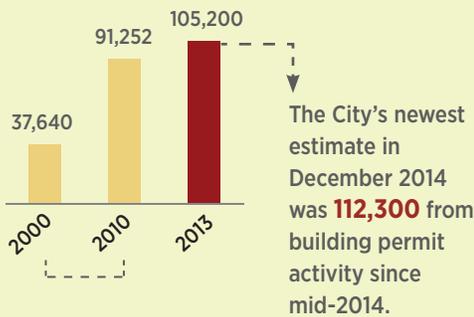


# Community Profile

This section highlights key aspects of Pearland’s demographic and socioeconomic profile, with all data obtained from the *Pearland Economic and Demographic Profile 2013* unless otherwise noted. These characteristics and trends pertain to the community’s population, housing, economy, educational attainment, and crime. Although this summary is only a snapshot in time, it provides insights to the community’s strengths and weaknesses as well as opportunities and threats toward future progress. These and other community statistics are essential for long-range and strategic planning. They will be prominently featured in later plan sections that address mobility, housing and neighborhoods, and economic development.

## Population

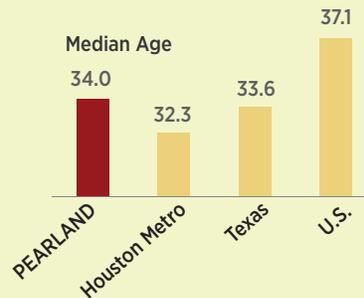
Between 2000 and 2013, the City’s population increased at an estimated **7.6%** average annual growth rate, which made Pearland the fastest growing large city in the Houston metropolitan area over that period. During this same period, housing units nearly kept pace at an estimated **7.58%** average annual growth rate.



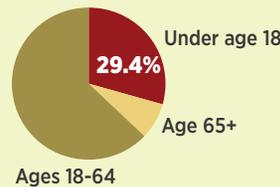
**+142%**  
increase in population from 2000-2010

## Age of Residents

An estimated **40.7%** of Pearland residents were in their prime income-earning years from ages 35-65, as of the 2010 U.S. Census. In addition, **81.8%** of residents between ages 18 to 64 were participating in the labor force as of 2011.



The median age of Pearland residents in 2010 indicated a slightly more mature population overall compared to the region and state.



A little more than one fourth of Pearland’s 2010 population was under age 18, and less than 10 percent was age 65 or older.



### Implications:

- Housing needs
- Infrastructure (water, wastewater) demands
- Public service (police, fire, EMS) demands
- Traffic volumes
- Park and recreation capacity
- School enrollment



### Implications:

- Varying purchasing power at different “life cycle” phases
- Expectations for shopping, entertainment, and cultural opportunities
- Senior mobility needs
- Bike/Pedestrian safety

## COMMUNITY CONTEXT

When drafting public policy focused on improving the lives of community residents, decisions must rely on data that answer who these people are, where and how they live, and how their lives are changing. Demographic and socioeconomic indicators help to answer these questions are essential to policymakers and development planners across nearly every sector of society. The facts and figures in this section illuminate the current characteristics of Pearland's population, such as its size and composition. Planners place particular emphasis on recurring or projected patterns so that they can fulfill the needs of their constituency and plan for change effectively.

### Housing

Pearland is the most affordable community in comparison to several peer cities (Franklin, TN; McKinney, TX; and Sugar Land, TX). This ranking is derived from a "home affordability index" which is based on a ratio of 2011 median home value (\$181,500) to median household income (\$87,033). Pearland has a **2.09** ratio, indicating it is also more affordable than Texas (2.54 ratio) and the U.S. (3.49 ratio).



# +138%

increase in housing units from 2000-2010

### Economy

Pearland's median household income was **\$89,113** according to the 2010 U.S. Census. These income statistics make Pearland one of the highest-income communities in the Houston metropolitan area. In addition, the labor force has more than doubled from 23,865 in 2005 to 50,550 in 2012, with more than 4,900 of these individuals added just since 2010.

**1:3** one job per three working age (18-69) residents, given 21,085 private and public sector jobs in 2010.

**9.2%** average annual growth in retail sales from 2006-2011, making Pearland **#1** among the top 50 retail markets statewide.

This translates into increasing sales tax revenue for the City, which reached \$22.4 million in 2012 (nearly **4x** as high as the \$5.8 million in sales tax revenue in 2000).



#### Implications:

- Increased attractiveness of Pearland as a destination for prospective home buyers in and new to the Houston area
- Need for housing options sought by business executives and managers
- Stability and growth of value of existing housing stock
- Challenge of lower property values relative to cost of serving residential



#### Implications:

- Marketable skills and prominent occupation types among the active labor force
- Potential nonresidential land use demands (e.g., office, medical, industrial, retail, hospitality, etc.)
- Increased sales tax revenue which helps to fund upgrades to local infrastructure and amenities



## Educational Attainment

Pearland has a highly educated population. Among those with some level of college degree, **41%** (or **18.5%** of the entire age 25 years and older group) had also earned a graduate or professional degree.

**45.2%**

Pearland residents in age 25+ group who had earned a bachelor's degree or higher as of 2010.

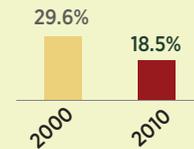
**9%**

of Pearland residents in age 25+ group did not have a high school diploma as compared to 14.6% for the U.S. as a whole in 2011.

## Public Safety

Pearland achieved nearly a one-third reduction in the rate of violent crimes from **1.76** incidents per 1,000 residents in 2000 to **1.34** in 2011. These positive trends during a very rapid growth period for the City are clear. This is reassuring given resident perception (expressed during small-group discussion sessions) that increasing crime can be a by-product of a growing city.

Property Crimes (per 1,000 Residents)



**60%**

decrease in property crimes between 2000-2010



### Implications:

- Projected demand for a range of jobs and amenities available in Pearland
- Projected increase in earning potential of Pearland residents
- Projected increase in median household income
- Maintaining community attractiveness to a mobile workforce with many options



### Implications:

- Ongoing monitoring of crime trends
- Resources and technology for public safety services

2015

# Pearland

## COMPREHENSIVE PLAN



### INPUT METHODS

- "Issues and Needs" Workshop
- Informal "Listening Sessions"
- Virtual Town Hall (MindMixer Website)
- "Big Picture" Outreach Workshops
- Advisory Committee Workshop Meetings
- Joint Workshop of City Council and Planning and Zoning Commission



### KEY PLANNING CONSIDERATIONS

This list is derived from public and leadership input. It is arranged in alphabetical order and does not reflect a specific ranking.

- Comprehensive community beautification
- Emphasis on key locations, corridors, and entries to City
- Expanded commercial tax base
- Growth management and annexation as build-out approaches
- Management of re-use, redevelopment and infill development
- Recapitalization of core infrastructure systems
- Recreation, entertainment, and event facilities
- Regional automobile, pedestrian, bicycle, and transit linkages
- Strategic east-west and north-south corridor planning
- Strengthened "sense of community" as one Pearland
- Targeted economic diversification with focus on high-value businesses and jobs
- Traffic congestion relief within and commuting to/from City
- Wider range of home ownership options

## Vision and Guiding Principles

In the Future, Pearland is...

### BALANCED

- Old and new
- Housing for all ages
- Culture and entertainment

### CONNECTED

- Sense of community
- Streets, sidewalks, trails
- Transit to/from Houston

### ATTRACTIVE

- Desirable place to live and work
- Retail magnet
- Special destinations

### SAFE

- Bike- and pedestrian-friendly
- Low crime rate
- Great place for kids

### INVESTED

- Homeownership emphasis
- Public infrastructure/facilities
- Great place to grow a business

### ACTIVE

- Healthy living emphasis
- Community events
- Volunteerism

### HIGH QUALITY

- Development
- Infrastructure
- Public services

## Your City, Your Plan...

### BE INVOLVED, STAY INVOLVED

The following quotes are a sampling of comments from community outreach efforts throughout the comprehensive planning process. They especially demonstrate concern for Pearland's character, identity and appearance in the years ahead.

**SMALL-TOWN CHARACTER.** "Pearland has something special... We have less than zero desire to simply be 'a suburb south of Houston.' We are our own entity, and a wonderful community, with so much to be proud of. I came to Pearland by choice almost 15 years ago, and I can't imagine having raised my son anywhere else. It's not easy to maintain that small-town feel, but the end result is so worth it."

**IDENTITY.** "The city is very diverse - although somewhat segregated. That needs to be addressed along with improving relations between East and West Pearland. It also seems that the city is being more successful with attracting multi-job companies which pay well. Those are positives."

### TOWNHOMES, CONDOS, AND

**BROWNSTONES.** "We desperately need these in our city. I was raised here and watched all the development for the most part. This is a missing piece to the 3rd largest city in the Houston area."

**SENIOR LIVING.** "Need more cottage/condo 55+ active communities. There are several we have visited in Boerne and Austin that would be great here."

**REGIONAL CONNECTIVITY.** "The current light rail in Houston is too slow to be a real option for many commuters. Any type of service from Pearland up into Houston would need to be much faster in order to truly appeal to the masses."

**TRAFFIC.** "The traffic is heavier, but there were problems 10 years ago also. There are more people, but there are also more lanes, and more roads [than] there were 10 years ago."

**SIDEWALKS AND BIKE LANES.** "There need[s] to be connected sidewalks. It is very difficult to walk anywhere. Biking needs dedicated lanes, and bikers need to stay in them."

**PARKS AND RECREATION.** "Houston was rated the fattest city last year? Let's be healthy and green to not only attract visitors but also be the first to make money and be the model too at the same time. Something such as an outdoor mountain bike park, skate board park, more public basketball and tennis courts..."

**JOINT-USE FACILITIES.** "Large detention pond facilities can be used for walkways like those that are near Friendswood. This is a great amenity when there is no rain but still has a functional purpose."

**REGULATIONS.** "The UDC [Unified Development Code] needs to be continually monitored and updated to meet new technologies and construction practices. The UDC sets us apart from many other cities. It should be monitored so that it does not impede growth, but guide[s] quality development."

**MORE SHOPPING.** "The Pearland Town Center is beautiful. The only downside is seasonal limitations - lot of rain and hot summer. An indoor shopping mall as an extension to Town Center will definitely bring more traffic to Town Center."

**ENTERTAINMENT VENUE.** "We are in desperate need of a cultural arts/convention facility for a city of 100,000 plus. People need something to do, something to see, etc. Shopping and restaurants are not entertainment and do not make us a destination city."



2015

# Pearland

COMPREHENSIVE PLAN



## SECTION 2

# Growth Capacity and Infrastructure



Extensive home construction in recent years lifted the City's population past the 100,000 mark

All indications are that Pearland's growth trajectory of recent years will continue over the next few decades. The community's prime location within the Houston metropolitan area, and the sheer momentum from its rapid population increase and land development activity of recent years, should continue to make Pearland a magnet for commercial investment along with further residential construction. At the same time, Pearland also needs reinvestment and updates to existing properties as the community matures. The City continues to plan for and invest in the public infrastructure and services needed to support further growth, local school districts have likewise added campuses to handle growing enrollment, and the private sector continues to bring quality and affordable new homes to market. New medical, office and especially retail development round out this picture of a vibrant city, along with expanded

## Extraterritorial Jurisdiction (ETJ) of Texas Cities

As a Home Rule municipality (greater than 5,000 population and with its own City Charter), Pearland has some authority over a larger unincorporated planning area, beyond its current City limits, which is known in Texas as the “Extraterritorial Jurisdiction,” or ETJ. In Chapter 42 of the Texas Local Government Code, the Texas Legislature declares it to be State policy that ETJs be created around cities so that municipal governments can “promote and protect the general health, safety, and welfare of persons residing in and adjacent to” the City limits.

For cities like Pearland that exceed 100,000 population, the ETJ is defined as the area contiguous to the corporate boundaries of the municipality and within five miles of those boundaries. However, because other cities and their respective ETJs are in close proximity, Pearland has much less of an extraterritorial jurisdiction than its statutory allotment as illustrated in the City-prepared **City Limits and ETJ Map** included in this plan section. This means that, unlike some populous and fast-growing Texas cities that can continue to expand outward, Pearland already knows the ultimate extent of its physical jurisdiction – and is actually already providing some services in the ETJ.

recreational and other amenities offered by both the public and private sectors.

This Comprehensive Plan and other City plans project that Pearland has adequate land remaining in its current incorporated area and extraterritorial jurisdiction (ETJ) to absorb further population increases through the early 2040s. However, looking beyond basic land supply, the purpose of this Comprehensive Plan section is to consider how prepared the City is for continued growth. Such an assessment must start with some fundamental questions:

How much would our community grow if current trends were to continue?

How much can our community grow? Do we have adequate utility infrastructure and public service capacity to handle this growth, especially if we are still catching up from some of the growth pressures of recent years?

To what extent will our community strive to influence, guide or even direct the location

and pace of growth to maximize its benefits and limit the potential downsides of growth, including the financial implications for City government?

Has our community deployed the various tools and methods available to Texas municipalities for managing growth effectively?

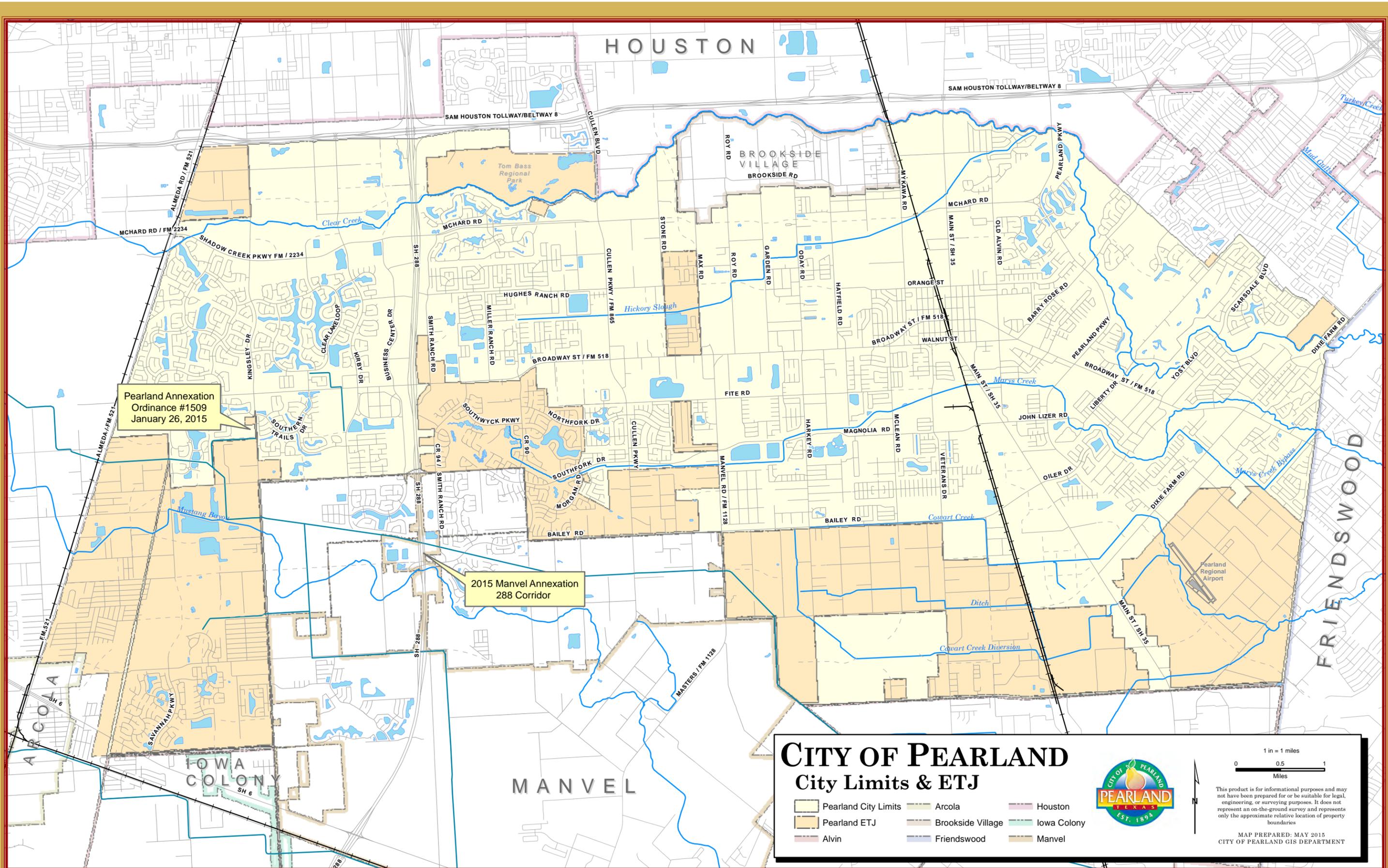
Other sections of this plan address the transportation implications of continued growth (Section 3, Mobility), the anticipated housing demands and new residential areas that growth will bring (Section 4, Housing and Neighborhoods), the potential for greater non-residential investment to bolster the City’s tax base (Section 5, Economic Development), the development pattern that will emerge through further growth (Section 6, Land Use and Character), and the added recreational facilities, green spaces and other amenities that will contribute to long-term livability and a positive community image (Section 7, Parks and Tourism). After outlining the growth assumptions on which this entire plan is based, this plan section focuses specifically on techniques the City of Pearland can use to influence the location, extent, timing and nature of the growth it expects to absorb over the next several decades, both in the City limits and in its extraterritorial jurisdiction (ETJ).

It should be noted that all assumptions in this plan section are based on the Land Use Plan in the Land Use and Character section. The planned future utility infrastructure and storm drainage systems for Pearland, or any extensions to the planned systems, may not be able to support future land use scenarios that vary significantly from the development intensities depicted on the Land Use Plan.

## Growth Context

The City initiated this update to the Pearland Comprehensive Plan at a time when the following trends and factors were responsible, in part, for driving the City’s growth, or were clearly having some influence.

**Texas and Houston Area Growth.** At the time the City was preparing its 1999 Comprehensive Plan update, the State of Texas was approaching the 21 million population mark. By 2013, Texas was estimated to have surpassed the 26 million mark, making it the second highest populated U.S. state after California at 38 million. As Pearland embarked on this current plan update in 2013, both Texas and the Houston area were widely and regularly recognized in the national



## CITY OF PEARLAND

### City Limits & ETJ

Pearland City Limits	Arcola	Houston
Pearland ETJ	Brookside Village	Iowa Colony
Alvin	Friendswood	Manvel

1 in = 1 miles  
0 0.5 1  
Miles

This product is for informational purposes and 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 boundaries.

MAP PREPARED: MAY 2015  
CITY OF PEARLAND GIS DEPARTMENT

media and elsewhere as remarkable engines of economic growth, leading to a renewed population surge after the nationwide recession of 2008-2010. A *Time* magazine cover in October 2013 featured an illustration of the nation as the “United States of Texas,” with the tagline “Why the Lone Star State is America’s Future.” The magazine singled out Texas as the nation’s fastest-growing large state, with three of the top five fastest-growing U.S. cities in Austin, Dallas and Houston. Further, since 2000, one million more people had moved to Texas from other states than had left Texas. Also in 2013 *Forbes* magazine predicted that within 10 years Houston will be known as “America’s next great global city.”

As the entire state was growing by nearly a quarter from 2000 to 2013, the Houston metropolitan area grew by nearly one-third, adding more than 1.3 million new residents (from 4.7 million in Census 2000 to roughly 6.2 million as of the last U.S. Census Bureau estimate in mid-2012). Taking advantage of its location within the fifth-largest metropolitan area in the nation, Pearland grew markedly faster, increasing its population by 170 percent between 2000 and 2013, from 37,640 to an estimated 101,900 residents. The 1999 Comprehensive Plan update had projected that the City’s population would increase by nearly 60,000 persons and be approaching 108,000 in 2020 (based on average annual growth of 2,600). In making this projection, the 1999 plan noted that, “As in the past, Pearland’s growth rate should substantially outpace the rate of growth experienced by the greater Houston area.” The *Pearland Economic and Demographic Profile 2013* highlights that Pearland ultimately recorded the highest growth rate among large cities in the Houston metropolitan area between 2000 and 2013, moving it from the tenth- to the third-largest area city after Houston and Pasadena, and ahead of The Woodlands, League City and Sugar Land.

**South Houston and Brazoria Growth.** Brazoria County had approximately 243,000 residents as of Census 2000. In the years since the County has added roughly 82,000 persons, growing by about one-third to nearly 325,000 residents according to a U.S. Census Bureau estimate in mid-2012. Pearland has accounted for a good share of this Brazoria growth as the most populated community in the County, and with most of its incorporated territory within the northernmost area of the County.

More generally, the entire south side of Houston has seen an uptick in growth in recent years. This is

### CITY COUNCIL NEAR-TERM GOALS

In establishing its 2013-14 Council Goals, Pearland City Council prioritized various items that involve the implications of growth, and related considerations that are most directly linked to this Comprehensive Plan section. Among these are:

- Public Safety, including emphasis on crime prevention initiatives
- Finance, including exploration of all City financial management policies
- Land Use/Annexation Plans, including developing a 3-5 year plan covering all aspects of annexation planning
- Regional Detention, especially to advance the Cullen/FM 518 Regional Pond and Lower Kirby Regional Detention Plan

Additionally, the Council adoption of its near-term goals and priorities noted “a constant pursuit of improving the quality of life for the citizens of Pearland.” This theme carried over as the first item in an updated set of Council Goals disseminated in Spring 2014, which also highlighted these priorities relevant to growth effects:

- Annexation planning
- Creating a Parks Foundation
- Policy on future residential development (e.g., low-density and cluster provisions, high-pressure gas pipelines)
- Small business support related to compatible re-use, redevelopment, and infill development in older areas
- Police vehicle and equipment needs long term
- Capital, equipment and staffing needs for fire suppression and emergency medical services
- Technology tools for traffic congestion reduction
- Ongoing implementation of the *Pearland 20/20 Strategic Plan*
- Evaluation of impact fee levels
- City financial management (e.g., property tax outlook, “pay as you go” versus debt service, expansion of in-city Municipal Utility Districts)
- Cultural entertainment facilities
- Multi-family residential trends and policy

partly due to market dynamics and the availability of land relatively close to central Houston and major employment centers as other suburban areas especially to the north and west have been developed more extensively – to the point of build-out in some directions. Growth drivers for Pearland highlighted later in this section also apply here, including Texas Medical Center expansion and development induced by the Sam Houston Tollway. This development includes recent multi-family and retail activity along the north side of the Tollway corridor and near major intersections such as Cullen and Monroe (north connection to Pearland Parkway), and near the Tollway-SH 288 interchange.

Additionally, the City of Houston has promoted greater investment in the area, in part through a 2002 *Southern Houston Sector Study*. This study by the City of Houston Planning and Development Department focused attention on more than 30,000 acres of land (nearly 50 square miles) within Houston's southern limits that remained largely undeveloped and under-utilized despite significant growth occurring beyond this area in Brazoria and Fort Bend counties. The lack of development interest was partly due to extensive floodplains associated with Sims Bayou and Clear Creek, plus a legacy of oil and gas drilling, landfills and illegal waste dumping in the area. Most needed were investments by the City of Houston in basic infrastructure and services, especially roads to open up access, and water, sewer and drainage improvements. The study recognized that such projects would need to be targeted given the potential cost/benefit and likelihood of generating significant new public revenue. Another

challenge was existing low-income and often blighted neighborhoods and limited retail use in need of revitalization. While the overall study included roughly 117 square miles from Loop 610 south to the Tollway, and from US-90A across to Houston's south and east City limits, it recommended focusing on certain corridors including Cullen Boulevard and Mykawa Road.

**Sam Houston Tollway.** The opening of the "South Belt" portion of Beltway 8 in the mid-1990s greatly enhanced the accessibility of Pearland within the Houston metropolitan area, further fueling the city's escalating growth. By 2012 the Texas Department of Transportation reported that the Tollway was carrying, at a point just east of Cullen Parkway/FM 865, some 55,000 vehicles per day on average. This traffic count was the second highest along the South Tollway between U.S. 59 and IH 45/Gulf Freeway, after a 58,000 count just east of the Fort Bend County Toll Road. The Harris County Toll Road Authority recently completed a \$118 million expansion of the Tollway between U.S. 59 and SH 288, which began in late 2011. The widening project added two new toll lanes in each direction to the two existing, plus an additional EZ TAG lane at each main-lane toll plaza. Final design is proceeding on a similar \$200 million widening of the southeast Tollway segment between SH 288 and IH 45/Gulf Freeway, with construction expected to begin in 2015. Over the years, the introduction of the Tollway and related traffic growth led to the construction of Pearland Parkway and enhancement of pre-existing north-south entries into the city such as Cullen Boulevard, Main Street/SH 35, and Kirby Drive, as well as the Barry Rose Road connection to Hughes Road.

**Texas Medical Center.** The Texas Medical Center (TMC) remains the largest medical complex in the world, with more than 50 member institutions occupying a campus of about 1,350 acres. Each day tens of thousands of workers gravitate to TMC, including numerous residents of Pearland, who chose to live in the community for this proximity, among other benefits. TMC is the largest employment node in the Houston metropolitan area, with approximately 106,000 workers reported by TMC in 2011-12, including some 5,000 physicians; 15,000 nurses; and 5,700 researchers – plus 17,500 faculty who support 49,000 students in various life sciences. TMC estimates that about 160,000 people visit the "City of Medicine" on a typical day when also accounting for patients, their visitors and roughly 10,000 volunteers.

### Growth Potential of the Entire 288 Corridor

A 2010 study of potential transit extension along the 288 corridor, conducted by the Metropolitan Transit Authority of Harris County (METRO), estimated that the corridor study area had just under 144,000 residents in 2009 and would grow to more than 241,000 by 2035. METRO noted that the entire Houston metropolitan area was projected to grow by just over one-third during this timeframe while the 288 study area would grow by roughly two-thirds under this scenario. The study area encompassed much more territory beyond Pearland, from Wheeler Street in central Houston on the north to SH 6 on the south, but the study further underscored the growth potential of this broader area.

In 2010 TMC's 34.2 million square feet of space alone placed it ahead of the entire downtown business districts in cities such as Dallas, Los Angeles, Denver, Phoenix and Atlanta (and, at some point in 2011, surpassing the approximately 36 million gross square feet in downtown Houston). With the nearly 38 million square feet that was planned through the end of 2014, the TMC campus already ranks as the eighth largest commercial concentration in the United States after the central business districts of Philadelphia and Seattle. TMC projects its ultimate capacity at 59 million square feet, which today would move the specific area of TMC alone to number four nationally, well ahead of San Francisco and behind only New York City, Chicago, Washington, DC, and Boston. Like Pearland, TMC in 1999 also developed a comprehensive plan entitled *Vision for Growth: A 50-Year Master Plan for the Institutions of the Texas Medical Center*, with other specialized plans completed in the interim plus a full Master Plan update in 2006.

**Hobby Airport Proximity and Outlook.** Among the locational advantages of living in Pearland, many residents cite the proximity of Hobby Airport as another benefit for both business and leisure travel. After more than 80 years of service, Hobby ranks as the 33<sup>rd</sup> busiest U.S. airport in terms of enplanements, with more than 10 million passengers (one-fifth of the Houston Airport System's 50 million total passengers) flying to 40-plus U.S. destinations during 2012. The airport also supports roughly 4,000 jobs and is a hub for corporate and private aviation. In 2012 the City of Houston Airport System and Southwest Airlines finalized an agreement to seek federal approval for and build a \$100 million, five-gate terminal that will introduce international air service to Hobby. Flights to and from Mexico and Caribbean destinations are expected to begin in 2015.

## Population Outlook

Population projections are an important component of a long-range planning process. Population projections help to determine and quantify the demands that will be placed on public facilities and services based on the potential pace and scale of the community's physical growth. Projections reflect local, regional and even national and international trends and offer a basis to prepare for the future. However, forecasting population changes can be challenging, particularly for the long term, because it is often difficult to account for all circumstances that

may arise. Therefore, it will be important for the City to continue its year-to-year monitoring of population and economic growth to account for both short- and longer-term shifts that can influence development activity and trends in the City and larger region.

Demographers also caution that population projections become trickier as the geographic area gets smaller, making city-level population the most difficult to forecast. This is because population change within a city is strongly influenced by less predictable factors such as housing prices, availability of vacant land to develop, and annexation of additional territory, which may already have existing residents and result in an instant increase in the city-wide total.

As in most cities, a variety of population projections are available for Pearland. Also, as in most places, "apples to apples" comparisons can prove difficult. The projections may start from different base years, or differ in their base-year population assumptions. The numbers may also apply to different geographic areas, such as only the City limits, the City limits plus ETJ, or a particular service area (e.g., water service area) that differs from the current or future jurisdiction boundary.

Each year the annual City budget includes population growth assumptions for the next five years. In the 2013-14 budget, the five-year projection for Fiscal Years 2014-2018 assumed continued growth of roughly three percent per year on average. This would put the 2018 population at 120,100, which would be an increase of 29,400 persons (32.4 percent growth) over the decade back to 2009. The budget also indicated 2025 as the point when the current City limits may be approaching build-out.

For the 2010 update of the City's Parks and Recreation Master Plan, various and widely-ranging population growth scenarios for Pearland through 2030 were assessed. The plan was ultimately based on a "middle ground" projection that indicated 193,498 residents in 2030. This was slightly higher but not significantly different from the 2030 projection of 186,050 prepared by the City's Planning Department.

The *Pearland Economic and Demographic Profile 2013* provided population projections through 2040 for the current City limits. The projections also start from a base-year assumption of 97,233 in 2010 relative to 91,252 reported by Census 2010. The projection indicates 48 percent growth over the 30-year period from 2010 to 2040, when the population is shown approaching 144,000 after surpassing 139,800 in

## PHENOMENAL GROWTH PHASE

The U.S. Census Bureau recently identified Pearland as the 15th fastest growing community in the nation among cities with 10,000 or more residents in 2000. Pearland's population growth of 142 percent during the 2000s made it the fastest growing city in the Houston metropolitan area and the second fastest growing city in Texas during that decade.

2030. Interestingly, this projection also considers the potential pace of growth, assuming that much of the increase will occur in the first half of the projection period by 2025 – with the largest percentage increase (14.7 percent) occurring in the first five years (111,478 persons by 2015). The rate of growth drops off in each ensuing five-year period, although the lower percentages still apply to an ever-expanding “pie,” resulting in continued strong numerical growth.

In recently updating its Water Master Plan, which focuses on areas that receive water service from the City (versus areas served by others, particularly Municipal Utility Districts in the area), the City estimated its service area population in 2012 as 94,100 persons. A near-term projection for 2015 was 110,400. The next projection was 132,100 in 2022, with this year selected as an anticipated point when annexation activity will pick up. After another 20 years, in 2042, when the water service area is expected to encompass the entire ETJ, the projected build-out population at that point is 224,600.

Finally, in support of its upcoming 2016 Regional Water Plan, the Texas Water Development Board in October 2013 released updated statewide, regional and community-level population projections for 2020 through 2070. As with any such exercise, the Board's projections rely on certain assumptions and are not as customized as local projections in terms of accounting for potential increases in incorporated territory through annexation. With these limitations in mind, as well as the very long-range horizon that water planning requires, the Board projects that Pearland will have just over 115,000 residents in 2020, will pass the 150,000 mark in 2050, and will have just under 175,000 residents in 2070. This would represent 52 percent growth in population over the 50-year timeframe.

It should be noted that the City's newest available population estimate, through December 2014, had the in-City population at 112,300 persons, which already exceeds some of the future-year projections from other sources cited in this section.

## BOTTOM LINE

It is wise for cities to think in terms of a range of potential growth rather than an absolute number given the uncertainty of any small-area forecast that extends beyond a few years. As illustrated in **Figure 2.1, Assumed Future Population of City Limits and ETJ**, it is assumed for this Comprehensive Plan that the area within Pearland's current City limits will reach a build-out population in a range from 185,000 to 195,000 persons by 2030 (with the extent of ETJ population at such milestone points dependent on the direction and timing of any annexation activity by the City). Additionally, it is assumed that the combined area within the City limits and ETJ will reach a build-out population of just under 225,000 persons by 2042. These assumptions are based on:

The City's population estimate from early 2014 of approximately 106,500 persons within the City limits and 26,900 in the ETJ, for a combined total of 133,400.

Using 190,000 for the City limits as an approximate midpoint between a 2030 projection of 193,498 in the 2010 Parks and Recreation Master Plan and a City-produced projection at that time of 186,050, along with the stated assumption in recent annual City budget documents that the community will be approaching build-out in about 2025.

Adapting the assumption above from the City's water master planning that the combined City limits and ETJ will reach build-out soon after 2040, with a projected maximum population of roughly 225,000 persons.

These build-out assumptions would mean the addition of just over 80,000 more residents within the current City limits over the next couple of decades. Additionally, this would mean that the combined City plus ETJ population (133,400 in early 2014) would increase by just over another two-thirds, or another 91,600 persons, over roughly the next 25 years.

Soon after the projections above were compiled, the Houston-Galveston Area Council (H-GAC) released new regional population and employment forecasts

through 2040 in support of its 2040 Regional Transportation Plan (RTP) update. While the Mobility section of this Comprehensive Plan cites some data from the prior 2035 RTP, no 2040 H-GAC data is reflected in this plan or factored into its population projections or the infrastructure and land use planning in other sections. This is advantageous as the City has found that, given the extent to which Pearland’s immense growth has outpaced the region-wide trend, H-GAC data has tended not to be a true representation of Pearland’s actual or projected future population (although more recent H-GAC numbers appear to be more in line with City numbers).

Since 2004 the City has maintained and frequently updated its own customized population estimates and projections based on residential building permits issued, persons per household findings from Pearland ISD demographic studies, and expected future construction of single- and multi-family dwellings based on land entitlements. The City routinely monitors its own figures and those produced by H-GAC, the U.S. Census Bureau, and others. This Comprehensive Plan and other key City plans and studies (e.g., the 2013 update of the City’s Water and Wastewater Impact Fee Report) rely on the more refined and localized estimates and projections the City is able to produce.

## Legacy of Past Long-Range Planning

The “20/20 Vision Statement” from the City’s 1999 Comprehensive Plan update – which is still featured today on the City’s website – set out a marker that Pearland would be “identified as one of the most livable places in the United States in 2020.” With regard to promoting and planning for the community’s growth, other relevant assertions about desired conditions in 2020 include:

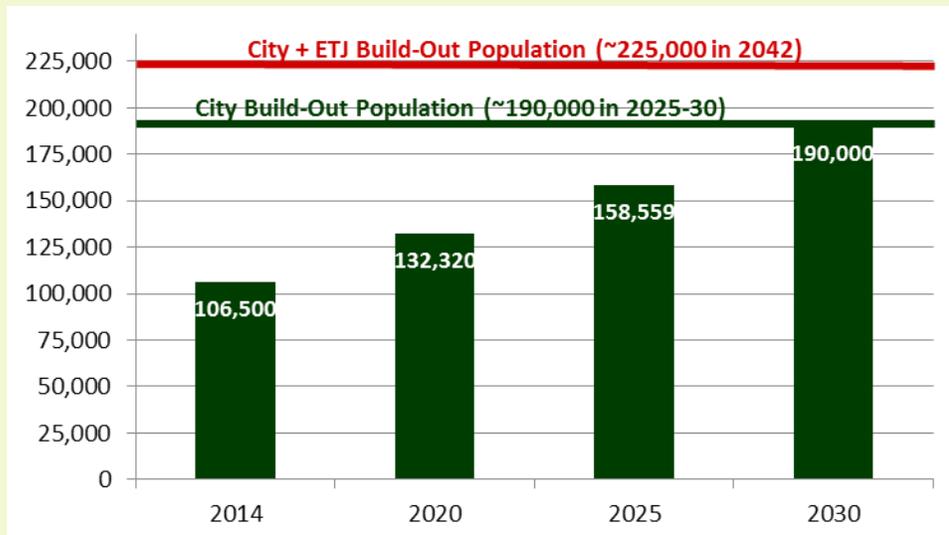
Pearland offers a vigorous, diversified economy solidly based upon a pro-growth business environment.

This family-oriented, Gulf Coast city manages its growth through proactive involvement of citizens who are committed to improving their quality of life and preserving their community values.

A common theme across the 1999 plan sections addressing Drainage and Flood Control, Water and Wastewater, and Community Facilities involved the “challenges” and “struggles” of the City to plan for and make necessary improvements amid rapid growth. The City’s westward growth trend was a further challenge, along with the area’s natural constraints (e.g., extremely flat landscape, periodic intense rainfall and tropical storms, limited capacities

**FIGURE 2.1,** Assumed Future Population of City and ETJ

Source: City of Pearland Planning Department (2014 estimate, projections through 2030); Water Master Plan (2042 build-out projection)



of most existing waterways, etc.). The plan describes systems “pushed to their limits,” especially during the 1990s, and emphasized that continued growth and development would depend upon ongoing improvement of these essential systems, where the City was, in fact, making significant progress. Particular priorities included:

Reducing localized flooding through continued focus on regional and on-site storm water detention, inter-agency initiatives (especially regarding Clear Creek flooding), high drainage standards for development and associated fees to fund improvements, prioritization of needed improvements, and coordination of Drainage District easements for maintenance – and also for their potential recreational use and aesthetic benefit.

Securing additional long-term water supply, plus ongoing water system investments involving additional ground water wells, ground and elevated water storage and associated pumping, and targeted distribution system upgrades.

Expanding two existing wastewater treatment facilities and constructing two new plants over the next 20 years, especially to address future growth west of SH 288, along with ongoing collection system expansion and upgrades.

Ongoing coordination with Municipal Utility Districts (MUDs) in the area that had constructed and operated their own water and wastewater systems, including two non-City wastewater treatment plants at that point serving the Country Place/Southdown developments (MUDs 4 and 5) and Silverlake development (MUDs 1, 2, 3 and 6) on the western side of the city.

Pursuing opportunities to coordinate infrastructure, parks and aesthetic improvements, especially at the 108-acre site of the Southwest Environmental Center (SWEC)<sup>1</sup> along Mary’s Creek (and future Magnolia Boulevard extension), where conceptual plans included one of the City’s new wastewater plants (to be operational by 2000, with capacity to support substantial future growth in the city) plus multiple detention basins and associated recreational amenities and wetlands preservation.

Upgrading existing community facilities and acquiring sites for future facilities better positioned for expanded service areas and for future annexations (and for better east side emergency access), including site acquisition and initial planning for a new Public Safety Center north of FM 518 along Cullen to house central police, justice, and fire functions, potential east and west police substations, up to six other new fire stations beyond existing locations (to maintain a 1.5-mile service area radius), new training facilities for both police and fire, appropriate siting of public works functions across the community, and additional administrative, public assembly and library space.

The City-prepared **Annexation Ordinances Map** included in this plan section provides a visual depiction of how Pearland’s territorial growth progressed over time, dating back to the original Old Townsite area in 1959, and then accelerating with the significant westward expansion that started in the 1990s. This annexation history is another legacy of the City’s past planning for growth and extension of public infrastructure and services across a much larger geographic area. In Pearland this often occurred in conjunction with the formation of in-city Municipal Utility Districts (MUDs) as an available mechanism in Texas for facilitating necessary infrastructure in conjunction with housing and economic development needs.

## Status and Outlook for Utility Infrastructure

This section highlights strategic issues and needs and provides related summary information about the City’s water, wastewater and storm drainage systems. With regard to water and wastewater, more detailed information and maps are available in the most recent update of the City’s Water and Wastewater Impact Fee Report from May 2013. The Impact Fee Report includes specific capital project needs involving the water distribution and wastewater collection systems and elevated water storage and pumping, which go beyond the projects described in this section focused on major source water and wastewater treatment upgrades. The report also provides consolidated information on both water and wastewater planning over a 10-year period, even longer in some cases, and ultimately through a projected build-out point for the Pearland City limits and ETJ in the early 2040s.

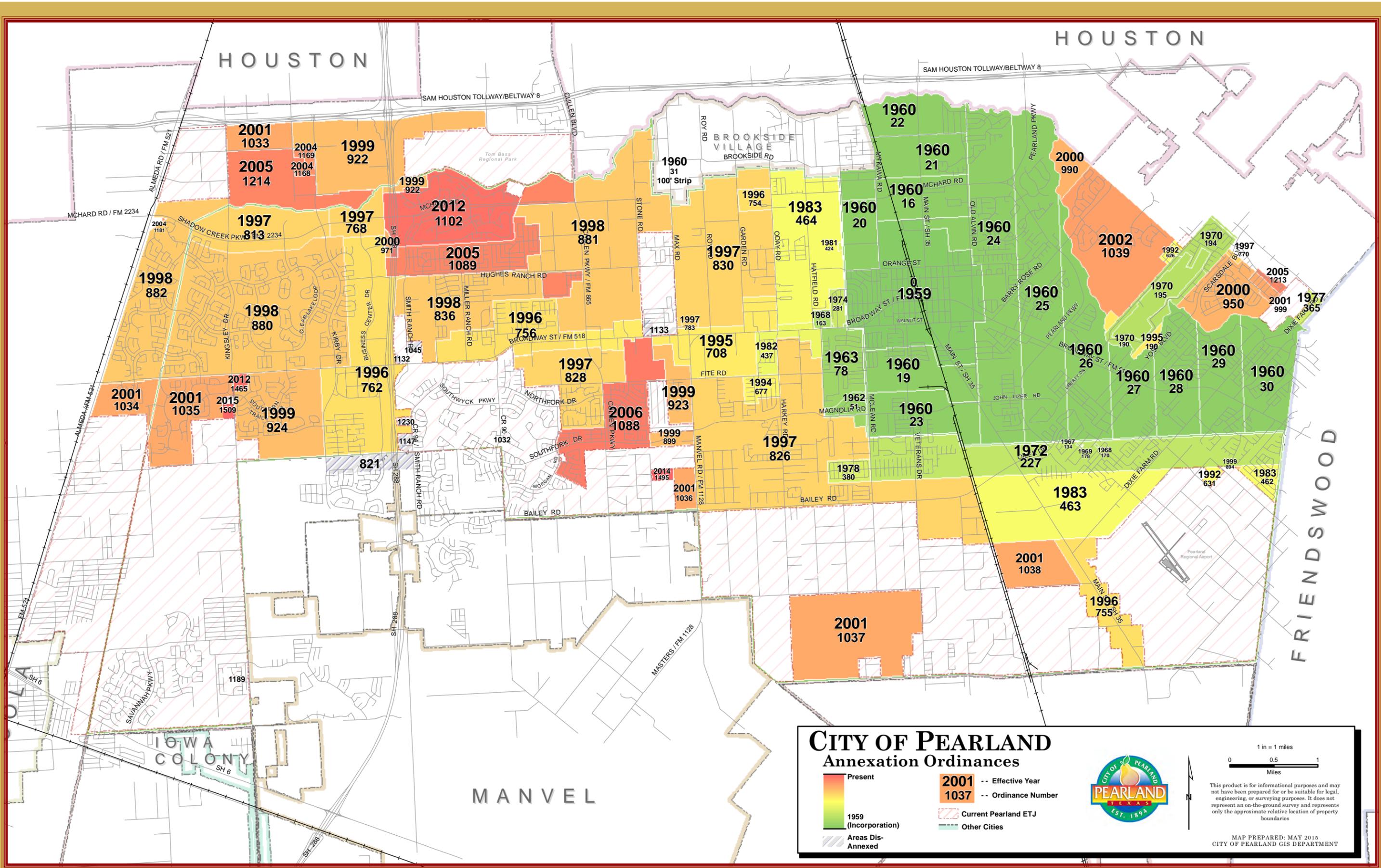
<sup>1</sup> Since renamed the John Hargrove Environmental Complex (JHEC).

