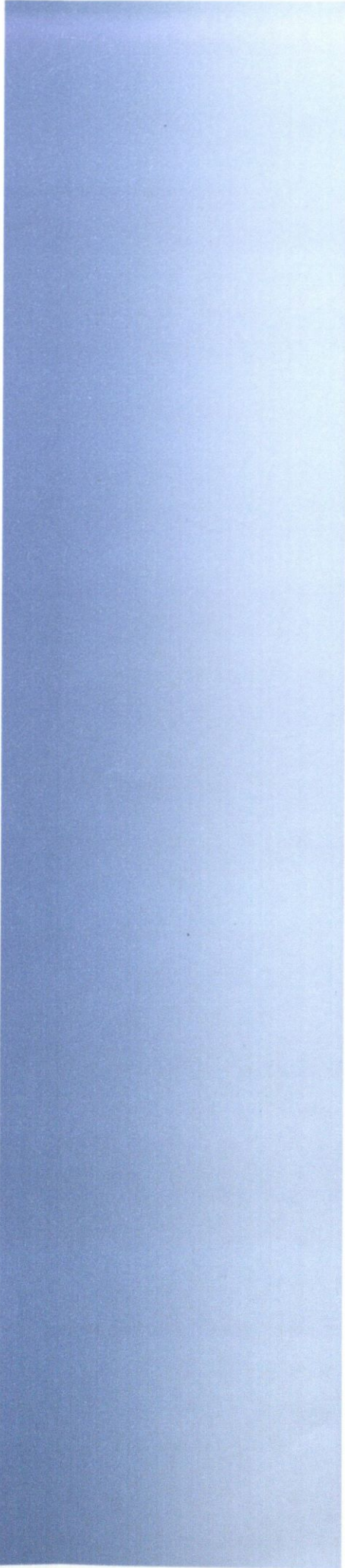


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COMPREHENSIVE PLAN

NAVASOTA, TEXAS



Navasota Comprehensive Plan

2005-2015

A Road Map to the Future

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We would like to thank the City of Navasota staff, the Economic Development Corporation, and the citizens of Navasota for their participation in this project.

THE EXISTING CITY



Forward



SECTION 1 – FORWARD

Texas Target Cities Program

The Texas Target Cities Program was initiated in 1993, by the Department of Landscape Architecture and Urban Planning at Texas A&M University. Each year, a city within the State of Texas is selected to participate in this program. The program is designed to provide residents of Texas communities with assistance in city planning while serving as a “real world” learning laboratory for graduate students in the Master of Urban Planning program. Students gain fundamental planning experience while the targeted community receives valuable assistance for improving the quality of urban life for its residents. Cities are chosen for participation in the program based on demonstrated need and their commitment to the planning process. The City of Navasota was selected as the 2003-2004 Texas Target City. This Comprehensive Plan is but one of the documents prepared by several graduate students for the City of Navasota.

The Urban Planning graduate students under the Texas Target Cities Program are providing the City of Navasota with a Comprehensive Plan, a geographic information system (GIS), an economic development plan, and an economic development website. The Comprehensive Plan provides a holistic view of various elements within Navasota. The geographic information system allows a graphic analysis of the status and growth of the City in order to manage development and determine where it should occur. The system can also provide City staff with up-to-date maps covering a wide range of subjects; for example, zoning, transportation characteristics, infrastructure, and etcetera. The Navasota Economic Development Plan aims to promote and concentrate on the growth of small, local businesses. The economic development website will be a useful tool to promote both economic development and tourism for the City of Navasota.

The Comprehensive Plan

The Navasota Comprehensive Plan strives to be a plan that addresses the needs and aspirations of the community both today and over the next 10 years. In order to ensure that the Comprehensive Plan reflects what the community desires, it is critical that community members are involved in the development and implementation of the plan. The ultimate goal of this plan is to create a sustainable community using the available resources to meet current needs while ensuring that adequate resources are available for future generations. This document is broken into two parts. The first part of the document is a compilation of various elements describing the City's history and background, regional context, natural resources, economic base, demographics, land use, transportation system, urban infrastructure, housing, community facilities, historic resources, hazards, and urban image. The second part is a future city scenario that includes goals, objectives, policies, and implementation measures.

The Planning Process

The analysis of the existing community data began in the fall of 2003, when data was collected on the City. Students visited the community and digitally mapped the entire existing land use along with many other features using GIS. To directly engage the local citizens in the planning process, surveys were mailed out to obtain input on community needs. Additionally, during the spring of 2004, students continued the interaction with the community by holding public meetings and design charettes. At these meetings, citizens were invited to provide direct comments on the state of Navasota. With the collected data analysis and the citizens' involvement, students were able to analyze the community that exists today and provide suggestions for City plans for tomorrow.

History & Background

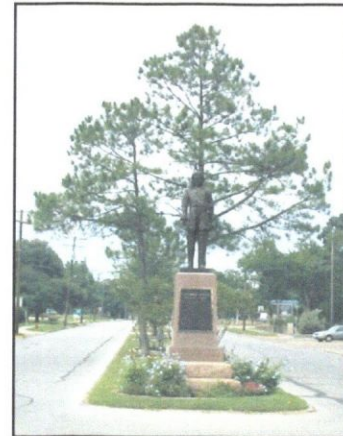


SECTION 2 – HISTORY & BACKGROUND

The History of Grimes County

Evidence suggests that human habitation in what is now Grimes County began around 5000 B.C. The Bidai Indians were the earliest residents of this area. Due to disease and European influences, the Bidai population declined in the late eighteenth and early nineteenth centuries. The surviving Bidais were finally sent to reservations by the United States government's general removal program in 1854.

The Spanish and the French explored the area during the Seventeenth and Eighteenth Centuries. Important personalities such as explorer Rene Robert Cavalier de LaSalle, Alonso De Leon governor of Coahuila, the Marques de Rubi, and Pedro Vial among others were the first ones to travel through the area opening new routes. LaSalle is believed to have been killed by his own men in 1687 near the Navasota River. De Leon was probably the first Spaniard to reach the area. De Leon traveled northeast



LaSalle Statue

from Goliad to the vicinity of Navasota and continued past the future sites of Anderson and Prairie Plains toward the Neches River. His route, originally a crude Indian trace through southern Texas, soon became known as La Bahia road or trail and served as an important Spanish thoroughfare.