HOUSTON

HOUSTON

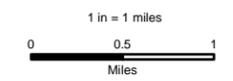
MANVEL

FRIENDSWOOD



### CITY OF PEARLAND Annexation Ordinances

- Present
- 2001 -- Effective Year
- 1037 -- Ordinance Number
- Current Pearland ETJ
- Other Cities
- Areas Dis-Annexed
- 1959 (Incorporation)



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MAP PREPARED: MAY 2015  
CITY OF PEARLAND GIS DEPARTMENT

**WATER**

The mission of the City’s Public Works Water Production division is to safely provide clean, superior, high quality potable water for the citizens of Pearland, while offering professional and timely customer service. The City continually strives to adopt new methods for delivering the best quality drinking water and remain vigilant in meeting goals of source water protection and development, water conservation, and community education while continuing to serve the needs of all water users.

**STRATEGIC ISSUES AND NEEDS**

Water supply planning is a key issue statewide and for southeast Texas communities. The City of Pearland’s expected growth over the next 25 years, from an in-City population of approximately 106,500 in early 2014 to ultimate build-out of its City limits and ETJ with a population of approximately 225,000, drives the need for the City to plan for the development of additional treated water sources.

**Basic Water Supply and Surface Water Conversion.** In recent years, the growing population and economic development of Pearland have led to increasing demands for water supplies. Historic reliance on groundwater supplies in the area has caused subsidence in the Gulf Coast Aquifer. Pearland is in a district

that is being encouraged, but not yet required, to transition from groundwater to surface water to help alleviate the subsidence of the Gulf Coast Aquifer. Additional surface water supplies will be required to meet higher water demands.

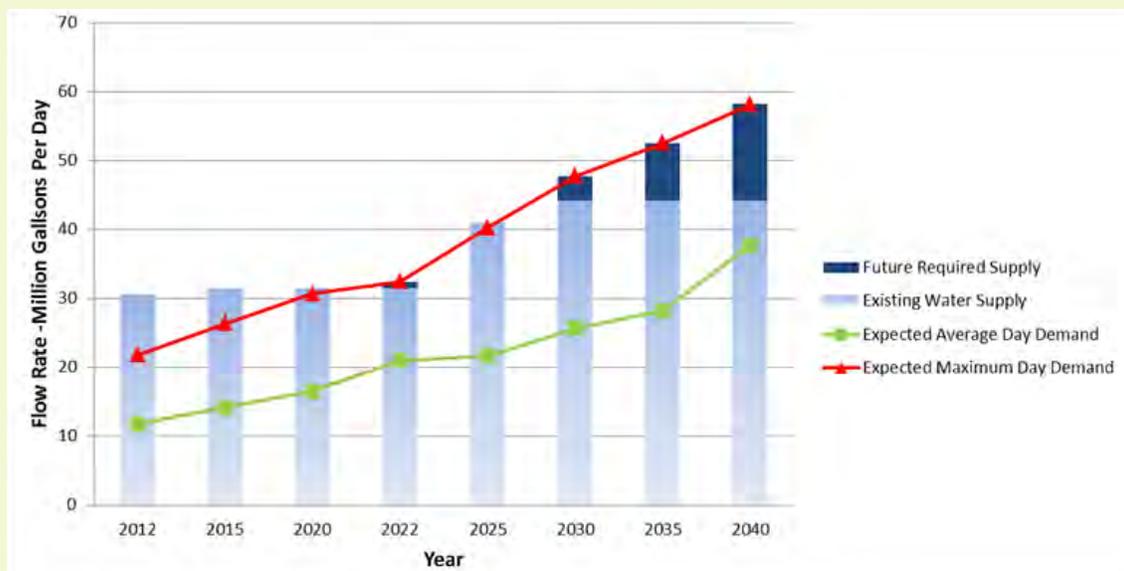
The City of Pearland recently decommissioned the Green Tee surface water connection and the Old City Hall Water and Alice groundwater plants. In addition, the City anticipates City of Houston infrastructure improvements that will allow it to receive its contracted 6 million gallons per day (MGD) of surface water – the amount of its current contract – at the Shadow Creek Water Plant in 2015.

The Texas Commission on Environmental Quality (TCEQ) requires that cities plan to provide 0.6 gallons per minute of source water per connection to the water system. Illustrated in **Figure 2.2, Expected Water Demand Versus Supply Through 2040**, is the City’s expected average day and maximum day water demand, based on anticipated population growth, compared to the existing supply capacity. The existing supply and demand calculation is based on the following assumptions:

- » Pearland is contracted to receive 6 MGD from the City of Houston at Shadow Creek

**FIGURE 2.2,** Expected Water Demand Versus Supply Through 2040

Source: City of Pearland Public Works Water Production Division





but is only able to rely on a maximum of 2.8 MGD with the current connection on high demand days. The City of Houston will remedy this with a waterline capital improvement project by 2015.

- » The City recently eliminated the existing Alice well, Old City Hall well, and Green Tee surface water connection.
- » All ETJ areas excluding the Savannah development will be added to Pearland's water system by 2025, with Savannah added by 2030.

As shown in Figure 2.2, the City will need to have developed additional source water by 2022 to meet expected maximum day demand. Additional source water can come from two potential projects:

1. increased supply through the Alice connection from the City of Houston; or
2. construction of a new surface water plant.

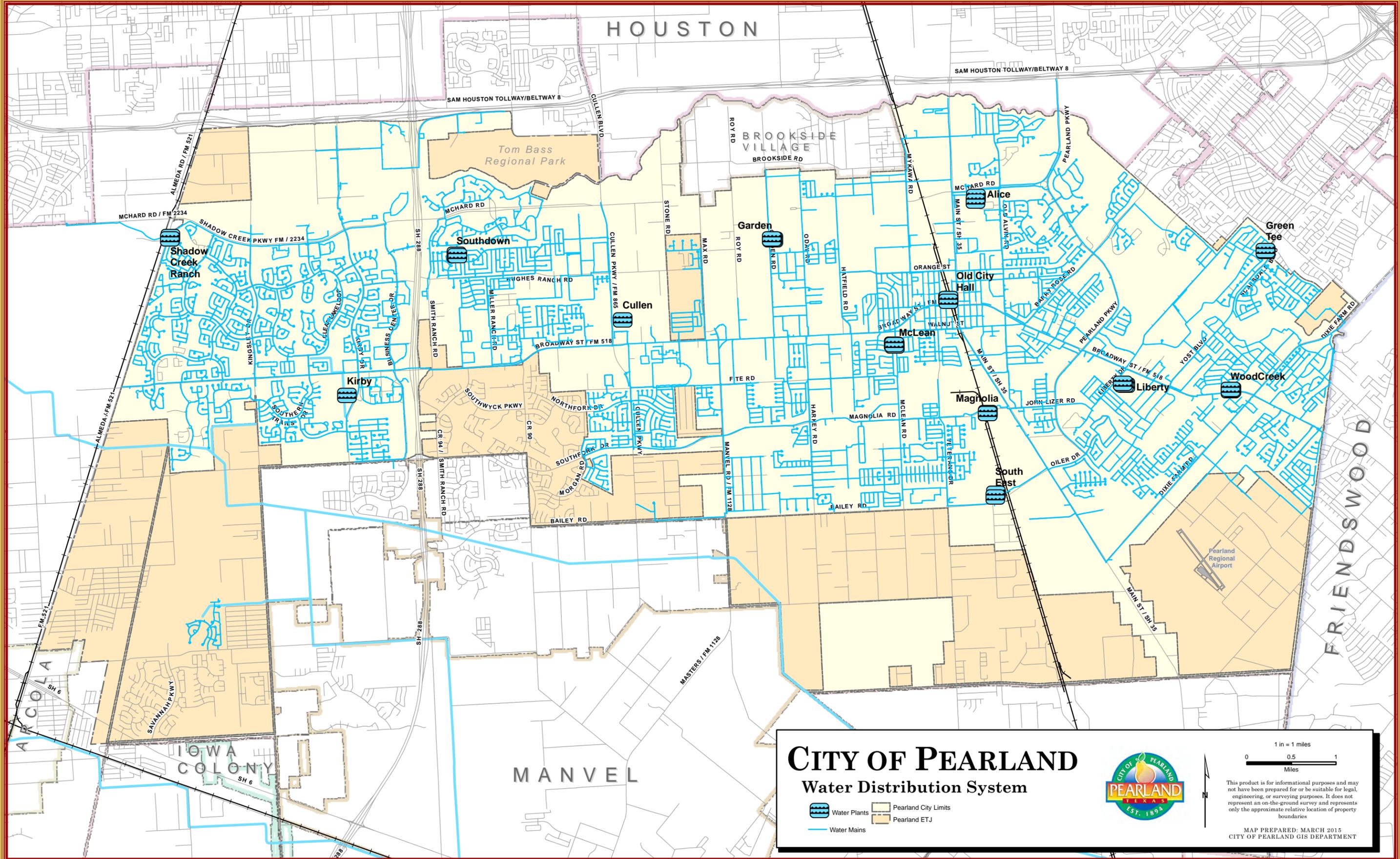
Both projects were identified through the City's long-term water infrastructure planning and are documented in the most recent update of the City's Water and Wastewater Impact Fee Report from May 2013. Since 14 MGD is needed by the point of City build-out, increasing the capacity of the Alice plant would still require the construction of a new, smaller surface water plant. Additional source water capacity may be implemented at the existing Alice Water Plant or the future surface water plant. However, for optimal operation of the City's water system, and based on the location of the growth in

demand through 2022, the City should plan to implement additional source water capacity by 2022 through the construction of a new surface water plant located in the southwest area of the City.

The required capacity by 2022 is a 5 MGD surface water plant with an ultimate build-out capacity of 10 to 15 MGD depending on the additional capacity obtained at the Alice connection. It is estimated that a 10 MGD facility will be required between 2030 and 2035 if the 5 MGD Alice connection expansion is not complete. Based on the American Water Works Association's industry standard curve of water treatment facility construction costs, the ratio of construction cost for a surface water plant between 5 and 10 MGD is 1.11. There would be an 11 percent economy of scale savings from construction of a 10 MGD facility for operation in 2022 versus construction of a 5 MGD facility for operation in 2022 with an additional 5 MGD expansion at a later date. Therefore, the City should plan to design and construct a 10 MGD surface water plant that can begin operation in 2022. Overall, the required additional future capacity by 2035 is approximately 10 MGD and by 2040 (ultimate City build-out) is an additional 15 MGD.

#### **Ongoing Planning and Upgrades to Water System Components.**

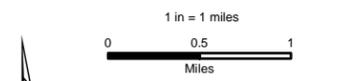
In addition to source water development projects, the City has water transmission, distribution, and storage projects included in its five-year and longer-range capital planning. Such improvements are also needed given ultimate City plans to extend water service to residential and commercial customers as the City continues to develop and progress toward build-out. The City's current model-based planning, for interim milestone years and ultimate needs, identifies the major water system projects required to take the City to expected build-out of the system while still meeting all TCEQ requirements for source water capacity, pumping capacity, and storage capacity. However, it is important that the City update its water master planning document every five years, or as dictated by the pace of land development activity, to ensure that projects are developed within the required timeframe to accommodate growth-induced demands. The City-prepared **Water Distribution System Map** included in this plan



# CITY OF PEARLAND

## Water Distribution System

-  Water Plants
-  Water Mains
-  Pearland City Limits
-  Pearland ETJ



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MAP PREPARED: MARCH 2015  
CITY OF PEARLAND GIS DEPARTMENT

## Pearland Commitment to Capital Investment

Pearland has a well-established record of focusing on utility infrastructure and public facility investments through a robust capital improvements planning (CIP) process. This is especially significant at a time when the “report card” for the nationwide infrastructure status and outlook remains disappointing, as evaluated and scored each year by the American Society of Civil Engineers (ASCE).<sup>1</sup>

ASCE issues an annual report and call for action that “depicts the condition and performance of the nation’s infrastructure in the familiar form of a school report card – assigning letter grades that are based on physical condition and needed fiscal investments for improvement.” The 2013 national Report Card assigned a D+ for all forms of U.S. infrastructure, ranging from utility and flood protection infrastructure (drinking water, wastewater, dams and levees) to all forms of transportation infrastructure (roads and bridges, freight rail, aviation, inland waterways, and transit). Both drinking water and wastewater received a D grade. ASCE continues to assign such low grades to draw attention to the ever-increasing scale of the national infrastructure challenge, and to the costs of continued deferral of necessary capital investments at all levels of government. For the nation to reach an acceptable grade by 2020, ASCE estimated necessary investment of \$3.6 trillion starting in 2013.

Even within Texas the City of Pearland excels when considering the last ASCE Report Card issued specifically for the Lone Star State in 2012. At that point Texas received a C- grade for wastewater infrastructure, D for flood control, and D- for water infrastructure. The State of Texas reported \$26 billion in drinking water infrastructure needs over the next 20 years, and \$11.5 billion in needed wastewater investments.

<sup>1</sup> 2013 Report Card for America’s Infrastructure, American Society of Civil Engineers (accessed on 03/21/14 at <http://www.infrastructurereportcard.org/>).

section illustrates the extent of the City’s water system.

As Pearland approaches its build-out population and the need for new water infrastructure decreases, the City will need to turn its attention to developing a plan for investing in the replacement and renewal of existing water infrastructure. Such replacement and renewal is already occurring in older areas of Pearland, but the City will need to develop an overall citywide plan for the future. This is to ensure that future City water customers will enjoy the same level of service experienced by past customers.

### WATER SUPPLY

The City’s water customers are fortunate because they enjoy an abundant water supply from three sources. The City draws water from 10 City-owned wells, which tap the Chicot and Evangeline aquifers. The City’s second source is water purchased from the City of Houston, which Pearland receives from two surface water connections. The third source is raw water from the Gulf Coast Water Authority’s American and Briscoe Canal System.

#### *Ground Water*

- The 10 City-owned wells have a combined pumping capacity of 13,360 gallons per minute.

#### *Surface Water*

- The current surface water contract for the Alice Water Plant is a pay-as-you-go contract for up to 10 million gallons per day.
- The current surface water contract for the Shadow Creek Water Plant is a take-or-pay contract of 40 million gallons per month (1,333,333 gallons per day) with a maximum day capacity of 6 million gallons per day.

#### *Raw Water*

- The City recently entered into a long term raw water supply contract with the Gulf Coast Water Authority (GCWA) to purchase up to 10 MGD. This contract arrangement is coupled with the City’s purchase of the former Chocolate Bayou Water Company through the GCWA for an additional 10 MGD. These waters will be used at the City’s future surface water purification plant.

## WATER TREATMENT AND STORAGE

- Combined, the City's water treatment facilities provide roughly three billion gallons of clean drinking water every year.
- The City provides continuous production of water to residential and commercial customers, with no current wholesale customers for City water.
- The total available city-wide storage capacity is 19.1 million gallons. This combines the 14.6 million gallons in ground storage and the 4.5 million gallons of available elevated storage.

## WATER QUALITY

Water quality is maintained in the distribution system through continuous monitoring of water pressure and disinfectant residual. The Public Works Water Production division also collects hundreds of samples each year to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants as required by the State of Texas. Results of all water quality testing are reported in the City's annual Drinking Water Quality Report. Public water suppliers across the nation must provide these reports to their customers each year as required by the 1996 amendments to the Safe Drinking Water Act.

## WATER CONSERVATION

The TCEQ requires cities to adopt water conservation goals based on a water conservation plan. The City of Pearland completed its required water conservation plan in April 2009 and is currently in the process of updating its plan. As part of this plan, the City has developed five-year and 10-year goals for per capita municipal water use. The City's average per capita consumption is approximately 140 gallons per capita per day. The statewide goal is for water consumption to be less than 140 gallons per capita per day. The City's other goals for water conservation include:

- Keep the five-year average water use as of 2014 below 109 gallons per capita per day (five-year goal).
- Keep the five-year average water use as of 2019 below 107 gallons per capita per day (10-year goal).
- Maintain the level of unaccounted water in the system below 10 percent annually.
- Implement and maintain a program of universal

metering and meter replacement and repair.

- Increase efficient water usage through a landscape water management ordinance.
- Decrease waste in lawn irrigation by implementation and enforcement of a landscape water management ordinance.
- Raise public awareness of water conservation and encourage responsible public behavior by a public education and information program.
- Develop a system-specific strategy to conserve water during peak demands, thereby reducing the peak use.
- Delay and decrease capital expenditures required to serve Pearland's future growth.
- Further develop reuse and recycling of wastewater.

Regarding the last goal, the water conservation plan noted that – at that time, 2009 – the City was treating wastewater at four plants with a total combined capacity of 10 MGD. Reuse water was being used for wash down at the treatment plants. It was also noted that the City had developed plans with Brazoria County MUD #4 (encompassing the Country Place subdivision, which has since been annexed into the City) to use effluent for golf course irrigation, and also to irrigate a proposed arboretum/nature center. The City is in the process of setting up an agreement with Brazoria County MUD #4 for reuse water for golf course irrigation. Additionally, the City has two other reuse agreements in place but is not yet supplying reuse water. One agreement would enable industrial customer Third Coast to receive reuse water from the Barry Rose Wastewater Treatment Plant for use in its industrial processes. A second agreement would enable the JHEC Wastewater Treatment Plant to supply reuse water for irrigating recreational grounds located adjacent to the plant.

Additionally, planned expansion of the Far Northwest Wastewater Treatment Plant could lead to reuse that would benefit Shadow Creek Ranch Park as the plant work will include upgrades to the existing disinfection system. However, additional disinfection modifications and distribution infrastructure would be required to implement a reuse system from this plant.

The City also intends to expand the use of "purple pipes" in Pearland, through which potable water can be conveyed and then converted for reuse. In addition to encouraging incorporation of purple

reuse pipes in irrigation plans and systems, the City could potentially require this practice through amendments to the Unified Development Code.

## WASTEWATER

The mission of the City's Public Works Wastewater Treatment division is to efficiently and effectively treat wastewater to protect the environment as well as public health, safety and welfare, while ensuring the effluent to the receiving stream meets or exceeds all environmental standards and regulations. The City provides wastewater collection, conveyance, and treatment for parts of the urbanized areas within its City limits and portions of its ETJ in Brazoria, Harris, and Fort Bend counties. At the time of this Comprehensive Plan update, the wastewater service area was approximately 48 square miles, which will change as the City incorporates Municipal Utility Districts or otherwise extends service.

The City currently has five wastewater treatment plants: John Hargrove Environmental Complex (JHEC), Longwood, Barry Rose, Far Northwest, and Southdown. The current permitted total capacity of the plants is 11.55 million gallons per day (MGD). The existing city-wide sanitary sewerage system consists of approximately 408 miles of collection system lines and 76 sanitary sewerage lift stations. The City treats 100 percent of the collected wastewater. The system relies on gravity to move the wastewater to the treatment facilities. When that is not enough, lift stations are used. The effluent produced is currently discharged into Clear Creek and Mary's Creek.

## STRATEGIC ISSUES AND NEEDS

Adequate treatment capacity is a principal need in the years ahead given the City's rate of population growth and land development. The wastewater collection system also requires attention, both to extend service to growth areas, and to rehabilitate portions of the system in Pearland's older developed areas.

**Added Treatment Capacity.** The Texas Commission on Environmental Quality (TCEQ) provides design criteria to be used as minimum guidelines for wastewater collection, treatment, and disposal systems. As part of the permitting requirements, whenever flow measurement for any wastewater treatment plant reaches 75 percent of the permitted average daily or annual average flow for three consecutive months, the permittee must initiate engineering

and financial planning for expansion and/or upgrading of the treatment and/or collection facilities. Whenever the 90 percent threshold is reached for three consecutive months, the permittee must obtain the necessary TCEQ authorization to commence construction of the necessary additional treatment and/or collection facilities.

The Reflection Bay Water Reclamation Facility is currently under design for a 4 MGD expansion. Because of rapid growth in the western portion of the city, this facility exceeded its permitted capacity in September 2014. The expansion is expected to be complete and operational between the Spring and Summer of 2018.

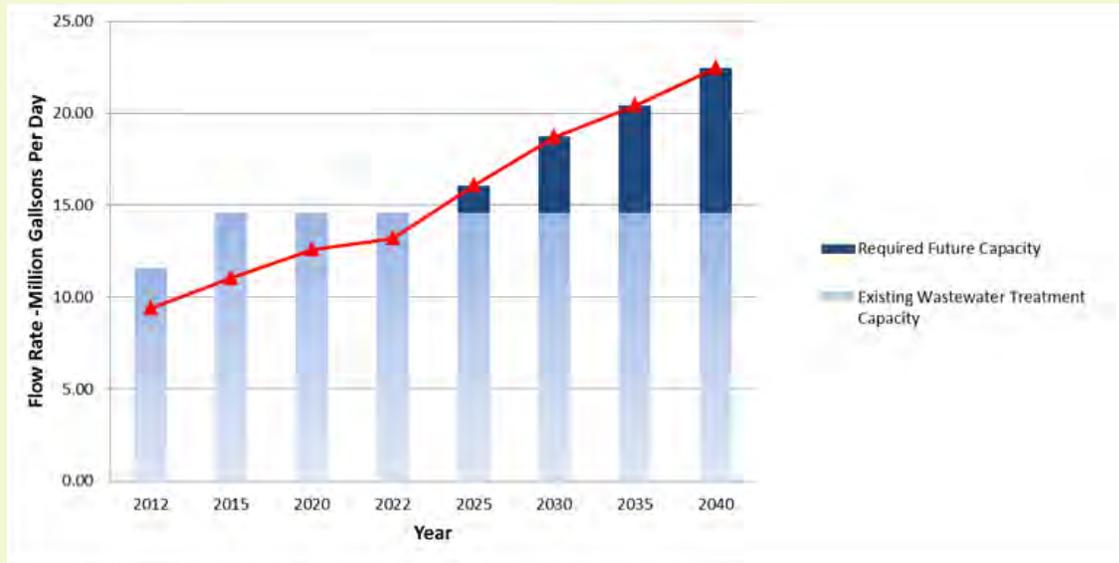
The Longwood Reclamation Facility is also approaching the limits of its capacity. Plans are in progress to redirect the flows from Longwood to both the Barry Rose and John Hargrove reclamation facilities. Portions of this project are currently under way with an anticipated decommissioning of the facility scheduled in approximately 2025.

Illustrated in **Figure 2.3, *Expected Wastewater Flow Versus Treatment Capacity Through 2040***, is the City's expected average day wastewater flow, based on anticipated population growth, compared to the existing wastewater treatment capacity. The existing capacity and projected flow calculation is based on the assumption that the Far Northwest Plant expansion currently under design will provide a treatment capacity increase of 4 MGD and the average wastewater flow rate per person is 100 gallons per day.

As shown in Figure 2.3, the City will need to have additional treatment capacity projects under design before 2025, in addition to the current Far Northwest Plant expansion project, for the additional capacity to be operational by the required timeframe. The City requires an additional 2 MGD operational by 2025, 5 MGD by 2030, 6 MGD by 2035, and an ultimate additional capacity of approximately 8 MGD. The City's current Capital Improvements Plan addresses the immediate need for additional treatment capacity by 2025 by identifying expansion projects for existing plants plus two regionalization projects. One project is for a portion of the Southdown service area, with flows to be redirected to the Far Northwest

**FIGURE 2.3,** Expected Wastewater Flow Versus Treatment Capacity Through 2040

Source: City of Pearland Public Works Wastewater Treatment Division



Wastewater Treatment Plant. Another is for the Longwood service area, with flows to be redirected to the Barry Rose and JHEC treatment plants.

Based on anticipated growth impacts the following major wastewater projects have been identified to address wastewater capacity requirements for expected growth in the next five years:

- » *Far Northwest Wastewater Treatment Plant Expansion.* The Far Northwest plant is permitted for an average annual flow of 2 MGD. During July 2013 the existing flows to the plant reached 75 percent of capacity. The project includes expansion of the existing 2 MGD plant to an intermediate 6 MGD capacity and ultimate 7 MGD plant. Based on the ultimate service area that includes diverted flows from the existing Southdown service area, it is estimated that the average annual flow will be approximately 6.75 MGD. The added capacity to 7 mgd will allow for service to areas outside of Shadow Creek Ranch including the ultimate build-out of the diverted Southdown service area.
- » *JHEC Wastewater Treatment Plant Expansion.* The existing 4.0 MGD plant will be expanded to increase the treatment capacity to 6.0 MGD. This expansion will help the plant meet the wastewater treatment needs of future development in the service area including the flows expected to be diverted from the existing Longwood service area.
- » *Barry Rose Wastewater Treatment Plant Expansion.* The Barry Rose plant is permitted for an average annual flow of 3.1 MGD. In the last two years of record flows, the annual average daily flow was 48 percent of the permitted flow. With the rapid growth in the service area, the City should evaluate the next expansion to the facility. Based on the ultimate service area, it is estimated that the average annual flow will be 3.94 MGD. This project will expand the treatment plant to 4.5 MGD to serve the growing population in this area. Also, a large portion of the Longwood service area flows will be redirected to the Barry Rose treatment plant in accordance with the Longwood regionalization plan.
- » *Longwood Service Area Diversion.* This project includes a force main diversion from the Liberty, Misty, Longherridge and Pirate Alley lift stations in the Longwood

wastewater treatment plant service area to the JHEC wastewater treatment plant service area. The diversion project is the first of several such projects to begin removing flow from the Longwood wastewater treatment plant service area. The first phase diversion will reduce by 8.6 percent the flow to the existing Longwood plant. The final phase of the project will convert the site to a regional lift station that will pump flows to the Barry Rose treatment plant.

- » *Southdown Wastewater Treatment Plant Expansion or Diversion.* The existing Southdown plant is permitted for an average annual flow of 0.95 MGD with a two-hour peak flow of 2,639 gallons per minute. In the last two years of record flows, the annual average daily flow was 50 percent of the permitted flow. Based on the ultimate service area, it is estimated that the average annual flow will be approximately 3.0 MGD with a two-hour peak flow of 10,420 gallons per minute. The 2002 Comprehensive Master Plan estimated an ultimate flow of 3.0 MGD. The Southdown plant has reported peak wet weather flow of 1,263 gallons per minute under a two-day rainfall event totaling 10 inches. An alternative to this expansion would be diversion of the flows to the Far Northwest treatment plant. The future expected Southdown service area diverted flow is being included in the Far Northwest Phase 2 expansion design currently in process.

**Ongoing Planning and Upgrades to Wastewater System Components.** In addition to wastewater treatment plant expansion projects and service area diversion projects, the City's five-year and longer-range capital planning includes lift station and trunk sewer line projects. These system improvements are necessary to extend sewer service to residential and commercial customers. All of the major collection system and treatment plant projects are required to take the City to expected build-out of the wastewater system while still meeting TCEQ requirements for treatment capacity, lift station pumping capacity, and pipeline collection system capacity. However, it is important that the City update its wastewater master planning document every five years, or as dictated by the pace of land development activity, to ensure

that projects are developed within the required timeframe to accommodate growth-induced demands. The City-prepared **Sanitary Sewer Collection System Map** included in this plan section illustrates the extent of the City's wastewater system.

As Pearland approaches its build-out population and the need for new wastewater infrastructure decreases, the City will need to turn its attention to developing a plan for investing in the replacement and renewal of existing wastewater infrastructure. Such replacement and renewal is already occurring in older areas of Pearland, but the City will need to develop an overall citywide plan for the future. This is to ensure a consistent level of service, and the sustainability of the wastewater system, into the future.

## STORM DRAINAGE

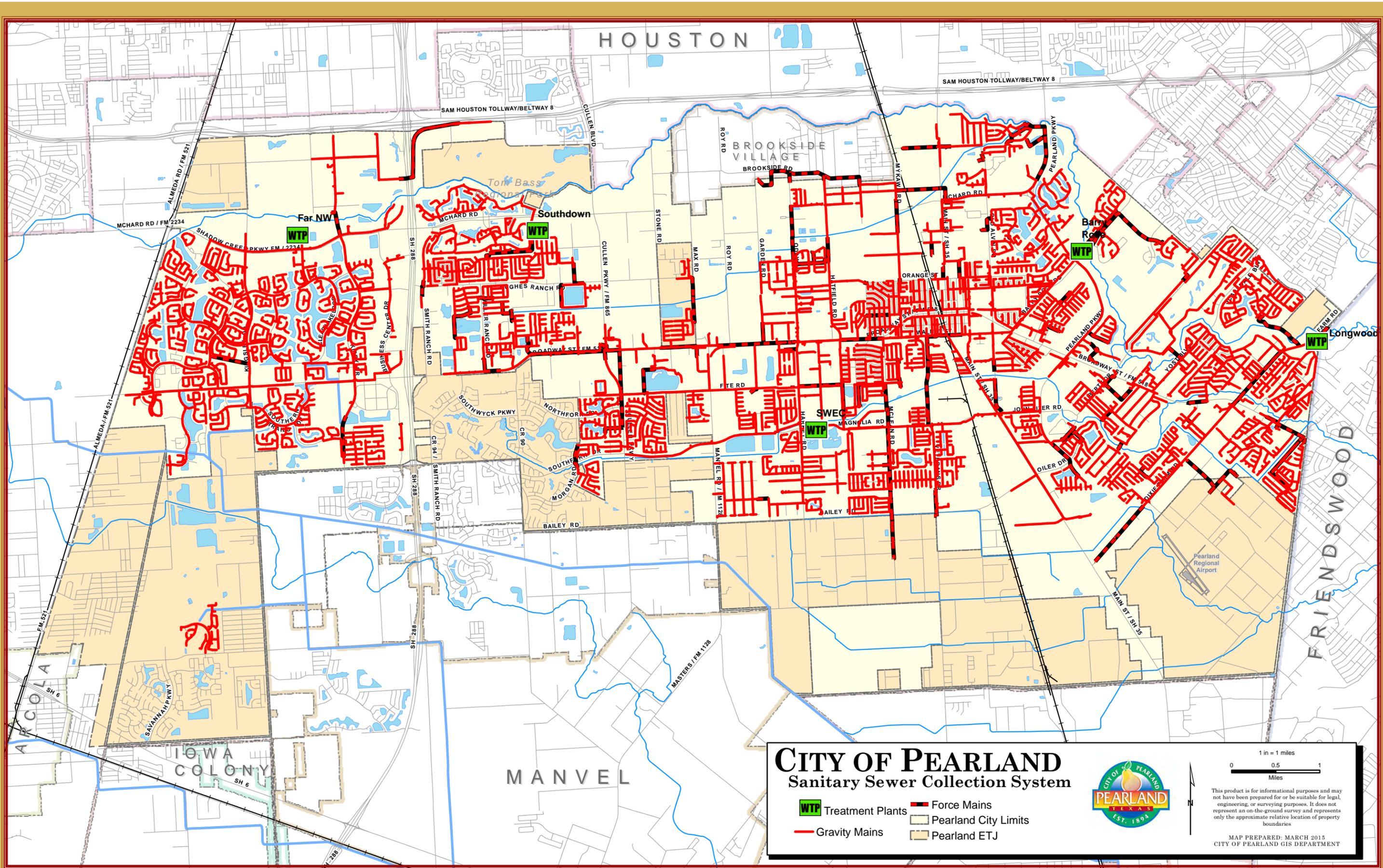
The mission of the City's Public Works Streets and Drainage division is to create and maintain a safe and effective transportation and storm water drainage infrastructure throughout the city to meet the needs of the citizens and businesses of Pearland. Pearland's storm sewer system is made up of a series of ditches, culverts and underground pipes which collect storm water runoff and convey it to streams, bayous, and ultimately Galveston Bay. The City-prepared **Storm Sewer Collection System Map** included in this plan section illustrates the extent of the City's storm sewer system.

The City last updated its master drainage plan in 2008. This plan outlined the physical constraints and issues associated with the geology and topography of Pearland. The area's natural topography is generally flat with an average slope of two feet per mile. This slope runs from west to east, and the area from SH 35 to four miles east has the largest slope in the City at 16 feet per mile, or 0.075 percent slope.

Many areas within the City effectively have no slope. The railroad corridor through Pearland also creates a north-south "dam." The east-west crossings of the railroad dictate the current drainage channel paths. The American Canal is another overflow barrier that causes a "dam" effect in the southwestern area of the city. As a result, land south of the American Canal must drain to Mustang Bayou.

Pearland is drained by the following waterways:

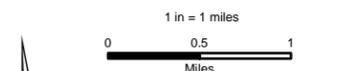
- Clear Creek



# CITY OF PEARLAND

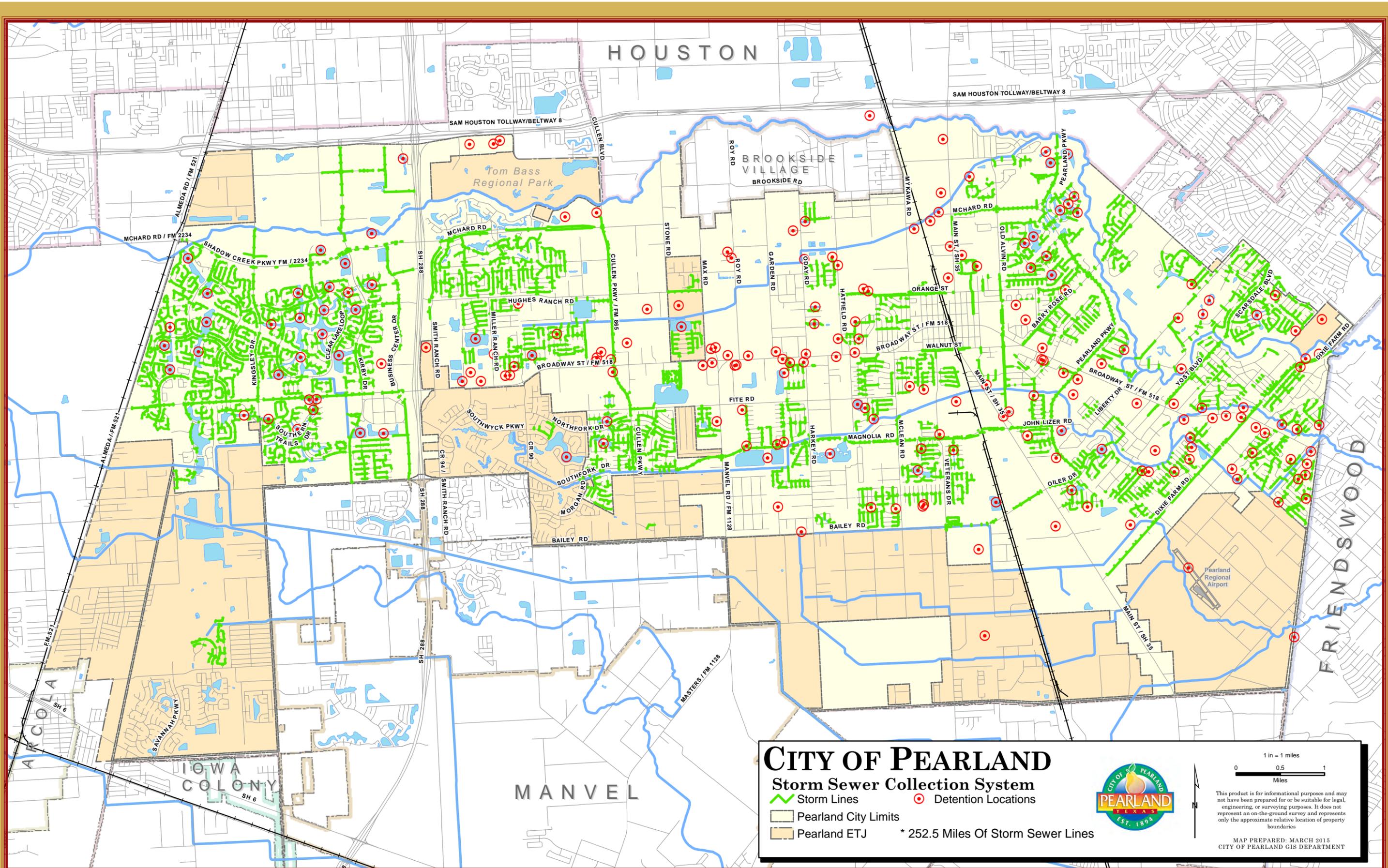
## Sanitary Sewer Collection System

- Treatment Plants
- Force Mains
- Gravity Mains
- Pearland City Limits
- Pearland ETJ



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MAP PREPARED: MARCH 2015  
CITY OF PEARLAND GIS DEPARTMENT

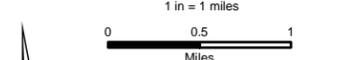


# CITY OF PEARLAND

## Storm Sewer Collection System

-  Storm Lines
-  Detention Locations
-  Pearland City Limits
-  Pearland ETJ

\* 252.5 Miles Of Storm Sewer Lines



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MAP PREPARED: MARCH 2015  
CITY OF PEARLAND GIS DEPARTMENT

Regional storm water detention basins at various locations across Pearland reduce flooding risk and also provide recreational and aesthetic benefits in some cases



Hickory Slough

Mary's Creek

Cowart Creek

Mustang Bayou

Flooding due to the area's relative flatness - in addition to the after-effects of intense rainfall in short periods, plus periodic tropical depressions and hurricanes - is the basic drainage planning issue for Pearland. Also, a layer of water-bearing, erosive sand is under most of the community. This fine sand is generally eight to 15 feet below the surface, but closer to the surface west of FM 1128. All underground work, including deep channels and detention basins associated with storm water management, must take into account this sand layer.

### STRATEGIC ISSUES AND NEEDS

The 2008 Updated Master Drainage Plan (UMDP) proposed drainage and detention capital improvement construction projects over the next 20 years. However, the UMDP did not address any of the routine culvert replacements, upgrades, or minor channel reworks regularly included in the work planned through the Department of Public Works annual budget.

**Near-Term Capital Project Priorities.** The initiatives described below address specific drainage issues and needs identified for resolution through the City's five-year Capital Improvements Plan. These projects and improvements will help to facilitate development and regionalization of small local detention ponds into a regionalized drainage system. The regionalization projects do not address repetitive flooding areas, nor

do they provide storage or general floodplain mitigation.

- » *Lower Kirby Urban Center Regional Detention.* This project was identified as one of the highest priorities through the City's Regional Detention Study conducted in 2010. The concept is also supported by the Lower Kirby Urban Center Master Plan and Implementation Strategy. The project will allow properties within the sub-watershed boundaries to contribute to the construction of the system or buy into the detention system in lieu of constructing individual ponds on each property. The detention project will also increase the overall extent of developable land in the Lower Kirby Urban Center area.

The Lower Kirby Urban Center Regional Detention project will provide regional storm water detention for the area bounded by Beltway 8 (north), Clear Creek (south), Kirby Drive (west), and SH 288 (east). The system will consist of one detention pond near Clear Creek based on preliminary studies. This detention pond will be combined with a widening of the Texas Department of Transportation (TxDOT) ditch to provide conveyance and storage between Beltway 8 and Clear Creek. The drainage study for the area was completed in the 2012 fiscal year. TxDOT, Harris County Flood Control District, and Brazoria County Drainage District No. 4 approvals and detailed design began moving forward in the 2013 fiscal year. The initial construction phase will consist of the inflow and outflow structures and pond excavation to improve the City's existing pond. Subsequent projects will increase the pond and drainage ditch sizes and be developer driven and funded.

- » *Cullen/FM 518 Regional Detention Pond.* This project is a City Council goal and was identified as one of the highest priorities through the City's Regional Detention Study conducted in 2010. This proposed detention pond, to be located southwest of the FM 518/Cullen Parkway intersection, will provide the required storm water detention for future development of approximately 155 acres of undeveloped land. This will facilitate future development along FM

518 and eliminate the need for detention ponds on individual properties along FM 518. Along with the detention pond, the project will include upgrades to an existing ditch and construction of underground storm sewer improvements required to convey development runoff. The Cullen/FM 518 Regional Detention Pond project does not address existing issues such as repetitive flooding areas or the need for additional storage or general floodplain mitigation.

- » *Cowart Creek Diversion.* The basis of the Cowart Creek diversion and detention project is to separate the drainage corridor out of the Bailey Road transportation corridor (FM 1128 to Veterans Drive). This diversion will allow for development of both the ultimate transportation and drainage facilities in separate corridors. The project includes construction of approximately 4,300 linear feet of interceptor box culverts included as part of the Bailey Road project; 3.2 miles of diversion ditches already constructed; various road ditch improvements that will be completed by the City in 2015; and a 1,200 acre-foot regional detention facility already constructed. The City has completed part of the project in cooperation with Brazoria County Drainage District No. 4 under the terms of an interlocal agreement.
- » *Old Townsite Drainage.* The City's Sub-Regional Detention Master Plan identified an area within Pearland's Old Townsite as a potential location for a sub-regional detention pond. The 41-acre service area is located at the southwest corner of Walnut Street and Galveston Avenue and extends to SH 35 and FM 518, which is within the southeast quadrant of the Old Townsite.

The project scope will include developing a drainage and detention plan for serving the area with a sub-regional detention pond. A Preliminary Engineer Report will determine the pond location and size and conveyance to the sub-regional facility. Phase 1 of this project focuses on the area between Walnut Street and FM 518. The impracticality of constructing on-site detention in the Old Townsite area has made redevelopment difficult. Implementation of the project will help alleviate this constraint, allowing for

development of approximately 15 acres, and also providing regional detention for the redevelopment or more intensive use of approximately 20 acres. Additionally, the detention pond will mitigate impacts from expansion of the roadway network within this portion of the Old Townsite. The Old Townsite Drainage project does not address existing issues such as repetitive flooding areas or the need for additional storage or general floodplain mitigation.

- » *McHard Road Second Outfall.* The current drainage for portions of McHard Road flows through the Country Place area and utilizes existing drainage facilities. These facilities drain south through the subdivision to an east-west drainage ditch south of Country Place. This project will create inlets along McHard Road to drain to some of the ponds in the golf course within the subdivision. This project will also provide a second outfall to relieve flows currently running south, which will alleviate drainage issues on McHard Road and in the subdivision area to the south. Budget for this project was included as part of the 2011 bond sale by Brazoria County MUD #4.
- » *David L. Smith Detention Pond Expansion Phase I.* In accordance with the City's Master Drainage Plan, there is a need for additional storage capacity within the Clear Creek watershed. This storage will mitigate existing flooding and provide capacity for future development. The detention pond expansion will lower the 100-year water surface elevation of Clear Creek, alleviating existing floodplain issues. This will facilitate future expansion of the Pearland campus of the University of Houston at Clear Lake, as well as other City facilities on the David L. Smith site. To accommodate future development along McHard Road between Old Alvin Road and Pearland Parkway, Phase 1 of the project will expand the existing David L. Smith detention facility by approximately 150 acre-feet. This expansion will occur to the west of the existing McHard Road outfall ditch and south of the pipeline easement. A future phase will add another 150 acre-feet, providing 300 acre-feet of total detention for further floodplain improvements and regional detention.



The Pearland Public Safety Building, completed in 2010, provides a centralized facility for Police Department functions

### **Ongoing Planning and Upgrades to Drainage System Components.**

The City has major storm drainage regionalization projects included in its near-term and longer-range capital planning to prepare for expected development. However, the City needs to expand the scope of its planning to address identified repetitive flooding areas along with the regional detention projects for general floodplain mitigation. The City has identified specific projects required to take the City's drainage system to build-out capacity. However, it is important that the City update its master drainage plan regularly, especially as dictated by the pace of land development activity, to ensure that projects are developed within the required timeframe to accommodate growth-induced drainage needs. The 2008 UMDP is already outdated and requires an update, especially to provide necessary and accurate input to the City's five-year capital budgeting. This and all future plan updates must also account for any significant shifts in development trends or patterns that occur as the City progresses toward build-out conditions.

Just as with the City's water and wastewater infrastructure, as the City approaches its build-out population and the need for new storm water infrastructure decreases, the City will need to turn its attention to developing a plan for investing in the replacement and renewal of existing drainage infrastructure to provide the same level of service in the future.

## **Status and Outlook for Public Safety Services**

### **POLICE**

In 2012 and 2013, Pearland was identified as among the top 50 safest cities in the U.S. Pearland has also been recognized in many news articles and other surveys for feeling safe. The Pearland Police Department takes pride in addressing issues, both big and small, that affect public safety.

The Police Department provides its services within the current City limits. The Department has historically implemented a Community-Oriented Policing approach, by focusing patrols within districts, with officers regularly work the same districts so they build relationships and become familiar with conditions and patterns of activity. While this has served as a positive foundation for citizen safety, the Department is adding data-driven solutions to accomplish the mission of reducing crime and disorder in the 21st century.

The Department also supports surrounding agencies by responding to incidents outside its jurisdiction upon request in a mutual aid capacity when the police agency with jurisdiction is unable to respond immediately, when officers view crimes in progress, or when rapid response is needed due to an immediate life-threatening situation. The Department currently maintains memoranda of understanding with a number of surrounding agencies, which continue to add value to public safety in Pearland. Through a Pearland Independent School District (ISD) partnership, the Department assigns School Resource Officers to the PACE center, junior and senior high campuses. The School Resource Officers also respond to elementary schools and school events as needed. The Alvin and Pasadena ISDs maintain their own police departments which coordinate with Pearland PD. The City is also served by Brazoria County Sheriff, constables and other law enforcement.

### **STRATEGIC ISSUES AND NEEDS**

Pearland's continued growth will be the most significant factor in the development of the Police Department for the years ahead. Department resources have increased in response to recent City annexations and permits. The Department will have further needs depending on the extent and timing of future annexation activity, population growth, and development. Keeping up with growth is also intricately linked with changing technology.

**Database and Reporting Enhancements.** The Department regularly evaluates its equipment,

technology and communications needs and budgets for replacements and upgrades as needed, especially as technology evolves

In 2009 the Department changed records management software, migrating from HTE Crimes to Sungard OSSI. The migration provides a platform for deriving useful information from police records, a critical component of the Department's data-driven policing efforts. Working with Municipal Courts, the Department is looking to switch to electronic citations as this saves manual data entry by the courts, reduces paper waste, saves money, and improves the local database.

A major initiative utilizing technology will be online reporting. This program will allow citizens to report certain criminal activity without an in-person response from a Police Officer. With all of the technology needs, the Information Technology Department works to keep the more than 150 computers and servers up to date with additional equipment to support the Department's growing needs.

**In-Car-Video and Body-Worn Cameras.** Additional technological advances have been made with in-car-video. However, the in-car-video camera systems have limitations for certain police actions that are out of view or out of the audio receiver range of the system. The Department is researching appropriate body-worn camera systems to implement in conjunction with the in-car-video. These newest systems provide critical video evidence for use in criminal prosecution, employee training and evaluation, public accountability, and limiting the liability profile of the City.

To effectively deploy body-worn cameras additional considerations need to be taken into account including replacement schedules, State and Federal regulations, and internal data management policies and personnel.

**Radio Communications.** In 2013, emergency services found that radio communications equipment utilized was not performing to acceptable standards. To address those issues and put the City in compliance with upcoming Federal mandates, the City migrated to the City of Houston's radio system and purchased new equipment through their contract with Motorola in 2014. The Department continues to evaluate this migration and must ensure that all communications are within compliance. **Communications are critical links in public safety and the mapping databases, vehicle locations, and coordination with Pearland FD, which has emergency medical dispatch through Harris County.**

**DDACTS Implementation.** Data-Driven Approaches to Crime and Traffic Safety (DDACTS) is the newest model of policing. Coupling community policing outreach with data and crime mapping, the DDACTS model is endorsed by the International Association of Chiefs of Police, National Institute of Justice, National Highway Traffic Safety Administration, National District Attorneys Association, Federal Highway Administration, and many others. The Police Department is implementing the DDACTS model during fiscal year 2016. In 2015, the addition of the Crime Analyst position allowed the development of a comprehensive Crime Analysis program to begin leveraging data for targeted enforcement in areas with concentrated criminal activity, traffic crashes, and traffic complaints. The Patrol Division is adding a Specialized Operation Squad with personnel assigned to a Proactive Unit and Traffic Unit. This team will work together to address the identified areas and positively impact crime and traffic in the area.

**Fleet Maintenance.** The Police Department currently has a marked fleet of nearly 120 vehicles servicing the Patrol, Traffic, SRO and Community Services Units. The City Service Center manages the vehicle fleet and determines replacement needs based on mileage and resale value. Police patrol vehicles may be moved to the Spare Fleet and reach up to 150,000 miles before replacement. In general, one-sixth of the Patrol Fleet may be marked for replacement on an annual basis.

**Ongoing Training Needs.** The Police Department strives to be a regional provider of quality Law Enforcement training so as to provide excellent customer service to the community. The Public Safety Building includes two large dedicated training rooms that can

accommodate up to 100 persons. This space is available to other groups, while the Department also uses a third training room in a secure area of the building, for up to 25 individuals engaged in in-house training and distance learning. The Department has experienced a rapid growth in personnel, and approximately one-third of all police officers have been with the department less than five years. The Department has placed great emphasis on training personnel to ensure the best response possible to the citizenry. In fiscal year 2014, the Department provided 162 days of in-service training to the officers and employees of Pearland and surrounding agencies. In 2016, each officer will receive a minimum of 80 hours of training to include a legislative update and, most importantly, certification as Mental Health Peace Officers. Pearland will be one of the only agencies in the State of Texas to have all personnel certified as Mental Health Officers, which far exceeds State standards.

**Animal Services' Needs.** In 2014, the Police Department was assigned oversight of Pearland Animal Services. Animal Services provides impound services for animals that are stray, abandoned or quarantined; support to residents and their pets during times of disaster; and pet adoption services, including education and promoting the benefits of spaying/neutering pets. The Animal Services Section provided 466 adoptions in fiscal year 2013 and 507 more in fiscal year 2014. The team works to handle the increased call volume, provides seven day a week adoption services and animal control services, with part of the day covered by an on-call status for emergency cases.

**Adequate Staffing.** Personnel needs of the Police Department are a function of mobility, availability, and demand. **In planning and anticipating future needs, the utilization study will be an important tool. Current planning looks at review of the distribution of officers' directed and self-directed time. Officers in 2015 generally have 48-percent of their time self-directed, with the remaining 52-percent directed. The 48-percent is well below the 60-percent threshold for staffing adjustments.** The mobility issues facing the City are ever-evolving. Having sufficient units responding quickly through and around traffic congestion and other barriers is managed with scheduling and appropriate unit assignments within district boundaries. The Department utilizes data to make these assignments, considering variables such as: response times, roadway miles, population, known congestion, and call volume history.

The Department objective is to have units available for priority calls for service 98 percent of the time.

Following a successful hiring campaign, the Department reached its full allotment of 155 officers in June 2015. This is only the second time in 20 years that all classified positions have been filled. In 2016, the Department plans to work with a consultant to conduct a Staffing Utilization Study. The study will leverage data to assess departmental resource allocation and lay out a plan for effective utilization of sworn and civilian personnel and resources as the City and the Department continue to grow.

The Police Department recently completed an organizational plan through the 2016 budget. This plan moves the newest, yet to be assigned police positions into support rolls such as Community Services, Professional Development and Standards, detectives, K9, first-line supervision, crime scene, motors units, crash investigation, and proactive patrol.

## FACILITIES

The Public Safety Building is located at 2555 Cullen Parkway and was completed in Spring 2010. The facility is expected to satisfy Police Department needs through at least 2020, with no near-term plans for any building expansion. The jail currently averages about 33 percent capacity with the ability to hold up to 72 persons. The building also includes facilities for the Municipal Court, the Utility Billing Department, and the Brazoria County Tax Office. The Police Department's long-term space needs may be met by relocating these other services and repurposing the space for Department use in the future.

The Public Safety Building also contains the City's Emergency Operations Center, through which City operations will be directed in the event of a natural disaster or other major event. Maintaining the technological and communications needs of the Emergency Operations Center is a continuing effort of all public safety departments, coordinated through the Office of Emergency Management.

The Public Safety Building also houses the City's Municipal Courts. A thorough security evaluation was completed in 2015 and identified structural changes needed to the lobby and court entrance areas of the building.

The Pearland Animal Shelter is located at 2002 Old Alvin Road. The facility was originally built

in 1997 and expanded in 2005 and 2010. The building is located on the east side of Pearland and is more than a 10-mile drive from some locations within the city. The facility runs at nearly 100 percent capacity on most days for many animal types. Upgrading of the current facility and expansion of services to the west side of Pearland has been identified as a priority need for this unit.

### KEY INDICATORS

#### *Call Volumes*

The Police Department responded to 29,249 citizen calls for service during the 2013 fiscal year, which was up 6.7 percent from fiscal year 2012. During the 2014 fiscal year, the Department responded to 29,752 citizen calls for service, which was 1.7 percent higher than the 2013 volume. During the same time, the Department saw a drop in the total number of self-initiated calls. In fiscal year 2012, there were 63,218 self-initiated calls, and in 2013 there were 69,679 of these calls. In 2014, the number dropped to 58,138 which was 8.7 percent lower than in 2012. The overall decrease in total calls between 2012 and 2014 was 3.1 percent.

The Animal Services Section of the Police Department, which keeps separate calls from the Police Department, reported 5,236 calls in fiscal year 2013. A dramatic increase in fiscal year 2014 led to 6,114 calls, which was up 16.7 percent from 2013.

#### *Response Time*

The Police Department monitors its historical average response time and works to lower or at least maintain this level of performance. In 2014, the Department pinpointed 4.51 minutes as its response time for high-priority calls, from dispatch to arrival on scene (with 1.05 minutes of dispatch time and 3.46 minutes of travel time). Police dispatchers screen all calls for service, and calls for Fire Department or Emergency Medical Services response are transferred to a private dispatching service as detailed further under the Fire / EMS section.

The Department's Patrol Division is working closely with the Communications unit to utilize the Automatic Vehicle Location features of the Computer Aided Dispatch system to identify the most effective response to calls for service.

One major initiative that started in June 2015 is already having a positive impact on response times, involving the assignment of an officer to the lobby of the Public Safety Building. This officer is readily available to address customer needs, allowing other officers to remain on the streets ready to respond to calls for service.

### FIRE / EMERGENCY MEDICAL SERVICES

The City of Pearland already provides fire suppression and emergency medical services (EMS) coverage to its entire ETJ, along with the current City limits, which is a combined area of nearly 70 square miles with more than 130,000 residents. Some ETJ areas have only limited development and population, but the City is still the first responder to these low-density locations. The EMS Department also provides ambulance service to the neighboring City of Brookside Village, just north of Pearland, through an agreement.

The Fire Department has mutual aid agreements with all other Brazoria County fire departments and with all other non-Brazoria agencies that abut the Pearland City limits. The Department also receives fire, emergency medical service, and hazardous materials mutual aid support from surrounding fire departments in Fort Bend and Harris counties including the City of Houston.

#### Citizen Survey Results

Nine in 10 respondents to the Pearland Citizen Survey (conducted December 2014 through February 2015) rated fire services and ambulance/emergency medical services as excellent or good.



In Fall 2013 the City formally consolidated the previously separate Fire Department and Emergency Medical Services(EMS) Department. Improved service delivery and flexibility are anticipated as a result of this initiative.

### STRATEGIC ISSUES AND NEEDS

The Fire Department continues to benefit from its last departmental study and plan completed in 2010, along with various other specialized documents addressing relevant issues and needs. The Department initiated a next strategic planning process during 2012, but this effort was postponed with the demands of the pending Fire/EMS consolidation and was to be revisited later in 2014. Discussions with department leadership for this Comprehensive Plan update identified the following key issues and priorities.

**Adequate Staffing.** Further meaningful increases in fire suppression and EMS personnel are needed based on the population size and geographic area of Pearland. Fire/EMS consolidation and resulting cross-training of staff will yield some efficiencies, in terms of being able to do more with the same number of people as existing personnel are able to fulfill more functions.

However, the Fire Department currently has six stations, with three operating around the clock, when it should have additional resources placed in appropriate areas during days and nights, based on predictive demand data. More facilities to meet service demands also translates into more staff in this combination department of full-time and part-time personnel plus volunteers, who are needed on each of the Department's shifts.

**New and Upgraded Stations.** To enhance response time amid Pearland's rapid growth,

capital project funding will provide for design and construction of two new fire stations over the next several years. Also, two existing stand-alone EMS stations will be taken out of service as they are replaced by two other new combined fire/EMS facilities. A new Fire Station 3 (at Yost Road and Broadway Street) will be designed and constructed by mid-2015, along with a new Fire Station (at Fite Road and Harkey Road) also by mid-2015.

**Continued Volunteer and Part-Time Support in Combination Department.** Maintaining the volunteer fire fighting function in Pearland is essential as the City works to expand its paid, full-time fire fighting ranks. Volunteers were effectively filling 12 percent of staffing as of Fall 2013, with another 12 percent covered by part-time personnel (many of whom are off-duty Houston fire fighters working a second job).

The Pearland Volunteer Fire Department, Inc., generates annual funding through a City-approved fundraising letter.

**ISO Rating.** The challenges faced by the City to commit more budget resources to Fire staffing, facilities and general support will ultimately play out in terms of the Insurance Services Office (ISO) rating the community receives the next time it is evaluated. Pearland currently enjoys a "2" rating on the 1-10 ISO scale in which 1 is the best and 10 the worst possible rating. The City is addressing facility needs by adding multiple new fire stations through its multi-year capital improvements planning and associated personnel through its annual budgeting. Fire Department leadership also noted good water supply conditions and hydrant coverage with in the current City limits, much of the ETJ and area Municipal Utility Districts, although some ETJ areas have no water service at all ahead of any significant land development in these locations.

However, basic response time will continue to be a key criterion, and the Fire Department leadership remains concerned with their ability to maintain satisfactory performance within a growing city now as populated and urbanized as is Pearland. Pearland already provides fire suppression and EMS response in its ETJ, so future annexations will not change the service equation much. However, annexation activity would likely further highlight the need to improve level-of-service capabilities in general.

### Incidence of Damaging Fires in Pearland

Annual statistics compiled by the Pearland Fire Department show that the number of building fires in Pearland each year is usually in the 55-70 range, with a recent high of 69 in 2012. The total estimated fire loss resulting from these incidents was approximately \$2.4 million in 2012, compared to a recent low of about \$1.5 million in 2011.

The future of Pearland Regional Airport will also influence emergency services planning, and is already a factor in assessing the need for an **tenth** fire station at some point to expand south-southeast coverage.

**Equity of County Funding for ETJ Service.** Fire Department leadership are concerned that the City continues to receive a share of Brazoria County funding under a county-wide allocation that dates back some years and does not reflect the extent of population growth and development around Pearland relative to other Brazoria communities. Equity of funding going forward is the key concern, just accounting for call volume alone and the extent of ETJ service delivered.

**Dispatch Moved to Contract Service.** During 2013 Fire and EMS dispatch functions were contracted out to an Emergency Services District in Harris County that provides this service to multiple area agencies, with the City of Pearland now its largest partner. The District satisfies unique mapping needs the department has, and also offers dispatching protocols more in line with Fire and EMS needs. In the end, the contract approach provides cost savings to the City and its taxpayers in lieu of needing to hire more in-house personnel.

**Demands on Ambulances.** Given the volume of miles put on ambulances (approximately 40,000 miles per year), and considering the layout of Pearland and service provided into the ETJ, a maximum three- or four-year life span is all that can be expected for these specialty vehicles. Going forward, and considering continued EMS call volume growth, this likely means budgeting routinely for replacement of one or more ambulances every year to maintain a reliable fleet. The City's Fiscal Year 2013-14 budget pointed out that another benefit of adding a fifth ambulance could be reduced reliance on mutual aid from other jurisdictions.

**Hazardous Materials Capabilities.** Fire Department leadership pointed out that, with the growth and encouragement of more local industry in Pearland, the extent and potential volume of hazardous materials handled by some area businesses will likely increase. The City currently relies on Houston and Harris County for response to "hazmat" emergencies,

so at some point building up internal capabilities will be advisable.

**Impact of Health Insurance Trends.** An interesting issue for emergency medical services in the years ahead is whether federal health insurance reforms and related expansion and adjustments to coverage, will lead to more or fewer calls for ambulance service and ultimate transport to emergency care facilities.

## FACILITIES

The Fire Department's six stations as of Spring 2015 included:

1. Fire Station 1 at 2020 Old Alvin Road at Orange Street for northeast coverage.
2. Fire Station 2 at 2838 McLean Road near Apple Springs Drive for east central coverage.
3. Fire Station 3 at 1801 East Broadway at Woodcreek Drive for east side coverage.
4. Fire Station 4 at 8333 Freedom Drive along Cullen Boulevard for central coverage.
5. Fire Station 5 at 3100 Kirby Drive, near Pearland Town Center, for west side coverage.
6. Fire Station 6 at 1511 County Road 58, for southwest coverage.

A new Pearland Fire Administration Building is located at 2703 Veterans Drive, south of Walnut Street, which was the former Pearland Police Department location. This site also provides for department training with classroom space and a Fire Training Field behind the building.

Fire Station 3 was recently reconstructed. The new station is another combined fire/EMS facility that is actually at the location of current EMS Station 3 near the Broadway/Yost Road intersection. The current Fire Station 3 building at 1801 Broadway will be demolished.

Fire Station 2 is also slated for reconstruction at a new site, with scheduled opening of the new station in October 2015 and demolition of the current facility.

At the time of this Comprehensive Plan update, Pearland Medical Center was the only hospital in the city. However, Memorial Hermann was constructing a new hospital that was slated to open in 2015.

## KEY INDICATORS

### *Call Volumes*

- Fire Department call volume increased 50 percent – from 2,410 to 3,602 calls for service – from 2010 to 2013.
- EMS call volume increased 18.5 percent – from 6,472 to 7,688 calls for service – from 2010 to 2012. In 2012 this resulted in about 4,800 individuals transported (63 percent of calls) and about 6,500 patients treated.

### *Response Time*

- The Fire Department continues to apply the same station location standard as created by the Fire Station Location Master Plan, which calls for a four-minute travel time. This is in line with Insurance Services Office (ISO) standards. One motivation for the current Fire Station 3 reconstruction is to improve east side response time.

Average response time data compiled by the Fire Department shows that the average was as high as 7 minutes, 18 seconds in 2010 but then declined to 6:22 in 2011 and 5:56 in 2012 (with 5:54 as the Department target for 2013). In 2011 and 2012, the percentage of calls responded to in five minutes or less was roughly in the 50 percent range, compared to 39 percent in 2010.

- The Fire Department monitors EMS response-time standards of NFPA and others, some of which call for a target as low as four minutes based especially on the ideal rapid response to cardiac emergencies. Many standards call for the arrival of advance life support transport within eight minutes. In recent years the department has strived to meet this eight-minute target, even shaving off 20 seconds or so on average in 2011 and 2012.
- Fire Department leadership acknowledges the emergency response benefits of the railroad overpasses constructed in recent years. However, other circulation difficulties remain, most notably around the SH 288/FM 518 intersection given traffic volumes and congestion in the vicinity, and closely-spaced traffic signals. Even with more appropriate station coverage over time, Pearland's public safety services will always face the challenge of navigating a relatively spread-out city, with some unique residential enclaves and remaining

low-density areas. Improvements to major north-south roads such as Veterans, McLean, Harkey, Garden, Roy and Max will improve emergency response times.

## Key Planning Considerations

Input and discussions for this Comprehensive Plan update, through workshops with City Council and Planning and Zoning Commission, informal small-group sessions, a community-wide public open house event, the online Virtual Town Hall forum, interaction with the Comprehensive Plan Advisory Committee, and background discussions with City staff, yielded the following concerns related to this Growth Capacity and Infrastructure section of the plan:

- Effective management of growth through the point when remaining developable land is built out.
- The fiscal and public service implications for City government of future growth in general, and potential build-out scenarios in particular.
- The potential pace of growth, and the ongoing challenges of providing and maintaining adequate road and utility infrastructure, especially in such an elongated east-west city with needs in both new and old areas.
- The potential extent and timing of future annexation activity, and the financial and many other considerations.
- Implications of potential population densities for schools and other facility planning.
- Continued focus on public safety services so more growth does not bring more crime.
- The challenges to redevelopment and revitalization of older areas and corridors, especially as a way to absorb some share of growth internally within the existing city.
- The safety, reliability and aesthetics of utility infrastructure, including continued emphasis on multi-use design and incorporation of amenities in storm water detention projects.
- The importance of maintaining Pearland's systematic approach to capital improvements planning and budgeting, especially given the lead time necessary for major projects.

- As in cities across the nation, the need to focus on basic infrastructure maintenance amid many other competing community needs and wants, and how “recapitalization” of roads, sanitary sewer and storm drainage in older areas is crucial to attracting investor interest in redevelopment potential.
- The need for community discussion about growth and the benefits to residents of expanding Pearland’s commercial tax base.
- The need to “think post-boom” and prepare to transition from growth to maintenance mode.

## Goals and Action Strategies

### GOALS

A “goal” is a statement of a desired outcome (“end”) toward which efforts are directed, as expressed by more specific objectives and action priorities (“means”). Below are three goals intended to focus plan implementation efforts related to Growth Capacity and Infrastructure that follow the adoption of this new Comprehensive Plan:

**Goal 2.1:** A **fiscally responsible pattern of development** that supports the City’s long-term financial health.

**Goal 2.2:** A **balance between investment in new and extended infrastructure** to support first-time development, and necessary investment in rehabilitation of aging infrastructure in previously developed areas.

**Goal 2.3:** A commitment to **sustained budget support for police, fire and emergency medical services** to maintain levels of service and responsiveness commensurate with projected growth and resident expectations.

### ACTION STRATEGIES

Itemized below are a set of potential actions for responding to the key issues and community needs identified in this Comprehensive Plan section. In particular, three items are highlighted as strategic initiatives for the immediate future.



### STRATEGIC PRIORITY 1: COST OF GROWTH/LAND USE STUDY

From the earliest discussions with City staff and focus group participants, and through the series of Comprehensive Plan Advisory Committee meetings, a frequently mentioned desire was to gain a better understanding of the fiscal implications for City government of how remaining developable land in Pearland’s City limits and ETJ might be used in the years ahead. “Cost of growth and land use” studies are a niche specialty of certain consultants within the urban planning community, and go beyond the scope of a comprehensive planning effort given the level of detail and technical analysis involved. However, these studies often build off a newly updated city-wide plan, as well as more specialized master plans for transportation and utility infrastructure and public facilities and services.

Such studies typically focus on both the near-term fiscal impacts of particular land development choices, plus the longer-term sustainability of City finances based on the projected overall pattern of growth and land use. Relevant considerations for the City’s annual and multi-year budgeting include the relationship between development location and densities and public infrastructure and service costs, the return on municipal investment under varying development scenarios, and the City’s up-front capital costs compared to the near-term and projected revenue stream. This can lead to adjustments in a range of municipal programs and practices, including development regulation, thoroughfare planning, capital improvements programming, annexation planning, and whether and when economic development incentives should be offered. A core consideration is how the types and relative mix of revenues the City derives from land development might shift under different scenarios, including the status quo.

Going forward, the study results and analytical tools would enable the City to explore “what if” scenarios, in which the potential value of particular land development outcomes could be weighed against the projected costs of service. This can include evaluation of how service costs would shift under varying level-of-service assumptions, typically figuring that most residents will expect a steady or higher level of service over time.

#### Library Services

City and County government jointly provide public libraries in Pearland, requiring ongoing coordination.

## Thoughts on the Public Costs and Benefits of Development Form

“Communities often experience some level of disconnect between economic development policy and ensuring sufficient tax revenue to cover the cost of the services the government provides ... [Data show that] a municipality receives a greater level of revenue from its denser and more walkable urban patterns than its suburban pattern of development.”

*“Thinking Differently About Development,” Joe Minicozzi,  
Government Finance Review, August 2013*

“If enhancing revenue is the goal, municipalities are far better off with compact development that generates higher property taxes ... Such compact development also would mean a more rapid payback of public investment ... This is not to suggest, however, that future development in a community should switch to the most intense forms of mixed-use development ... in a quest for greater revenue. Clearly, a city or town isn’t likely to be made up only of such high-yielding buildings, nor would its citizens want it to be ... Indeed, most citizens in suburban areas, even when they are aware of the tax consequences, still oppose density if they feel that it threatens the ambiance and perceived value of their own dwellings.”

As issues related to revenue generation are increasingly linked to matters of building form and scale, communities should strive to hold more complete conversations about the trade-offs associated with growth.”

*“The Missing Metric,” Peter Katz,  
Government Finance Review, August 2013*



### STRATEGIC PRIORITY 2: REGULAR UPDATING OF UTILITY MASTER PLANS

This plan section emphasizes regular updating of the three key utility infrastructure master plans – water, wastewater and storm drainage – especially during periods of rapid land development activity as Pearland has now experienced for multiple decades. The City of Pearland is in particular need of a comprehensive and in-depth update of its Drainage Master Plan (last updated in 2008) for this reason, although the last Wastewater Master Plan is actually older, from 2006, and the last full Water Master Plan update was in 2007. These plans likewise require a complete reassessment and full updates given highly dynamic conditions in Pearland, with the community continuing to experience dramatic on-the-ground change through both private and public projects and investments. Refreshed utility infrastructure master plans are needed to provide meaningful guidance

for crucial decisions related to ongoing utility system management and associated capital projects. As also highlighted in this plan section, all three master plans should place greater emphasis on the need for replacement and renewal of existing portions of the systems, along with planning for expanded overall system capacities.



### STRATEGIC PRIORITY 3: ANNEXATION PLANNING

Given Pearland’s history of and future prospects for expanding its physical jurisdiction through further incorporation of additional territory, this Comprehensive Plan includes a special focus on annexation possibilities and planning through the Annexation Outlook section below. The purpose was to review recent and/or planned annexation activity by the City and assess the outlook in coming years. Then City staff and consultants for this comprehensive

planning effort coordinated on a focused evaluation of ETJ areas eligible for potential annexation to weigh options and possible timing based on growth projections, service implications and capacities, and other considerations, including the framework for municipal annexations under Texas statutes.

Through this Growth Capacity and Infrastructure section and in preparation for the annexation assessment, an inventory was completed of remaining vacant land within the City limits and ETJ. The inventory results are displayed in **Map 2.1, Remaining Vacant Land**. The inventory exercise was conducted with the following resources and parameters:

- Using high-quality aerial imagery of the Pearland area from 2012, and recognizing that certain properties have since or are in the process of dropping from the vacant land inventory due to recent land development activity (and significant such instances were identified as inputs to the future land use planning in Section 7, Land Use and Character).
- Including as “vacant” land not only parcels that appeared almost entirely unused, but also large properties that are relatively underutilized within a developed city in terms of having just a small homestead or only minimal disturbance from agricultural or limited personal or business use (e.g., vehicle/trailer storage, minor clearing or excavation activity, etc.).
- Seeking explanations for limited property use in some cases, including properties wholly or partly within floodplains, areas through which pipeline corridors pass, undeveloped areas within County parks, and City-owned properties in reserve for future park development and/or regional storm water detention projects. But also recognizing that allocation of some land for essential public purposes like recreational space and flood prevention also contributes to the overall “draw-down” of Pearland’s overall remaining land supply. (The City-prepared **2015 Pipelines Map** included in this plan section shows the locations of pipelines within the Pearland City limits and ETJ.)

Calculations from the inventory results shown in Map 2.1 yielded the following statistics\*:

- Just under nine square miles of remaining vacant land within the current City limits, which

was approximately 19 percent of the City’s incorporated area (46.3 square miles) based on the City limits as of May 2014.

- Approximately 4.4 square miles of remaining vacant land within the current ETJ areas, which was roughly 19 percent of the Pearland ETJ (23.5 square miles) as of May 2014.
- So, the combined City limits and ETJ (69.8 square miles) had about 19 percent of their total area vacant based on this inventory.

\* NOTE: All calculations were made using Geographic Information System (GIS) data and mapping and are intended for general planning purposes only as the data is approximate and does not have the accuracy of on-the-ground land surveys.

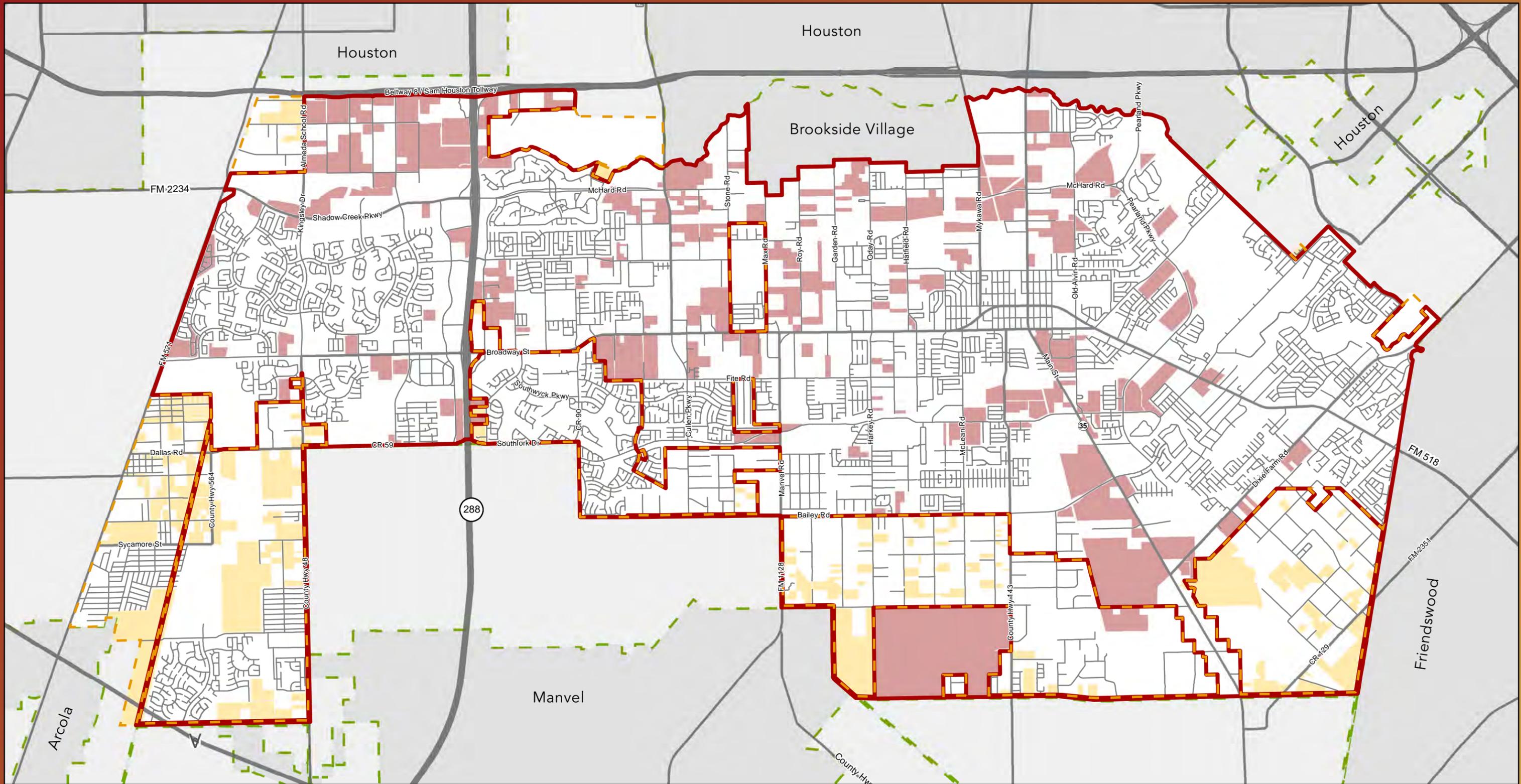
## OTHER ACTION ITEMS

### ACTION: “SMART GROWTH” AUDIT

Pearland should join other communities that are enjoying the economic and quality-of-life benefits of steady growth, but also wanting to know if they are growing in an efficient and sustainable manner. The Smart Growth Network suggests that growth is “smart” when “it gives us great communities, with more choices and personal freedom, good return on public investment, greater opportunity across the community, a thriving natural environment, and a legacy we can be proud to leave our children and grandchildren.”<sup>2</sup>

The City can consider how well it is applying the Principles of Smart Growth identified by the Smart Growth Network, recognizing that Pearland may just be reaching a point of maturity in some aspects of its growth and development progression for certain principles to even be relevant or attainable locally. Pearland can also identify and apply measurable indicators as benchmarks for tracking progress on each of the principles as illustrated in **Table 2.1, Smart Growth Principles**. Additional resource publications include: *Smart Growth Audits* (American Planning Association, PAS Report 512); *Jobs-Housing Balance* (APA, PAS Report 516); and *Getting to Smart Growth: 100 Strategies for Implementation* (Smart Growth Network and ICMA, publication 02-202).

<sup>2</sup> This is Smart Growth, pamphlet published by the Smart Growth Network through a cooperative agreement with the International City/County Management Association (ICMA) and the U.S. Environmental Protection Agency (publication 06-064).



## Map 2.1

### Remaining Vacant Land

DRAFT AUGUST 2015



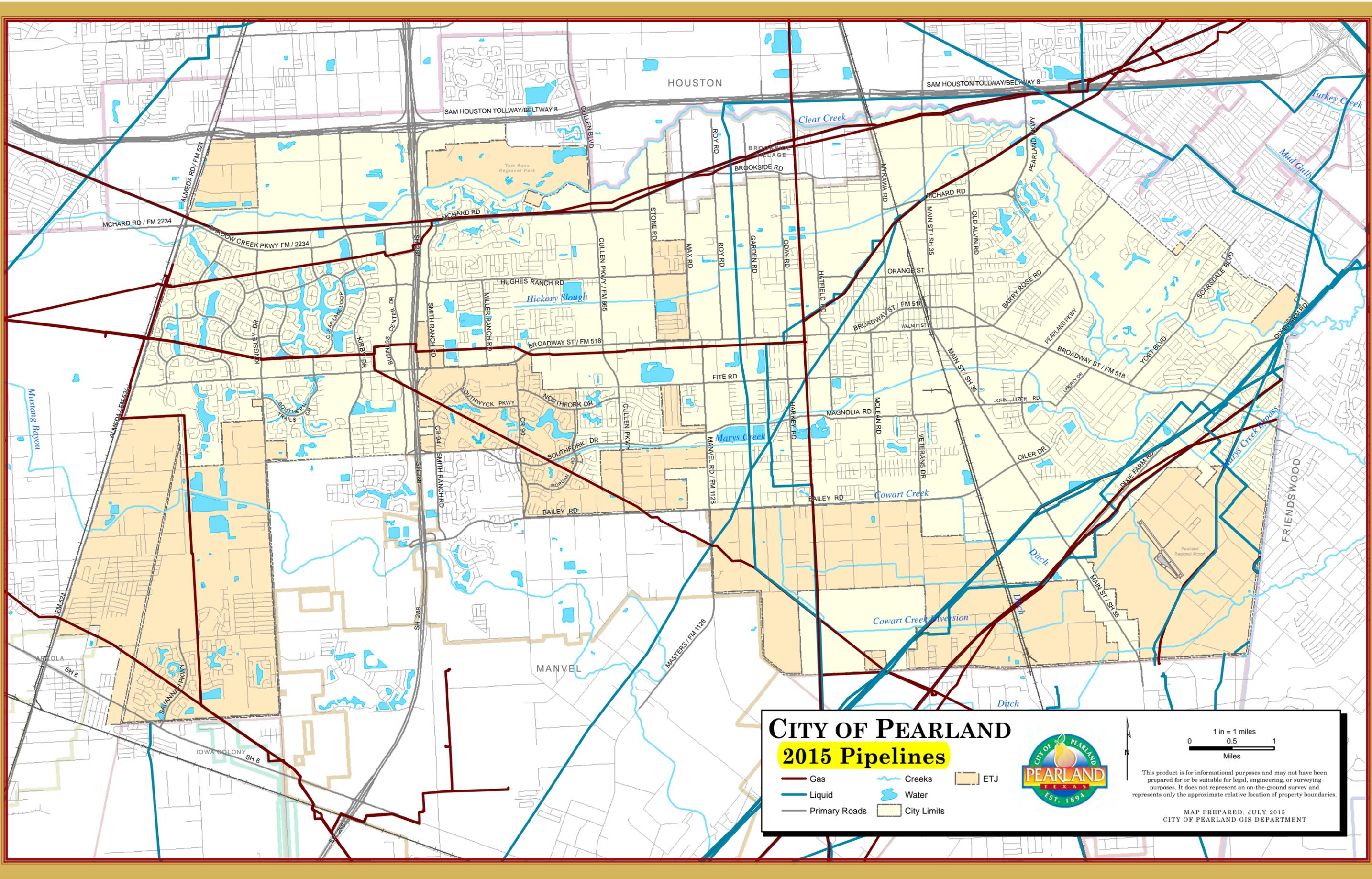
Area	Vacant Sq. Miles (approx.)	Vacant Acres (approx.)
City Limits	8.8	5,642
ETJ	4.4	2,831
<b>Total</b>	<b>13.2</b>	<b>8,473</b>

NOTE: Vacant land inventory based on Fall 2012 aerial imagery and further verification by City and consultant personnel.

NOTE: "Vacant" land includes entirely unused properties plus large properties with just a small homestead or only minimal disturbances (e.g., clearing/excavation, storage, etc.).

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.

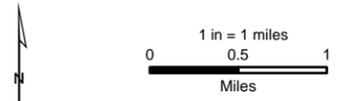




# CITY OF PEARLAND

## 2015 Pipelines

- Gas
- Liquid
- Primary Roads
- Creeks
- Water
- City Limits
- ETJ



This product is for informational purposes and 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 boundaries.

MAP PREPARED: JULY 2015  
CITY OF PEARLAND GIS DEPARTMENT

**TABLE 2.1,** Smart Growth Principles (as identified by the Smart Growth Network)

Smart Growth Principle	Potential Local Indicator
Mix land uses.	<ul style="list-style-type: none"> <li>Total acres in developments designed with integrated and complimentary uses, especially where residential and non-residential uses are mixed within the same master-planned project.</li> </ul>
Take advantage of compact building design.	<ul style="list-style-type: none"> <li>Local comparisons of percent site coverage among sites with typical auto-oriented and horizontal design relative to sites with building footprints that preserve more open and green space.</li> </ul>
Create a range of housing opportunities and choices.	<ul style="list-style-type: none"> <li>Percentage of total housing stock not in single-family detached dwellings.</li> <li>Relative percentage of ownership and rental opportunities within total housing units.</li> <li>Extent of housing options for certain "life cycle" stages (e.g., young singles, "empty nesters," senior independent and assisted living, etc.).</li> </ul>
Create walkable neighborhoods.	<ul style="list-style-type: none"> <li>Total linear feet of sidewalk relative to total street length in sample neighborhoods.</li> <li>Number of non-street linkages to/from the neighborhood to nearby schools, parks, adjacent neighborhoods and other destinations.</li> </ul>
Foster distinctive, attractive communities with a strong sense of place.	<ul style="list-style-type: none"> <li>Survey residents elsewhere in the region on recognizable place names and destinations in Pearland.</li> <li>Measures of the total volume of landscaping in public areas at key community entries and along major corridors.</li> </ul>
Preserve open space, farmland, natural beauty, and critical environmental areas.	<ul style="list-style-type: none"> <li>Total acres in Pearland under conservation easements, land trust ownership, or other non-public preservation measures.</li> <li>Total linear feet of trail along area creeks and in other natural areas to facilitate public access.</li> </ul>
Strengthen and direct development towards existing communities.	<ul style="list-style-type: none"> <li>Total dollars of public investment to spur redevelopment in the Old Townsite area, in older established neighborhoods, and along the Main Street/SH 35 corridor.</li> <li>Relative percentage of building permit activity for improvement/rehabilitation of existing properties and structures.</li> </ul>
Provide a variety of transportation choices.	<ul style="list-style-type: none"> <li>Ridership trends on local park-and-ride bus service.</li> <li>Surveys of City trail network users to quantify those biking to/from work, shopping or other destinations versus purely recreational use.</li> </ul>
Make development decisions predictable, fair and cost effective.	<ul style="list-style-type: none"> <li>Measures of time savings for applicants, City staff and Board/Commissions from technology and other procedural streamlining steps.</li> <li>Annual statistics on approvals/denials, extent of variance requests, and other metrics from the City's development review processes.</li> </ul>
Encourage community and stakeholder collaboration in development decisions.	<ul style="list-style-type: none"> <li>Total hours of City Council and Board/Commission meeting time devoted to public hearings and comment opportunities on development-related matters.</li> <li>Website analytics on number of persons accessing agendas, packet materials, and other online information related to development-related matters.</li> </ul>

**ACTION: ACCOMMODATION OF “GREEN” BUILDING PRACTICES**

Pearland should continue to monitor trends and best practices in the building code, land development, and public facilities arenas related to “green” building and operational standards (including for energy efficiency; water conservation, capture, and re-use; waste reduction and recycling, etc.) to ensure that the City’s codes and policies promote and do not discourage such activity locally. The National Green Building Program sponsored by the National Association of Home Builders is an important information clearinghouse, along with other governmental and non-profit resources. Additionally, the Texas Gulf Coast Chapter of the U.S. Green Building Council, based in Houston (www.usgbc-houston.org), provides a regional forum for public and private sector coordination and information exchange.

**Annexation Outlook**

This section considers the potential extent and timing of future annexation of areas currently in the City’s extraterritorial jurisdiction (ETJ) and the associated rationale. This information is included in the Comprehensive Plan for general planning purposes only. More detailed study and planning would be necessary to satisfy statutory requirements and procedures for initiating specific annexations as contained in Chapter 43, Municipal Annexation, of the Texas Local Government Code.

In conjunction with the City’s Land Use Plan map (in Section 7, Land Use and Character), Thoroughfare Plan map (in Section 3, Mobility), and the outlook for utility infrastructure extensions and upgrades summarized in this plan section (with more detail in the 2013 update of the City’s Water and Wastewater Impact Fee Report and related master plans), this information provides a broad overview of where and when Pearland might grow and extend municipal services beyond its current City limits.

**ANNEXATION FACTORS**

Compiled in the list below are five major factors that typically enter into decisions to annex certain ETJ

areas sooner than later, or to defer annexation in some locations until later, if ever. Under each major factor are related considerations. Beyond this list, other intangibles include consideration of the potential degree of contention and opposition that particular annexation initiatives may provoke, plus the basic capacity of City officials and staff – in a large, rapidly-growing community – to devote the necessary time and effort that annexation proceedings require.