English settlement started with the founding of Stephen F. Austin's colony between the lower Brazos and Colorado rivers. Andrew Millican built a home along Holland Creek west of what is now the City of Anderson. By 1824 Colonists immigrating with Austin began claiming land within what is now Grimes County. The colonists were attracted to the rich farmland along the waterways and prairies. Early residents included the families of Francis Holland, Isaac Jackson, James Whiteside, Jesse Grimes, Caleb Wallace, Jared E. Groce, and Anthony Kennard. A total of

sixty-four land grants were issued by the Mexican government prior to the Texas Revolution of 1836.

The territory became part of the City of Washington in 1835. In 1835 the first post office was opened at the Fanthorp Inn. After the creation of the Republic of Texas, the territory became part of Montgomery County. Grimes County was created on April 6, 1846. The county was named in honor of Jesse Grimes. Grimes was a signator of the Texas Declaration of Independence.

Cotton and corn became the most important cash crops in the county. This agricultural production was accompanied by stock raising which included large herds of cattle, hogs, and sheep.

On the eve of the Civil War the county's agriculture activity had grown considerably. Cities within the county grew substantially during this same period. By 1856 there were six well established communities in Grimes County. They included Anderson, Bedias, Grimesville, Retreat, Prairie Plains, and Navasota. The location of Kellum Springs and Piedmont Springs in the county prompted the development of two spas in 1850. In 1859 the Houston and Texas Central railroad extended its line to Navasota bypassing Anderson whose residents had opposed the establishment of the railroad in their city.

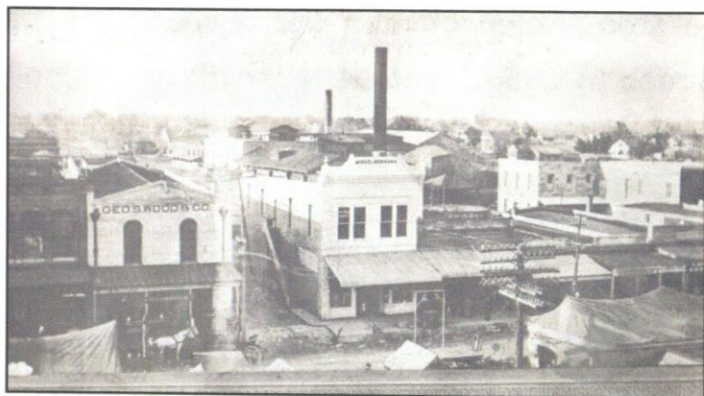
A majority of the residents of Grimes County supported the Confederacy. During the Civil War a munitions factory specializing in small armaments was developed near Anderson.

Grimes County's recovery from the Civil War was slow. Agricultural production was enhanced through the emigration of people from several southern states including Alabama, Georgia, Louisiana and Mississippi. This process was further supported by an influx of foreign-born immigrants from Germany and Poland. After World War I, the labor force increased with the arrival of Mexican migrant workers. Between World War I and World War II people of Mexican ancestry became the

largest cultural group within the county. African Americans began to leave the county after the Civil War and this process continued unabated. By 1990, just under 4,000 African Americans remained.

Grimes County's population declined by more than 31% during the 1940's. Apparently, employment opportunities in Houston were primarily responsible for this phenomenon. The Great Depression triggered a significant decline in cotton farming, however, cattle production actually increased during this same period. Agricultural activity began to diversify, and by the 1970's this diversity reflected the production of cane sorghum, small grains, watermelons, pecans, Christmas trees, and vegetables such as potato, sweet potato, and soybean. Beekeeping has been of commercial significance since the 1980's.

The development of industrial activities in Grimes County began with lumbering. Petroleum was discovered in 1952, but until the late 1970s only small quantities were recovered. During the 1980's the production of crude oil and natural gas



Navasota Industry – 1900's

increased significantly. During this same period lignite coal was also heavily mined in the area. Manufacturing increased between 1967 and 1982 and most of the plants were located in the City of Navasota.

The History of Navasota

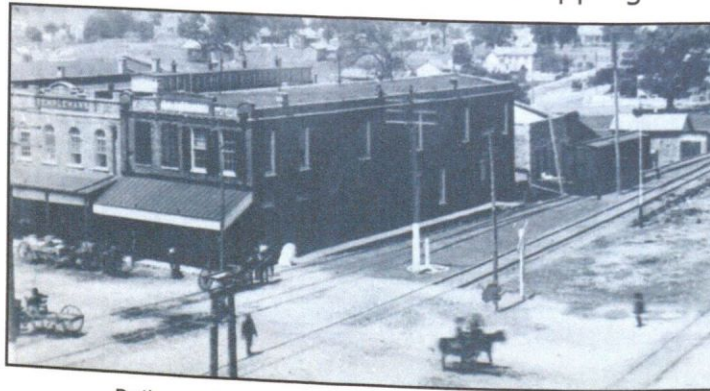
Pioneer Settlement

In 1822, Francis Holland purchased land located on a bend of the Navasota River in southeastern Grimes County. The site of present day Navasota was named Hollandale in honor of its original settler. More settlers followed Holland to the area. In 1831, Daniel Arnold, a Georgia planter, applied for and received a land

grant along the Navasota River. Soon after, Daniel Tyler received a land grant in the same vicinity. Navasota was built on sections of these two Montgomery County land grants. The county was divided in 1846, and Navasota became part of Grimes County.

James Nolan, another important figure, moved to the area from Mississippi in 1848. Nolan did not have a land grant, so he chose a suitable place to live and “squatted” on the land. In 1855, he was financially able to begin to purchase the surrounding property. He built his first home at the back of the land that later became the first stage stop in the region. The stage stop was ideally located at the crossroads between Anderson and Washington-On-The-Brazos, in close proximity to the crossing of La Bahia Trail and the Navasota River. Growth in the area began quickly, and four more stage lines were established in the area by the mid 1850’s. In 1854, the settlement changed its name from Hollandale to Navasota when a post office was established.