**1. Fiscal**

- Value added relative to cost to serve (based on various factors including land use)
- Municipal Utility District (MUD) debt/timing (a potential annexation date for each MUD in the City’s ETJ can be projected based on when each district’s outstanding debt will be paid off as summarized in **Table 2.2, Annexation of MUDs in ETJ**).

**2. Service Provision**

- Proximity to current incorporated area
- Feasibility and realistic timing of service extension – and whether City prefers to be the service provider
- Extent of existing population/development
- Already providing certain municipal services to area (and ETJ residents already benefitting from use of in-City streets, parks, etc.)
- Other service providers
- Health/safety (housing/building conditions, sanitation, emergency response)

**3. Growth**

- Proximity to current incorporated area

**TABLE 2.2, Annexation of MUDs in ETJ**

Source: City of Pearland Finance Department  
 Note: Dates are based on the timing of when all MUD debt will be paid off.

Municipal Utility District (MUD)	Potential Date of Annexation	Potential to Issue More Debt
MUD 2	After 02/01/2017	No
MUD 3	After 09/01/2020	No
MUD 6	After 09/01/2024	No
MUD 21	After 09/01/2039	Yes
MUD 22	Not yet issued any debt but will in the future	Yes

- Available/developable land (including for schools, parks, other public facilities) without significant constraints or legacy issues (e.g., unplanned development, brownfields, etc.)
- Market/development community interest and/or economic development potential
- Already planned facility/service extensions

#### 4. Other Community Objectives

- Orderly growth progression and effective land use management in prime areas and corridors
- Land use compatibility and quality (including to protect nearby in-City neighborhoods and developed areas)
- Resource protection (e.g., floodplains, well fields, creek corridors)
- Asset protection and area planning (e.g., airport vicinity)
- Community image/aesthetics (e.g., gateways, corridors)
- Amenity acquisition or future potential

#### 5. Statutory / Strategic

- Ease of annexation (especially the Chapter 43 exemption, from the three-year annexation process, of areas with 99 or fewer tracts where each tract has one or more residential dwellings)
- Strategic or “defensive” annexations to set the stage for future actions and/or prevent potential adverse actions by other nearby cities

### POTENTIAL ANNEXATION PHASING

Displayed in **Map 2.2, Potential Annexation Phasing**, are the results from a general evaluation of ETJ areas eligible for potential annexation and related discussions between City and consultant personnel that touched on many of the factors itemized above. Based on this assessment, 19 areas (labeled “A” through “S” on the map) were classified as appropriate for potential annexation in one of three timeframes, subject in all cases to more detailed and area-specific study and deliberation by City officials, staff and other stakeholders:

- Short Term (0-5 years)
- Medium Term (5-10 years)
- Long Term (10+ years)

It should be noted that the timing is meant to convey when annexation proceedings might be initiated but not necessarily completed. Also, while each area is identified for a particular timeframe, this does not mean that all of the land within an area would necessarily be annexed at that time given the more detailed area-specific analysis that will occur before any final decisions.

As displayed on Map 2.2 and in the accompanying **Table 2.3, Primary Factors in Potential Annexation Phasing**:

- The Short Term category includes eight areas, A through H, that account for nearly 10 percent of the ETJ (1,317 acres and 2.1 square miles).
- The Medium Term category includes four areas, I through L, that encompass 25 percent of the ETJ (3,458 acres and 5.4 square miles).
- The Long Term category has the seven remaining areas, M through S, which together are 65 percent of the ETJ (8,939 acres and 14 square miles).

To elaborate on the summary presentation in Table 2.3, below is a compilation of the primary factors considered in classifying each of the 19 areas, recognizing that lesser considerations in other or all five of the “annexation factor” categories might apply in some cases. In general, more checkmarks for a particular area in Table 2.3 suggests more – or more significant – reasons for expediting possible annexation in either the Short or Medium Term relative to areas in the Long Term category.

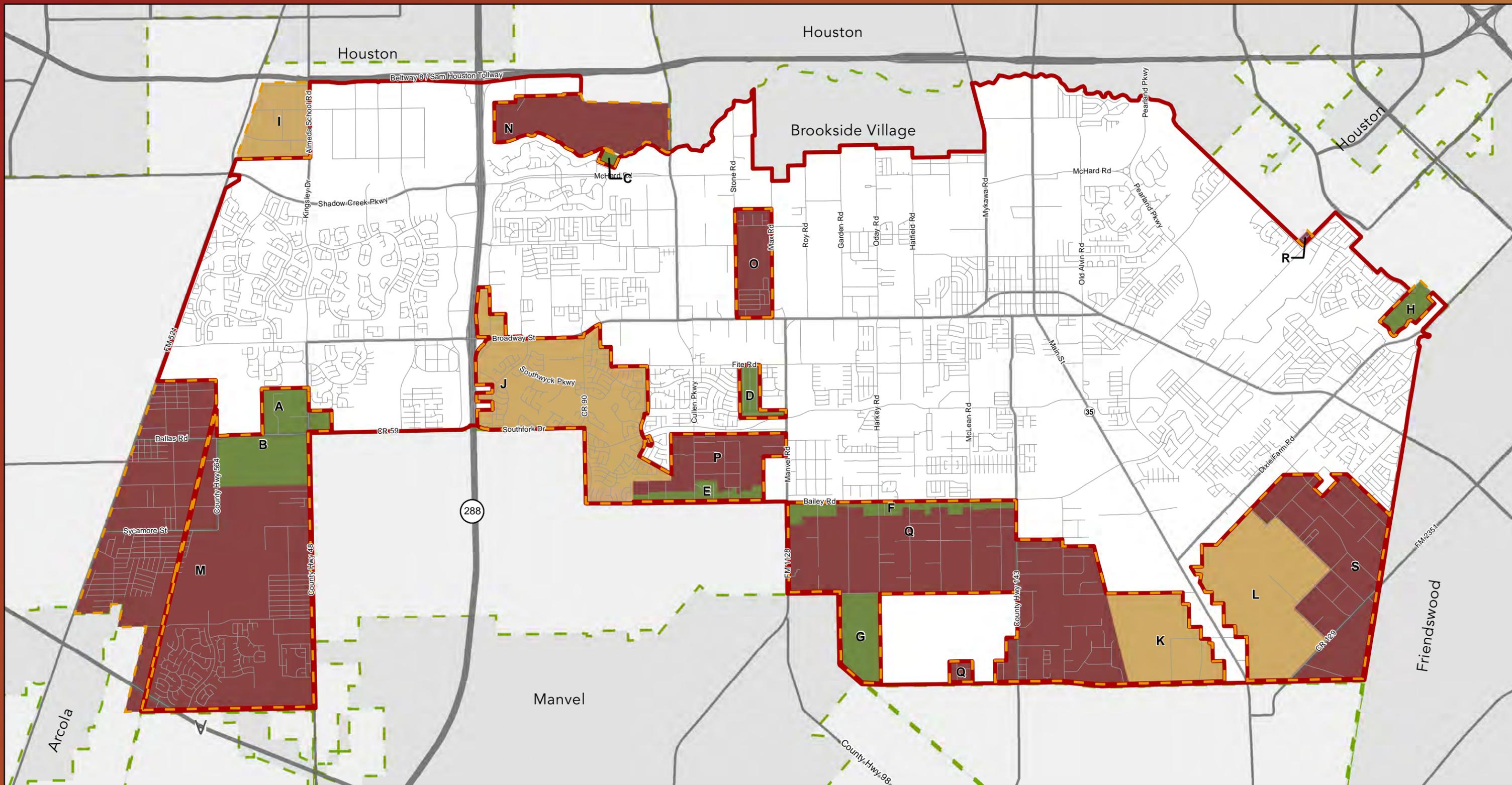
### SHORT TERM

#### AREA A

- Adjacent to planned subdivisions with premier high value residential areas

**AREA B** (portion of Area 4 from 2009-2010 initiated by the City)

- Includes new City water plant (required tie-ins within 1,000 feet of City service)
- Intersection of County Roads 48 and 59 (Minor Retail Node on Land Use Plan, current vacant property on northwest and northeast corners)
- Protection of nearby in-City areas (Southern Trails)
- <100 residential parcels



## Map 2.2

### Potential Annexation Phasing

DRAFT AUGUST 2015



Areas	Sq. Miles (approx.)	Acres (approx.)
Short Term	2.1	1,317
Medium Term	5.4	3,458
Long Term	14.0	8,939
<b>Total</b>	<b>21.5</b>	<b>13,714</b>

NOTE: Identified areas are discussed further in Chapter 2 and do not suggest areas to be annexed in their entirety.

NOTE: This map is for a general planning purposes only and does not constitute the Municipal Annexation Plan required by Chapter 43 of the Texas Local Government Code.

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**TABLE 2.3**, Primary Factors in Potential Annexation Phasing (in conjunction with Map 2.2)

AREA	Fiscal	Service Provision	Growth	Other Community Objectives	Statutory / Strategic
<b>SHORT TERM (0 - 5 YEARS)</b>					
<b>A</b>	-	✓	-	✓	✓
<b>B</b>	✓	✓	✓	✓	✓
<b>C</b>	-	✓	-	✓	-
<b>D</b>	-	✓	-	✓	-
<b>E</b>	-	✓	-	✓	✓
<b>F</b>	-	✓	-	✓	✓
<b>G</b>	-	-	✓	✓	✓
<b>H</b>	-	✓	-	✓	-
<b>MEDIUM TERM (5 - 10 YEARS)</b>					
<b>I</b>	✓	✓	✓	✓	-
<b>J</b>	✓	✓	-	✓	-
<b>K</b>	-	-	✓	✓	-
<b>L</b>	-	-	✓	✓	-
<b>LONG TERM (10+ YEARS)</b>					
<b>M</b>	-	-	✓	✓	-
<b>N</b>	-	-	-	-	-
<b>O</b>	-	-	-	✓	-
<b>P</b>	-	-	-	✓	-
<b>Q</b>	-	-	✓	✓	-
<b>R</b>	-	-	-	✓	-
<b>S</b>	-	-	-	-	-

**AREA C**

- Vacant land
- Protection of nearby in-City areas (Country Place)
- Proximity to Clear Creek (potential trailhead location) and Tom Bass Regional Park

**AREA D**

- Located within the Magnolia Corridor Overlay District
- Surrounded by planned subdivisions and in close proximity to three schools on Manvel Road

**AREA E** (*Area 1 from 2009-2010 planning*)

- Importance of Bailey Road corridor and related street improvements
- Land use management along north Bailey Road frontage within ETJ
- Intersection of Bailey Road and Cullen Parkway (Minor Retail Node on Land Use Plan)
- <100 residential parcels

**AREA F** (*Area 2 from 2009-2010 planning*)

- Importance of Bailey Road corridor and related street improvements
- Land use management along south Bailey Road frontage within ETJ (with current City limits on north side)
- Intersections of Bailey with Manvel and Harkey Roads (Minor Retail Nodes on Land Use Plan)
- <100 residential parcels

**AREA G**

- Vacant land
- Development potential with transition of Massey Ranch property

**AREA H**

- Largely in regional storm water detention and open space near Dixie Farm Road

**MEDIUM TERM****AREA I**

- Existing and potential additional industrial development (some vacant property)
- City water service extensions

- East-west roadway improvements on Thoroughfare Plan
- Tollway / Beltway 8 proximity

**AREA J**

- Significant existing commercial development
- Strategic location and high-profile area of city
- MUD debt / timing considerations (2, 3, 6)

**AREA K** (*Area 5 from 2009-2010 planning*)

- Interim services agreement in place
- Industrial focus on Land Use Plan (extraction activity in meantime)
- Dixie Farm Road extension on Thoroughfare Plan
- Eventual extension and improvement of County Road 129 and link across Main St/SH 35 to County Road 128 (Hastings Cannon Road) on Thoroughfare Plan
- City gateway factor (along with Area L) behind Main St/SH 35 frontage already in city

**AREA L** (*portion of Area 6 from 2009-2010 initiated by the City*)

- Pearland Regional Airport and vicinity to south (airport protection/buffering and economic development potential)
- Industrial focus toward Main St/SH 35 on Land Use Plan
- Pearland Parkway eventual extension on Thoroughfare Plan
- East-west link across Main St/SH 35 involving County Roads 414 and 130 on Thoroughfare Plan (airport access)
- Extension and improvement of County Road 129 and link across Main St/SH 35 to County Road 128 (Hastings Cannon Road) on Thoroughfare Plan
- City gateway factor (along with Area K) behind Main St/SH 35 frontage already in city

**LONG TERM****AREA M**

- Legacy of scattered residential development with uncoordinated platting and street network, not up to in-City standards

- Necessary upgrades to streets/infrastructure and other public service challenges (fiscal factor)
- Predominantly Low Density Residential on Land Use Plan
- Limited City interest in FM 521 frontage
- MUD debt / timing considerations in southern portion toward SH 6 (21, 22 - Lakes of Savannah)

**AREA N**

- All public land managed by Harris County (Tom Bass Regional Park)

**AREA O**

- Previously disannexed
- Minimal vacant land with park and storm water detention areas plus low density residential use
- MUD debt / timing considerations (16)

**AREA P**

- Existing low-density residential development with same designation on Land Use Plan (fiscal factor)
- Minimal vacant land

**AREA Q**

- Existing low-density residential development with same designation on Land Use Plan (fiscal factor)
- Only some scattered vacant properties

**AREA R**

- Isolated property at edge of city amid low-density residential use

**AREA S** (*portion of Area 6 from 2009-2010 initiated by the City*)

- Largely existing low-density residential development with same designation north of airport on Land Use Plan (fiscal factor)
- Only some scattered vacant properties

**ANNEXATION POLICIES**

The written policy statements below may be used by City officials and staff as a guide and reference when making decisions regarding potential annexation activity or related growth guidance measures.

**FISCALLY RESPONSIBLE**

1. All annexation decisions should require fiscal impact assessments to determine that the annexation is fiscally responsible from the perspective of City operations, maintenance, capital investments, and debt.
2. The City should not annex special districts, such as municipal utility districts (e.g., MUDs) until the district's debt is paid off and/or the economic benefits outweigh the immediate and long-term costs of assuming the district's debt and providing municipal services. The City can negotiate a schedule to establish a future plan for voluntary annexation.
3. When an annexation is not fiscally feasible, the City should consider service agreements in lieu of annexation agreements to extend aspects of the City's regulatory authority without committing to provision of full City services or transfer of debt.

**EFFICIENT INFRASTRUCTURE**

4. The City should avoid strip and piecemeal annexations given the potential high cost of extending services in such situations. Annexations can be used in a strip or piecemeal nature to establish the contiguity necessary for eventual expansion into strategic areas if there is a long-term plan to annex the unincorporated, "passed over" land.
5. Wherever possible, existing infrastructure systems in areas proposed for annexation should have near or fully adequate capacities to accommodate current and projected development demands in such areas without the City bearing an inordinate burden for capital investment in the near or longer term.
6. To maximize the use and efficiency of existing City infrastructure, growth should first be directed toward vacant parcels and underutilized lands within the City limits before extensive development is considered or encouraged within future growth areas beyond the City limits.
7. The City should promote reuse and/or redevelopment of obsolete, vacant buildings and underutilized properties to maximize the efficiencies of existing infrastructure and municipal services, along with the overall

community and tax base benefits of restoring such properties to productive use.

### ECONOMIC DEVELOPMENT

8. Annexation decisions should be consistent with the economic development objectives of the City as stated in this Comprehensive Plan and the *Pearland 20/20 Strategic Plan*.
9. Annexation agreements and voluntary ETJ agreements should be used as tools to secure the City's long-term jurisdictional interests and protect its growth trajectory and future development options in the ETJ.

### QUALITY DEVELOPMENT

10. The City should prioritize annexations in highly visible areas at community gateways and along key corridors to ensure sound regulation of the type, pattern, and quality of development.
11. The City should weigh the intangible benefits of annexation and the possible costs of inaction, such as potential lost opportunities to extend the City's proposed zoning authority to undeveloped areas where growth is anticipated.
12. The City should use development agreements and/or strategic partnership agreements as a negotiation tool to increase the quality of site and building design, when appropriate.
13. Annexation should occur in strict compliance with the policies and planning guidance in this Comprehensive Plan, particularly the Land Use Plan and Thoroughfare Plan.

### COORDINATION AND PARTNERSHIPS

14. Annexation and strategic partnership agreements should be used as vehicles to partner with and mutually define growth objectives with private landowners to ensure land is devoted to its highest and best use whenever possible, along with consideration of other community objectives and priorities.
15. The City should consider entering into interlocal agreements to facilitate ETJ boundary adjustments with adjacent municipalities in exchange for areas of strategic importance and equivalent value (i.e., "ETJ swaps"), when appropriate.

### ANNEXATION PARAMETERS

Given the amount of territory already included within Pearland's corporate limits (roughly 46 square miles), the City has the ability to add considerable acreage through annexation where desired and feasible. As specified in Chapter 43 of the Texas Local Government Code, in any given year the City may annex a quantity of acreage that is equivalent to up to 10 percent of its current incorporated land area (i.e., approximately 4.6 square miles). If it does not annex all of the land that is allowed, the difference rolls over to the next year. The City can make two such rollovers, meaning it can annex up to 30 percent of its land area in a single year (i.e., nearly 14 square miles currently).

The flip side of this opportunity is that, even more so since Chapter 43 was significantly amended in 1999, Texas annexation statutes impose stringent standards for extending municipal services to newly-annexed areas in a timely and adequate manner, which must be comparable to pre-existing services and service levels in similar incorporated areas.

## Growth Guidance Tools

Cities have an array of strategies for influencing the location, pattern and timing of development. Some methods simply aim to minimize the adverse effects of growth without affecting its direction or the nature of the development. Other techniques allow a city to guide and shape growth more directly. Given the limitations of Texas enabling laws for city and county government, there are few, if any, mechanisms currently available to entirely prevent scattered or "leapfrog" development trends, particularly within a City's ETJ. Instead, Texas cities are faced with a complex set of rules regarding their ability to manage all aspects of future growth and development. While there are some ways to better manage peripheral development, there are also factors over which the City has little control (e.g., no building permit requirements or building code enforcement in the ETJ).

Within this context, it is wise for Pearland to consider ways in which it can exert more influence over the direction, timing, pattern, and quality of fringe development that it ultimately must serve. The intent should not be to stop or necessarily slow growth in the area, but to guide growth toward areas that can best be served with public utilities and services in

a cost-efficient manner. The bottom line is that no single “silver bullet” solution is available to the City. Rather, Pearland must be prepared to consider a combination of ways to better manage its growth.

**AVAILABLE MUNICIPAL TOOLS**

As a home rule municipality, the City of Pearland is equipped with a number of authorities and methods for tackling the challenges of local growth guidance and management. Summarized in **Table 2.4, Tools for Advancing Growth Guidance Objectives**, are key mechanisms through which Pearland is already pursuing its growth-related objectives. These tools are shown in five categories that represent the main ways that comprehensive plans are implemented:

1. Capital projects.
2. Policies and programs.
3. Regulation and standards.
4. Partnerships and coordination.
5. More targeted planning (especially as required to qualify for external funding opportunities).

Given its size and the resulting level of sophistication of its municipal government, Pearland benefits from activities that are done here routinely relative to smaller cities with lesser means and capabilities – and compared to some larger cities with limited will or support to take certain actions. Along with the strategic priorities and other actions outlined in this plan section, it is important to capture in the Comprehensive Plan ongoing functions of City government, such as those highlighted in Table 2.4, that will also help to attain the plan vision and goals.

**TABLE 2.4, Tools for Advancing Growth Guidance Objectives**

TOOL	PEARLAND EXAMPLES
<b>Overall Framework for Growth and Development</b>	
Long-Range Planning	<ul style="list-style-type: none"> <li>• Comprehensive Plan                             <ul style="list-style-type: none"> <li>» Growth projections and assumptions</li> <li>» Land Use Plan (both new uses and redevelopment)</li> <li>» Thoroughfare Plan</li> </ul> </li> </ul>
Strategic Planning	<ul style="list-style-type: none"> <li>• Pearland 20/20 Strategic Plan</li> </ul>
<b>Capital Projects</b>	
Multi-Year Programming and Budgeting	<ul style="list-style-type: none"> <li>• Capital Improvements Plan (CIP)                             <ul style="list-style-type: none"> <li>» Targeted public investments in prime growth areas</li> <li>» Advance land acquisition for public improvements</li> <li>» Improved Insurance Services Office (ISO) rating</li> </ul> </li> </ul>
<b>Policies and Programs</b>	
Municipal Policies	<ul style="list-style-type: none"> <li>• Utility policies (required connection, extension, oversizing and cost-reimbursement)</li> <li>• Engineering design criteria                             <ul style="list-style-type: none"> <li>» Adequate infrastructure in ETJ development</li> <li>» “Green infrastructure” provisions</li> </ul> </li> <li>• Water rate structure (conservation incentives)</li> </ul>
Financial Management and Tools	<ul style="list-style-type: none"> <li>• Fiscal impact analysis</li> <li>• Development impact fees</li> <li>• Cost-sharing and external funding opportunities</li> </ul>
Special Initiatives	<ul style="list-style-type: none"> <li>• Regional approach to storm water management</li> <li>• Brownfield remediation to support redevelopment</li> </ul>

**TABLE 2.4,** Tools for Advancing Growth Guidance Objectives

TOOL	PEARLAND EXAMPLES
Special Districts	<ul style="list-style-type: none"> <li>• Municipal Utility Districts (MUDs, in-city and in ETJ)</li> <li>• Brazoria County Drainage District No. 4</li> <li>• Emergency Services Districts</li> <li>• Municipal Management Districts</li> <li>• Tax Increment Reinvestment Zones (TIRZ)</li> </ul>
<b>Regulations and Standards</b>	
Land Development Regulations	<ul style="list-style-type: none"> <li>• Unified Development Code (UDC) <ul style="list-style-type: none"> <li>» Appropriate zoning of annexed land</li> <li>» Adequate public facilities provisions</li> <li>» Parkland dedication and fee-in-lieu provisions</li> </ul> </li> <li>• Planned Development (PD) option</li> <li>• Cluster Development Plan option</li> </ul>
<b>Partnerships and Coordination</b>	
Public/Public	<ul style="list-style-type: none"> <li>• Multi-jurisdiction planning <ul style="list-style-type: none"> <li>» Water supply</li> <li>» Drainage</li> <li>» Transportation</li> <li>» Parks/trails</li> </ul> </li> <li>• Intergovernmental and interagency agreements</li> <li>• Pearland Economic Development Corporation</li> <li>• School districts (Alvin, Clear Creek, Fort Bend, Houston, Pasadena, Pearland)</li> <li>• County, state and federal entities with facilities in city</li> </ul>
Public/Private	<ul style="list-style-type: none"> <li>• Development agreements</li> <li>• Private property owners, and land development and real estate communities</li> <li>• Advocacy and resource organizations <ul style="list-style-type: none"> <li>» Pearland Chamber of Commerce</li> <li>» Keep Pearland Beautiful</li> <li>» Old Townsite Business Coalition</li> <li>» Homeowner associations</li> </ul> </li> </ul>
<b>Targeted Planning</b>	
Annexation Planning	<ul style="list-style-type: none"> <li>• Location, timing and logistics of potential annexations</li> </ul>
Special-Area Planning	<ul style="list-style-type: none"> <li>• Corridor and district plans</li> <li>• Neighborhood plans</li> </ul>
City Master Plans	<ul style="list-style-type: none"> <li>• Water, Wastewater, Drainage <ul style="list-style-type: none"> <li>» Water Conservation Plan</li> </ul> </li> <li>• Traffic Management</li> <li>• Parks and Recreation, Trails</li> </ul>

2015

# Pearland

COMPREHENSIVE PLAN



Informal walking path along Harkey Road at Old Oaks

## SECTION 3

# Mobility

Pearland is in an enviable location within the Houston metropolitan area relative to downtown Houston, the Texas Medical Center and other major employment and activity centers, while also offering its residents and businesses quick access to Hobby Airport. However, one of the community's main links to many of these key destinations – the State Highway 288 corridor – has reached a point of severe congestion at peak travel times in recent years. Relief of this situation, and for further projected traffic volume growth on SH 288, is planned through the proposed introduction of managed toll lanes to this freeway corridor and other phased improvements. Furthermore, at the time this Comprehensive Plan was under development, the Harris County Toll Road Authority had just completed a major widening project for the southern segment of the Sam Houston Tollway between SH 288 on the east and US 59 on the west. Looking ahead, the potential for a future rail transit connection to Pearland remains a “wild card” given uncertainty about regional and federal

funding and completing transportation improvement priorities across the area.

Closer to home, municipal government can invest and leverage its own local public dollars toward specific mobility projects that make an immediate and tangible difference in roadway capacity, safety and connectivity. Through its multi-year Capital Improvements Program (CIP), the City of Pearland plans ahead for an array of such projects, some of which are implemented in partnership with other levels of government. Through the subdivision regulation component of its Unified Development Code (UDC), the City also obtains needed right-of-way for new and expanded streets in conjunction with the land development that will generate additional traffic within the community. Private development often constructs such streets as well, in conformance with City engineering design criteria, and in some cases as part of development and cost-sharing agreements that yield benefits to both the private and public sectors. Pro rata assessments also help to fund improvements based on traffic impact analyses.

Community input for this long-range planning effort continues to demonstrate citizen interest in devoting more resources to connectivity and safety improvements that will make biking and walking to nearby destinations a more attractive option, especially in the vicinity of neighborhoods. This has implications for the design approach to future roadway improvements, as well as opportunities for developing more off-street “bike/ped” routes and connections.

It should be noted that all assumptions in this plan section are based on the Land Use Plan in the Land Use and Character section. The planned future transportation system for Pearland, or any extensions to the planned system, may not be able to support future land use scenarios that vary significantly from the development intensities depicted on the Land Use Plan.

## Mobility Context

Funding for transportation improvements is in increasingly scarce supply in the face of unprecedented demands, with ongoing population and economic growth across the nation and especially within Texas and the Houston metropolitan region. Besides the level of funding, the reliability of funding also complicates local planning, project selection and budgeting efforts. This section provides an overview of the funding situation for the Texas Department

of Transportation (TxDOT), along with other key transportation financing methods. It also documents Pearland’s struggle for public transit service through several potential providers, and references the 2040 update of the Houston-Galveston Area Council’s (H-GAC) Regional Transportation Plan, which is a principal method for allocating mobility funds across the area.

## ROADWAY FUNDING

Over the last decade, federal and state transportation revenue streams have not been keeping up with needed transportation investments. Federal and state tax rates on gasoline sales have not changed since the early 1990s, and increases in oil prices have changed behaviors of people with respect to their driving habits and types of cars purchased. Today, the increased options of telecommuting and reduced work weeks have also decreased the amount of cars on the road. This, in conjunction with more fuel-efficient automotive technology, has further decreased the amount of revenue generated from the gas tax per vehicle miles traveled (VMT). During this same time, many states including Texas have not raised their gasoline tax rate. As of January 2013, according to the Institute on Taxation and Economic Policy, 16 states had not increased the rate of gasoline taxation for 20 years or more.<sup>1</sup>

Specifically, the level of gas tax in Texas is 18.4 cents per gallon for the federal excise tax and 20 cents per gallon for the state tax.<sup>2</sup> The Texas rate of 20 cents has not changed in 21 years. To compound the problem, the Texas Legislature has diverted some revenue generated through the gas tax to education and other non-infrastructure expenditures.<sup>3</sup>

Other funding sources for mobility projects include:

## TEXAS MOBILITY FUND

The Texas Legislature created the Texas Mobility Fund to accelerate completion of TxDOT projects and improvements. The Fund allows the state to issue bonds for these purposes, which are backed by a dedicated revenue source. House Bill 3588 also authorizes certain transportation-related fees such as motor vehicle inspection fees and driver’s license fees to be moved from the state’s General Revenue Fund to the Texas Mobility Fund. Also, in 2014, Texas voters approved Proposition 1, which amended the Texas Constitution to expand transportation funding – without creating any new taxes or fees –

<sup>1</sup> “Time to tweak gas taxes? States weigh options,” Larry Copeland, USA TODAY, January 25, 2013.

<sup>2</sup> [http://www.gaspricewatch.com/web\\_gas\\_taxes.php](http://www.gaspricewatch.com/web_gas_taxes.php)

<sup>3</sup> [http://ftp.dot.state.tx.us/pub/txdot-info/sla/education\\_series/txdot\\_funding.pdf](http://ftp.dot.state.tx.us/pub/txdot-info/sla/education_series/txdot_funding.pdf); <http://www.lbb.state.tx.us/Documents/Publications/Primer/Highway%20Funding%20Primer%20312012.pdf>

by enabling some oil and gas tax revenues to be deposited into the State Highway Fund versus the Economic Stabilization Fund.

### STATE INFRASTRUCTURE BANK

TxDOT set up this banking system with federal and state funds. Given TxDOT's own funding constraints, the Infrastructure Bank is designed to encourage local entities to pay a larger share of the cost of highway projects, which is a key way to expedite needed improvements. Local entities may apply for loans, lines of credit, letters of credit, bond insurance, and capital reserves for roadway improvement projects.

### ROAD IMPACT FEES ON NEW DEVELOPMENT

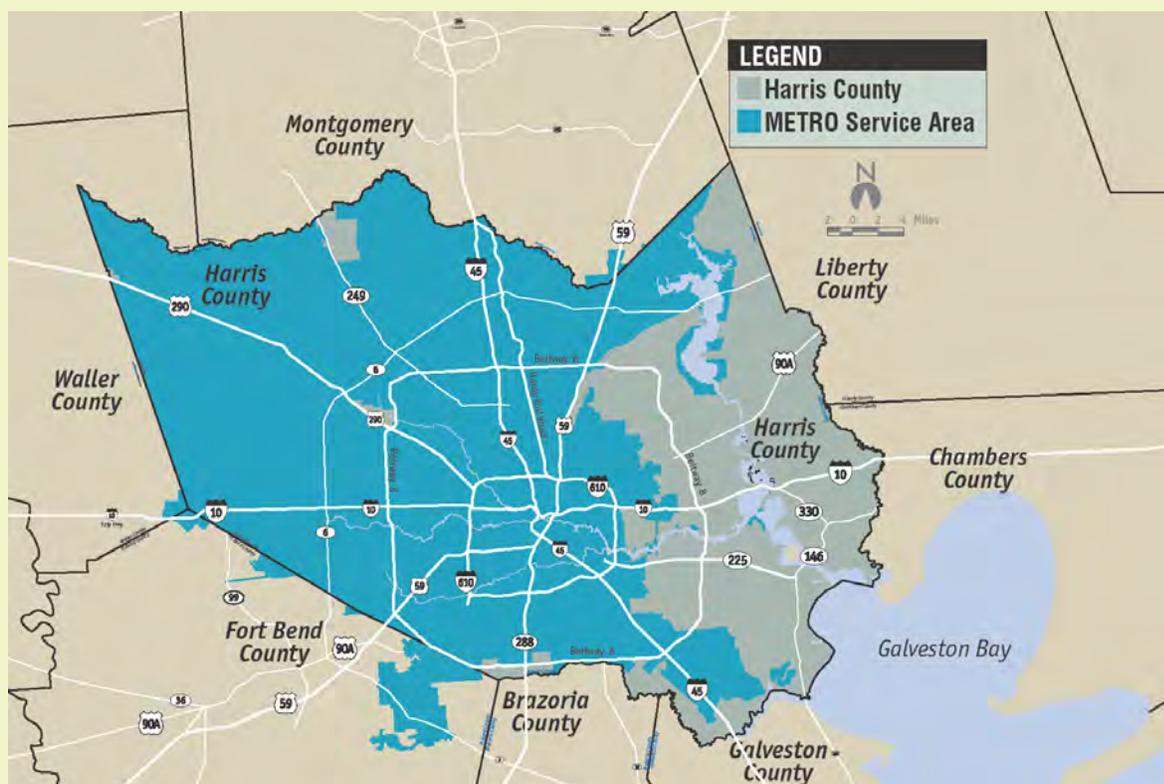
Road impact fees ensure that new development pays its fair share of the cost to improve the transportation system, based on the added traffic demands such development will generate, so as not to exacerbate existing traffic congestion issues or create new problems. The City of Pearland explored this option in the mid-2000s, with City officials ultimately deciding not to pursue it. However, the City has used water/wastewater impact fees for some time, which apply the same "fair share" principle to new development.

### TOLL FEES

The use of toll revenue financing is attracting increased attention as a means to complete transportation projects when other funding sources may be limited. Issuing bonds secured by toll revenue gives state and local authorities the ability to accelerate transportation projects that might otherwise not be built for some time, if at all, relying only on traditional funding sources. HB 3588 allows TxDOT to enter into an agreement with a Regional Mobility Authority (RMA) through which TxDOT will pay a per-vehicle fee to the RMA as reimbursement for RMA-led construction and maintenance of state highways, or to compensate the RMA for taking maintenance responsibility for certain facilities transferred by TxDOT. Based on pre-determined levels of usage, this approach allows TxDOT to effectively pay "tolls" on behalf of motorists using a new facility, with the revenue derived from traditional funding sources such as the gas tax. The "shadow toll" or "pass-through financing" payments received by the RMA from TxDOT can then be used to repay revenue bonds issued by the RMA to advance the project.

**FIGURE 3.1, METRO Service Area**

Source: Metropolitan Transit Authority of Harris County (METRO)



### LOCAL DEBT MECHANISMS

Cities can generate funds for roadway and other capital improvements through two forms of debt, General Obligation bonds and certificates of obligation (COs). Issuing bonds to fund City improvements largely depends on a favorable bond rating and low interest rates, as well as the support of local voters through bond referenda, while COs do not require voter approval. The City of Pearland has a long history of successful voter-supported bond programs that enabled the phased funding and completion of a range of mobility improvements over a multi-year timeframe.

### TRANSIT FUNDING

Most of Pearland lies within the Census-designated Houston urbanized area. Federal funding generated by Pearland area residents is sent to the Metropolitan Transit Authority of Harris County (METRO). However, Pearland is not within the service area of METRO as shown in **Figure 3.1, METRO Service Area** (on the previous page). Therefore, no federal formula funds have been allocated to Pearland. This must change if Pearland is to offer any type of transit services to residents.

Despite this situation, Pearland's eligibility could change with new Census designations of urbanized areas, Federal Transit Administration (FTA) rules for service areas, or with an expansion of METRO's service area. As a result, Pearland could become eligible for service from either an urban or rural provider at some point in the future.

FTA, through TxDOT, provides funding for public transit in several categories related to geographic area and trip purpose. The primary FTA funding categories include Section 5307 for designated urbanized areas, Section 5311 for non-urbanized areas, and Section 5310 to serve persons with disabilities. Funding categories for special services include Section 5309 for establishing new rail or busway projects, Section 5316 Job Access and Reverse Commute funding for low-income persons, Title III under the Older Americans Act, and Section 1122 of MAP-21 for the Transportation Alternatives Program, which replaces the funding from pre-MAP-21 programs including the Safe Routes to School Program.

### H-GAC REGIONAL TRANSPORTATION PLAN

The Regional Transportation Plan (RTP) maintained

by the Houston-Galveston Area Council (H-GAC) was recently updated, with H-GAC's Transportation Policy Council (TPC) adopting the new 2040 RTP in January 2015. The RTP is a long-range planning document that identifies future transportation needs, and the roadway, transit, and other transportation projects that will best meet those needs. The plan also establishes future transportation policy, projects and programs that meet federal air quality standards and are affordable based on transportation revenue projections. Federal regulations for RTPs require that they have at least a 20-year planning horizon.

The previous active Regional Transportation Plan (RTP) was adopted in October 2010, and was an update of the original 2035 RTP, which had been adopted in October 2007. (Note that all RTP-related information and projections in this plan section are based on the 2010 version as the 2040 RTP update was still pending.) The 2010 update reflected the fiscal outlook at that time compared to what had been projected in the October 2007 version. The projected transportation expenditures in 2007 totaled approximately \$157 billion for financially constrained projects. Due to the 2008 recession, the projected expenditures in 2010 were cut almost in half to \$87 billion for financially constrained projects. Many projects were removed from the RTP entirely, including FM 518 in Pearland, and other projects were changed in terms of their scope, costs and limits. Locally funded projects completed since 2007 were also removed.<sup>4,5</sup>

The new 2040 RTP includes performance measures and standards for the regional transportation system. This is to comply with 2012 federal surface transportation funding legislation, Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21). The 2040 RTP is also based on the newest available demographic data and projected land use changes, and contains reworded and reformulated goals for consistency with the new performance measures and standards.

Once a new RTP is adopted, H-GAC's project selection process screens and determines which transportation projects actually move forward. When a city, county or other public agency wants to use federal or state dollars for a transportation project or program in the region, the project/program must first be submitted, selected and included in the RTP before it can be built.

4 [http://www.h-gac.com/taq/plan/2035\\_rtp.aspx](http://www.h-gac.com/taq/plan/2035_rtp.aspx)

5 <http://www.h-gac.com/taq/plan/2040/default.aspx>

**TABLE 3.1,** Major Mobility Projects Completed Since 1999 Pearland Comprehensive Plan

Source: City of Pearland, CDM Smith

Map ID	Roadway	From	To	Description	Lead Agency	Status
1	Barry Rose Rd	Broadway St/ FM 518	Pearland Parkway	Widen 0.3 mi 2-lane to 4-lane w/ continuous turn lane; 1.8 mi of 4-lane divided roadway on new location	City	Completed
2	Hughes Ranch Road/ CR 403	Stone Rd	Garden Rd	Construct 4-lane	City	Partially Completed
3	Cullen Blvd/FM 865	Broadway St/ FM 518	Southfork	Construct 4-lane	City	Completed
4	Dixie Farm Rd	15 ft S of Broadway St/ FM 518	SH 35	Widen to 4 lanes	City	Completed
5	Dixie Farm Rd	Harris Co line	Broadway St/ FM 518	Widen to 4 lanes	City	Completed
6	Cullen Blvd/FM 865	Harris Co line	Broadway St/ FM 518	Widen to 4-lane divided	TxDOT/City	Completed
7	John Lizer Rd	SH 35	Pearland Pkwy	Widen from 2 to 4-lane divided curb and gutter	City	Completed
8	Magnolia Dr at BNSF RR	-	-	Construct grade separation @ RR track	City	Completed
9	Magnolia St	Dead end west of McLean	Veterans Dr	Widen from 2 to 4-lane divided curb and gutter	City	Completed
10	Magnolia St	Veterans Dr	SH 35	Widen from 2 to 4-lane divided curb and gutter	City	Completed
11	Magnolia/ Southfork	Magnolia dead end	CR 89	Construct 4-lane divided	City	Completed
12	McHard Rd/FM 2234	SH 35	Pearland Pkwy	Construct 4-lane divided urban road on new location	City	Completed
13	Pearland Pkwy	Beltway 8	Oiler Drive	Construct new 4-lane extension	City	Completed
14	SH 288 at Bailey Rd/ CR 101	-	-	Construct grade separation	TxDOT	Completed
15	SH 288 at CR 58 and CR 59	-	-	Construct four overpass structures	TxDOT	Completed
16	SH 288	McHard Rd/FM 2234	CR 59	Construct 2-lane frontage roads on both sides	City	Partially Completed
17	SH 288	Harris Co line	McHard Rd/FM 2234	Connect existing frontage roads	TxDOT	Completed
18	SH 35	Harris Co line/ Beltway 8	Broadway St/ FM 518	Widen to 6-lane divided w/ curb and gutter in sections	TxDOT	Completed
19	Bailey Rd/CR 101	SH 288	SH 35	Construct 3.5 mi of 4-lane roadway, rehab 4.7 mi of existing roadway	City/County	Partially Completed
20	FM 2234	FM 521	SH 288	Widen to 4 lanes	TxDOT	Completed
21	FM 518 extension	Alameda School Rd	FM 521	Construct 4-lane	City/ Developer	Completed
22	Southfork/John Lizer/ CR 59 (Magnolia St)	Kirby Dr	Pearland Parkway	Widen from 2 to 4 lanes	City	Completed

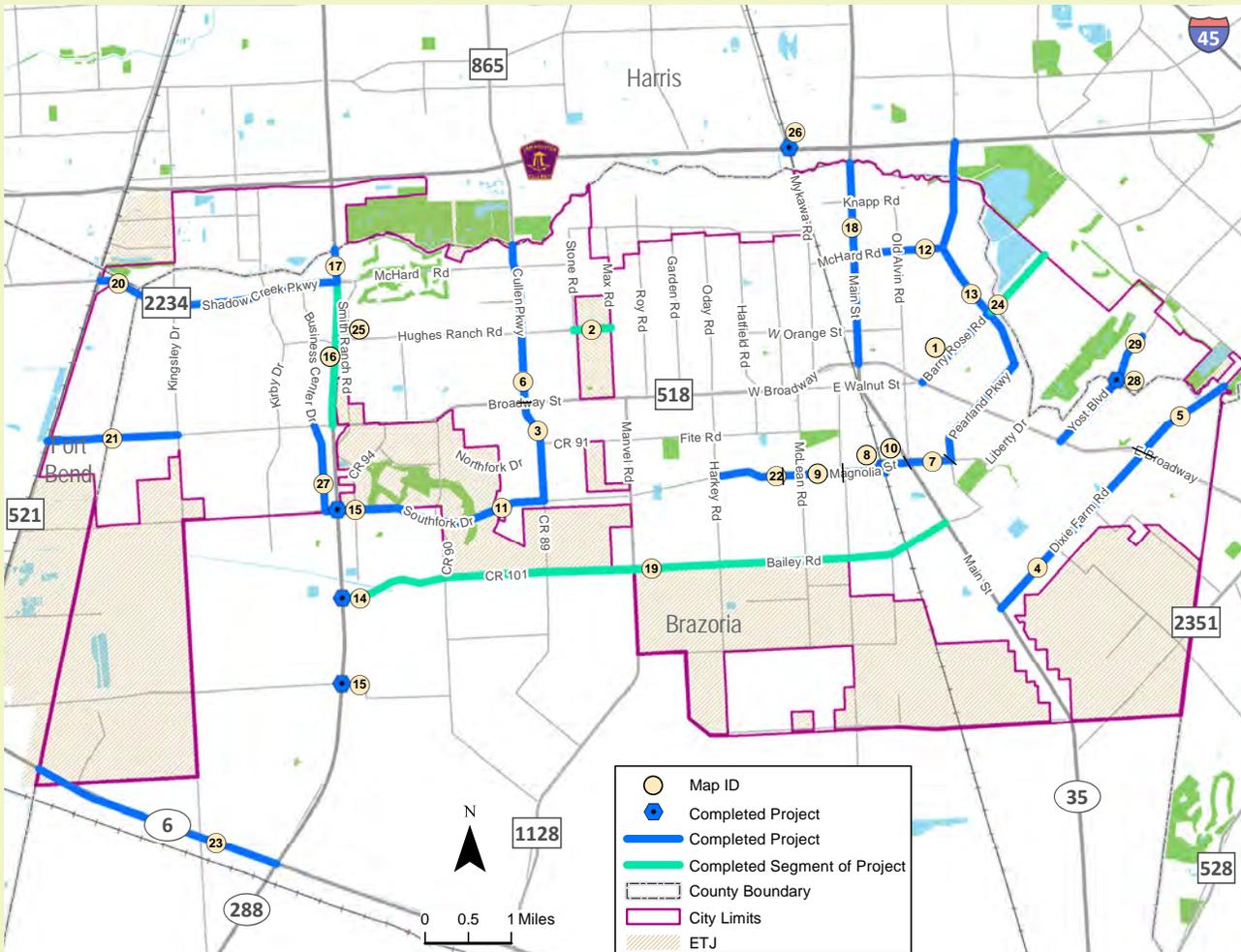
**TABLE 3.1, Major Mobility Projects Completed Since 1999 Pearland Comprehensive Plan**

Source: City of Pearland, CDM Smith

Map ID	Roadway	From	To	Description	Lead Agency	Status
23	SH 6	Fort Bend Co line	SH 288	Widen to 6-lane divided	TxDOT	Completed
24	Hughes Rd/CR 403	Pearland Parkway	City limits	Construct new 4-lane extension	City/ Developer	Completed
25	Hughes Rd/CR 403	SH 288	Cullen Blvd/FM 865	Widen from 2 to 4 lanes, add median and shoulders, add ped walkway and elevated crosswalk	City	Partially Completed
26	Beltway 8 Santa Fe RR (Mykawa Rd)	-	-	Permanent frontage road overpasses	TxDOT	Completed
27	Business Center Dr	Broadway St/ FM 518	Southfork/CR 59	Construct 4-lane divided w/ curb and gutter on new alignment	City	Completed
28	Yost Rd/ Scarsdale Rd	-	-	Extend Yost Rd across Clear Creek eastward	City/Harris County	Completed
29	Yost Blvd	Broadway St/ FM 518	Scarsdale dead end	Widen 4-lane undivided	City	Completed

**FIGURE 3.2, Major Mobility Projects Completed Since 1999 Pearland Comprehensive Plan**

Source: City of Pearland, CDM Smith



**TABLE 3.2,** Committed Projects in 2035 Regional Transportation Plan

Source: H-GAC 2035 Regional Transportation Plan

Map ID	Project ID	Roadway	From	To	Description	Total Cost (MIL)	Date	Status
1	668	Bailey Rd/CR 101	FM 1128	Veterans Dr	Widen from 2 to 4-lane divided with raised median	\$33.8	5/1/2015	TIP
2	671	Hughes Ranch Rd/CR 403	Smith Ranch Rd	Cullen Blvd/ FM 865	Widen from 2 to 4 lanes, add median and shoulders, and sidewalks	\$22.3	8/1/2017	Short
3	7602	Mykawa Rd	Beltway 8	Broadway St/ FM 518	Widen from 2 to 4 lanes with raised median (S of McHard) and flush median (N of McHard)	\$20.7	7/1/2016	TIP
4	7624	Mykawa Rd	Broadway St/ FM 518	Walnut St W	Construct new 4-lane divided to connect Mykawa to Veterans	\$6.7	1/1/2021	Short
5	7625	Hughes Ranch Rd/CR 403	Max Rd	Garden Rd	Construct 4-lane	\$12.8	1/1/2018	Short
6	7626	CR 48	Beltway 8	Clear Creek	Widen from 2 to 4-lane divided	\$9.9	1/1/2018	Short
7	7628	Fite Rd	McLean Rd	Veterans Dr	Construct 4-lane undivided	\$5.3	8/1/2014	TIP
8	7630	Pearland Pkwy	Dixie Farm Rd	FM 2351	Construct 4-lane divided on new location	\$19.5	1/1/2018	Short
9	7631	Orange St W	O'Day Rd	Hatfield St	Construct 4-lane undivided	\$5.6	1/1/2018	Short
10	7874	McHard Rd/ FM 2234	Cullen Blvd/ FM 865	Mykawa Rd	Construct 4-lane divided on new location	\$45.9	2/1/2016	TIP
11	11633	Cullen Blvd/ FM 865	Southfork Dr	Bailey Rd	Widen from 2 to 4-lane divided curb and gutter	\$9.5	1/1/2018	Short
12	11635	Max Rd	McHard Rd/ FM 2234	Hughes Ranch Rd/CR 403	Widen from 2 to 4 lanes divided curb and gutter	\$8.9	1/1/2018	Short
13	11636	Max Rd	Hughes Ranch Rd/CR 403	Broadway St/ FM 518	Widen from 2 to 4-lane divided curb and gutter	\$7.9	12/1/2014	TIP
14	11639	Harkey Rd	Broadway St/ FM 518	Bailey Rd/CR 101	Widen from 2 to 4-lane divided curb and gutter	\$22.3	1/1/2021	Short
15	11640	Veterans Dr	Walnut W	Bailey Rd/CR 101	Widen from 2 to 4-lane divided curb and gutter	\$24.5	1/1/2018	Short
16	11641	Veterans Dr	Bailey Rd/CR 101	Hastings Cannon Rd	Widen from 2 to 4-lane divided curb and gutter	\$45.7	1/1/2020	Short
17	11642	Hastings Cannon Rd	Harkey Blvd	Veterans Rd	Widen from 2 to 4-lane divided curb and gutter	\$4.1	1/1/2032	Long
18	11643	Hastings Cannon Rd	Veterans Rd	SH 35	Widen from 2 to 4-lane divided curb and gutter	\$38.8	1/1/2033	Long
19	11653	CR 894	Fort Bend Co line	CR 48	Widen from 2 to 4-lane divided curb and gutter	\$37.6	1/1/2031	Long
20	11654	Smith Ranch Rd/CR 94	Hughes Ranch Rd/CR 403	N of Broadway (FM 518)	Widen from 2 to 4-lane divided curb and gutter	\$5.3	5/1/2017	TIP
21	11655	O'Day Rd	McHard Rd/ FM 2234	Broadway St/ FM 518	Widen from 2 to 4-lane divided curb and gutter	\$20.7	1/1/2018	TIP

**TABLE 3.2,** Committed Projects in 2035 Regional Transportation Plan

Source: H-GAC 2035 Regional Transportation Plan

Map ID	Project ID	Roadway	From	To	Description	Total Cost (MIL)	Date	Status
22	11764	SH 288	Alameda Line GRT (RR ROW)	Intermodal Terminal	SH 288-Alameda line guided rapid transit	\$250	9/1/2033	Long
23	12759	CR 59	Fort Bend Co line	CR 48	Widen from 2 to 4-lane divided with bridge	\$12.6	1/1/2023	Short
24	13564	Harkey Rd	Bailey Rd/CR 101	Hastings Cannon Rd	Widen from 2 to 4-lane divided curb and gutter	\$26.1	1/1/2025	Long
25	13565	Max Rd	BW 8	McHard Rd/ FM 2234	Widen from 2 to 4-lane divided curb and gutter	\$13.9	1/1/2018	Short
26	13566	O'Day Rd	Brookside Rd	McHard Rd (future alignment)	Widen from 2 to 4-lane divided curb and gutter	\$1	1/1/2018	Short
27	13856	SH 288	IH-610	Brazoria Co line	Construct 4 toll lanes	\$192	8/1/2014	TIP
28	13583	CR 48	Broadway St/ FM 518	CR 894	Widen from 2 to 4-lane divided rural section with 10 ft outside shoulders	\$15	6/1/2014	TIP
29	12760	CR 59	CR 48	Business Center Dr	Widen from 2 to 4 lanes with bridge	\$20.3	1/1/2015	TIP
30	13765	SH 288	Harris Co line	CR 58	Construct 4 toll lanes with grade separations	\$196.4	1/1/2014	TIP
31	11644	Palmetto Rd/ CR 49	Alameda Rd/ FM 521	Fort Bend Co line	Widen to 4-lane divided	\$1.9	1/1/2020	Short
32	669	FM 2351	SH 35	Galveston Co line	Reconstruct and widen to 4-lane divided rural section	\$3.3	9/1/2019	Short
33	13767	SH 288	CR 58	SH 99	Construct 4 toll lanes with grade separations	\$261	8/1/2032	Long
34	12402	CR 58	SH 288	FM 1128	Widen to 4 lanes	\$34.8	1/1/2020	Short
35	14255	SH 288 at Beltway 8	-	-	Construct 4 direct connectors at Beltway 8 interchange	\$130	4/1/2032	Long
36	7622	Pearland Pkwy	Oiler Dr	Dixie Farm Rd	Construct new 4-lane divided with raised median	\$6	8/1/2013	LET/TIP

## Legacy of Past Long-Range Planning

Since the time of the City's 1999 Comprehensive Plan, numerous major transportation projects have been completed within Pearland's jurisdiction as listed in **Table 3.1, Major Mobility Projects Completed Since 1999 Pearland Comprehensive Plan**, and as illustrated in **Figure 3.2** (same title) on page 3.6. These projects were identified in the 1999 Comprehensive Plan and/or in periodic H-GAC regional transportation plans.

Among the most significant projects were:

- Dixie Farm Road, which is now a four-lane divided roadway between SH 35 and I-45.
- Pearland Parkway, with an initial four-lane segment constructed between Oiler Drive and Beltway 8.
- SH 35, which was widened to a six-lane divided facility between Beltway 8 and FM 518/ Broadway.
- Sam Houston Tollway, which was widened from four to eight lanes between US 59 and SH 288, and has its four original main lanes from SH 288 to just west of I-45.

**FIGURE 3.3,** Committed Projects in 2035 Regional Transportation Plan

Source: H-GAC 2035 Regional Transportation Plan



A number of major projects were also identified in H-GAC's 2035 Regional Transportation Plan, which was adopted several years ago and recently updated as the 2040 RTP. These projects are listed in **Table 3.2, Committed Projects in 2035 Regional Transportation Plan** on page 3.7, and illustrated in **Figure 3.3** (same title).

Among the most significant projects are:

- Pearland Parkway, involving construction of another four-lane divided segment from Dixie Farm Road to FM 2351.
- SH 288, involving construction of four toll lanes from IH-610 to the Brazoria County line.
- SH 288, involving construction of four toll lanes with grade separations from CR 58 to SH 99.
- SH 288, involving construction of four direct connectors at the Beltway 8 interchange.

## Status and Outlook for Mobility

### EXISTING TRANSPORTATION SYSTEM

The Pearland regional roadway network consists of freeway, toll road, arterial, collector, and local roadways providing mobility and access at the regional and local levels. TxDOT maintains the state roadway system, which mainly provides regional mobility. Cities and counties collectively maintain the rest of the road network, which provides access to the state system and also serves travel needs within the region and between and within local communities.

As the city of Pearland has reached the threshold population of 50,000 for implementing the program, the TxDOT Signal Takeover Program has been implemented to turn over control, operation, and

maintenance of 50 previously TxDOT-maintained traffic signals to the City. The locations of these signals are shown in **Figure 3.4, TxDOT Traffic Signals Operated by the City of Pearland**. The TxDOT traffic signals which are now operated and maintained by the City include signals on McHard Road/Shadow Creek Parkway/FM 2234, Broadway Street/FM 518, Southfork Drive/CR 59, Cullen Boulevard/FM 865, Manvel Road, SH 35, and SH 288.

Pearland is known as primarily a bedroom community, with many travel destinations located in and around Houston. The resultant travel patterns focus on north-south movement along major roadways such as SH 288. Secondary east-west movements to access SH 288 impose high traffic demands on arterials such as FM 518/Broadway.

Significant regional and local roadways in the Pearland area include:

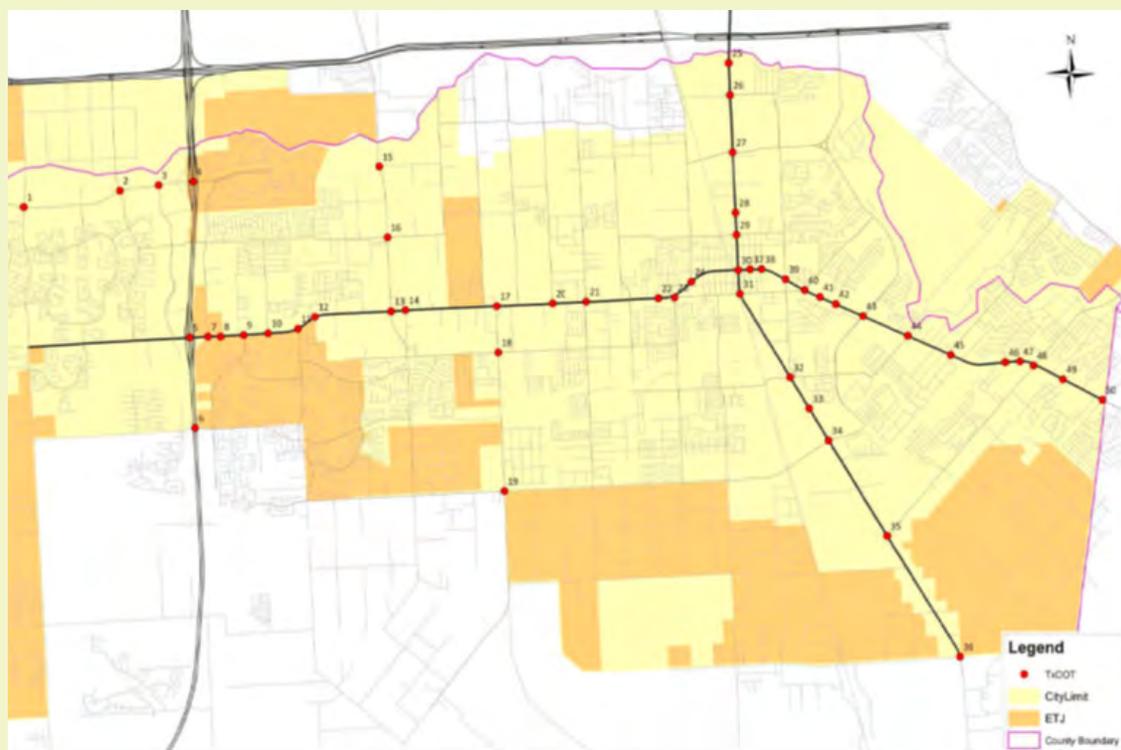
- **Sam Houston Tollway and Beltway 8**, which are components of an outer loop around the City of Houston. It is the second circumferential loop outside of Houston with IH-610 being the innermost loop. Tolloed main lanes are known as the Sam Houston Tollway, and are operated by

the Harris County Toll Road Authority (HCTRA). The free frontage roads are known as Beltway 8. They are situated along portions of the northern border of Pearland. HCTRA recently completed an expansion of the main lanes, which caused the closure of the Kirby Drive exit in the eastbound direction. Future widening may restore access with a new ramp between Kirby Drive and SH 288.

- **SH 288** has been identified in numerous plans and public meetings as the primary “hot spot” traffic location for Pearland. It is the primary route providing access to the Texas Medical Center and downtown Houston locations. In addition to providing regional access for commuters, SH 288 serves local traffic needs with retail uses focused at its intersection with FM 518/Broadway and other major intersecting roadways.
- **SH 35 / Main Street** runs north and south on the eastern side of Pearland.
- **SH 6** crosses the southwest corner of Pearland’s ETJ, connecting FM 521, Old Airline Road, and SH 288.

**FIGURE 3.4,** TxDOT Traffic Signals Operated by the City of Pearland

Source: Pearland TxDOT Signal Takeover Technical Memorandum #1





Improvements to Bailey Road ▲ will make it a much safer four-lane roadway, while recent upgrades to Dixie Farm Road ▼ include sidewalks and on-street bike lanes



- **FM 518 / Broadway** is the major east-west route in Pearland. Discussions during small-group listening sessions held in August and September 2013 and informal polling results from a later Comprehensive Plan Advisory Committee meeting showed that improving east-west circulation was considered one of the most important mobility issues in the community.
- **FM 521** runs north-south, parallel to SH 288 and about three miles west of the corridor, and forms portions of the western border of Pearland. Its current configuration is six lanes with a center turn lane from Beltway 8 running south, dropping quickly to five lanes and then to four at Riley Road. South of Riley Road it reduces to two lanes with a center turn lane. The four-lane section of FM 521 is being

extended, with an overpass at the railroad tracks near Alameda Road. Construction on this extension is slated to start in 2015.

- **FM 2234 / Shadow Creek Parkway / McHard Road** is an east-west corridor which currently is not continuous across the city. The City's adopted Thoroughfare Plan calls for completing the corridor. The corridor has an existing interchange at SH 288 and an at-grade crossing at SH 35. Construction of the extension is slated to begin in 2017. An overpass at FM 521 and the railroad tracks is scheduled for construction in 2015. According to the 2035 RTP update, the referenced project (MPO ID 7873) is included in the 2014 TIP.
- **Kirby Drive** and the parallel **Business Center Drive** provide important access from residential areas and from the Pearland Town Center to FM 518/Broadway, FM 2234/McHard Road, and SH 288.
- **Cullen Boulevard** provides access to Beltway 8 and enables north-south movement into Houston.
- **Max Road** is parallel to and east of Cullen Boulevard and also provides for north-south movement. It currently does not connect with Beltway 8, but roadway widening and an extension to Beltway 8 are planned. Traffic on Max Road is expected to increase with the completion of a soccer complex currently under construction.
- **Mykawa Road** has four lanes throughout the southern portion of Pearland, but transitions to two lanes north of Orange Street. Comments received at a public open house event for this Comprehensive Plan in October 2013 called for making it four lanes to Beltway 8. Mykawa currently intersects Beltway 8 at a point where the Beltway lanes do not cross the railroad tracks to the east, so it provides direct access to the Sam Houston Tollway only in the westbound direction.
- **Dixie Farm Road** is a four-lane divided arterial for the full extent of its length from SH 35 northward through Pearland. It connects SH 35 with FM 518/Broadway on the east side of Pearland and also provides access to IH-45 in Houston.

- **Pearland Parkway** was built as an entirely new roadway connecting Beltway 8, a new section of McHard Road, and FM 518/Broadway. Long-term plans are to extend the roadway to FM 2351, which will tie into a future extension in Friendswood and League City to provide access to IH-45. Construction on the Pearland Parkway extension to Dixie Farm Road is currently under way. The design of the roundabout at Pearland Parkway and McHard Road is interesting in that it has one lane over part of the circle and two lanes over another part. In some parts of the circle, traffic within the roundabout yields to entering traffic, while at another part incoming traffic yields.
- **Magnolia Street** is parallel and to the south of FM 518/Broadway. It is configured as four-lane divided along most of its length through Pearland, from Business Center Drive in the west to Pearland Parkway in the east. It serves as a reliever route for FM 518.
- **Bailey Road** is parallel and to the south of FM 518/Broadway and Magnolia Street. It is two lanes through most of its length. The portion within Pearland is from FM 1128 to just east of Pearland Parkway. East of SH 35, where its name changes to Oiler Drive and then Marys Village Drive, it is a four-lane divided section. To the west, the two-lane section ends at Silverlake Parkway, where it becomes four-lane divided as far as SH 288. The segment from SH 288 to FM 1128 is in unincorporated Brazoria County and the City of Manvel ETJ.

### SH 288 CORRIDOR

The SH 288 corridor is the focus of several major studies and planned projects for expansion and enhancement, including new managed lanes, a park and ride lot, and commuter bus service. The 2005 *SH 288 Corridor Feasibility Report* reported Level of Service (LOS) on SH 288 from SH 6 to FM 518/Broadway as in the C/D range, dropping to the E/F range north of there all the way to downtown Houston. With the 2005 study projecting that traffic on SH 288 could increase anywhere from 32 to 74 percent through 2035, further degradation in future LOS was expected.

To address this issue, TxDOT, HCTRA and METRO all show the SH 288 managed lanes project in their future project plans. As shown in **Figure 3.5, SH 288 Managed Lanes Project**, the project will have

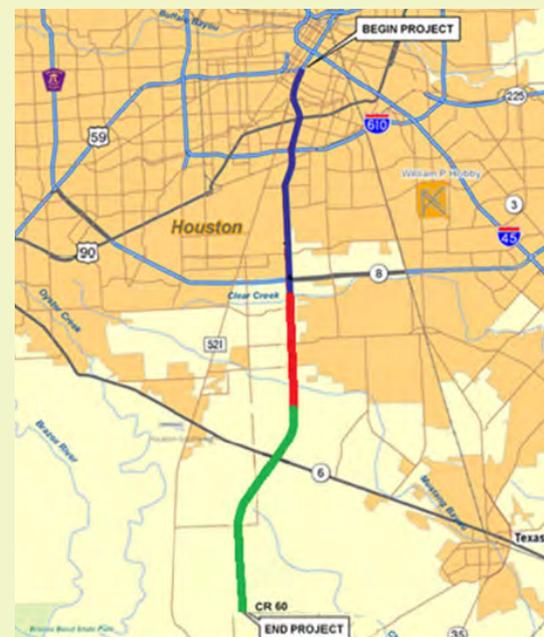
several phases. The ultimate build-out of the project is for four toll lanes within the existing median with direct connectors at Beltway 8. The total ultimate project length is 25 miles from US 59 in Houston to Grand Parkway/CR 60 north of Rosharon. The initial project runs from US 59 to CR 58. TxDOT will be responsible for the portion from US 59 to the Harris/Brazoria county line, with the Brazoria County Toll Road Authority responsible for the portion from the county line to CR 58. The initial project will construct a four-lane section, but the exact configuration of the direct connectors has not been finalized. Construction is scheduled to begin in 2015 and be complete by 2018.

Complementing the managed lanes project, a separate TxDOT project has identified the preferred alignment for direct connectors from SH 288 to the Texas Medical Center, running along Holcombe Boulevard.<sup>6</sup> Construction there is expected to coordinate with the SH 288 toll lanes project, commencing in 2015 and becoming operational by 2018. The public transit discussion later in this section highlights another initiative intended to relieve SH 288 congestion.

<sup>6</sup> According to TxDOT Houston District design office.

**FIGURE 3.5, SH 288 Managed Lanes Project**

Source: TxDOT Houston District



## THOROUGHFARE NETWORK

### PEARLAND THOROUGHFARE PLAN AND FUNCTIONAL CLASSES

The City-prepared **City of Pearland Thoroughfare Plan map** included in this plan section is the City's current Thoroughfare Plan as last updated and adopted by City Council in February 2014. Line styles are applied to roads on the Thoroughfare Plan map to identify the status of roads and projects and to define each road by its functional class. Line styles identify roads with several options as to their status and of the proposed projects:

- A solid black line indicates a freeway.
- An intermittent line identifies the location of proposed frontage roads on SH 288.
- Other solid lines indicate roads where the width is sufficient for projected needs.
- A dashed line indicates a road for which a widening project is planned.
- A dotted line indicates the alignment for a new road or road connection where right-of-way usually must be acquired.

Existing and planned area roadways are shown and defined in four functional classes. Functional class defines characteristics of a road and its relationship with other roads in the area. It is a somewhat subjective measure, and may change over time as traffic patterns change with residential and commercial development. Generally, the higher level functional classes focus on providing mobility,

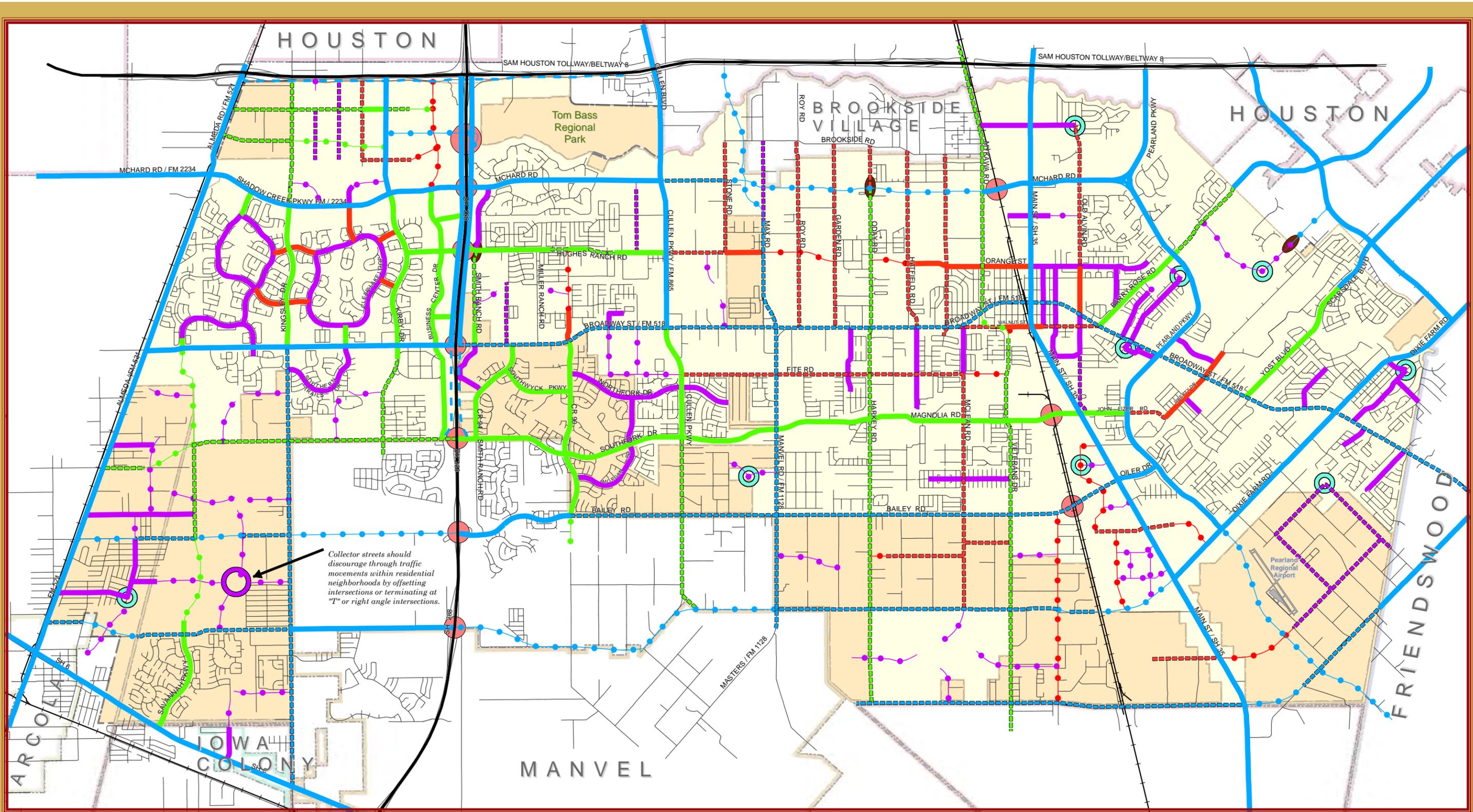
### Prospects for Toll Lane Use

As an informal polling exercise, Comprehensive Plan Advisory Committee members were asked, "If special toll lanes are added to SH 288, would you be likely to use the toll lanes?" More than two-thirds of members said they would use the lanes regularly (20 percent) or occasionally (50 percent), with 10 percent saying rarely, and 20 percent never. When the same question was posed to participants in the MindMixer online discussion forum site, the distribution of responses was: 31 percent regularly, 29 percent occasionally, 23 percent rarely, and 17 percent never. Therefore, in both forums, a clear majority of respondents – 70 percent in one case and 60 percent in the other – indicated they would take advantage of the new toll lane option at least on occasion.

providing paths between origins and destinations. Lower level functional classes focus on providing access, with multiple driveway cuts and connections.

- **Freeways** are shown in black, and are part of the state system. They serve high-volume, high-speed regional traffic with full access control. Freeways in the Pearland region are SH 288 and HCTRA's Sam Houston Tollway.
- **Major Thoroughfares**, shown in blue, have a minimum 120-foot right-of-way width. They primarily function to provide regional mobility, but also have a smaller element of providing access. This functional class is designed to serve 15,000 to 30,000 vehicles per day. Major thoroughfares in Pearland include roads such as FM 518/Broadway, FM 2234/McHard Road, SH 35/Main Street, Bailey Road, Dixie Farm Road, FM 521, and Pearland Parkway.
- **Secondary Thoroughfares**, shown in green, have a minimum 100-foot right-of-way width. This functional class is designed to serve 10,000 to 20,000 vehicles per day. Examples of secondary thoroughfares in Pearland include Kirby Drive, Southfork Road, Magnolia Street, Harkey Road, and Veterans Drive.
- **Major Collector Streets**, shown in red, have a minimum 80-foot right-of-way width. This functional class is designed to serve 1,500 to 10,000 vehicles per day. In practice, collector streets provide a larger degree of access to homes and to destinations than do thoroughfares. Stone Road, Walnut Street, Fite Road, and a portion of Orange Street are examples of major collectors.
- **Minor Collector Streets**, shown in purple, have a minimum 60-foot right-of-way width. This functional class is designed to serve 1,500 to 5,000 vehicles per day. Minor collector streets in Pearland include Northfork Drive, Clear Lake Loop, and a portion of Orange Street.

The Thoroughfare Plan also shows the locations of grade separation projects, both for road interchanges and for roads crossing over railroad tracks. It also presents intersection design as a strategy for discouraging through traffic in neighborhood areas. This is done by specifying that collector streets should have offsetting intersections or terminate at "T" or right-angle intersections. Locations for several neighborhood intersections with this treatment are identified on the plan where collector streets are to be widened or right-of-way acquired.



# CITY OF PEARLAND THOROUGHFARE PLAN

Plan Approved: 24 MAR 2014  
(Ord 943-21)

- 120' Minimum ROW**
- Major Thoroughfares - Sufficient Width
  - - - Major Thoroughfares - To Be Widened
  - · - · - Major Thoroughfares - To Be Acquired
  - · - · - Major Thoroughfares - Proposed Frontage Road
  - Freeway

- 100' Minimum ROW**
- Secondary Thoroughfares - Sufficient Width
  - - - Secondary Thoroughfares - To Be Widened
  - · - · - Secondary Thoroughfares - To Be Acquired

- 80' Minimum ROW**
- Major Collector Streets - Sufficient Width
  - - - Major Collector Streets - To Be Widened
  - · - · - Major Collector Streets - To Be Acquired

- 60' Minimum ROW**
- Minor Collector Streets - Sufficient Width
  - - - Minor Collector Streets - To Be Widened
  - · - · - Minor Collector Streets - To Be Acquired

- Proposed Grade Separation
- 15:1 R.O.W. Transition
- Collector Streets
- Street intersect at a right angle as part of a T or 4-way intersection
- Pearland City Limits
- Pearland ETJ



1:63,360 or 1 inch = 1 miles

0 0.5 1  
Miles

This product is for informational purposes and 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 boundaries.

MAP PREPARED: MAY 2014  
CITY OF PEARLAND GIS DEPARTMENT

### The Dilemma of Local Street Network Design

The choices that are made in defining the Pearland transportation system will address particular community goals and contribute to solving local mobility issues. However, in an environment of multiple and sometimes conflicting goals, at a practical level a strategy to achieve one goal may not be the optimum solution to address another goal. The current approach to local street networks in Pearland and elsewhere illustrates this dilemma.

A grid street system is promoted in much of the literature relating to neo-traditional development and livable communities. A grid pattern with short block lengths has the advantage of providing multiple paths and shortening travel distances. On the other hand, long straight lengths of street tend to promote speeding, and multiple paths promote “rat runs” of regional traffic seeking alternate routes through residential neighborhoods. This has led to the need for traffic calming programs in neighborhoods with traditional grid street patterns.

Local street patterns in Pearland have mostly been developed with a different approach, often being structured with cul-de-sacs and isolated blocks that define small “neighborhood clusters” such as in the aerial clip below from the Shadow Creek Ranch area (Source: Google Earth). Streets in the distinctly defined neighborhood clusters are often curvy and short, with visual variety in streetscapes and in the shapes of individual lots. Landscaping, parks, and trails can easily be provided between neighborhood clusters to provide green space and recreation. In the



Shadow Creek Ranch example, a water feature is provided in the space between clusters. Through traffic and excessive speed is discouraged without the need for dramatic after-the-fact traffic calming techniques such as traffic humps to try to fix issues that are based on the underlying design of the street system. On the negative side, the cul-de-sac design creates higher-intensity traffic loading points at discrete spots along the collector streets and allows for few alternate travel paths.

Therefore, the choice in the design of the local street structure requires a balancing of multiple goals. In the case of the grid system as compared to the cul-de-sac system, transportation efficiency is balanced against quality of life issues. Trade-offs between such choices will be an issue throughout the Pearland transportation system as it develops and is upgraded to accommodate future growth, with the intent of building an efficient yet “friendly” environment where people have ready access to destinations and a practical choice of travel modes.

### LEVEL OF SERVICE

The sufficiency of a roadway or its need for new capacity is often assessed by its Level of Service (LOS). LOS is an indicator of congestion on a roadway and of the ease of driving conditions that a driver has to face. LOS is not physically measured. Rather, it is typically calculated based on the ratio of a road’s traffic volume to its capacity for a full 24-hour period. These two inputs were obtained from the Pearland portion of the Houston-Galveston Area Council (H-GAC) regional travel demand model, for

the model’s base year (2012) and forecast year (2035), to calculate local LOS.<sup>7</sup>

<sup>7</sup> The LOS information and maps in this section are from Pearland-specific modeling completed in 2013. No new modeling was completed specifically for this Comprehensive Plan update. Such modeling helps to illustrate potential future conditions based on existing conditions and certain assumptions about how current trends may continue or change during the time horizon reflected in the model. The 2013 modeling for Pearland reflected whatever assumptions about the timing and extent of surrounding area growth and resulting traffic generation that were factored into H-GAC’s regional traffic modeling. As H-GAC periodically completes newer modeling in support of Regional Transportation Plan updates, the actual pace of emerging growth in Manvel and other areas south of Pearland will be factored into the newer modeling.

**FIGURE 3.6,** Roadway Level of Service “Grades”

Source: CDM Smith

<b>A</b>	<b>Excellent</b> Very low vehicle delays, free traffic flow, signal progression extremely favorable, most vehicles arrive during given signal phase.	
<b>B</b>	<b>Good</b> Good traffic flow, good signal progression, more vehicles stop and experience higher delays than for LOS A.	
<b>C</b>	<b>Average</b> Stable traffic flow, fair signal progression, significant number of vehicles stop at signals.	
<b>D</b>	<b>Acceptable</b> Noticeable traffic congestion, longer delays and unfavorable signal progression, many vehicles stop at signals.	
<b>E</b>	<b>Congested</b> Unstable traffic flow, poor signal progression, significant congestion, traffic near roadway capacity, frequent traffic signal cycle failures.	
<b>F</b>	<b>Severely Congested</b> Unacceptable delay, extremely unstable flow, heavy congestion, traffic exceeds roadway capacity, stop-and-go conditions.	

Generally, a traffic volume/road capacity ratio leading to LOS in the range from A to D is acceptable. The instability of traffic flow at LOS E and F is generally unacceptable, even for brief times during the morning or evening peak periods. Roads with current or projected LOS in the E or F range are strong candidates for capacity or operational projects.

Pearland’s extraordinary population growth has had a significant impact on the amount of traffic on local and regional streets. The increased traffic has degraded road LOS at all times of the day, but even more severely during the morning and evening peak periods as illustrated in **Figure 3.7a, LOS F Roadways in 2012 from Pearland Travel Demand Model**, which shows the most congested area roadways in 2012. The City has responded to this challenge by implementing a Thoroughfare Plan with projects that enhance the capacity of existing roads, involve new roads, or focus on intersection improvements. These projects are expected to help improve roadway LOS, although the continuing increases in population and trip generation will contribute to ongoing needs for road network improvements as illustrated in **Figure 3.7b, LOS F Roadways in 2035**

from **Pearland Travel Demand Model**, which shows the projected extent of congested roadways in 2035. The 2035 transportation network includes committed projects in the 2035 RTP and projects in the City of Pearland’s Capital Improvements Program (CIP).

Pearland’s key mobility issues and needs are verified by other planning documents for the region, including H-GAC’s Subregional Plan for the Pearland area and the *Pearland 20/20 Strategic Plan*. The Strategic Plan, in particular, points out “...the rapid increase in population, the volume of out-commuters, the dominance of solo commuting, and sub-optimal east-west arterial options” as core challenges to mobility in Pearland. Traffic congestion was identified as the community’s primary challenge.

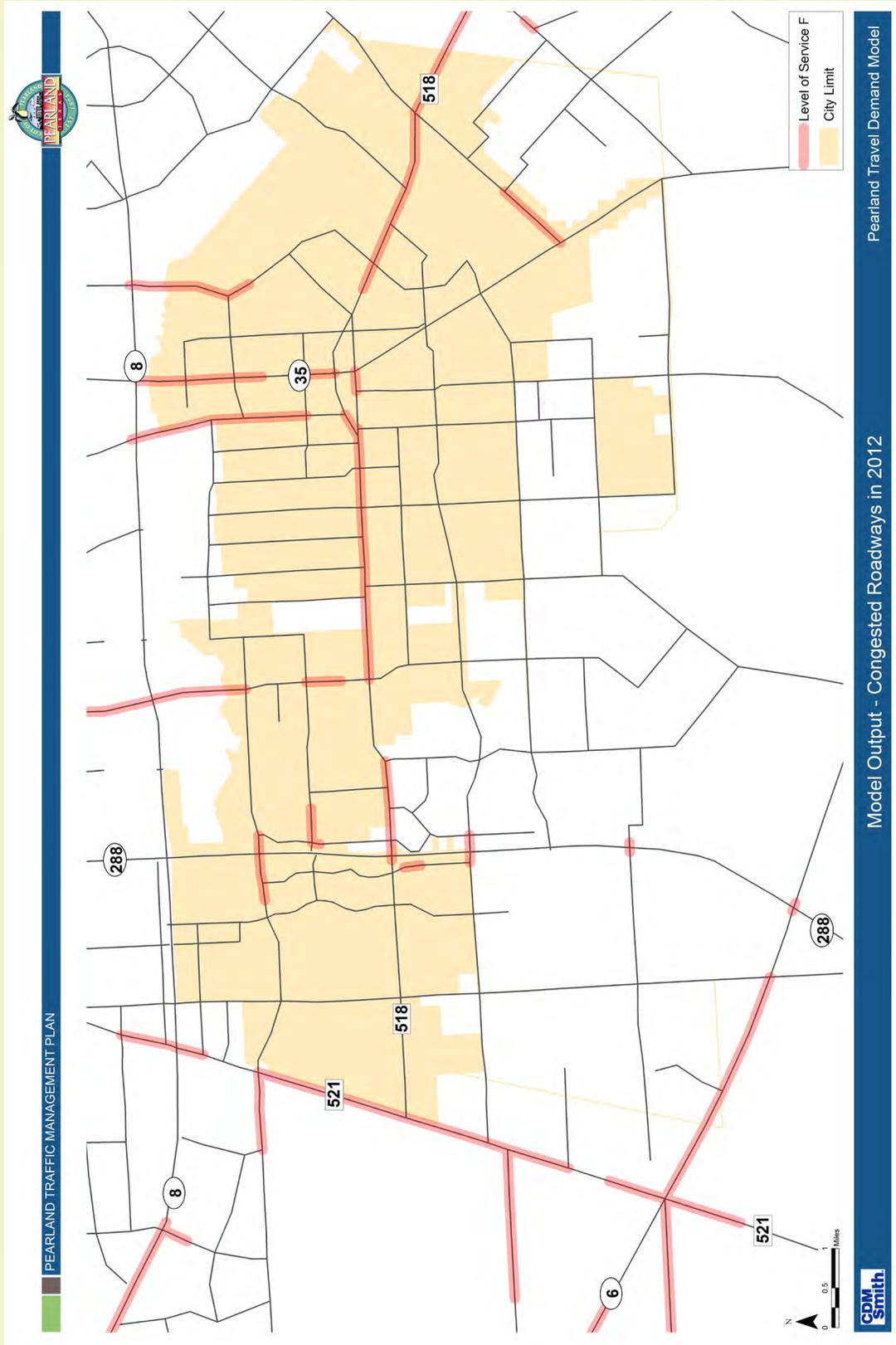
One approach to increased traffic levels is to expand roadway capacities, as Pearland certainly continues to do through its Thoroughfare Plan and Capital Improvements Program. Another approach is to reduce the volume of traffic – or the rate of increase in such volume – even while population is increasing. Pearland is also pursuing this strategy with the pending managed lanes and park and ride lot along the SH 288 corridor. A longer-term approach to reducing traffic congestion is to pursue land development patterns that accommodate multiple uses and have distinct nodes of activity. Pearland Town Center is a good example of this strategy, with retail, office, hotel, residential and civic uses in a unified, master-planned setting.

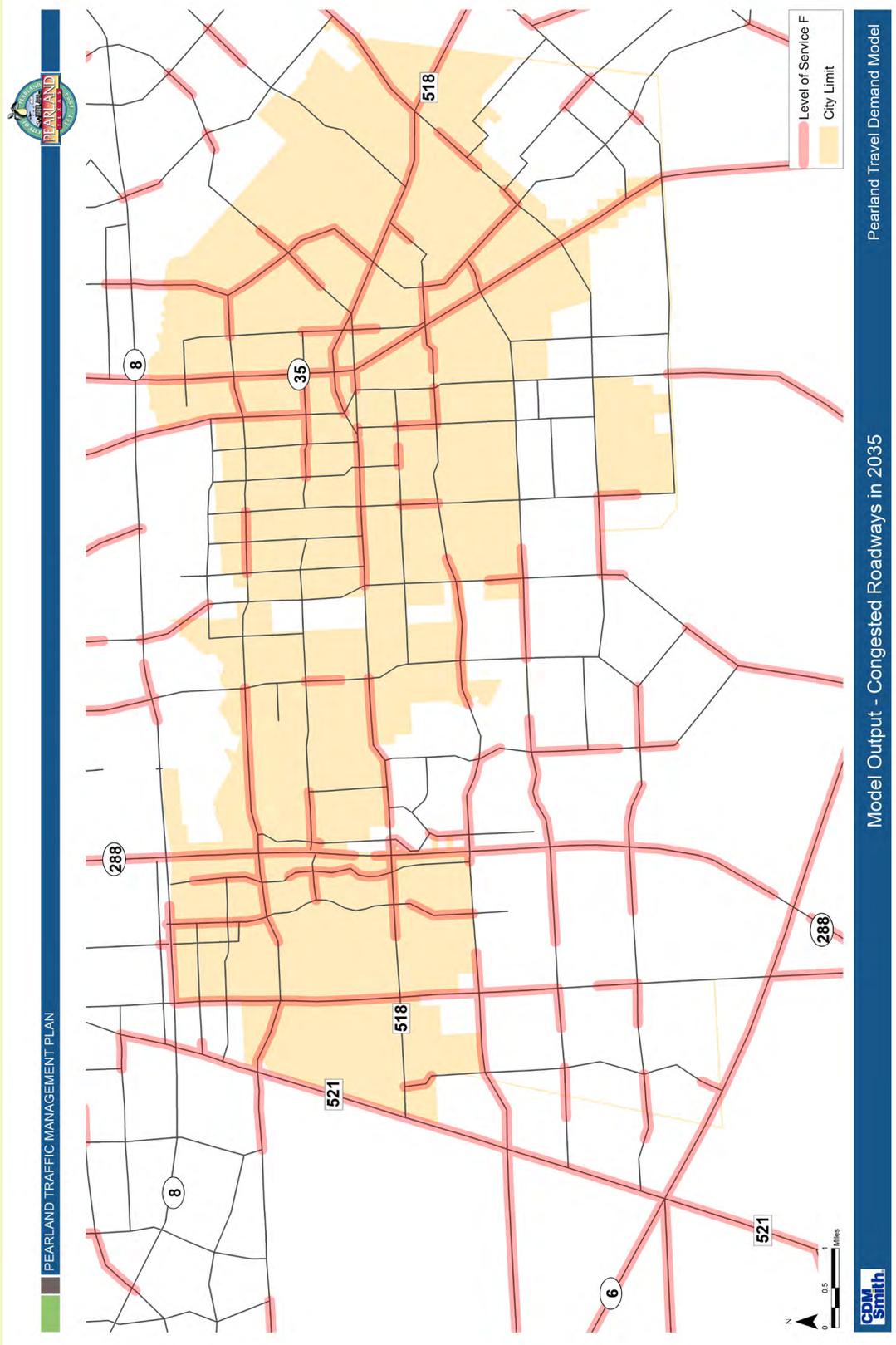
Accommodating multimodal choices for travelers is both a quality of life issue and a way to make more efficient use of available roadway space. Pearland is addressing this need with the proposed park and ride facility on SH 288, as a first step toward high-profile transit service in the area. Additionally, the Pearland Trail Master Plan captures the vision of a community-wide trail network for pedestrians and bicycles.