Due to the ideal location of the stage stop, Nolan deeded the property to the Houston and Texas Central (H&TC) Railroad in 1859. The settlement’s population increased significantly, making it one of the more prominent shipping and marketing centers in the area. Timber, agriculture products, and livestock were constantly being driven to Navasota for shipment across Texas. However, a set of disasters during the mid 1860’s caused the City to lose much of its population.



Railroad Avenue – late 1800’s, early 1900’s

Civil War Era

During the Civil War, the population and business in Navasota decreased as able men left the City to fight in the war. In 1862, the first telegraph lines in the area were strung through Navasota to benefit the railroad and the Confederate

government. Due to the City's important location, the Confederate Army stored cotton, gunpowder, and guns in a downtown warehouse during the war. Disgruntled Confederate veterans set fire to the warehouse in 1865, exploding the building and damaging or destroying the surrounding commercial district of Navasota.

Post Civil War

Navasota residents were hit with a harsh cholera outbreak in 1866. In the midst of this turmoil, Navasota was incorporated on October 27, 1866; 10 years before the Texas Agricultural and Mechanical College was founded and 6 years before the City of Bryan was incorporated. The City boundaries extended one mile in every direction from the train depot. William E. Jones was then elected the first mayor of Navasota. The following year an even more deadly epidemic of yellow fever spread across the area. Many of the residents including Mayor Jones fled the City to avoid the disease, which resulted in a decrease of the population by half. The events of 1867 left the City's government in turmoil until 1868 when the panic was over and the City began to rebuild.

Turn of the Century

By 1880, Navasota had one of the first cottonseed oil mills built in Texas. Besides the mill, the City was also prosperous with two flourmills, several steam-powered cotton gins, five churches, a bank, a newspaper, and an opera house. By the end of 1884, Navasota's population reached 2,500. A year later, a telephone company began operating in Navasota and the City acquired a second railroad connection. Electric lights and a water system also appeared in Navasota in the late 1880's, and by 1896 the City's population had grown to 3,500. A third railroad, the International-Great Northern



Downtown Navasota – late 1800's, early 1900's

(I&GN) was built through Navasota in 1900, heading from the City of Spring to Fort Worth. The new railroad helped to further the City's prosperity in the shipping and marketing of livestock, lumber, and agricultural products. In 1902, another I&GN line was built to travel from Navasota to Madisonville. These prosperous times caused the population to increase to 5,128 by 1930. Navasota further benefited in the 1930's, when major thoroughfares throughout Grimes County were blacktopped, beginning with the construction of State Highway 90 from Navasota to Madisonville.

During the Great Depression, Navasota lost several of its businesses, but by 1940 its population had grown to 6,138. Unfortunately the consolidation and mechanization of the agriculture industry forced many farmers to reduce the number of their employees, thus causing a decrease in the City's population. By 1950, only 4,976 residents remained.

Post Depression

In 1952, Navasota businesses joined together to combat the decline in growth, and organized the Navasota Industrial Foundation. The foundation's primary duty was to search for new industries to bring them to the area. The number of manufacturing establishments and jobs increased within Grimes County between 1967 and 1982, and Navasota gained manufacturing producers in the mobile home, furniture, cheese, steel tubing, and oilfield machinery industries. Navasota began to exercise a dominant influence over the economic, social, and political life of Grimes County, and consequently, the population grew from 4,937 in 1960 to 5,971 by 1980.

The residents of Navasota organized their efforts to revitalize the Downtown area. This renewal of Downtown began in 1980, when Navasota was chosen for the National Main Street program sponsored by the National Trust for Historic

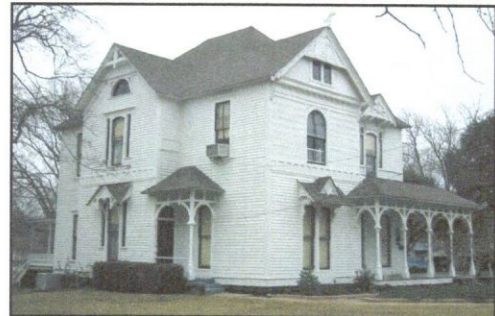


Downtown Navasota late 1800's, early 1900's

Preservation. This revitalization spurred other economic opportunities within Navasota such as the development of the Wallace Pack minimum-security prison outside of the City limits in the early 1980's. This new facility brought new economic diversity to the area and helped ease jobs lost from the collapse of the oil industry in the 1980's. In 1990, Navasota's population was 6,296, and the City had established itself as an agribusiness center for the surrounding counties.

Nearby Attractions

Navasota is considered to be the gateway to Washington-On-The-Brazos State Park, located only 7 miles from the City. The 71-acre state park is located on the site where the Texas Declaration of Independence was signed on March 2, 1836, creating the Republic of Texas. Facilities at the state park include: Independence Hall, a replica of the building where the Declaration was signed; the home of Anson Jones, the final president of the Republic of Texas; the Star of the Republic Museum, which commemorates the history of the Republic of Texas from 1836-1846; the Barrington Living History Farm, which recreates daily cotton farm life. Located in Navasota is the Horlock History Center, a home that was originally built in 1892 by Colonel R.A. Horlock, and is used today as a museum exhibiting historical artifacts from Grimes County.