Access management is another strategy for preserving a road’s capacity and enhancing its ability to provide mobility. The balance struck between the functions of supporting mobility and providing access depends on the functional class of a road. Unlimited driveways and other access points on a thoroughfare can compromise its ability to provide mobility by imposing too many traffic loading points on the system. Access management strategies seek to address this issue by defining the number and location of access points on a road to more appropriately match its functional class. Specific access management strategies may

FIGURE 3.7a, LOS F Roadways in 2012 from Pearland Travel Demand Model

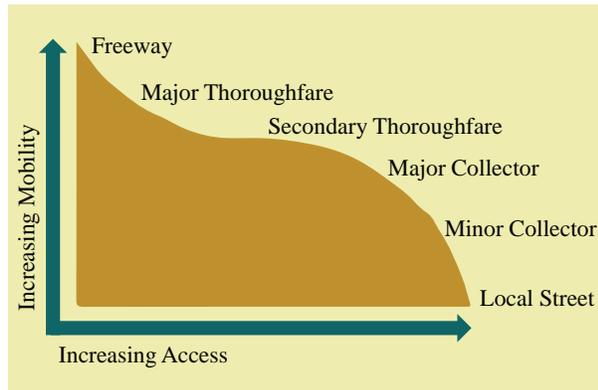
Source: CDM Smith





**FIGURE 3.7b**, LOS F Roadways in 2035 from Pearland Travel Demand Model

Source: CDM Smith



include controlling mid-block turns with turn lanes or medians, limiting access points close to intersections, and providing an interconnected street system that allows for alternate travel paths.

Finally, Travel Demand Management (TDM) strategies address the LOS issue in a different way to form a more comprehensive approach to solving traffic issues. Complementing the traditional approach of adding more capacity to a road, TDM is designed to reduce the amount of traffic that the road must carry. TDM strategies include measures to eliminate road trips, as well as to divert them to other travel modes. Specific strategies include promoting ridesharing, working at home or at other satellite locations (“telecommuting”), peak period spreading, and greater transit use. The planned park and ride lot on SH 288 and the proposed commuter bus service to the Texas Medical Center are examples of TDM. A longer-term TDM strategy involves altering land use patterns to eliminate or shorten trips, or to remove them from the regional network and put them on the local street system. Pearland Town Center, which places multiple land uses within easy walking distance, is a local example of this TDM strategy.

### NON-VEHICULAR MOBILITY

Convenient and safe travel for pedestrians and bicyclists is an issue of quality of life as well as of transportation. Both modes can play an important role in the mix of transportation options in Pearland. Additionally, as part of the Houston-Galveston designated non-attainment area for air quality, Pearland can contribute to the overall health of the region as well as to personal health by promoting these non-vehicular modes. A comprehensive pedestrian and bicycle network, as envisioned in the City’s Trail Master Plan, can help to promote

connectivity, convenience, and safety, and thus encourage these other travel modes. Between the Trail Master Plan and the City’s Capital Improvements Program, key components to pursue include:

- **Trails**, which are off-road facilities primarily focused on recreational use. They are generally provided in a totally separate right-of-way from roads, and, in Pearland’s case, sometimes alongside creeks. They are well suited for use by children and inexperienced bicyclists, but are generally not preferred by experienced riders because of potential conflicts with pedestrians.
- **Bicycle Routes**, which are numbered and marked “shared roadways” that place bicycles in mixed traffic without an exclusive right-of-way. The designated routes improve bicycle safety by alerting drivers to the likely presence of bicyclists. By law, bicycles are vehicles and may use any public road other than interstate highways. So, the designation of bicycle routes does not preclude bicyclists from still using public roads.
- **Bicycle Lanes**, which are portions of the roadway that have been exclusively reserved for bicycles, typically by striping or pavement markings. Bike lanes define road space for multiple uses, remind motorists to look for cyclists, and promote an orderly flow of traffic. Bike lanes also encourage cyclists to ride in the street rather than on the sidewalk, encourage them to ride with the flow of traffic rather than against it, and also encourage them to obey traffic laws, which addresses the most common causes of crashes between bicycles and motor vehicles.

### PUBLIC TRANSIT

In November 2011, METRO purchased approximately 16 acres of property along SH 288 to build and operate the Northern Brazoria County Park and Ride facility. The total land cost was \$3.97 million. METRO used 20 percent of its own money (\$794,000) to purchase the property. In December 2012, METRO met with the City and informed Pearland that the METRO Board had changed its mind and was heading in a different direction and would no longer be a partner in the Pearland area park and ride.

Based on this new information, the City entered into an agreement with Goodman Corporation in November 2013 to determine the feasibility of the



Certain areas along Broadway/FM 518, such as segments not yet in the City limits just east of SH 288, lack sidewalks for pedestrians compared to the newest improved thoroughfares in the city



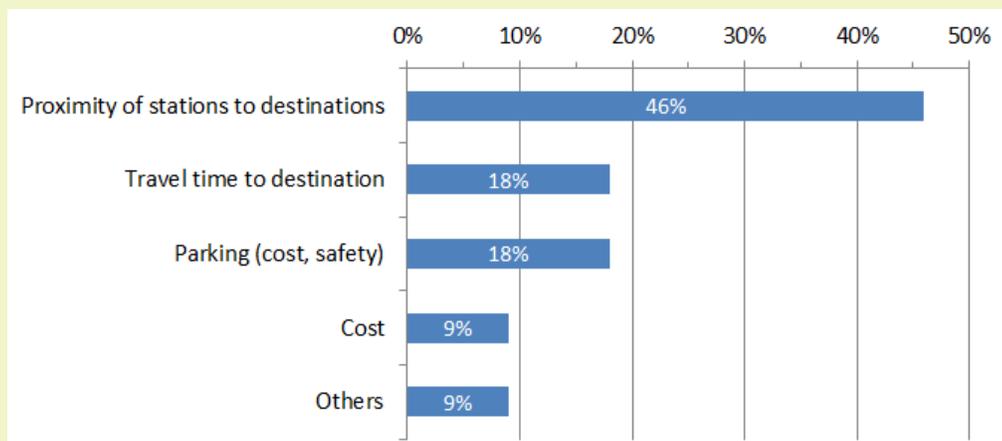
City potentially operating a park and ride and how to fund the operation if it was deemed financially feasible. On May 28, 2014, the City sent a letter to METRO Board Chairman Gilbert Garcia requesting to purchase the 16 acres from METRO for the park and ride. The City also requested the use of federal 5307 funds to be credited as the City’s portion of the funding for the project.

Ultimately, if METRO does agree to sell or release the property to the City, the City will need to design the facility, purchase or lease buses, and then construct the facility. For the project to be financially viable, the City must secure federal transit dollars to supplement local funds devoted to operating costs.

### EXISTING TRANSIT SERVICES

In August 2012, the City entered into a contract with Gulf Coast Center - Connect Transit to provide transportation services for eligible residents within the Pearland City limits. Eligible participants must be 60 years of age or older and be disabled and/or low-income designated individuals/families. This is a collaborative effort between the City of Pearland, Gulf Coast Center, and the Harris County Rides Program. The service is a door-to-door taxi program that provides one-stop transportation within Brazoria, Harris and Galveston counties at a reduced rate. The program is a three-year initiative funded partially through Jobs, Access Reverse Commute (JARC) funds and the City of Pearland.

In an informal polling exercise during a Comprehensive Plan Advisory Committee meeting, committee members were asked, “What factors might make you choose rail transit versus private car if such service linked Pearland to major job centers?” The resulting distribution of responses was:



### FUTURE TRANSIT SERVICES

Future transit services must be considered within the City as the population continues to increase and local Transit Indicators demand the service. Pearland must also look at services outside its City limits as the population of the Houston metropolitan area continues to grow and as traffic congestion increases within the City and along major highways in the area.

One possible long-term solution or option is the Kirby Corridor at the northern boundary of Pearland and the southern boundary of Harris County. On January 11, 2010, Pearland City Council passed a resolution “Declaring Kirby Rail Route as the Preferred Passenger Rail Route in Pearland.” Pearland must work closely with the Houston-Galveston Area Council (H-GAC), METRO, Harris County, Brazoria County, and the City of Houston to ensure that rail transit someday extends southward from Houston to Pearland to transport residents to and from Pearland, Downtown Houston, and the Texas Medical Center.

In the meantime, additional park and ride locations should be explored to enable more local residents to transition seamlessly from single-occupant vehicles to transit vehicles for the remainder of their commute to key regional job hubs. This typically occurs in close proximity to freeways, meaning that potential locations with good access should be considered along the Sam Houston Tollway/Beltway 8 (e.g., in

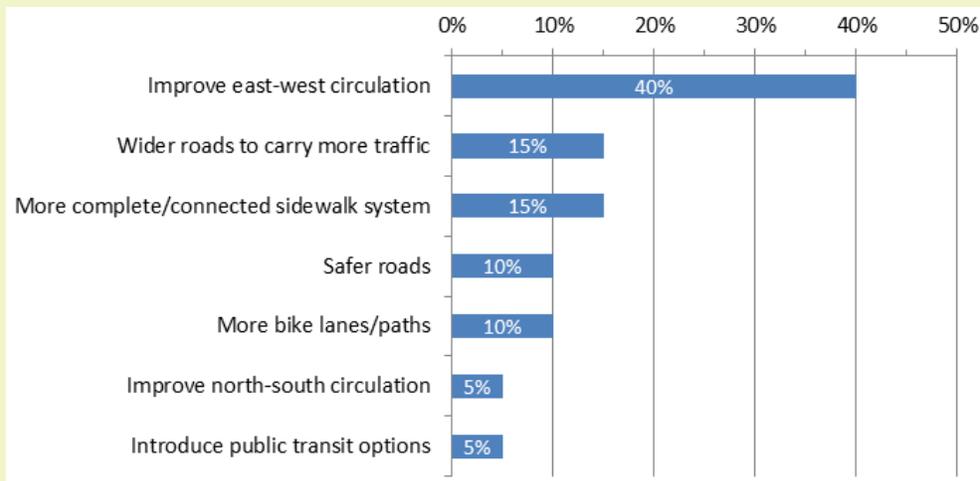
the vicinity of Cullen Boulevard, SH 35, or Pearland Parkway), and possibly at a smaller satellite location away from the IH-45 corridor (e.g., along or near Dixie Farm Road) for residents who commute in that direction.

## Key Planning Considerations

Input and discussions for this Comprehensive Plan update, through workshops with City Council and Planning and Zoning Commission, informal small-group sessions, a community-wide public open house event, the online Virtual Town Hall forum, interaction with the Comprehensive Plan Advisory Committee, and background discussions with City staff, yielded the following concerns related to this Mobility section of the plan:

- The need to celebrate and publicize even more the benefits of mobility projects completed in recent years, ranging from Pearland Parkway and other north-south freeway connections to the multiple railroad overpasses.
- The continued importance of maintaining local and regional focus on investments that will make the journey to and from work a less burdensome aspect of living in Pearland, which remains largely a commuter city.

In an informal polling exercise during a Comprehensive Plan Advisory Committee meeting, committee members were asked, “To improve mobility, what are the most important aspects to focus on [with the opportunity to select two]?” The resulting distribution of responses was:



### What the (Transportation Technology) Future May Hold

Perhaps in more than any other aspect of this Comprehensive Plan – along with innovative green building practices – potential breakthroughs in various transportation-related technologies could have a profound effect on basic daily commuting and travel activities, plus in other areas such as reduced parking needs. The challenge for community planning is that the nature and timing of



such technological advances remains uncertain, although some possibilities and scenarios are becoming less abstract and “futuristic” all the time. This includes everything from vehicle design and materials to fuel options, lowered energy consumption and emissions, and future mobility infrastructure in general.

At the time of this Comprehensive Plan, the prospect of “driverless vehicles” was receiving more attention than ever given the enthusiastic research and development efforts of Google and others (Photo Source: Bloomberg Financial LP). The auto industry group IHS Automotive, in early 2014, forecast that about nine percent of all car sales, or nearly 12 million automobiles, will be self-driven by 2035.<sup>1</sup> The IHS forecast assumes that consumer sales will begin around 2025 and account for about 230,000 cars, or less than one percent of car sales at that point, mainly in the U.S., Europe and Japan. Other sources expect that the trend will start with “luxury” driverless vehicles on public roadways by 2020. IHS also expects growth in self-driving car sales to outpace electric car sales given the continued high cost of batteries.

Here in Texas, the Cockrell School of Engineering at The University of Texas at Austin is among various academic institutions putting research effort and dollars toward such technologies. Researchers in the School’s Center for Transportation Research are studying scenarios involving “shared autonomous vehicles” (SAVs), which would be part driverless vehicle fleets in “on-demand” car-sharing programs, in which users reserve vehicles on a pay-per-use basis after paying an initial subscription fee. (It was noted that two conventional car-sharing programs are already gaining popularity, including ZipCar with 850,000 members and Car2Go with 140,000 subscribers.)<sup>2</sup>

Along with potential level of user interest, especially with likely “premium” price points early on, other considerations for SAVs include the reliability of collision avoidance technology, security issues, and environmental impacts. Computer models run for an area of Austin showed that one SAV would take 11 conventional vehicles off the road, and also eliminate the need for that many parking spaces. Furthermore, ridesharing among SAV users who are going to or from the same places could further reduce overall driving trips. Another research question is whether such systems could be economically viable in other places besides larger and denser urban areas.

<sup>1</sup> “Forecast: 9% of cars will be self-driven in 20 years,” Ed Arnold, Memphis Business Journal, January 4, 2014.

<sup>2</sup> “Shared Autonomous Vehicles: Rethinking The Morning Commute,” University of Texas at Austin Cockrell School of Engineering, April 22, 2014 (<http://www.engr.utexas.edu/features/shared-autonomous-vehicles>).

- The impetus to relieve the community's most intensive traffic "hot spot" focused around the intersection of FM 518/Broadway and SH 288, as confirmed by area-wide studies and citizen sentiment, yet recognizing the financial and engineering challenges involved.
- The need for continued improvement of key cross-town roadways, both east-west and north-south, to improve internal circulation within the city and add more freeway connections (e.g., Bailey, Mykawa, CR 100 connection to SH 288, etc.).
- The strong desire to see the SH 35/Main Street project finally completed, and the needed redevelopment momentum this could spur.
- The potential land use and economic development implications of the eventual completion of the McHard Road corridor across north Pearland, and of the full upgrade of the Bailey Road corridor across south Pearland.
- Concern about the further traffic implications of Pearland's continued rapid growth pace, and how this should factor into future land use planning and policy decisions on allowable development intensities.
- The desire for Pearland to progress toward being a more bike- and pedestrian-friendly community, with well-connected sidewalk and trail networks, and a place where certain neighborhoods and districts are intentionally designed to focus on walkability more than accommodation of vehicular circulation.
- The need to capitalize on the recognized links between roadway design and community image and aesthetics, especially in a community that so many residents and visitors experience primarily from their automobiles.
- Maintaining Pearland's readiness to accommodate potential rail transit investments, if and when they occur in this part of the region, to reap the mobility and economic development benefits of this new travel option.

### Citizen Survey Results

The Pearland Citizen Survey (conducted December 2014 through February 2015) identified mobility as one of two priority issues to focus on in the next two years.

## Goals and Action Strategies

### GOALS

A "goal" is a statement of a desired outcome ("end") toward which efforts are directed, as expressed by more specific objectives and action priorities ("means"). Below are four goals intended to focus plan implementation efforts related to Mobility that follow the adoption of this new Comprehensive Plan:

- Goal 3.1:** A mobility system with **adequate connectivity** to provide multiple travel options, accommodate cross-town trips, and ensure effective emergency response.
- Goal 3.2:** A mobility system that **safely accommodates all modes of travel**, including vehicular, pedestrian, and bicycle – plus public transit if and when feasible.
- Goal 3.3:** A mobility system that supports **local economic development and tax base growth** through the City's own investments in transportation infrastructure, plus those it gains through advocacy with other agencies and levels of government that administer transportation funding.
- Goal 3.4:** A mobility system that helps to establish and reinforce the **desired community image and identity** for Pearland.

### ACTION STRATEGIES

Itemized below are a set of potential actions for responding to the key issues and community needs identified in this Comprehensive Plan section. In particular, three items are highlighted as strategic initiatives for the immediate future.



#### STRATEGIC PRIORITY 1: STATE HIGHWAY 288 CORRIDOR IMPROVEMENTS

Without question, the uppermost quality of life concern expressed by Pearland residents during this comprehensive planning effort is the need to "fix" the extreme traffic congestion situation in the SH 288 corridor during peak morning and afternoon

commuting times. The City of Pearland, on its own, can only marginally affect this situation with direct physical improvements, mainly related to the roadways and intersections where traffic accesses, exits and passes under the freeway. As the City already recognizes, the more essential role it can play is to maintain active and close relationships with all levels of government and public agencies that administer transportation dollars and/or directly implement critical projects such as major freeway improvements. Through such advocacy efforts, Pearland aims to receive its “fair share” of mobility funding given the area’s recent and ongoing growth trajectory, and also ensure that programmed improvements are carried out expeditiously.

Among its 2013-14 City Council Goals, Council’s first priority under Transportation was to “Continue to Build Relationships with All Stakeholders and Actively Lobby Elected Officials/TxDOT to Ensure Pearland’s Priority Transportation Interests/Needs are Met.” The City of Pearland is already well represented at all levels of the Houston-Galveston Area Council (H-GAC), the “Metropolitan Planning Organization” that annually allocates significant transportation funds to projects across the region through its Transportation Improvement Program (TIP). This includes City officials and senior staff serving at the Board of Directors and policy level (Transportation Policy Council), and also participating on committees that deal with more technical and programmatic matters (e.g., Technical Advisory Committee, TIP Subcommittee, and Pedestrian and Bicycle Subcommittee). The City also monitors and coordinates with other key agencies such as TxDOT, area Toll Road Authorities, County precincts, and



METRO and BayTran in the transit arena. Additionally, the Greater 288 Partnership has long provided a convenient forum for engaging state and federal elected officials and agency leaders, along with a network of other interested parties and advocates. Finally, subregional transportation planning efforts in recent years have afforded another opportunity for coordination and partnerships across jurisdictional boundaries, which will continue as the focus has shifted to implementation and ongoing cooperative planning.

### STRATEGIC PRIORITY 2: TARGETED CAPITAL PROJECTS

The City of Pearland is noted for its commitment to meticulous and effective capital improvements planning and programming, necessitated by the community’s growth pace and associated demands for new and expanded public facilities. Given Pearland’s extensive geographic area and automobile dependence, ongoing investment in street and highway construction, extensions and upgrades will remain a prime focus of municipal government. This is prudent and essential given the long-term Level of Service outlook for the area roadway network summarized earlier in this plan section, which is even after factoring in the extent of mobility improvements anticipated in the years ahead. The City’s 2013-14 annual budget also cited citizen survey results that confirmed traffic as the number one concern of Pearland residents.

Mobility-related projects accounted for approximately 45 percent of the City’s five-year Capital Improvements Program (CIP) for 2014-18, or \$160.1 million of the total \$354.3 million package. Within the five-year cycle, capital expenditures on street projects will rise from \$9.2 million in 2014 to a peak of \$72.2 million in 2017, when such projects will account for nearly two-thirds (64 percent) of all CIP spending that year.

The largest source of funding is “other funding sources,” which reflects the City’s continued success at securing transportation appropriations and support through programs at the federal, state and regional levels. Over the 2014-2018 CIP cycle, just over \$67 million (42 percent) of the mobility total will come from these other sources. For example, the City’s 2013-14 annual budget pointed out that \$32.6 million in TIP funds will support design and construction of the McHard Road extension from Mykawa to Cullen. This means that TIP funds will cover 80 percent of the project cost, with the City providing the required 20 percent match with \$8.6 million from future General Obligation bonds. Likewise, 80 percent (\$21.8 million) of the construction cost of widening and improving Bailey Road from Veterans Drive to FM 1128 will be covered by federal funds via the TIP. City bond funds will cover the other 20 percent, along with other City funds for related drainage improvements. Nearly \$4 million in TIP funds will also go toward County Road 94 improvements.

Other key funding streams for the streets portion of the 2014-2018 CIP included future General Obligation bonds (\$49.25 million, or 31 percent), general revenue (\$950,316, or 0.6 percent), and Certificates of Obligation (\$700,000, or 0.4 percent) – plus another 26 percent (\$42.19 million) for which funding sources are still to be determined.

CIP-funded projects will involve replacement of failed pavement on certain existing streets, extensions of other roads, and widening and reconstruction of some major streets to improve mobility and safety and reduce traffic congestion. Along with the McHard and Bailey Road projects noted above, other major projects include:

- Max Road.
- Fite Road.
- Hughes Ranch Road.
- CR 59 expansion.
- Mykawa Road widening from Beltway 8 to FM 518.
- Old Alvin Road widening from Plum Street to McHard Road.
- Old Alvin rehabilitation from McHard to Knapp.

Several other projects – reconstruction of Grand Boulevard, and Hughes Ranch Road expansion from Cullen to Stone – were identified in the CIP as needs although funding sources are still to be determined.

The CIP transportation portion also funded preliminary engineering on future projects yet to be identified so that more precise project scopes and estimated construction costs can be included in the next City bond referendum eventually put before Pearland voters.

At the end of this plan section is supplemental discussion of an extensive pavement management assessment effort completed by the Public Works Department in Spring 2015. The resulting report and City Council presentation reaffirmed that it is in the City’s best interest to invest further in existing infrastructure before it reaches a poor condition. A more strategic, life-cycle approach to infrastructure maintenance will enable the City to reap the benefits from lengthening the useful life of physical assets and reducing their total cost to the City over time.

Regarding pavement rehabilitation work, the City’s 2013-14 annual budget highlighted a partnership with Brazoria County Precinct 3 through which the City furnishes materials and flag personnel while the County provides equipment and operators. This intergovernmental approach enables the City to complete these projects at about 40 percent less than if privately contracted. Furthermore, the City pays for both the asphalt street improvements plus separate sidewalk rehabilitation work with dollars recovered from mobility projects done in conjunction with TxDOT, from which some City contributions were refunded as the projects were completed under budget. The Public Works Department budget also included \$300,000 to assess street and sidewalk conditions for future rehabilitation phases.

Additionally, the 2013-14 annual City budget kicked off a multi-year initiative to fund upgraded traffic signals and equipment along FM 518/Broadway and various other locations. This was intended to improve traffic circulation and alleviate delays through this specific aspect of traffic management, which will also improve intersection aesthetics. The 2014-18 CIP also included funding for signal installation at currently unsignalized intersections, to improve mobility and safety. Along with the City’s General Fund budget, Community Development Block Grant funds and dollars from the Traffic Impact Improvement Fund (a special revenue fund from pro rata fees paid by private development) will help to pay for the traffic signal work.



**STRATEGIC PRIORITY 3: SIDEWALK NETWORK UPGRADES**

While SH 288 congestion was highlighted as a top concern of Pearland residents under Strategic Priority 1 above, not far behind during this comprehensive planning process was repeated mention of needed sidewalk improvements, especially in and around neighborhoods, to encourage walking and make it a safer and more enjoyable experience. The City continues to devote funds, through its annual budgeting, for ongoing repair and replacement of damaged and hazardous sidewalks, including \$437,000 allotted in 2013-14. In the meantime, the Public Works Department is assessing the extent and estimated cost of addressing all such sidewalk upgrades comprehensively given the effects of both age and drought on so many sidewalk segments. This may lead to a stepped-up, multi-year effort, using either debt mechanisms or a “pay as you go” approach through further General Fund allocations.

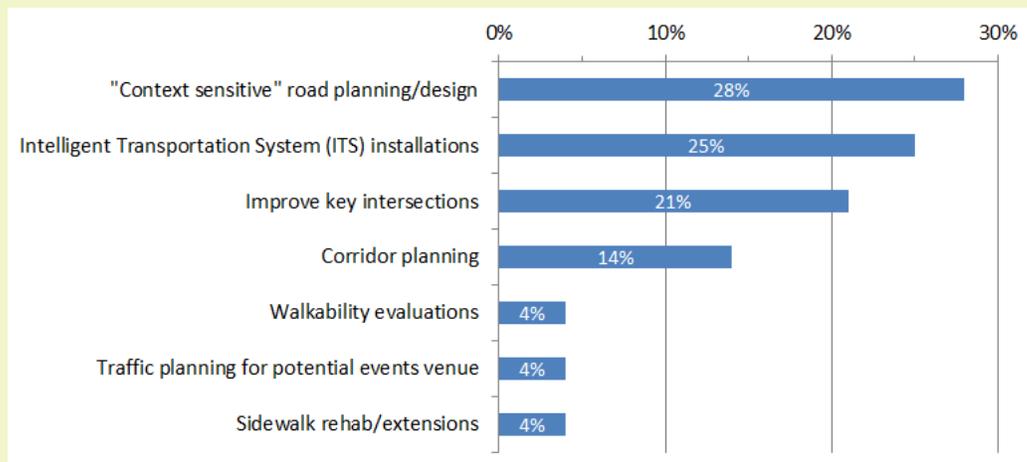
Additionally, the City’s 2014-18 CIP included a multi-year Sidewalk Installation initiative, with projects already prioritized, in part, through a Safe Routes to Schools (SRTS) study. This also addresses pedestrian needs in areas where Community Development Block Grant (CDBG) funds cannot be used, and could help to reduce driving in favor of walking. Direct project

funding that previously came through the federal SRTS program now flows through the broader federal Transportation Alternatives Program (TAP). These funds will be allocated through the regional TIP administered by H-GAC, and some funds were also distributed through a statewide call for projects by TxDOT.

Another CIP project anticipated the possibility of devoting \$1 million toward sidewalk improvements in the area between Houston Street and Grand Avenue, from FM 518/Broadway to Orange Street, in furtherance of Old Townsite Master Plan implementation. Given that Old Town currently has no sidewalks, and adding sidewalks to current conditions would require additional street right of way, this initiative will enclose existing roadside ditches so sidewalks may be installed above them.

Ongoing Trail Master Plan implementation provides further justification for sidewalk system extensions and upgrades across the community as this 2007 plan highlighted the role of local sidewalks in providing access to and filling gaps in the ultimate trail network.

In an informal polling exercise during a Comprehensive Plan Advisory Committee meeting, committee members were asked, “The most important near-term action items from this Comprehensive Plan related to Mobility should be [with the opportunity to select three]?” The resulting distribution of responses was:





## OTHER ACTION ITEMS

### ACTION: CONTEXT-SENSITIVE ROADWAY DESIGN

At the time of this Comprehensive Plan, the City was already exploring flexible design approaches to new and improved roadways to accommodate varying needs and situations. Pearland was already a leader among communities in the Houston area by incorporating a roundabout into the design of the Pearland Parkway-McHard Road interface. The need for greater flexibility and consideration of design alternatives is consistent with a nationwide movement toward “context-sensitive” roadway planning and design. In some cases this could lead to a “super street” cross section in which efficient flow of high-volume vehicular traffic is the primary focus of roadway design. Elsewhere, a “complete street” approach could be more appropriate given the need to accommodate bicycle, pedestrian and/or transit vehicle activity along with automobile traffic. Along with consideration of how various travel modes are incorporated into a corridor, another emphasis of context-sensitive design is to match roadway design (and cross section transitions) with the existing or intended development character of the area the roadway will serve and traverse, whether primarily an Urban, Suburban or Rural character area.

As in the Pearland Parkway scenario, this can also have implications for how traffic flows and turning movements are best handled where major thoroughfares meet – plus where lesser streets such as collectors intersect with busy arterials – in terms of traditional signalization and turning lane layouts relative to other potential configurations. Another

significant design consideration, which can and should vary depending on the specific corridor context, is whether bicycle circulation should be handled on-street with bike lanes, or if a wider off-street solution would be safer, allow for use by both cyclists and pedestrians, and also enhance corridor aesthetics through attractive streetscape design. Given these options, another topic already under discussion in Pearland during this planning effort was whether a right-of-way width of more than the current 120 feet for major thoroughfares may be needed (also given the need in Pearland to accommodate drainage improvements as part of many road projects). The reality, however, is that a wider cross section for major thoroughfares could be difficult given the extent of rights-of-way already dedicated to the City at the 120-foot standard through previous platting. After-the-fact acquisition of additional right-of-way width could be costly and/or disruptive in various locations. Wider rights-of-way going forward could also affect the cost and design of newer land development projects.

Nonetheless, a context-sensitive design approach allows for such discussions and exploration of alternatives early in a roadway planning and design process, well before definitive engineering and financial decisions must be made. As promoted by the Federal Highway Administration and the Institute of Transportation Engineers (ITE), context-sensitive design is a way of planning and building a transportation system that balances the many needs of diverse stakeholders and offers flexibility in the application of design controls, guidelines and criteria, resulting in facilities that are safe and effective for all users regardless of the mode of travel they choose. The basic principles of context-sensitive solutions, as highlighted in ITE and numerous other transportation industry publications, include:

- Balance safety, mobility, community and environmental goals in all projects;
- Involve the public and stakeholders early and continuously throughout the planning and project development process;
- Use an interdisciplinary team tailored to project needs;
- Address all modes of travel;
- Apply flexibility inherent in design standards; and,
- Incorporate aesthetics as an integral part of good design.

Another intended outcome is to help specific mobility projects move from design to construction faster and with less objection by applying a design and stakeholder involvement process that ensures that the project elements respond to area-specific transportation needs as well as overall community values. This typically requires adjustments in a City's project development process, along with potential amendments to the Thoroughfare Plan map and tools used to implement the plan, such as engineering design criteria and associated street standards in the City's land development regulations.

A context-sensitive planning approach may also require reconsideration of typical arterial spacing assumptions. For example, arterials spaced as far as one mile apart may carry the anticipated future traffic volumes but will likely require six lanes, which may be inappropriate for some contexts. Closer spacing of arterials could carry the same volume of traffic but reduce the number of lanes necessary. Likewise, collectors spaced closer together (e.g., one-eighth mile) result in lesser block lengths and promote greater pedestrian and bicycling activity. Also, local streets should connect as frequently as practical to the collector network to keep block lengths short and to promote connectivity throughout the street system.

In general, context-sensitive solutions are focused on streets that play the most significant roles in the local transportation network and that offer the greatest multi-modal opportunities – arterials and collectors. Primary mobility routes or freeways, such as SH 288, are generally intended to move very high volumes of high-speed traffic through the area, providing connections to the larger region. These facilities should be the focus of their own unique planning and design process. Similarly, local or residential streets are generally not the focus of context-sensitive design, although they generally should be designed to accommodate bicycles and pedestrians and should be interconnected to one another and into the larger transportation network.

### **ACTION: STREET CONNECTIVITY INDEX**

To promote a more interconnected local street system within and between new developments, which also helps to relieve some traffic demands on the major thoroughfare network by removing very localized trips, the City should consider incorporating a street

connectivity index into its subdivision regulations as adopted by various other Texas and U.S. cities. In UDC Section 3.2.6.2, Adequacy of Streets and Thoroughfares, the regulations currently include a broad statement of "General Adequacy Policy" for subdivision street layouts in subsection (b):

*Every subdivision shall be served by improved streets and thoroughfares adequate to accommodate the vehicular, bicycle and pedestrian traffic to be generated by the development. Proposed streets shall provide a safe, convenient and functional system for traffic circulation; shall be properly related to the City's Thoroughfare Plan, road classification system, Comprehensive Plan and any amendments thereto; and shall be appropriate for the particular traffic characteristics of each development.*

Along with such general statements of policy, a connectivity index can be used to quantify how well a proposed (or existing) roadway network connects origins and destinations for all travel modes. Indices can be measured separately for motorized and non-motorized travel, taking into account non-motorized "shortcuts," such as paths that connect cul-de-sacs (as already addressed in subsection (y), Pedestrian Connectivity, within Section 3.2.6.2.), and barriers such as highways and streets that lack sidewalks. Several different index methods can be used:

- The number of roadway "links" divided by the number of roadway "nodes."<sup>8</sup> Links are the street segments between intersections, while nodes are the intersections themselves. Cul-de-sac heads count the same as any other link end point. A higher index means that travelers have greater route choice, providing more direct connections between any two locations.
- The ratio of the number of intersections divided by the number of intersections plus dead-ends. The result is expressed on a scale from zero to 1.0, with a ratio over 0.75 being desirable.<sup>9</sup>
- The number of surface street intersections within a given area, such as a square mile. The more intersections, the greater the degree of connectivity.

<sup>8</sup> Reid Ewing, *Best Development Practices: Doing the Right Thing and Making Money at the Same Time*, Planners Press (www.planning.org), 1996.

<sup>9</sup> U.S. Environmental Protection Agency, *Smart Growth Index (SGI) Model* (www.epa.gov/smartgrowth/topics/sgipilot.htm), 2002. (www.epa.gov/smartgrowth/pdf/4\_Indicator\_Dictionary\_026.pdf)



Unique local factors, such as a large school and/or park “superblock” within a residential area, can affect the calculation results. Therefore, it is important to use professional judgment in addition to quantitative measurements when evaluating street system connectivity.<sup>10</sup>

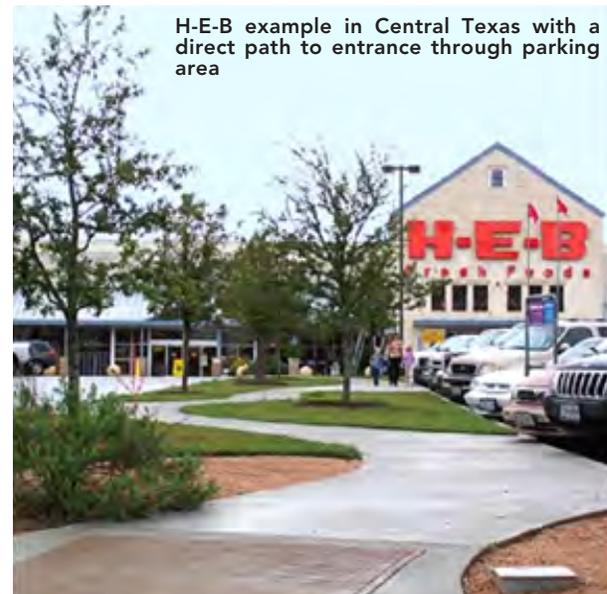
#### **ACTION: PEDESTRIAN/BICYCLE ACCOMMODATION ON COMMERCIAL SITES**

The City’s UDC, in Chapter 4 on Site Development, already includes typical and sound provisions to ensure consideration of non-vehicular circulation and safety in site planning and design. This includes:

- A general statement regarding the “provision of a safe and efficient vehicular and pedestrian circulation system” in the criteria for site plan review and approval. [Section 4.1.1.3.(c)(3)]
- Required incorporation of pedestrian lanes in the design of off-street parking areas for more than 100 vehicles, such that “separate, marked pedestrian walkways [will] enable pedestrians to safely transit the parking area with minimum hazard.” Such walkways must have a clear width of at least four feet, exclusive of any vehicle overhang where head-in parking adjoins a walkway. [Section 4.2.1.3.(l)]
- Required design of landscaping within the interior of parking areas “in such a manner that it will assist in defining ... pedestrian paths,” among other objectives from effective integration of landscaping and parking lot design. [Section 4.2.2.4.(e)]

A next step would be to make the UDC language more explicit as to necessary accommodation of non-vehicular movement at all stages, from first

accessing a commercial site at its edges (whether from an adjacent street, sidewalk, trail or property), then traversing parking areas safely, and providing direct and convenient access to building entrances. The closest example of this currently is in the zoning portion of the UDC, in Section 2.4.4.1. regarding the potential establishment of Residential Retail Nodes (which are fairly limited in scope within the context of the overall non-residential zoning regulations). Among the considerations for such nodes, subsection (l)(2) cites the “existence or provision of pedestrian access, including but not limited to walkways, bikeways, trails, and traffic controls, to promote safe pedestrian friendly access and environment.” Chapter 4 also could call out on-site circulation of bicycles more specifically as it currently refers only to “pedestrian” needs.



**H-E-B example in Central Texas with a direct path to entrance through parking area**

Other possibilities include requiring dedicated bike parking areas near building entrances, and designated pedestrian pathways to adjacent developments and/or transit stops. These commercial site design considerations are especially important in close proximity to residential neighborhoods. Explicit requirements for bicycle parking are currently included in the provisions of the Corridor Overlay District (COD), in Section 2.4.5.1.(f). Through the overlay, bicycle parking is an added site development requirement where COD overlaps the underlying Office and Professional, Neighborhood Service, Business Park-288, General Business, and General Commercial base zoning districts. In these instances, the required number of bicycle parking

<sup>10</sup> Victoria Transport Policy Institute, Roadway Connectivity: Creating More Connected Roadway and Pathway Networks, TDM Encyclopedia, 2012. (<http://www.vtpi.org/tdm/tdm116.htm>)

spaces must be at least five percent of the number of required vehicle parking spaces.

## Mobility Tools

The highway and roadway networks are the most visible components of the transportation system and are used by private, commercial and public transportation vehicles. A comprehensive transportation system not only supports efficient vehicular circulation within the region and local areas but also advances community goals such as a friendly environment for bicycles, pedestrians and public transit; enhanced safety; and a higher level of streetscape design. While the Pearland street network has historically been developed with a focus on automobile mobility, there is a clear desire going

forward to balance transportation needs with quality of life considerations while also providing practical choices among all transportation options.

### AVAILABLE MUNICIPAL TOOLS

As a home rule municipality, the City of Pearland has various authorities, methods and partnership opportunities for advancing its mobility priorities and accomplishing needed improvements. The City also remains active in various forums and processes to advocate for its “fair share” of available transportation funding. Summarized in **Table 3.3, *Tools for Advancing Mobility Objectives***, are key mechanisms through which Pearland is already pursuing its mobility-related objectives. These tools are shown in five categories that represent the main ways that comprehensive plans are implemented:

**TABLE 3.3,** Tools for Advancing Mobility Objectives

TOOL	PEARLAND EXAMPLES
<b>Overall Framework for Mobility System Development</b>	
Long-Range Planning	<ul style="list-style-type: none"> <li>• Comprehensive Plan               <ul style="list-style-type: none"> <li>» Thoroughfare Plan</li> <li>» Land use-transportation coordination</li> </ul> </li> </ul>
Strategic Planning	<ul style="list-style-type: none"> <li>• Pearland 20/20 Strategic Plan               <ul style="list-style-type: none"> <li>» High-impact mobility projects</li> </ul> </li> </ul>
<b>Capital Projects</b>	
Multi-Year Programming and Budgeting	<ul style="list-style-type: none"> <li>• Capital Improvements Plan (CIP)               <ul style="list-style-type: none"> <li>» Complete Street design approaches</li> </ul> </li> </ul>
<b>Policies and Programs</b>	
Municipal Policies	<ul style="list-style-type: none"> <li>• Engineering design criteria</li> <li>• Developer pro rata contributions for improvements based on traffic impact analyses</li> </ul>
Special Initiatives	<ul style="list-style-type: none"> <li>• Safe Routes to School</li> <li>• Railroad Quiet Zones</li> <li>• Intelligent Transportation System (ITS) technology, signalization upgrades</li> <li>• Sidewalk repair/replacement</li> <li>• Access management</li> <li>• Traffic law enforcement (City Code Chapter 29)</li> </ul>
External Funding Opportunities	<ul style="list-style-type: none"> <li>• Direct appropriations</li> <li>• Grants</li> <li>• Community Development Block Grant (CDBG)</li> </ul>

**TABLE 3.3,** Tools for Advancing Mobility Objectives

TOOL	PEARLAND EXAMPLES
Special Districts	<ul style="list-style-type: none"> <li>• Municipal Management Districts</li> <li>• Tax Increment Reinvestment Zones (TIRZ)</li> </ul>
<b>Regulations and Standards</b>	
Land Development Regulations	<ul style="list-style-type: none"> <li>• Unified Development Code (UDC)               <ul style="list-style-type: none"> <li>» Street/sidewalk design and connectivity provisions</li> <li>» Sight distance and visibility provisions</li> <li>» Access management provisions</li> <li>» Traffic impact analysis provisions</li> </ul> </li> <li>• Thoroughfare Plan implementation via required dedications and improvements</li> </ul>
<b>Partnerships and Coordination</b>	
Public/Public	<ul style="list-style-type: none"> <li>• Multi-jurisdiction planning (subregional)</li> <li>• Intergovernmental and interagency agreements</li> <li>• Pearland Economic Development Corporation</li> <li>• Houston-Galveston Area Council               <ul style="list-style-type: none"> <li>» Regional Transportation Plan (RTP)</li> <li>» Transportation Improvement Program (TIP)</li> </ul> </li> <li>• Texas Department of Transportation (TxDOT)</li> <li>• Counties and Commissioner precincts</li> <li>• Toll Road Authorities (Harris, Fort Bend, Brazoria)</li> <li>• School districts (bus routing/operations, campus area traffic management and safety)</li> <li>• Metropolitan Transit Authority of Harris County (METRO)</li> <li>• Bay Area Houston Transportation Partnership (BayTran)</li> </ul>
Public/Private	<ul style="list-style-type: none"> <li>• Development agreements</li> <li>• Land development community</li> <li>• Employers/institutions (trip-reduction measures)</li> <li>• Railroad companies (crossing safety, quiet zones)</li> <li>• Advocacy and resource organizations               <ul style="list-style-type: none"> <li>» Pearland Chamber of Commerce</li> <li>» Greater 288 Partnership</li> <li>» Biking clubs and associations</li> </ul> </li> </ul>
<b>Targeted Planning</b>	
Special-Area Planning	<ul style="list-style-type: none"> <li>• Corridor plans</li> </ul>
City Master Plans	<ul style="list-style-type: none"> <li>• Traffic Management (and Travel Demand Model)               <ul style="list-style-type: none"> <li>» Targeted corridor and intersection improvements</li> </ul> </li> <li>• Trail Master Plan</li> </ul>

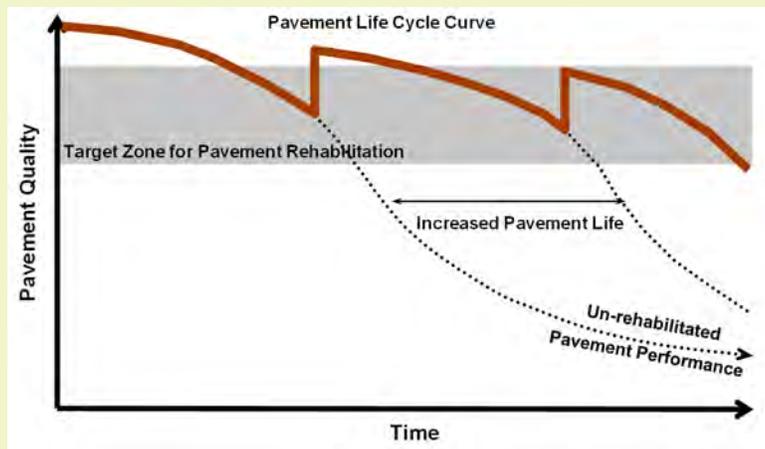
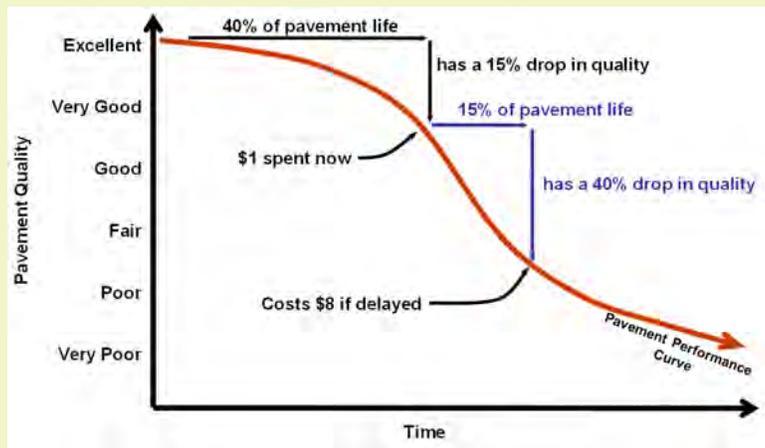
1. Capital projects.
2. Policies and programs.
3. Regulation and standards.
4. Partnerships and coordination.
5. More targeted planning (especially as required to qualify for external funding opportunities).