Horlock Center

Sources:

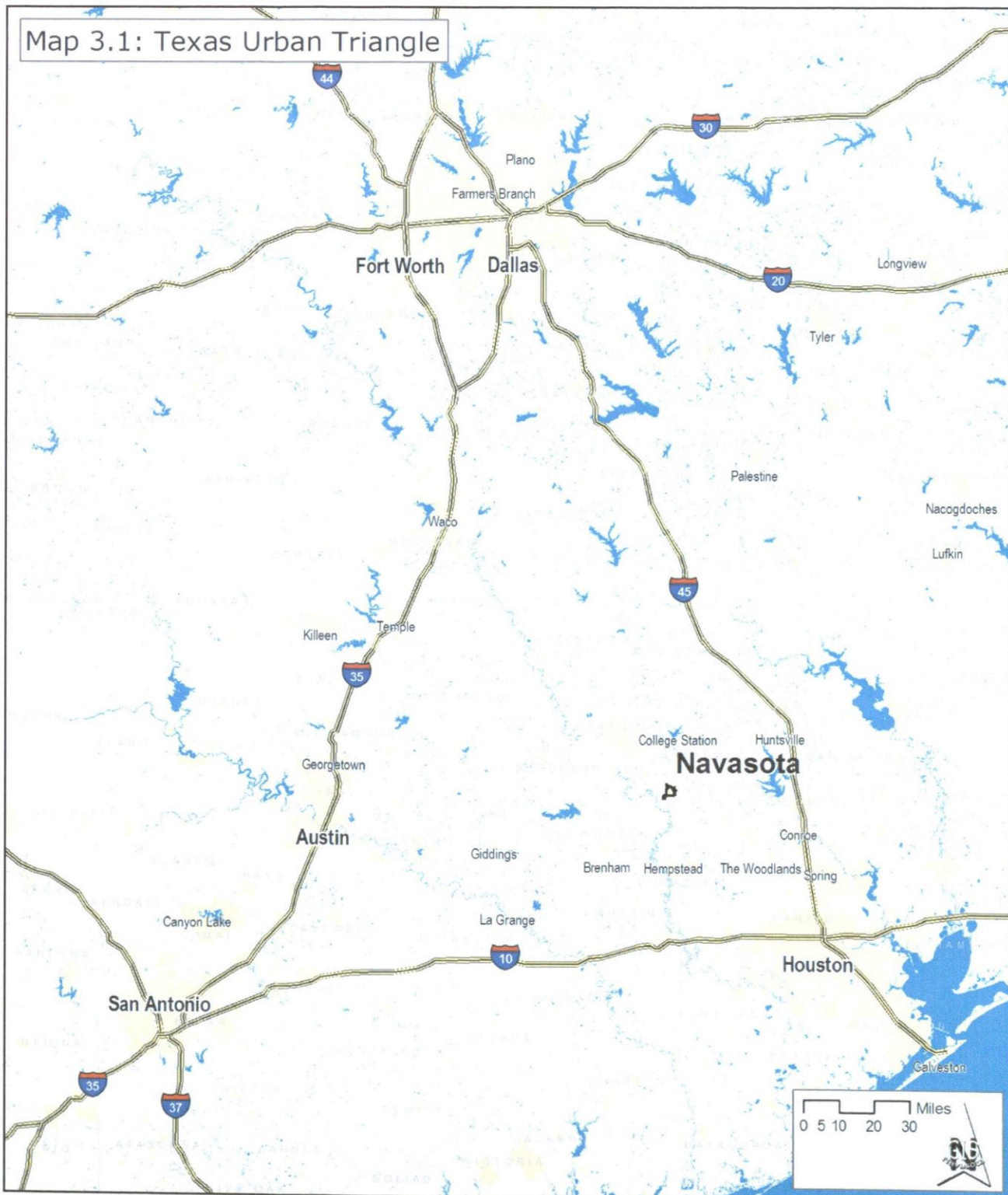
Chinski, Maurine. 1954. The Navasota Bluebonnet. Commemorating 100 years of City Growth & Development 1854-1954. Navasota: Grimes County COC.
The Handbook of Texas Online. 2003. *Navasota, Texas & Grimes County* articles.
<http://www.tsha.utexas.edu/handbook/online/articles/view/NN/hfn1.html> and
<http://www.tsha.utexas.edu/handbook/online/articles/view/GG/hcg11.html>.
The Navasota Examiner. "Visitor's Guide". Thursday, January 22, 2004.

Regional Context



SECTION 3 – REGIONAL CONTEXT

The City of Navasota is found in the center of the Texas Urban Triangle, which is outlined by Houston, San Antonio, and the Dallas/Fort Worth metroplex (Map 3.1).



Navasota is positioned 21 miles from College Station, 73 miles from Houston, 114 miles from Austin, 174 miles from San Antonio, and 189 miles from Dallas/Fort Worth. Superior highways serve the City in all directions making it easy to travel within not only the area, but also to major cities in Texas. Navasota is adjacent to State Highway 6 and intersected by State Highway 105.

Navasota is located in Grimes County which is bordered on the north by Madison County, on the east by Walker and Montgomery counties, on the south by Waller County, and on the west by Washington and Brazos counties.

Navasota is the largest city in Grimes County. Grimes is one of seven counties that comprise the Brazos Valley Council of Governments (Map 3.2). The other six counties are Brazos, Burleson, Leon, Madison, Robertson, and Washington.



Sources:
Garnham, Harry, et al. "What's So Special About Navasota?" Preliminary Report. March 1978.