Given its size and the resulting level of sophistication of its municipal government, Pearland benefits from activities that are done here routinely relative

to smaller cities with lesser means and capabilities – and compared to some larger cities with limited will or support to take certain actions. Along with the strategic priorities and other actions outlined in this plan section, it is important to capture in the Comprehensive Plan those ongoing functions of City government, such as those highlighted in Table 3.3, that will also help to attain the vision and goals within this plan.

### Better Street Maintenance Through an Infrastructure Life-Cycle Approach

In 2014 the Public Works Department engaged an infrastructure management consultant to assist in the development of a Rights of Way (ROW) Assessment that would provide the City with a strategic approach for effective maintenance of City infrastructure. This was accomplished through an automated data collection process that identified and spatially located City assets using GPS and GIS technology. The data collected from the ROW was analyzed and a condition rating was assigned to each asset. The condition rating was used to determine the remaining usable life of each asset which also determined the methodology by which those assets should be maintained to ensure that their maximum usable life is realized. This work was presented to the City Council in



2015 and was well received. The ROW Assessment provided a comprehensive picture of the City’s infrastructure assets and served as the impetus to further develop and expand better infrastructure maintenance programs in the Public Works Department. Additional information is contained in the final report, City of Pearland, Texas Pavement Management Analysis Report (March 2015).

The first chart illustrates the value of infrastructure from the life-cycle costing perspective, focusing on street pavement in this case. The chart also validates that it is prudent for the City to invest further in existing infrastructure before it reaches a poor condition. Strategic investments early in the life of the asset will lengthen its useful life and cost less over time. The second chart illustrates the benefits of strategic infrastructure investment and also compares the life cycle of properly versus improperly maintained infrastructure.

2015

# Pearland

COMPREHENSIVE PLAN



## SECTION 4

# Housing and Neighborhoods



As with economic development, where municipal government helps to ensure a positive and supportive “business climate” for commercial and industrial investment, the City has an essential role in promoting adequate and diverse housing development in quality neighborhood settings. Through the City’s Unified Development Code (UDC), the subdivision regulations help to ensure sound design practices, and the zoning regulations determine the range of housing types that may be built in the community, and where and in what amounts. These are critical functions given the proportion of developed land in Pearland, as in most communities, that is devoted to residential use.

Effective land use planning and management also balances the convenience of shopping and services in close proximity to neighborhoods with the need to ensure compatible nonresidential development near homes. Capital investments by the City and others in infrastructure, public facilities, and parks and trails provide the framework for private development to

bring needed new dwellings to market. Furthermore, housing options and value are a key ingredient for economic development success – and that success, in turn, drives further housing demand, including for “move-up” homes when local income growth increases purchasing power and lifestyle aspirations.

## Housing and Neighborhoods Context

The following information provides a snapshot of the quantity and types of people living in and seeking new or different housing within Pearland. All data, unless otherwise noted, were obtained from the *Pearland Economic and Demographic Profile 2013*, which the Pearland Economic Development Corporation (PEDC) disseminates, drawing primarily from U.S. Census Bureau data along with other sources. **Also see page 4.25 for related community comparison data obtained through a 2014 benchmarking study.**

### DEMOGRAPHICS

**Households in Pearland.** Pearland had 33,632 households in 2011. The average household size was 2.9 persons, compared to 2.75 statewide in Census 2010. In owner-occupied housing, the average household size was 2.95, compared to 2.20 for renter-occupied housing.

**Household Characteristics.** The estimated median age in Pearland during 2011 was 33 years, slightly lower than the statewide median of 33.6. However, at the household level, 47.3 percent of all households in Pearland had one or more persons under age 18 in Census 2010 compared to only 38.9 percent across Texas. Also, 16.1 percent of Pearland households had one or more persons age 65 or older in Census 2010, while across Texas the percentage was 21.2 percent. Data compiled for PEDC showed that, compared to the Houston metropolitan area, Texas and the nation, plus a set of peer cities, Pearland experienced substantial growth in “family households” during the 2000-2010 decade (134.9 percent) and from 2010 to 2013 (8.6 percent) – second only to a bit higher growth in such households in McKinney, Texas. From 2000 to 2010, Pearland was also just behind front-runner McKinney in the growth of households headed by a person between ages 25 and 44 (46.6 percent versus 49.7 percent in McKinney).

**Residency Turnover.** Among the City’s residents in Census 2010, 10.9 percent had lived in a different

home one year earlier compared to 17.4 percent for all of Texas, which likely reflects the extent of people moving to Texas in general during the nationwide recession that began in 2008. A very small percentage (0.5 percent) had relocated to Pearland from outside the U.S. Among the rest, the prior residence was distributed as follows: different U.S. state (1.1 percent), different county in Texas (6.2 percent), and within same county (3.1 percent).

### HOUSING STOCK

**Housing Units.** Pearland had 36,385 total housing units in 2011, with 92.4 percent of these units occupied and the remaining 7.6 percent vacant at the time. As of the U.S. Census Bureau’s 2012 American Community Survey, the vacancy rate among ownership units was only 1.9 percent, compared to 10.8 percent for rental units.

**Home Ownership.** Among all occupied housing units in Pearland, 80.9 percent were owner-occupied and 19.1 percent were renter-occupied at the time of the 2012 American Community Survey. This set Pearland apart from the statewide pattern, where only 63.9 percent of housing units were occupied by their owners, with 36.1 percent renter-occupied.

**Housing Types.** Among all housing in Pearland at the time of the 2012 American Community Survey, the vast majority (82.2 percent) were single-family detached units as illustrated in **Figure 4.1, Extent of**

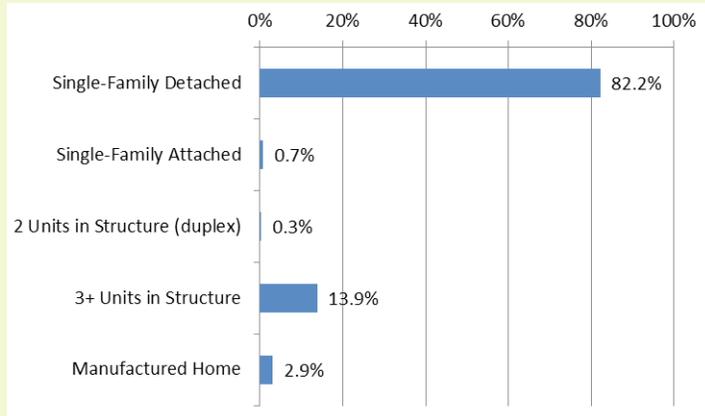
### Some Vacancy is Good – But Not Too Much

As noted above, as of the U.S. Census Bureau’s 2012 American Community Survey, the vacancy rate among ownership units was 1.9 percent, and 10.8 percent among rental units. A rule of thumb often used by economists is that five to eight percent is a “natural” vacancy level that promotes healthy functioning of the housing market, as well as supporting a community’s economic development. When the vacancy rate is too low, demand for housing will push up rents and prices as consumers vie for scarce units. Conversely, when vacancy rates are higher, new and relocating households can be accommodated by the existing stock of housing, and new units are not necessary.

Among Pearland’s multi-family housing stock, vacancy has fluctuated but remained in a satisfactory range in recent years according to the *Pearland Economic and Demographic Profile 2013*. Multi-family vacancy was 10 percent or lower in nine of the 13 years from 2000 to 2012, and rose only to 11.7 percent at its highest point in 2004.

**FIGURE 4.1, Extent of Housing Types in Pearland**

Source: U.S. Census Bureau, 2012 American Community Survey



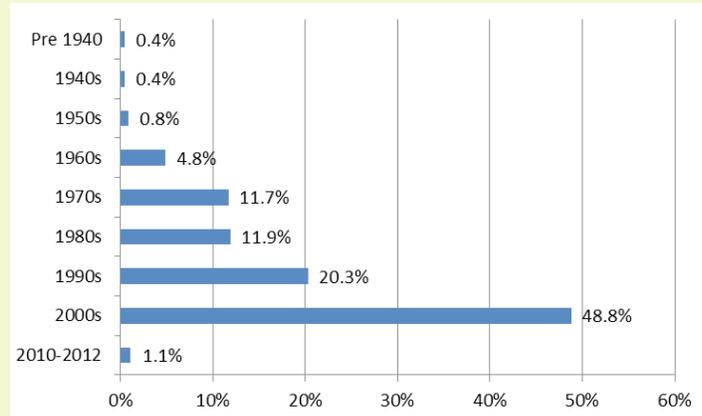
**Housing Types in Pearland.** Multi-family structures were the next most prevalent at roughly 14 percent of the total. It is telling that duplex and townhome style dwellings, at one percent combined, accounted for less than half as much as the amount of manufactured homes in the community (2.9 percent).

**Age of Housing Stock.** As of the 2012 American Community Survey, roughly half (49.9 percent) of all housing units in Pearland had been built since 2000 as illustrated in **Figure 4.2, Age of Housing Stock in Pearland**. If construction during the 1990s is included, then just over two-thirds (70.2 percent) of all Pearland housing at that point was from the 22-year period between 1990 and 2012. In comparison, statewide only 37.3 percent of all housing has been built since 1990. Residential construction in Pearland during the 1970s and 1980s contributed just under a quarter of the 2012 total. About five percent was from the 1960s, and all pre-1960 housing was only 1.6 percent of the total. It is important to consider housing that is 30 years or older as this is a common point when maintenance of older homes becomes an increasing burden on their owners and can start to impact the integrity of entire neighborhoods. Significantly, only about 18 percent of all Pearland dwellings in 2012 were beyond the 30-year threshold.

**Value of Existing Homes.** The median value of owner-occupied homes in Pearland in 2011 was \$177,600, which was a 54.6 percent increase over the 2000 median value of \$114,870. The largest percentage of homes, 37.7 percent, were valued in the \$150,000 to \$199,999 range. Combining this range with all homes valued in the \$200s accounted

**FIGURE 4.2, Age of Housing Stock in Pearland**

Source: U.S. Census Bureau, 2012 American Community Survey



for 70.7 percent of all existing homes. At the lower end of the spectrum, just under one-quarter (24.4 percent) were valued below \$150,000 – with 15.8 percent in the \$100,000 to \$149,999 range. The 2011 data showed only 4.9 percent of all existing homes valued at \$300,000 or higher (compared to nearly 12 percent statewide), with only 1.1 percent at or above the \$500,000 threshold (nearly four percent statewide), and no homes valued at \$1 million or more (0.9 percent statewide). Overall, valuations in Pearland changed significantly during the 2000s, starting with three-quarters of homes valued under \$150,000, and ending with 65 percent of homes valued at or above this level.

**Selling Price of Homes.** One indicator of the relative affordability of Pearland housing is shown in **Figure 4.3, Average Sale Price of Homes in Pearland**

### Multi-Family Development History

As of 2013, 19 of the 30 multi-family residential developments in Pearland had been built since 2000, including 10 just since 2008. This included the newly constructed Carroll at Shadow Creek Ranch apartments at 12501 Broadway, just east of Kingsley Drive, which includes 352 units in a garden-style Class A development. In terms of units, the 30 developments cited above include 7,132 total multi-family dwellings. About 37 percent of these units are new since 2008, and just under 30 percent date back to the 1990s or earlier.

Source: *Pearland Economic and Demographic Profile 2013*

**Relative to Region**, where, after 2002, the average home sale price across the Houston metropolitan area has exceeded the Pearland average by a widening gap. When Pearland's average peaked in 2007 at \$200,688, the regional average was \$217,600, or 8.4 percent higher. By 2012 the regional average had grown to 19.7 percent, especially with the Pearland average price having receded to \$193,384 while the regional average continued to rise.

**Housing Starts and Sales.** Housing starts in Pearland definitely tailed off in recent years after exceeding 1,000 annually from 2002 to 2006 (with a high of 1,176 in 2002). After dropping to 831 in 2007 and 538 in 2008, the annual number remained in the 300s from 2009 to 2012, with a low of 310 in 2010. The trend was similar but less so across the region, with the first signs of an uptick in 2012. On the other hand, after local home sales climbed each year from 2002 and peaked in 2007 at 2,121, they dropped each of the next several years down to 1,435 in 2010 – the lowest number since 1,395 in 2003 – before recovering in 2011 and climbing back to 1,856 in 2012. In recent years the year-to-year change in Pearland's home sales has trended above the regional change.

## THE AFFORDABILITY EQUATION

Along with home prices, income is the other essential factor that determines the “affordability” of housing within a market area. The following indicators capture various aspects of the income picture in Pearland. As

in the previous sections, all data, unless otherwise noted, were obtained from the *Pearland Economic and Demographic Profile 2013*.

**Income.** The estimated 2011 median household income in Pearland was \$83,665. This was significantly higher than at other comparison levels, including the nation (62 percent higher than \$50,502), entire state (67 percent higher than \$49,392), and the Houston metropolitan region (52 percent higher than \$54,901). Additionally, while roughly one-quarter of households in the region had annual incomes greater than \$100,000, 41 percent of Pearland households exceeded this income level. At the same time, nearly half of the region's households (45.9 percent) had incomes below \$50,000, while in Pearland the proportion was only 25.4 percent.

**Incidence of Poverty.** In Pearland, 3.2 percent of families and 4.6 percent of all individuals had incomes in 2008 that put them below the federally-defined poverty level. This was compared to 13.5 percent of families and 17.4 percent of individuals statewide.

The next important consideration is housing-related expenditures. Among owner-occupied housing units in Pearland at the time of the 2012 American Community Survey, 77.7 percent of owners were paying off a mortgage compared to 62.5 percent for all of Texas. The Census Bureau estimated that among those with a mortgage in Pearland, typical monthly owner costs (including mortgage payment,

## Residential Lot Supply

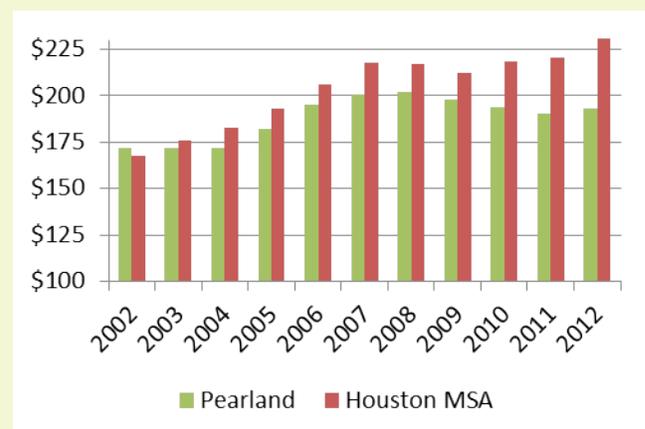
An analysis completed by City staff in July 2015 yielded the following statistics on the distribution of lot sizes within the City limits, based on just under 31,900 total developed and platted lots through first quarter 2015:

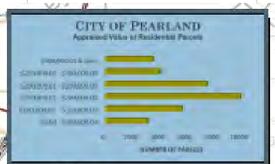
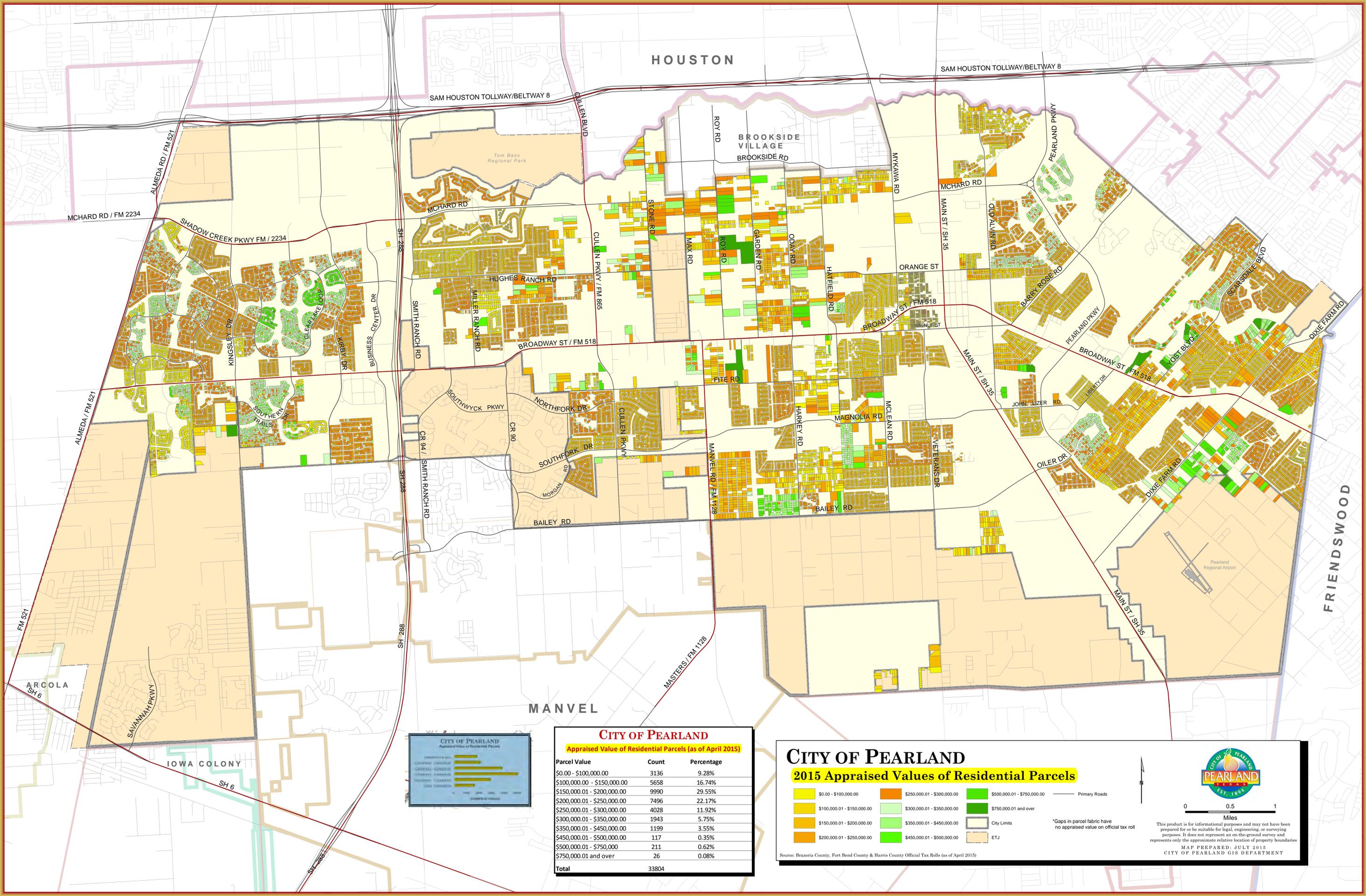
- The majority of lots (54.3 percent) were in a range from 7,000 to 11,999 square feet. The greatest share, 29.2 percent, were in the 7,000-8,799 range (equivalent to the R-2 zoning district) and another 25.1 percent were in the 8,800-11,999 range (R-1 zoning).
- Nearly 30 percent of lots (29.1 percent) were 12,000 square feet or larger. Of these, 13.2 percent were ½-acre (21,780 sq ft) to one acre (Residential Estate zoning relative to SR-12 and -15 zoning).
- Lot sizes less than 7,000 square feet accounted for 16.6 percent of all lots (R-3 and R-4 zoning), with only 2.5 percent in the smallest permissible range of 5,000-5,999 square feet (R-4).

The City-prepared map, **2015 Appraised Values of Residential Parcels**, included in this plan section displays the pattern of lot values across the community.

**FIGURE 4.3,** Average Sale Price of Homes in Pearland Relative to Region

Source: *Pearland Economic and Demographic Profile 2013*





**CITY OF PEARLAND**  
Appraised Value of Residential Parcels (as of April 2015)

Parcel Value	Count	Percentage
\$0.00 - \$100,000.00	3136	9.28%
\$100,000.00 - \$150,000.00	5658	16.74%
\$150,000.01 - \$200,000.00	9990	29.55%
\$200,000.01 - \$250,000.00	7496	22.17%
\$250,000.01 - \$300,000.00	4028	11.92%
\$300,000.01 - \$350,000.00	1943	5.75%
\$350,000.01 - \$450,000.00	1199	3.55%
\$450,000.01 - \$500,000.00	117	0.35%
\$500,000.01 - \$750,000.00	211	0.62%
\$750,000.01 and over	26	0.08%
<b>Total</b>	<b>33804</b>	

**CITY OF PEARLAND**  
2015 Appraised Values of Residential Parcels

\$0.00 - \$100,000.00	\$250,000.01 - \$300,000.00	\$500,000.01 - \$750,000.00	Primary Roads
\$100,000.01 - \$150,000.00	\$300,000.01 - \$350,000.00	\$750,000.01 and over	City Limits
\$150,000.01 - \$200,000.00	\$350,000.01 - \$450,000.00	ETJ	
\$200,000.01 - \$250,000.00	\$450,000.01 - \$500,000.00		

\*Gaps in parcel fabric have no appraised value on official tax roll

0 0.5 1 Miles
   
 This product is for informational purposes and 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 boundaries.
   
 MAP PREPARED: JULY 2015
   
 CITY OF PEARLAND GIS DEPARTMENT

Source: Brazoria County, Fort Bend County & Harris County Official Tax Rolls (as of April 2015)

## Pros and Cons of Low Rent

Lower rents reduce housing costs for individuals and families who cannot afford to purchase a home or will not be in the area for long. However, consistently low rents can have some adverse effects on local housing conditions by:

- Potentially discouraging long-term maintenance of rental properties.
- Not sending a signal to the market to supply more new units.
- Potentially discouraging renters from making the leap to home ownership because of the gap in monthly cost.

property taxes, insurance, utilities, association fees, etc.) were at a median of \$1,970 per month. The statewide median monthly housing expenditure was \$1,446.

In percentage terms, 47.7 percent of Pearland home owners were paying \$2,000 or more per month compared to only 23.7 percent at that level for all of Texas. The highest proportion in Pearland was also the 47.7 percent paying \$2,000 or more per month, while statewide the highest proportion was 32.6 percent in the \$1,000 to \$1,499 per month range. For housing units without a mortgage, median monthly owner costs were \$688 in Pearland and \$451 for all of Texas.

A common way of gauging housing affordability is to consider monthly owner costs relative to household income. Shelter costs are typically considered excessive when they surpass 30 to 35 percent of household income. The U.S. Census Bureau estimated that, in both Pearland and statewide, 31.4 percent of home owners with a mortgage were spending 30 percent or more on housing in 2012. In Pearland the proportion at or above the critical 35 percent threshold was 22.8 percent, compared to 23.4 percent in all of Texas. On the other hand, a solid majority (57.1 percent) of Pearland home owners who were carrying mortgages in 2012 were devoting less than 25 percent of their incomes to housing costs – again,

almost exactly in line with the statewide proportion of 57.2 percent.

For those owners without a mortgage, only 11.4 percent were putting 30 percent or more of their income toward housing costs (13.8 percent for all of Texas), which shows the long-term benefits of home ownership for most people after a mortgage is fully paid.

Among occupied rental units in Pearland during 2012, the median rent was \$1,073, compared to \$834 statewide. Also, 23.1 percent of these local units had rents of \$1,500 or more. This resulted in 36.2 percent of Pearland renters spending 30 percent or more of their income on rent (versus 49.3 percent for all of Texas). This included 26.5 percent who were at or above the 35 percent of income threshold, which was considerably lower than the 40.3 percent at the statewide level. However, the U.S. Department of Housing and Urban Development (HUD) defines any household paying more than 35 percent of its income toward housing as “cost burdened.” This means they must often forego other essential needs – or choose to sacrifice quality of life in another manner.

Focusing again on the income side of the housing affordability equation – and given a median household income of \$83,665 in Pearland during 2011 – the median household should have aimed to pay no more than \$2,092 monthly (30 percent) toward housing costs, with an absolute maximum of \$2,440 per month (35 percent). Detailed in **Table 4.1, Monthly Housing Cost Capacity of Households**, are the monthly “affordability” (30 percent of income) amounts for households at various points above or below the area’s median household income for 2011.

**TABLE 4.1, Monthly Housing Cost Capacity of Households**

Source: Kendig Keast Collaborative

Percent of Median Household Income	Annual Income Amount	Affordable Monthly Housing Cost (30% of Income)
150%	\$125,498	\$3,137
125%	\$104,581	\$2,615
100%	\$83,665	\$2,092
75%	\$62,749	\$1,569
50%	\$41,833	\$1,046

**FIGURE 4.4,** Home Affordability Index Comparison in 2011Source: *Pearland 20/20 Competitive Assessment*, December 2012

	Median Home Value	Median Household Income	Home Affordability
Pearland, TX	\$181,500	\$87,033	2.09
Franklin, TN	\$295,300	\$73,316	4.03
McKinney, TX	\$185,100	\$80,113	2.31
Sugar Land, TX	\$251,700	\$103,041	2.44
Texas	\$127,500	\$50,266	2.54
United States	\$179,500	\$51,484	3.49

Note: Affordability is the ratio between median home value and median household income. A low value indicates greater affordability and a higher value indicates less affordable markets. The figure for the United States can be used as a median benchmark.  
Source: U.S. Census Bureau, American Community Survey (3 yr. estimates)

In late 2013, Pearland was among four Texas cities ranked by Movoto.com, a real estate website, as among “The 10 Most Affordable Suburbs in America” – with Pearland having the best ranking, at number four, among the Texas communities included. The others were Universal City at number seven, Schertz at number eight, and Cibolo at number 10. The ranking considered the 139 largest suburban communities around the 50 largest cities in the nation. Pearland’s advantages were the lowest cost of food (18 points below the U.S. average) and relatively low utility costs (nine points below) and overall cost of living (six points below). On the other hand, Pearland had the highest median home price among the Top 10 suburban cities, but this was offset by the second highest median income. Property taxes for Pearland home owners were also cited as 38 percent above the national average. The key elements of the housing affordability equation – income and housing cost – resulted in a home price-to-income affordability ratio of 2.21 for Pearland as calculated by Movoto. This compared to 2.27 in Universal City, 2.38 in Cibolo, and 2.45 in Schertz.

The *Competitive Assessment* completed for the *Pearland 20/20 Strategic Plan* used the same Home Affordability Index (HAI) tool – the ratio of median home value relative to median household income – to demonstrate Pearland’s housing affordability strength. As presented in **Figure 4.4, Home Affordability Index Comparison in 2011**, Pearland’s ratio of 2.09 at that time was the lowest among a set of peer cities, as well as compared to the State of Texas (2.54) and the nation (3.49). As explained in the *Competitive Assessment*, as HAI ratio increases, this

means that households are devoting more of their incomes toward their homes.

The *Competitive Assessment* also examined the rental situation in Pearland, with the same comparison to several peer cities and the state and nation as displayed in **Figure 4.5, Comparative Rental Affordability in 2011**. This shows that while Pearland had one of the

higher gross rent levels (\$1,140), it also had the lowest percentage of renters (35 percent) paying more than 30 percent of their incomes toward housing cost. This data suggests that a renter in Pearland has to be relatively more affluent than in other communities where lower-cost rentals are available, and that a high proportion of Pearland renters (65 percent) had 70 percent or more of their income left to spend on other needs and wants after covering their rent.

### Implications of the Housing Affordability Index (HAI)

The Real Estate Center at Texas A&M University also publishes Housing Affordability Index (HAI) data for metropolitan areas in Texas along with the entire state and the nation. As described by the Center, the HAI indicates general housing affordability in terms of the ability of the median-income family to purchase the median-priced existing house in its area using standard, conventional financing terms. A ratio of exactly 1.0 would mean that the median family income is exactly equal to the income a conventional lender would require for the family to purchase the median-priced house. A ratio of greater than 1.0 indicates that a median-income family earns more than enough to buy the median-priced house; that is, the family could afford to buy a house priced above the median price. A ratio of less than 1.0 means that a median-income family has insufficient income to qualify for a loan to purchase the median-priced house.

With Pearland having an HAI above 2.0 in recent years, this means the median-income family in the community would presumably qualify to purchase a substantially higher value house beyond the median-priced home. So, this is another indicator of the degree of housing affordability in Pearland.

**FIGURE 4.5,** Comparative Rental Affordability in 2011Source: *Pearland 20/20 Competitive Assessment*, December 2012

## TEXAS AND HOUSTON HOUSING MARKETS OFF THE CHARTS

Over the last few years, the State of Texas has been experiencing a residential development boom due to Texas' remarkable economic performance relative to the nation. In the fourth quarter of 2013, 60,998 single-family homes were sold statewide – a 6.8 percent increase from the fourth quarter of 2012.<sup>1</sup> Home prices were also increasing, with the median price statewide up to \$172,600 in the fourth quarter of 2013, an 8.5 percent increase from the previous year. Furthermore, the statewide inventory of homes had decreased to 3.6 months, which is well below the 6.5 months standard that is considered a balanced market.

The Houston area, as one of the state's fastest growing regions, played a significant role in these statewide real estate trends. From November 2012 to November 2013, the Houston area added an estimated 86,200 jobs amid the great energy and health sector booms.<sup>2</sup> This brought thousands of new people to the Houston area, resulting in a greatly increased need for residential development. In fact, the Houston market had recorded its 30th consecutive month of year-over-year increase in home sales by the end of November 2013. By the end of the fourth quarter, Houston-area sales had jumped by 9.3 percent – up to 18,502 homes – accounting for 30.3 percent of the total statewide increase.<sup>3</sup> Sale prices in 2013 also continued to outpace those of a year earlier, as housing demand continued to run

ahead of supply. The median price of single-family homes had risen to \$180,000, an 8.6 percent increase from the year before. Population growth in the Houston metropolitan area during this time reached 3.1 percent, the highest rate among all major U.S. metropolitan areas, while the nation overall saw growth of only 1.7 percent.

The area housing market had started 2013 with its inventory level at a 13-year low, and it continued to shrink nearly every month.<sup>4</sup> The inventory level is a figure which reflects the number of months it will take to deplete current active inventory based on sales activity within the previous 12 months. By the end of 2013, the inventory level had dropped to 2.6 months, below the statewide inventory level and much lower than the 5.2-month national inventory level.<sup>5</sup> Homes were selling faster than they could be built, taking the area inventory down to an all-time low across all price points by the first quarter of 2014.

Builders had to begin playing catch-up as there had been virtually no new construction in 2009 and 2010 after the national economic recession.<sup>6</sup> The Houston area generated 46,462 residential building permits in 2013, more than any other U.S. metropolitan area, and 11,102 higher than second-ranked New York-Northern New Jersey.<sup>7</sup> However, area builders could not find enough build-ready lots to meet the surging demand, causing the steeply rising prices of homes. Generally it takes 12 to 18 months to convert raw land to buildable lots as infrastructure work is completed. Concern about a potential regional housing shortage was emerging in late 2013 given the combination of limited lot supply and resulting slowdown in new home starts. Plus, added pressure could be placed on a multi-family sector that was already growing rapidly and might not be able to keep pace either.

In late 2013, the Houston area was also ranked number five among the top U.S. metropolitan areas for buying single-family homes to market as rental property.<sup>8</sup> This ranking is maintained by Dallas-based HomeVestors of America Inc. and North Carolina-based Local Market Monitor and takes into account the area job market and relative affordability of housing. Fort Worth and Dallas were the first- and second-ranked markets on this list, and Charlotte and Nashville were also ahead of Houston. Other top-ranked markets after Houston included Atlanta, Oklahoma City, Orlando and Las Vegas.

1 - "Texas Housing Market Finishes 2013 Strong," Texas Association of Realtors, in Texas A&M University Real Estate Center Online News, February 4, 2014.

2 - "Toll Spreads Out in Houston," Kris Hudson, *The Wall Street Journal*, January 22, 2014.

3 - "Houston home sales, prices surge," Jenny Aldridge, *Houston Business Journal*, February 4, 2014.

4 - "Year in Review: Houston's red-hot housing market was on fire in 2013," Olivia Pulsinelli, *Houston Business Journal*, December 27, 2013.

5 - "Houston home sales, prices up, but still affordable, study finds," Realty News Report, in Texas A&M University Real Estate Center Online News, April 11, 2014.

6 - "Houston a top market for residential real estate investing," Olivia Pulsinelli, *Houston Business Journal*, December 23, 2013.

7 - "Toll Spreads Out in Houston," Kris Hudson, *The Wall Street Journal*, January 22, 2014.

8 - "Houston a top market for residential real estate investing," Olivia Pulsinelli, *Houston Business Journal*, December 23, 2013.

Multi-family housing development is also at an all-time high in the Houston area. CBRE reported 17,614 apartment units under construction during the fourth quarter of 2013, with new units leasing quickly.<sup>9</sup> Apartment complexes were leasing between 20-40 units a month on average, almost double the normal rate. The number of apartment units is expected to keep increasing with ongoing starts of new multi-family projects. The Houston area currently ranks third in the nation for the number of multi-family units projected to be constructed by 2017, just behind Atlanta and Dallas-Fort Worth. Also, Houston's projected unit absorption through 2017 is 60,000, which ranks second only to the 70,000 expected to be absorbed in Dallas-Fort Worth.

After the first quarter of 2014, several key trends were firmly established and still continuing across the Houston area housing market: (1) ongoing increases in the volume of existing single-family home sales, (2) continued extremely tight supply of available homes, and (3) a clear advantage in general housing affordability among major U.S. metropolitan areas – although the limited supply was causing an uptick in area prices given the continued strength of demand. Area homes sales once again rose during the first quarter compared to one year earlier, showing a four percent increase. Nearly 6,000 homes were sold just during March 2014.<sup>10</sup>



### Citizen Survey Results

Eight in 10 respondents to the Pearland Citizen Survey (conducted December 2014 through February 2015) rated their neighborhood as excellent or good. Nine in 10 respondents rated their neighborhood as a safe place to live. Respondents were also pleased with the availability and affordability of quality housing. Nine in 10 respondents rated new development as excellent or good.

9 - "Houston one of top markets for multifamily rental, occupancy growth," Jenny Aldridge, Houston Business Journal, February 3, 2014.

10 - "Houston home sales, prices up, but still affordable, study finds," Realty News Report, in Texas A&M University Real Estate Center Online News, April 11, 2014.

## Legacy of Past Long-Range Planning

In 1999, the City of Pearland reviewed and revised its Comprehensive Plan due to the remarkable growth the community had experienced in the 1990s. The City later updated the 1999 Comprehensive Plan with a 2004 addendum. The 2004 interim update was warranted because of necessary policy changes within the City given the continued rate of growth and particular opportunities and challenges facing the city. Along with essential new land use planning and community appearance guidance, the 2004 addendum focused on housing-related issues involving single-family lot sizes, multi-family development, and recommendations for the future allowable density of single-family housing. More specifically, the 2004 addendum called for:

- Rezoning all multi-family zoned property to either single-family residential or nonresidential zoning districts. This has occurred in the vicinity of SH 288, for example, to accommodate medical-related development opportunities and given the City's desire for more Class A office space.
- Adding more residential zoning districts to the UDC to allow for larger-sized residential lots, and to increase the variety of housing. It was recommended to add districts that would provide minimum lot sizes of 10,000 square feet, 12,000 square feet, and 15,000 square feet. Based on this recommendation, the City added the SR-12 and SR-15 zoning districts, with 12,000 square foot and 15,000 square foot minimum lots respectively. The 2004 addendum was also specific in stating that future rezoning activity in the City should not involve allowance for smaller-sized residential lots.
- Providing more diversity in housing types such as patio homes and townhomes. More straightforward and streamlined zoning approaches were recommended to eliminate reliance on Planned Development (PD) applications as the main avenue for development of patio homes and townhomes. Based on this recommendation, the City added a new Townhouse Residential (TH) zoning district to accommodate townhome development.

- Providing for walkable neighborhoods by creating pedestrian-centered developments with sidewalks, interconnected streets and traffic calming measures. It was also recommended that each new neighborhood contain a focal point such as a square or park that is centrally located within the development. In accordance with this philosophy and with the City's Parks and Recreation Master Plan, the adopted Land Use Plan shows general locations for future Neighborhood parks.
- Promoting open space through cluster development approaches, including use of density bonuses to encourage developers to apply this land planning technique. Based on this recommendation, the City adopted the Cluster Development Plan option within its UDC to enable the use of special residential density standards as a substitute for the typical minimum lot size standards for residential development. However, City staff has noted limited utilization of this option, and the need to revisit and potentially adjust the cluster development provisions.
- Encouraging neighborhood designs that incorporate water features and that offer waterfront locations for parks, walking trails, water views and general accessibility for residents.

### LAND USE PLAN UPDATE 2009

Among the six objectives of this interim Land Use Plan update was to Conserve Existing Neighborhoods, including through preservation of existing residential uses, and by designating appropriate land uses for transition areas between residential and nonresidential uses to safeguard neighborhoods while allowing for growth and expansion of local businesses.

The plan identified 26 issues for consideration, including three involving residential land use. Most significant of these was an item that led to the addition of Residential Retail Nodes (five acres) at five locations on the City's Land Use Plan map. The UDC also now includes a Residential Retail Nodes (RRN) zoning designation. As envisioned through the 2009 plan update, an RRN also allows for single-family detached dwellings, two-family (duplex) dwellings, town house dwellings, and multi-family dwellings, all requiring Conditional Use Permit approval, as well as site plan review "to assist in evaluating the

impact of the development on surrounding uses." As elsewhere, Planned Development (PD) approval is another option for proposing residential uses.

Also among the 26 issues was an item to promote broader housing choices in Pearland, including specific mention of senior housing, plus patio and multi-family dwellings. However, this item was ultimately deferred from the report given attention to this need through other City and PEDC initiatives. Finally, the 2009 update also included an item to eliminate residential zoned parcels along Broadway in favor of commercial retail use.

The 2009 Land Use Plan Update report also included an appendix tabulation of the extent of land devoted to various land use types based on the recommended map updates. This table indicated that 61.8 percent of the total area on the Land Use Plan map (just over 27,500 acres) would be in categories intended for primarily residential use. Most prominent among these categories, by far, was the Low Density designation with 37.5 percent of the total (16,670 acres). The next largest was Medium Density at 15 percent of the total (6,875 acres). Detailed in **Table 4.2, Acreage in Residential Categories Based on 2009 and 2015 Land Use Plan Updates**, is a comparison of the overall residential breakdown from both the 2009 update and the new Land Use Plan version prepared for this Comprehensive Plan update – recognizing that some residential use is also possible in other map categories (e.g., Garden/O'Day Mixed Use District). The new 2015 statistics show that the proportion of total acreage in the primarily residential categories is effectively unchanged at 62 percent. However, the shares in Low Density and especially Medium Density both increased slightly while the High Density category is roughly the same. The most significant change is in the now-combined Suburban Residential categories, which together now account for 5.1 percent of the total compared to 8.1 percent in 2009.



**TABLE 4.2,** Acreage in Residential Categories Based on 2009 and 2015 Land Use Plan Updates

Source: City of Pearland 2009 Land Use Plan Update

Land Use Category	Acreage on 2009 Land Use Plan	Percent of Total	Acreage on 2015 Land use Plan	Percent of Total
Suburban Residential A (½ acre lots)	2,168	4.9%	2,258	5.1%
Suburban Residential B (15,000 sf lots)	158	0.3%		
Suburban Residential C (12,000 sf lots)	220	0.5%		
Suburban Residential D (10,000 sf lots)	1,047	2.4%		
Low Density	16,670	37.5%	17,219	38.7%
Medium Density	6,875	15%	7,501	16.6%
High Density	549	1.2%	535	1.2%
Totals	27,687	61.8%	27,513	61.6%

## SPECIAL AREA PLANNING AND IMPLEMENTATION

The City of Pearland and PEDC have completed a series of other targeted planning initiatives in recent years that included residential land use considerations and/or promotion including:

- Old Townsite Downtown Development District Plan (2005).
- Spectrum District (2004 Comprehensive Plan Update).
- Lower Kirby Urban Center (including 2011 Proposed Form-Based Code).

## OLD TOWNSITE

Significant attention and planning has been devoted to Pearland's Old Townsite area, especially through the 2005 Old Townsite Downtown Development District Plan. The plan included a series of development principles, including traditional neighborhood street and parking design to transition to more walkable streets; a mixed-use new Town Center with existing and new residential uses integrated; and extensive connectivity within Old Town through interconnected neighborhood and district parks, tree-lined sidewalks, trails, bike paths and other open space and recreation amenities.

The plan then identifies four districts "to form a strengthened foundation in and around the downtown and... support vitality in the downtown." Along with an Arts, Culture and Education District, this included an Existing Neighborhood District, a Historic Neighborhood District, and the New Town Center. Based on this plan, the City's UDC now includes an Old Townsite (OT) zoning district with three subdistricts:

1. **OT-GB, Old Townsite General Business District**, which allows single-family detached dwellings and two-family (duplex) dwellings subject to Conditional Use Permit approval, and with the stipulation that such dwellings are allowed only on upper floors of buildings and not at ground level.
2. **OT-R, Old Town Residential District**, which permits by right single-family detached dwellings, two-family (duplex) dwellings, townhomes, patio homes, and industrialized housing.
3. **OT-MU, Old Townsite Mixed Use District**, which permits by right townhomes and industrialized housing, and requires Conditional Use Permit approval for single-family detached dwellings, two-family (duplex) dwellings, four-family dwellings, multi-family dwellings, and boarding or rooming house uses.

All three subdistricts also allow for accessory dwelling units on lots, within an accessory structure.