Natural Resources



SECTION 4 – NATURAL RESOURCES

Introduction

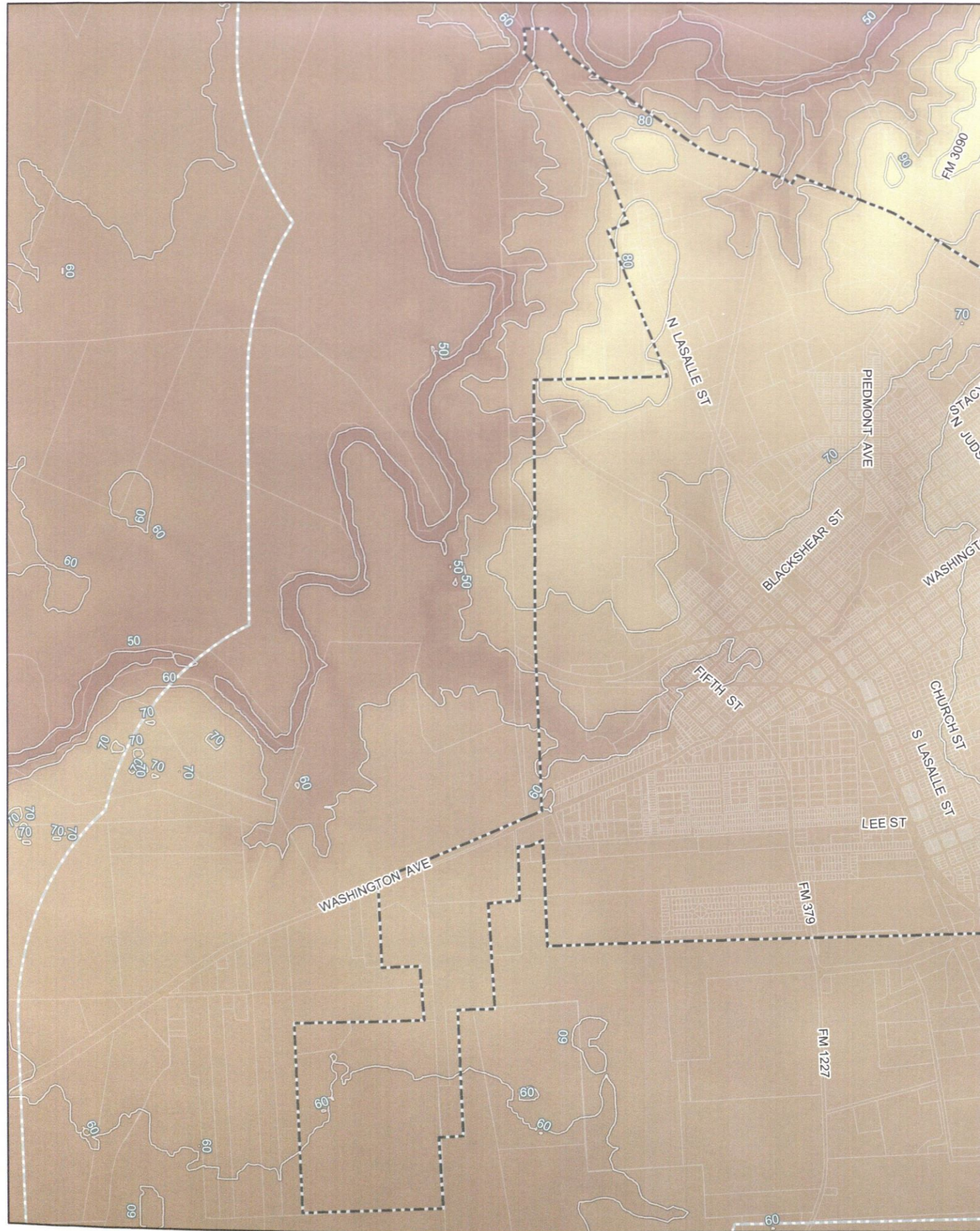
Maintaining natural resources is a necessity for the enhancement of quality of life, higher property values, increased economic development, and beneficial growth in tourism. The City of Navasota has many available natural resources that can be utilized to benefit the City. Residents should seek to protect the environment by acknowledging the need to balance competing interests. The practice of conservation promotes the wise use of resources combined with their protection.

Elevation & Topography

The topography of the Navasota area can be defined as gently rolling to sloping terrain throughout the majority of the City. The eastern sections of the City consist of a greater range of elevations than the west. There are more differences in the eastern terrain compared to the west and the areas surrounding bodies of water. The northwest reaches 415 feet above sea level. However, the elevations of the land along the rivers and streams are almost level to slightly sloping at 193 feet of elevation. The elevation of the city is displayed in Map 4.1.

Climate

The climate of the Navasota area is identified as subtropical humid due to the hot summers and mild winters. There is an average of 107 days when the temperature exceeds 90°F and an average number of 25 days per year when the temperature is less than 32°F. Over the past years the record high and low temperatures have been collected and are identified in Table 4.1 and Figure 4.1. The overall record high for the area was measured in 1998 at the temperature of 110°F in the month of August. The record low temperature is 3°F observed in 1989 during the month of December.





Map 4.1:
Elevation

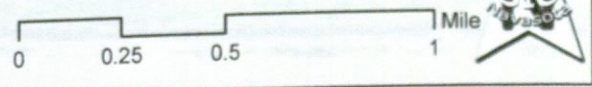
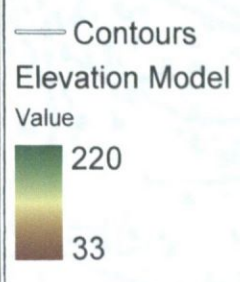
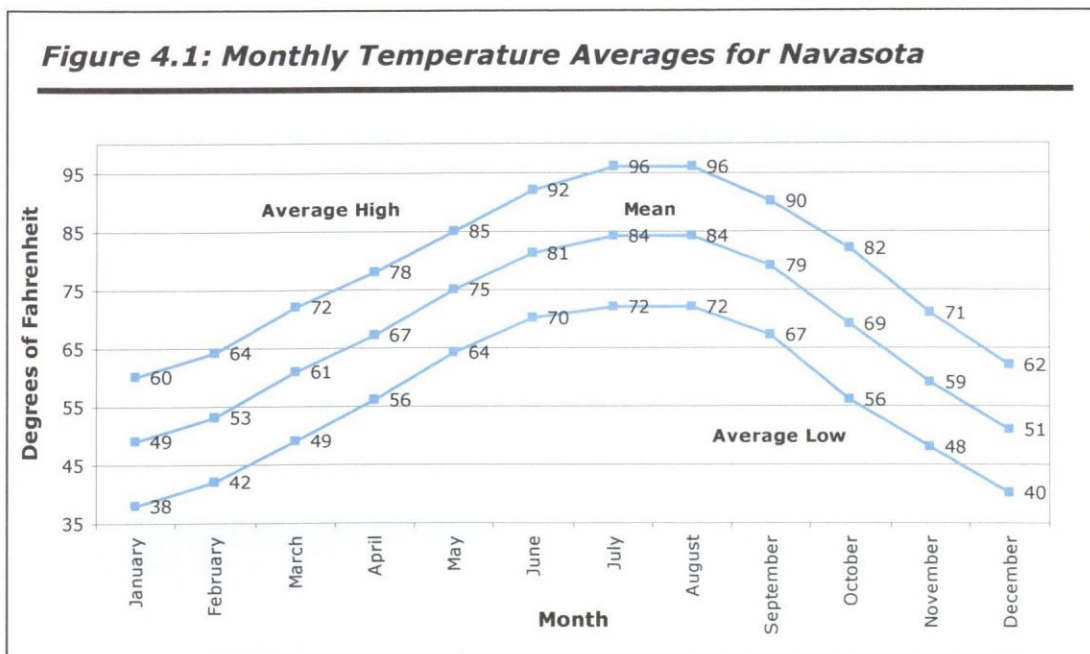


Table 4.1: Monthly Temperature Averages for Navasota

Month	Average High (°F)	Average Low (°F)	Mean (°F)	Average Precipitation (inches)
January	60	38	49	3.54
February	64	42	53	2.74
March	72	49	61	3.13
April	78	56	67	2.98
May	85	64	75	4.42
June	92	70	81	4.42
July	96	72	84	2.18
August	96	72	84	2.83
September	90	67	79	4.03
October	82	56	69	4.38
November	71	48	59	3.68
December	62	40	51	3.30

Adapted from: www.weather.com



Average precipitation for Navasota is 45.51 inches per year with the record occurring in 1919 at 65.49 inches. Mean relative humidity at 6 a.m. is 87%, at 12 noon 58%, and at 6 p.m. 60%. Colder periods during winter usually occur at 2 to 3 day intervals with rare snowfalls. Summer daytime temperatures tend to be high, often topping 100°F. Spring is generally characterized by short-lived warm and cool spells, while fall provides longer periods of mild, fair days. Winds within the area usually originate from the south, being the strongest in March and April. The growing season averages 278 days from March 1 to December 4.

Surface Water

The Navasota and Brazos River systems drain to the west and northwest of the county, while the eastern portion of the county uses the San Jacinto and Trinity River systems. The drainage basin inside Navasota's Extraterritorial Jurisdiction (ETJ) includes:



Cedar Creek

- Cedar Creek - which rises two miles northeast of Navasota in southwestern Grimes County and runs southwest six miles to its mouth on the Navasota River.
- Sandy Creek - which rises in southwest Grimes County three miles east of Navasota.

These rivers and creeks are displayed on Map 4.2.

Groundwater

Groundwater is found in the southwest portion of Grimes County in the Catahoula/Jackson Group Formation. The formation consists of sandstone and clay as well as some volcanic tuff beds (debris from volcanic eruptions consisting of dust particles and pebbles) and lignite beds. Furthermore, the City of Navasota also obtains water from the Carrizo-Wilcox Aquifer, which is located directly beneath

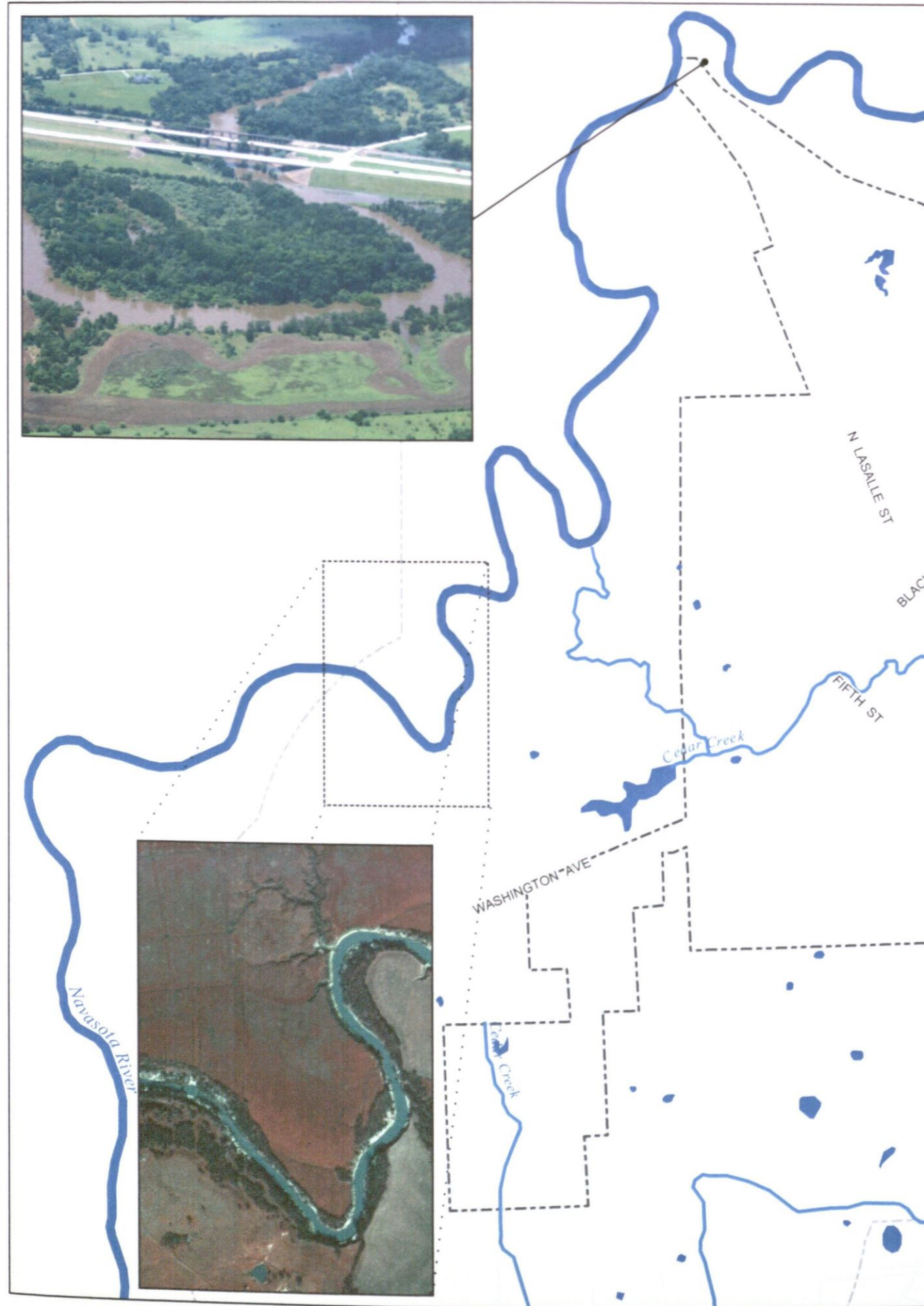
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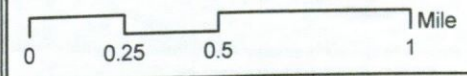
Map 4.2:
Water Features

Streams & Rivers

-  river
-  stream

Surface Water

-  pond
-  swampy area



This surface water map was compiled from multiple sources including but not limited to digitization from aerial photography and plats. Some water features such as those found on golf courses and seasonally dry creek beds were not included.