## SPECTRUM DISTRICT

Based on plans for and the anticipated direction of the Spectrum District (now the Lower Kirby Urban Center district) in the early to mid-2000s, the City established a Spectrum (SPD) zoning district in the UDC. Among the five subdistricts in SPD, one in particular focuses on residential activity on single- or mixed-use sites:

**SPD District S3, Mixed Use - High-Density Residential District**, which is "intended for Traditional Neighborhood Design (TND) ...

[and] is characterized by a vertical mix of nonresidential and residential uses, with retail and/or office uses on the ground floor and residential uses above.” Multi-family dwellings are permitted subject to Conditional Use Permit approval. Nonresidential uses in S3 could include commercial and light industrial uses, involving science and technology related activities, developed within a business park or corporate campus for compatibility with residential uses. As elsewhere, Planned Development (PD) approval is another option for proposing residential uses.

**LOWER KIRBY URBAN CENTER**

Planning for the Lower Kirby Urban Center, or LKUC (formerly the Spectrum District), included completion of an LKUC Framework Plan in October 2010. This plan envisioned:

A major regional center with significant regional retail, employment, and residential uses within convenient access to regional highways and walking distance from the future transit station. Development within this area would accommodate large scale office and retail users while providing for appropriately scaled mixed use and residential uses within the district.

Then, following in November 2011 was a proposed form-based code for LKUC. The code details are driven by a Regulating Plan that establishes five Character Zones, including a Highway Commercial zone on the district edges along Beltway 8 and SH 288. The other four Character Zones include varying degrees of residential intent as follows:

1. **Mixed Use Core**, which provides the most opportunity for the highest intensity development – and the highest pedestrian activity and greatest variety of uses – given its immediate adjacency to a future transit station.
2. **Urban Neighborhood**, which “consists primarily of a residential fabric” by allowing for a mix of small apartments, townhomes and live-work units, along with commercial activity concentrated at street intersections and along the Clear Creek frontage.
3. **Commercial Transition**, which provides for a range of commercial (retail, office, and live-work) and residential uses as a transition from the Mixed Use Core.
4. **Research/Tech Campus**, which is intended as the LKUC employment center along Kirby Drive, with a campus-style office research park setting, but with opportunity for limited residential and supporting retail and restaurant uses.

The residential portion of the schedule of permitted uses in the proposed LKUC code also indicates residential lofts as a residential use type that is permitted by right in all five Character Zones.

## Status and Outlook for Housing and Neighborhoods

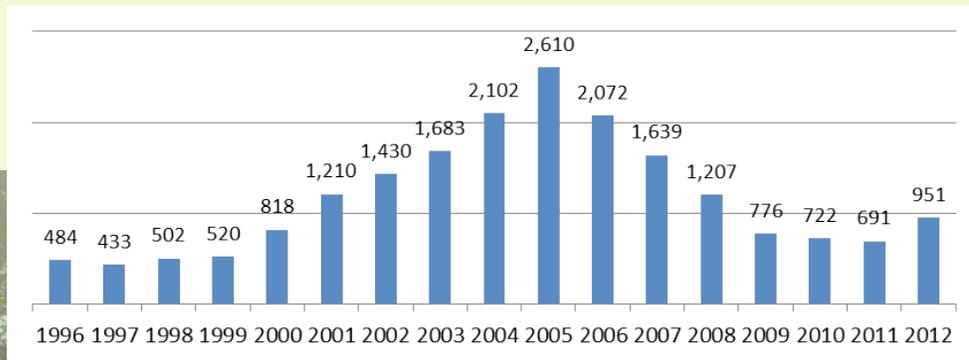
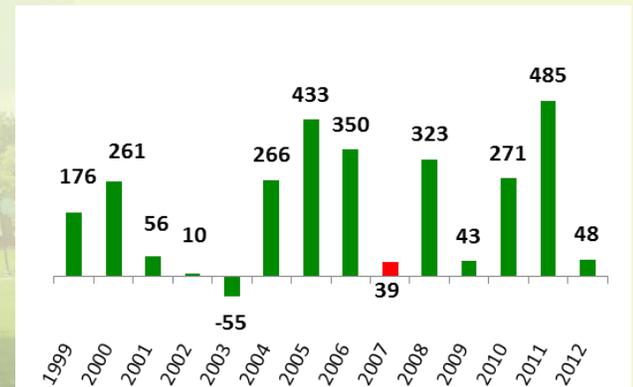
### FUTURE HOUSING NEEDS

Displayed in **Table 4.3, Future Potential Housing Needs**, are the results of calculating the potential housing units that will be needed within the city

**TABLE 4.3, Future Potential Housing Needs**

Source: Kendig Keast Collaborative

Future Population Milestone	Projected Housing Units at Milestone	Projected Units Added from 2011	Average Units Added Per Year	Potential Owner-Occupied Units	Potential SF-Detached Units
95,644 (2011 ACS)	36,385 (2011 ACS)	--	--	80.9% (2012 ACS)	82.2% (2012 ACS)
132,320 (2020 in-city)	49,299	12,914	1,435	10,477	10,615
158,559 (2025 in-city)	58,538	22,153	1,582	17,922	18,210
190,000 (2030 in-city)	69,609	33,224	1,749	26,878	27,310

**FIGURE 4.6,** Trend in Single-Family Residential Building Permits, 1996-2012Source: *Pearland Economic and Demographic Profile 2013***FIGURE 4.7,** Trend in Local Absorption of New Multi-Family Units, 1999-2012Source: *Pearland Economic and Demographic Profile 2013*

at the population levels projected for certain milestone years in Section 2, Growth Capacity and Infrastructure. The total number of housing units in the city could increase to nearly 70,000 units by 2030, building upon the estimated 36,385 existing units as of 2011.

These numbers are intended primarily as a baseline against which comparisons can be made as actual trends unfold in the years ahead. For ease of calculation, they assume that the 2011 median household size (2.84 persons per household), the 2012 proportion of owner-occupied units (80.9 percent), and the 2012 proportion of single-family detached units (82.2 percent) will all remain constant into the future. They are also gross and not net housing unit projections as they do not account for demolition and/or replacement of any existing units. While it is even more challenging to pinpoint a potential future housing unit count for the combined City limits and

extraterritorial jurisdiction, one possibility is 81,818 units if the projected 225,000 buildout population in 2042 is divided by a somewhat reduced figure of 2.75 persons per household.

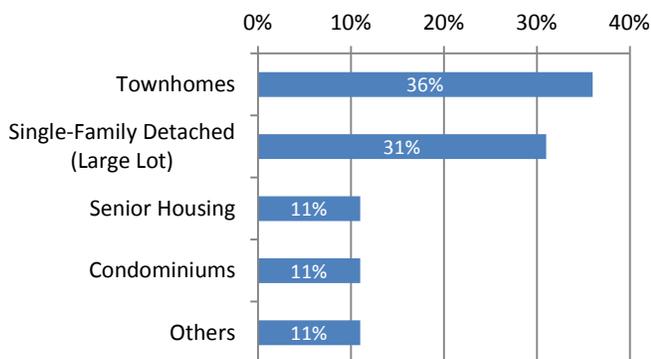
As shown in **Figure 4.6, Trend in Single-Family Residential Building Permits, 1996-2012**, Pearland saw its building permit activity for single-family home construction rise and fall dramatically over the last decade, as reported in the *Pearland Economic and Demographic Profile 2013*. Issued permits peaked above 2,500 in 2005, then fell off with the national recession of the late 2000s, and began to rebound in 951 in 2012. Despite the recent permitting drop-off, activity remains higher than it was at any point in the late 1990s. The associated value of the permits issued has held steady over the last decade and, with a 2012 average value of \$202,200, is roughly double where permit values were in the late 1990s.

Illustrated in **Figure 4.7, Trend in Local Absorption of New Multi-Family Units, 1999-2012**, is the quite positive absorption of new multi-family units in Pearland dating back to 1999, with only one off year in 2003 when 55 more units became available for lease than were ultimately rented. The larger absorption numbers in various years since the mid-2000s reflects the extent of new multi-family construction in Pearland during this time, and the evident demand given their leasing success. Other communities have noticed an impact on multi-family absorption and occupancy following an uptick in senior housing construction and development of more assisted living projects, which is a possibility for Pearland in the coming years.

**FUTURE HOUSING MIX**

At the time of this comprehensive planning effort, Pearland’s public and private leadership and many residents were recognizing the need for a wider array of housing options in the community – while remaining adamant that further multi-family construction should not be a significant part of this mix. Demographic trends were partly behind this desire to see a more diverse housing stock in Pearland, to address “life-cycle” housing needs among younger, middle-aged and senior population cohorts within the city. Additionally, as captured in the *Competitive Assessment* conducted for PEDC, concern was also expressed about a mismatch between the employment options available in Pearland relative to the housing costs such workers face in hoping to live where they work, leading many to purchase or rent elsewhere and commute to local jobs in Pearland.

In an informal polling exercise during a Comprehensive Plan Advisory Committee meeting, committee members were asked, “What housing types will Pearland need in the future that are not available at all or enough today?” The resulting distribution of responses was:



The same question was posted on the MindMixer online discussion forum site during a portion of the comprehensive planning process, with the following sampling of responses:

- Condos or townhomes – NO APARTMENTS!
- Brownstones
- Planned higher-density communities
- More affordable condos/townhomes for retirees
- “Permaculture” neighborhood with much smaller houses
- Townhomes that you buy
- More middle income and upscale
- Small condos/retirement communities for age 55+
- Residential neighborhoods with larger lots
- Occupant-owned housing of any kind
- Single-family homes in gated communities
- Housing that is not controlled by Home Owner or Property Owner Associations
- Ones where we pay less property taxes

Concern about and opposition to significant additional apartment construction in Pearland was expressed during public engagement activities for this comprehensive planning effort. This was consistent with sentiments heard as input to the *Competitive Assessment* completed in late 2012 for the *Pearland 20/20 Strategic Plan*:

Despite these data [on the relatively low level of rental housing options in Pearland], most Pearland input respondents do not want to see additional multi-family residential units constructed in the city. Stakeholders feel that multi-family development attracts a lower-income resident to Pearland and risks the community’s quality of life, public safety, and educational performance.



Furthermore, in an informal polling exercise during a Comprehensive Plan Advisory Committee meeting, committee members were asked to agree or disagree with two statements on the specific issue of multi-family housing:

“Even if the private development market is interested in building more multi-family housing in Pearland, the City’s zoning regulations should limit this type of housing.”

“The City’s Land Use Plan should indicate areas for new multi-family residential beyond existing locations of this use.”

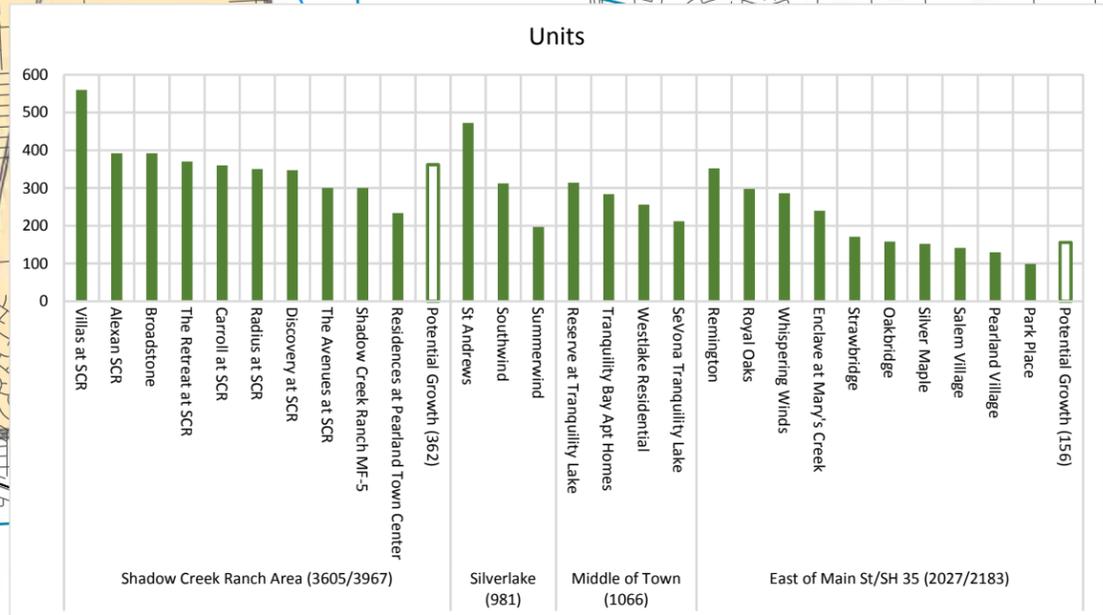
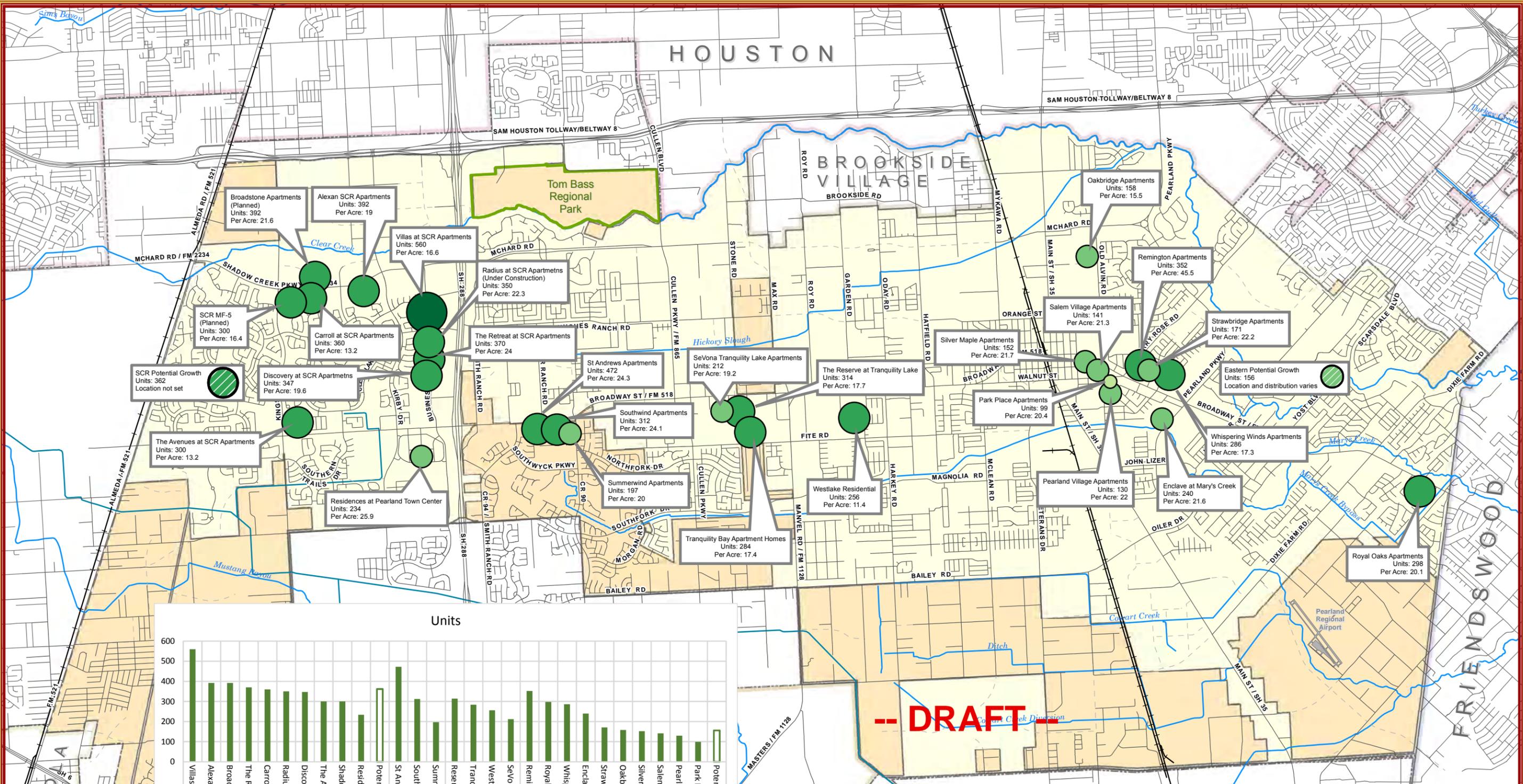
The entire committee unanimously concurred with the first statement (yes, limit this housing type). To the second statement, three-quarters of the group disagreed (no, do not plan for additional areas of multi-family housing). Both the desire for greater housing variety and the discomfort with multi-family development has significant implications for the potential mix and form of new and redeveloped residential uses within Pearland in the years ahead. The City-prepared **Apartment Complexes map** included in this plan section illustrates the location, size and relative density of current multi-family uses.

## Key Planning Considerations

Input and discussions for this Comprehensive Plan update, through workshops with City Council and Planning and Zoning Commission, informal small-group sessions, a community-wide public open house event, the online Virtual Town Hall forum, interaction with the Comprehensive Plan Advisory Committee, and background discussions with City staff, yielded the following concerns related to this Housing and Neighborhoods section of the plan:

- Needed diversity in housing stock, including entry-level, young professional and senior housing, and a wider range of ownership options.
- Lot and house size considerations, from both market and regulatory perspectives (i.e., socioeconomic trends and cost factors will drive what lot and home types/sizes the private market chooses to supply; meanwhile, the City can use zoning standards to accommodate some amount of smaller-footprint dwelling types while also limiting the overall extent of small lots, which is typically driven by density concerns plus the cost of providing municipal services to residential uses that do not “pay their way” in terms of appraised value and resulting property tax revenue to the City).
- Community receptiveness to multifamily housing due to effects of concern in a suburban setting (e.g., density, traffic, schools, City facilities/programs).
- Importance of effective regulations to get desired residential outcomes (i.e., relative to limited-regulation cities).
- Sustainability and code compliance of older rental properties, especially near single-family residential neighborhoods.
- Cost and difficulty of redevelopment and infill development, so ways City can promote and incentivize it.
- Outreach and partnerships between City and homeowner associations.
- Accommodating an aging demographic (appropriate design for in-home accessibility and neighborhood walkability, more senior care facilities so older residents can stay in community).
- More green space and trees within neighborhoods.
- Coming focus on home maintenance with older housing stock, and the need for adequate regulations to manage teardown/rebuild activity where home renovation is not feasible.





## CITY OF PEARLAND

### Apartment Complexes

**Unit Counts**

- ≥ 501
- 251 - 500
- 101 - 250
- ≤ 100

- Pearland City Limits
- Pearland ETJ
- Other Cities

\*Note: potential growth figures given reflect the maximum permissible units which could be built based on currently approved zoning and regulations.

1 in = 1 miles  
0 0.5 1 Miles

This product is for informational purposes and 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 boundaries.

MAP PREPARED: SEP 2014  
CITY OF PEARLAND GIS DEPARTMENT

-- DRAFT --

## Goals and Action Strategies

### GOALS

A “goal” is a statement of a desired outcome (“end”) toward which efforts are directed, as expressed by more specific objectives and action priorities (“means”). Below are three goals intended to focus plan implementation efforts related to Housing and Neighborhoods that follow the adoption of this new Comprehensive Plan:

- GOAL 4.1:** A **wider range of residential options** to meet the “life-cycle” housing needs of current and future Pearland residents.
- GOAL 4.2:** A commitment both to the **integrity and continued appeal of older established neighborhoods**, as well as the **quality design and long-term sustainability of newer residential areas**.
- GOAL 4.3:** A continued emphasis on Pearland’s **housing quality and options as a fundamental economic development advantage** and benefit for current and prospective residents.

### ACTION STRATEGIES

Itemized below are a set of potential actions for responding to the key issues and community needs identified in this Comprehensive Plan section. In particular, three items are highlighted as strategic initiatives for the immediate future.

#### STRATEGIC PRIORITY 1: GREATER HOUSING VARIETY

Along with the focus on diverse housing types and mixed-use development in various special districts within Pearland (e.g., Old Townsite, Lower Kirby Urban Center), the City should revisit its Unified Development Code to consider ways to encourage – and, in some cases, potentially require – a mix of housing types within new developments. In some municipal codes a residential “flex” district is included in which a series of residential development options and lot sizes are available by right, with appropriate development and compatibility standards for each option (e.g., maximum lot coverage, buffering, etc.) that are on a sliding scale and tied to the proposed

development intensity to maintain a consistent area character. This approach is most effective when density bonuses are built into the district framework such that those development options that will best advance community housing objectives are also the most rewarding for the development community.

This zoning approach can also be tied to the promotion of cluster and conservation development methods. Provisions can be included to require incorporation of multiple housing types into developments that will exceed a certain density threshold. For example, as a potential condition for awarding a density bonus to such developments that will preserve a greater amount of permanent open space in return for smaller lot sizes, another housing type besides single-family detached dwellings (e.g., zero lot line patio homes, townhomes, etc.) could be required when lot sizes are reduced beyond a certain point. By incorporating such provisions into the City’s development regulations, this mixed-housing outcome can be achieved directly without needing a Planned Development application and process – or by carving up a single project site into multiple zoning districts to accommodate different housing types and densities.

The UDC currently defines nine types of “dwellings” (in Section 5.1.1.1., General Definitions):

- Single-Family Detached (with multiple zoning districts that provide for seven minimum lot sizes compared to just one zoning district for each of the other housing types)
- Industrialized Home
- Patio Home
- Two-Family
- Quadriplex (four-family)
- Town House
- Multiple-Family
- HUD-Code Manufactured Home
- Mobile Home

Detailed in **Table 4.4, Housing Types Allowed in Zoning Districts**, are where these particular residential options are currently possible within the community either as a permitted-by-right use



**TABLE 4.4,** Housing Types Allowed in Zoning Districts

Source: City of Pearland Unified Development Code

Zoning District	SF Detached	Industrialized	Patio Home	Two-Family	Four-Family	Town House	Multi-Family	Manufactured	Boarding / Rooming	Accessory Unit
R-E (Residential Estate)	P	P								
SR-15 (Suburban Development)	P	P								
SR-12 (Suburban Development)	P	P								
R-1 (Single-Family Residential)	P	P								
R-2 (Single-Family Residential)	P	P								
R-3 (Single-Family Residential)	P	P								
R-4 (Single-Family Residential)	P	P	P	C						
TH (Townhouse Residential)	P			P	P	P				
MF (Multiple-Family Residential)	P			P	P		P		P	
MH (Manufactured Home Park)					P			P		
SPD-3 (Spectrum Subdistrict 3)							C			
C-MU (Cullen Mixed Use)	P	C								
G/O-MU (Garden / O'Day Mixed Use)	P	C								
OT-GB (Old Townsite-General Business)	C			C						P
OT-R (Old Townsite-Residential)	P	P	P	P		P				P
OT-MU (Old Townsite-Mixed Use)	C	P		C	C	P	C		C	P
RRN (Residential Retail Nodes)	C			C		C	C			
GB (General Business Retail)									P	
GC (General Commercial)									P	
M-1 (Light Industrial)								C		
M-2 (Heavy Industrial)					P			C		

NOTE: Residential uses are permitted in all districts, where not permitted by right (indicated by a "P" in the table) or by Conditional Use Permit (indicated by a "C" in the table), via a Planned Development approval. Residential uses are possible only via Planned Development approval in the Suburban Development (SD), Spectrum (SPD) 1-2 and 4-5, Office and Professional (OP), Business Park-288 (BP-288), and Neighborhood Service (NS) zoning districts.

(indicated by a “P”) or subject to Conditional Use Permit approval (indicated by a “C”). The table also shows where a “Boarding or Rooming House” use is possible, as well as the allowance for accessory dwellings units in the three Old Townsite subdistricts. In addition, the Planned Development (PD) zoning district functions as an overlay to underlying base zoning districts and provides for single-use or mixed-use projects that could involve residential use. A PD may be proposed anywhere in the City subject to provisions in the City’s Unified Development Code.

### STRATEGIC PRIORITY 2: REGULATORY RELIEF FOR REDEVELOPMENT

The City should consider adding new or adjusting current UDC provisions that allow for relaxation of specified standards, especially to make a clearer connection to the community objective of encouraging desired redevelopment activity. Neighborhood redevelopment and infill proposals often face immediate obstacles when contemporary development standards must be applied in older areas of communities. Regulatory relief may be warranted in such cases, as long as certain precautions and mitigation criteria can be met.

Common regulatory constraints to redevelopment include site access and circulation standards, limited on site area for parking and loading, nonconforming building setbacks (and/or inadequate area to meet minimum yard requirements), and on-site drainage requirements. The intent is that known obstacles peculiar to targeted redevelopment areas should be addressed directly in the development regulations, including a defined procedure for offering flexibility in such areas with longstanding revitalization needs. Otherwise, an applicant with viable reinvestment plans must pursue typical hardship-based variance requests before the Zoning Board of Adjustment, which takes time and can be unpredictable.

Pearland’s UDC currently deals with this, to some extent, through Section 2.7.3.7, Special Exceptions for Nonconformities (which, similar to variance applications, involves a Zoning Board of Adjustment review process), and Section 2.7.3.8, Nonconformities Specifically Related to the Old Townsite (OT) Zoning District. In providing a procedure under which such relaxation of standards should be allowed, the development regulations should also spell out parameters for and conditions under which such flexibility might be provided so that applicants have an idea of what is possible and so that other property owners and residents see that adequate precautions are in place to protect area character. UDC Section 2.7.3.8.(a)

(5) currently has only general and typical language about bringing properties into compliance, protecting adjacent property owners, and ensuring public health, safety and general welfare, which still leaves much to the discretion of the Board of Adjustment.

### STRATEGIC PRIORITY 3: EXPANDED FOCUS ON NEIGHBORHOODS

Most municipal governments address neighborhood-level needs across a variety of departments and functions, from public works and public safety to parks and recreation and animal control. Some cities, both from a management and resource allocation standpoint, as well as to signal their commitment to neighborhoods as the core “building blocks” of the community, choose to establish a Department of Neighborhoods or other specialized division to ensure a daily focus at the “grass roots” level.

The City of Pearland should explore this option and consider models in other Texas and U.S. cities. For example, the City of College Station, in furtherance of an action item in its 1997 Comprehensive Plan, prioritized neighborhood planning and the associated coordination of services to neighborhoods. The City currently focuses on 13 identified neighborhood planning areas with individual plans. Meanwhile, City staff oversees a variety of neighborhood-focused activities, including its Neighborhood Partnership Program, its Seminar Supper series (on such topics as neighborhood watch and block captain training through the Police Department), and the City’s annual National Night Out plans. Points of contact on City staff facilitate the resolution of lingering code enforcement issues and noise and animal complaints. As summarized on the City’s website:

Neighborhood Services maintains collaborative partnerships between neighborhoods, community organizations and the City of College Station. By registering your neighborhood or homeowner association with Neighborhood Services, your association is eligible for resources and assistance from the City. Associations have the opportunity to develop regular communication with staff regarding area development and City services.

The program also focuses, in particular, on leadership development and promoting the establishment or rejuvenation of neighborhood and home owner associations. An essential resource for this is a 47-page publication, *Taking Action! A Manual for Neighborhood Associations*, which, among its array of resources, includes a Neighborhood Self-Evaluation Checklist.

In its 2007 Comprehensive Plan update, the City of College Station included a plan element specifically on Neighborhood Integrity. Among its action items, this plan section recommended enhancing the Neighborhood Services function even further by:

- Establishing a single point of contact for neighborhood organizations in problem solving, and education and outreach programs to neighborhoods and residents about City services and training opportunities, which was accomplished as described above.
- Focusing on providing leadership training and assistance in capacity building for neighborhood associations.
- Tracking identity and character indicators to help identify neighborhoods in transition so that the City can allocate resources to specific areas of need.
- Enhancing the City's overall public engagement practices with additional public education and outreach, especially related to the City's development review and approval process, which was a source of frustration for neighborhoods in some cases mainly because of inadequate communication and a lack of knowledge about the process.

In recent years the City of Houston also took significant steps to focus more resources on neighborhoods. Among its priorities, the City distributes mini-grants, which is a popular initiative in many U.S. cities for engaging neighborhoods and promoting grass-roots involvement and self-help actions. Local civic clubs, Super Neighborhoods, and other community organizations can compete to earn cash through an annual competition sponsored by Neighborhoods USA (NUSA). NUSA is the largest U.S. non-profit committed to neighborhoods. NUSA helps the City to evaluate applications for funding of programs or projects that meet the eligibility requirements in several categories. Significantly, Houston hosted NUSA's annual conference in 2015.

In considering the wide range of neighborhood-oriented initiatives that could be pursued, it is helpful to look to programs in other cities for ideas and inspiration given the variety of examples they can offer. Besides the City of Houston, other examples from across the country include:

- City of Charlotte-Mecklenburg County (NC) Department of Neighborhood and Business

Services, <http://charmec.org/city/charlotte/nbs/>.

- City of Riverside (CA) Neighborhoods Division, <http://www.riversideca.gov/neighborhoods/>.
- City of Seattle (WA) Department of Neighborhoods, <http://www.seattle.gov/neighborhoods/>.
- Hillsborough County (FL) Office of Neighborhood Relations, <http://www.hillsboroughcounty.org/index.aspx?nid=2510>.

At the time of this Comprehensive Plan update, and in furtherance of several core initiatives in the *Pearland 20/20 Strategic Plan*, PEDC in 2013 had hired a new staff member who, in part, will focus on corridor revitalization efforts.

### Neighborhood-Oriented Events

Examples from across the nation illustrate the multiple ways to maintain communication links to neighborhood leaders and representatives. 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. 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 major zoning cases, crime prevention activities, code compliance initiatives, etc. Some communities also host high-profile annual events focused on the interests and needs of neighborhoods including:

- The 29th annual CityLinks conference between the City of Dayton, University of Dayton and other partners, with the 2014 theme, "Moving Dayton Forward: New Ideas, New Initiatives."  
([http://www.udayton.edu/artsscience/fitzcenter/community\\_progs/citylinks/](http://www.udayton.edu/artsscience/fitzcenter/community_progs/citylinks/))
- The annual Neighborhood Conference in Riverside, California, hosted by the City's Neighborhoods Division.  
(<http://www.riversideca.gov/neighborhoods/neighborhoods-conference.asp>)
- The 11th annual Neighborhoods Conference in Hillsborough County, Florida, hosted by the County's Office of Neighborhood Relations.  
(<http://www.hillsboroughcounty.org/index.aspx?NID=2999>)

## OTHER ACTION ITEMS

### ACTION: REDEVELOPMENT INCENTIVES

As another way to encourage residential redevelopment in targeted areas, the City should consider a tax abatement or deferral program, or other incentive mechanism, that rewards infill activity and housing rehabilitation in older neighborhoods. Such a program could target lots where substandard structures were recently removed so that these lots are put back onto the market and tax rolls as promptly as possible. Other inducements can include fast-track permitting, fee waivers, land assembly assistance, and infrastructure cost-sharing for builders and organizations that complete infill construction on vacant lots.

### ACTION: ZONING INCENTIVE FOR ADDRESSING TARGETED HOUSING NEEDS

Along with potential financial mechanisms, the City should also consider ways that it can provide incentives for meeting the housing needs of specific demographics through special UDC provisions. Some development codes allow for density bonuses to reward projects that provide a variety of dwelling types such that some percentage are more affordable than current market-rate units. A development would be allowed a certain amount of additional residential density over and above the maximum limit allowed by existing zoning. In return, some designated units may be restricted to occupancy by certain target groups (e.g., seniors, disabled, veterans, young persons/families) and/or the units must remain available over time and multiple re-sales of the property. The regulations can also establish certain criteria to govern when a density bonus is appropriate with regard to compatibility, adequate site area, adequate parking, etc., and to ensure consistent design and finishes for the designated units.

### ACTION: ACCESSORY DWELLING UNITS

As another way to respond to demographic trends and provide another affordable “life-cycle” housing option, the City should consider providing more opportunity for accessory dwelling units beyond just the Old Townsite area – and also integrated with single-family dwellings versus only in accessory structures on a residential lot. The UDC currently allows such units only in the three subdistricts of the Old Townsite zoning district (in Section 2.4.3.4., OT, Old Townsite District), and only in an accessory structure that may not exceed a 660 square foot

footprint, and may not exceed two stories or 24 feet in height, whichever is less.

Accessory dwelling units are common and popular in some communities to accommodate elderly parents or relatives (“granny flats”), young adult family members wanting to live independently but close by, or local college students in need of basic, low cost housing. It also provides another affordable living option within neighborhoods – and a rental income opportunity for home owners. The UDC should provide a legal avenue for accessory dwelling units in more situations within Pearland. This can involve creation of a separate or semi-private living area within an existing dwelling, or the establishment of a garage apartment or separate living area in another accessory building on a lot as already addressed by the UDC. To ensure their appropriate use and compatibility, accessory units can also be regulated in a variety of ways to address bulk, setback, and lot size and coverage issues; residential density; and parking, safety, and other potential concerns. Some ordinances aim to limit the leasing of such units through provisions disallowing separate utilities and utility billing, separate trash collection, or the establishment of a separate house number and mailing address on a lot.

### ACTION: MAXIMUM LOT COVERAGE RATIONALE

The City should revisit the current maximum lot coverage standards for each of its residential zoning districts to ensure that they reflect the existing and/or desired character for various areas of the community. By limiting lot coverage, the UDC already has a core element of a character-based land use planning and zoning approach. This zoning tool, along with minimum yard requirements, helps to control the extent of site area that may be covered by improvements, which also maintains open space and is particularly important where a more Suburban development character is desired (and also for storm water management purposes in some ordinances). Additionally – and fortunately – the Pearland UDC, unlike codes in some other cities, does treat lot coverage as encompassing all “impervious cover” (as defined in Section 5.1.1.1.(a)(231)) and not just building footprints. However, some of the current coverage limits raise questions including:

- Why a relatively high lot coverage of 50 percent is allowed in the Residential Estate (RE) and Suburban Residential-15 (SR-15) districts when these are intended to be the least intensive

residential districts with an Estate or Suburban development character?

- Why the coverage limit increases to 60 percent for the Suburban Residential-12 (SR-12) district – another district where a less intensive Suburban character is the stated intent – but then drops back to 50 percent for all the progressively more intensive Single-Family Residential districts (R-1 through 4) plus the Townhouse Residential (TH) district?
- Why some of the most intensive residential uses, as accommodated by the Multiple-Family Residential (MF) and Manufactured Home Park (MH) districts, have some of the most restrictive coverage standards – 40 percent and 30 percent, respectively – compared to only a 50 percent coverage limit in the least intense RE and SR-15 districts?

The City of Pearland is also to be applauded for including residential anti-monotony regulations in its UDC, in Section 2.5.6.3, which requires variation in the front facades of homes and in garage styles and locations on lots to prevent garages from becoming the “dominant visual architectural feature” across entire subdivisions. Varied front yard setbacks are also allowed.

#### **ACTION: EVALUATE AND ELEVATE NEIGHBORHOOD DESIGN**

The U.S. Green Building Council (USGBC) developed a now widely familiar building performance rating system entitled, Leadership in Energy and Environmental Design (LEED). LEED includes several categories with which to evaluate the performance of various types of buildings including New Construction, Homes, Schools, Healthcare, and Commercial Interiors. In 2007 USGBC introduced LEED for Neighborhood Development (ND) as a means of taking the green certification concept beyond individual buildings and applying it to a neighborhood context. Co-developed with the Natural Resources Defense Council and the Congress for the New Urbanism, 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 involves a set of measurable standards that collectively identify whether an existing 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, which are required as a baseline for sustainable neighborhood development, and credits, which provide additional best practice standards for such development. LEED-ND encourages design 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:

1. Smart Location and Linkage (SLL): Where to Build.
2. Neighborhood Pattern and Design (NPD): What to Build.
3. Green Infrastructure and Buildings (GIB): How to Manage Environmental Impacts.

While actual pursuit of LEED-ND certification for a proposed development project is still relatively limited compared to other LEED certifications, another approach is to informally assess the quality of existing neighborhoods – and possibly even some proposed developments – using the LEED-ND checklist. For most neighborhoods and developments this will involve three main steps:

1. Evaluate the Neighborhood. Conduct an audit of a neighborhood or development using the LEED-ND categories, prerequisites and credits. Within the resource publication, *A Citizen’s Guide to LEED for Neighborhood Development*, is a handy checklist that can be used to aid in this evaluation (and also see the simplified checklist in this section).<sup>11</sup>
2. Focus on Strengths and Weaknesses. Identify areas where the neighborhood performs well under LEED-ND. Where it does not, solicit stakeholder input on specific needs and potential solutions or mitigation measures.
3. 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, grass-roots participation in that process is essential to ensure that it addresses identified needs and protects neighborhood assets.

<sup>11</sup> - *A Citizen’s Guide to LEED for Neighborhood Development*, Natural Resources Defense Council, ([www.nrdc.org/cities/smartgrowth/files/citizens\\_guide\\_LEED-ND.pdf](http://www.nrdc.org/cities/smartgrowth/files/citizens_guide_LEED-ND.pdf)).

## Checklist for Evaluating Neighborhoods

The informal checklist below summarizes all credits and prerequisites in the LEED-ND Rating System. The checklist can be used to assess the strengths and weaknesses of a development proposal, site plan, existing neighborhood, or even a neighborhood plan or the zoning standards that apply to a particular neighborhood. The checklist can also be used as a source of potential standards and thresholds to include in plans, policies, regulations, or designs. However, this summary checklist is a simplified version of the full LEED-ND Sustainable Neighborhood Development Checklist, which offers much more detail for such efforts. The LEED-ND Rating System requires sophisticated verification of compliance with standards and, therefore, provides a much more authoritative evaluation. The complete checklist can be found in the Citizen's Guide publication cited earlier in this section.

### *Smart Location and Linkage*

- Location
- Ecosystems and Open Spaces
- Contaminated Sites
- Transit-Accessible Locations
- Cycling Facilities
- Jobs and Housing Proximity

### *Neighborhood Pattern and Design*

- Walkable Streets
- Compact Development
- Neighborhood Connections
- Mixed Uses
- Affordable and Diverse Housing
- Parking and Transportation Demand
- Parks and Recreation
- Universal Design
- Community Participation
- Local Food
- School Access and Design

### *Green Infrastructure and Buildings*

- Construction Techniques
- Energy Efficiency and Conservation
- Energy Production and Distribution
- Water Efficiency and Conservation
- Stormwater and Wastewater
- Green Building Process
- Historic and Existing Building Reuse
- Heat Islands
- Recycling and Reuse
- Light Pollution



In 2010, the U.S. Department of Housing and Urban Development (HUD) announced that it would consider LEED-ND's location criteria when awarding competitive housing grants, including its Sustainable Communities Regional Planning Grants. This includes LEED-ND standards for such things as transit access, proximity to neighborhood shops and services, sensitivity to environmental features, and the amount and character of nearby development. Grant-giving organizations and agencies can use LEED ND in a similar way, incorporating standards for smart and sustainable development into their project selection process.

Regarding the Quality Neighborhood Design elements highlighted here, a related question on neighborhood quality was posted on the MindMixer

## 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 interconnectivity 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 intensive atmosphere and draw residents to enjoy common areas of their neighborhood. This should include 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.

online discussion forum site during a portion of the comprehensive planning process – “What specific features make certain neighborhoods in Pearland very appealing and should be done elsewhere when possible?” – with the following sampling of responses:

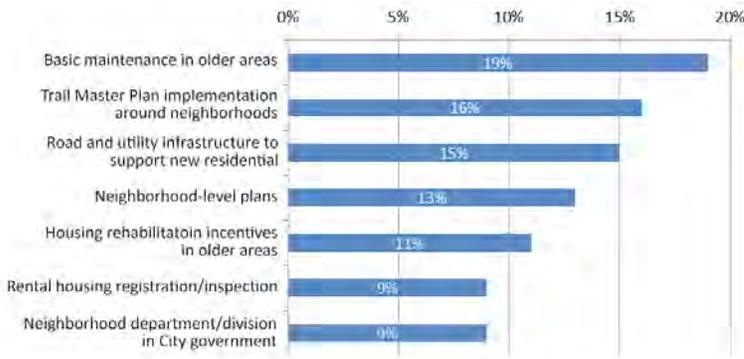
- Detention ponds used for walkways and parks
- Curb appeal (entries, winding sidewalks, green/open spaces)
- Brick perimeter fences
- Street lights
- Pocket parks
- Walking/jogging paths and trees
- Sidewalks
- Parks and recreation – connect to hike and bike trails
- More fences
- Fewer fences
- “Good neighbor” designs (amenities for interaction)
- Speed humps
- Parkways
- More gated neighborhoods

Participants in the MindMixer online discussion forum site were also asked – “What neighborhood features have you liked in other cities that should be encouraged more in Pearland when possible?” – with the following sampling of responses:

- Street maintenance in older areas
- More walking and biking spaces (sidewalks everywhere in city)
- Connectivity to uses outside of neighborhood, and to other neighborhoods
- Larger lots and no privacy fences (natural barriers versus worn fences)
- Outdoor water recreation (a real lake)
- Trees not planted under power lines to avoid future trimming
- Complete Streets (for cyclists and older residents, and also more attractive)
- Protecting against certain business types (payday loans, pawn shops)
- Large City-issued trash bins on wheels (versus use of trash bags)

- Trees (more planting and transplanting in new developments)

In an informal polling exercise during a Comprehensive Plan Advisory Committee meeting, committee members were asked, “The most important near-term action items from this Comprehensive Plan related to housing and neighborhoods should be [with the opportunity to select three]?” The resulting distribution of responses was:



A similar question was posted on the MindMixer online discussion forum site during a portion of the comprehensive planning process – “What actions are needed to ensure that Pearland’s older neighborhoods remain appealing and successful?” – with the following sampling of responses:

- Keep them safe
- Keep high-level amenities
- Retain nice old people
- Zoning laws or something similar
- Limit trashy businesses in downtown – encourage nice small businesses
- Don’t let the “riff raff” in
- Keep property taxes high
- More community development
- Sidewalks, curbs and street lights
- Maintenance of common areas
- Upkeep and maintenance laws
- Deed restrictions
- Infrastructure updating
- Active civic clubs (where there is no Home Owners Association)

## Housing and Neighborhoods Tools

While the development of new residences and rehabilitation of older housing occurs primarily through the private sector, municipal government and other public and non-profit partners have an essential role to play in protecting residential investments over time, as well as the local economy and tax base which strong neighborhoods support. Having a diverse stock of housing – new and old, big and small, ownership and rental – is instrumental in offering choice and providing for the individual needs of all households, regardless of economic condition.

### AVAILABLE MUNICIPAL TOOLS

As a home rule municipality, the City of Pearland has various authorities and means for spurring and shaping the extent, location, form and quality of residential development. Summarized in **Table 4.5, Tools for Advancing Housing and Neighborhoods Objectives**, are key mechanisms through which Pearland is already pursuing its objectives related to the variety and affordability of local housing options, and the desirability and sustained appeal of both new and older established neighborhoods. These tools are shown in five categories that represent the main ways that comprehensive plans are implemented:

1. Capital investments.
2. Policies and programs.
3. Regulation and standards.
4. Partnerships and coordination.
5. More targeted planning (especially as required to qualify for external funding opportunities).

Given its size and the resulting level of sophistication of its municipal government, Pearland benefits from activities that are done here routinely relative to smaller cities with lesser means and capabilities – and compared to some larger cities with limited will or support to take certain actions. Along with the strategic priorities and other actions outlined in this plan section, it is important to capture in the Comprehensive Plan those ongoing functions of City government, such as those highlighted in Table 4.5, that will also help to attain the vision and goals within this plan.