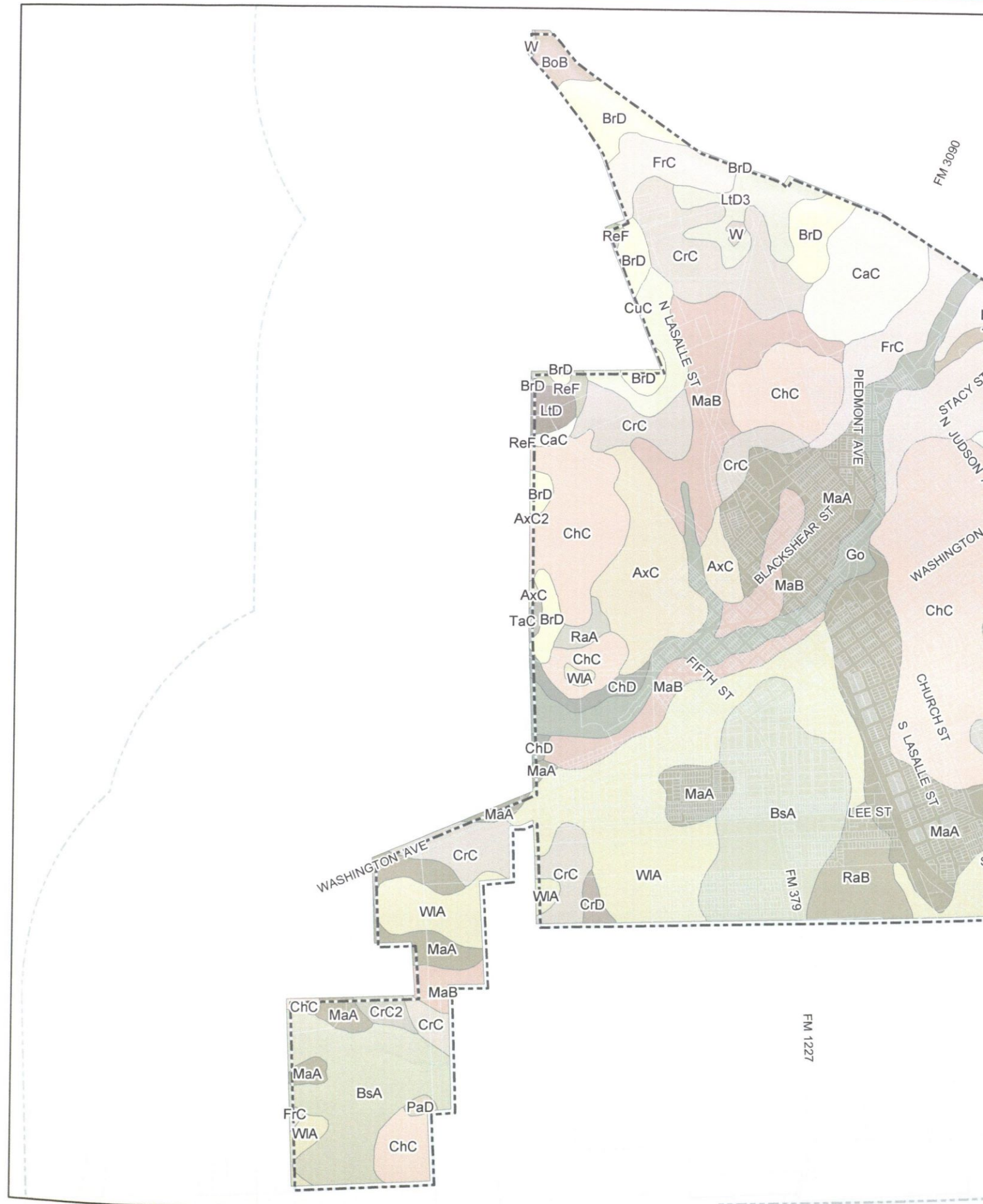


Hearne in Robertson County. Due to the current state of the aquifer, Navasota will have an adequate supply of water through the year 2050 if the current level of water consumption and acquisition remains constant.





























Soils and Mineralogy

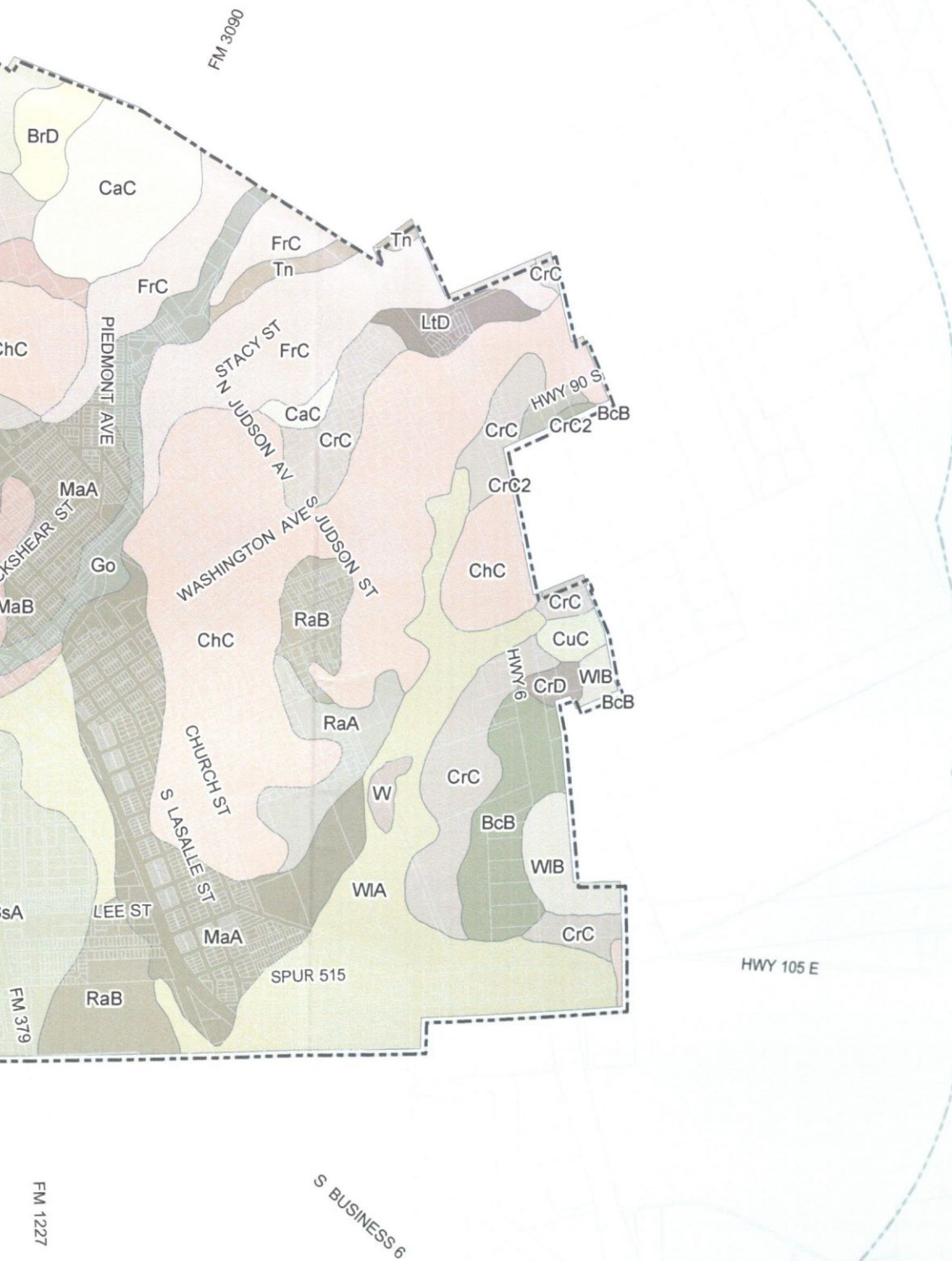
Soil conditions should be considered in the planning and development process for several reasons. One reason for soil conservation is to ensure that buildings and structures are adequately supported. Minimizing soil erosion is also important to reduce sediment deposits into surface water and to control airborne dust. In addition, soil depths must be adequate for water to infiltrate into the ground and maintain groundwater levels.

The City of Navasota's soil contains a mixture of clay, sand, and organic materials, which are called gray sandy loam soil. The gray sandy loam lies over clayey subsoils that are found in the upland areas and throughout most of the region. The soil found in the floodplains is made up of dark, loamy to clayey soil and a fine-grained soil called alluvial soil. The southern portion of Grimes County contains prairie land made up of clay blackland soils. This soil is most useful for farming. However, the soil contains high levels of clay thus resulting in shrinking and swelling. This characteristic has the potential to result in bumpy roads and cracks within poorly laid concrete foundations. The soils in Navasota are shown on Map 4.3. The soil map offers more details concerning the different types of soil in the area. In addition to the varied types of soil in Navasota, there are also several different mineral resources. Among these limited mineral resources are low reserves of petroleum, natural gas, and lignite coal.



Map 4.3: Soil Type

-  AxC, AXTELL FINE SANDY LOAM, 1 TO 5 % SLOPE
-  AxC2, AXTELL FINE SANDY LOAM, 1 TO 5 % SLOPE
-  BcB, BLEIBLERVILLE CLAY, 1 TO 3 % SLOPE
-  BoB, BRAZORIA CLAY, 1 TO 3 % SLOPE
-  BrD, BRENHAM CLAY LOAM, 3 TO 8 % SLOPE
-  BsA, BURLESON CLAY, 0 TO 1 % SLOPE
-  CaC, CARBENGLE CLAY LOAM, 1 TO 5 % SLOPE
-  ChC, CHAZOS LOAMY FINE SAND, 1 TO 5 % SLOPE
-  ChD, CHAZOS LOAMY FINE SAND, 5 TO 8 % SLOPE
-  CrC, CROCKETT FINE SANDY LOAM, 1 TO 5 % SLOPE
-  CrC2, CROCKETT FINE SANDY LOAM, 1 TO 5 % SLOPE
-  CrD, CROCKETT FINE SANDY LOAM, 5 TO 8 % SLOPE
-  CuC, CUERO CLAY LOAM, 1 TO 5 % SLOPE
-  FrC, FRELSBURG CLAY, 1 TO 5 % SLOPE
-  Go, GOWKER LOAM, FREQUENTLY FLOODED
-  LtD, LATIUM CLAY, 5 TO 8 % SLOPE
-  LtD3, LATIUM CLAY, 4 TO 12 % SLOPES
-  MaA, MABANK FINE SANDY LOAM, 0 TO 1 % SLOPE
-  MaB, MABANK FINE SANDY LOAM, 1 TO 3 % SLOPE
-  PaD, PADINA LOAMY FINE SAND, 1 TO 8 % SLOPE
-  RaA, RADER FINE SANDY LOAM, 0 TO 1 % SLOPE
-  RaB, RADER FINE SANDY LOAM, 1 TO 3 % SLOPE
-  ReF, RENISH-ROCK OUTCROP COMPLEX, 8 TO 20 % SLOPE
-  TaC, TABOR FINE SANDY LOAM, 1 TO 5 % SLOPE
-  Tn, TINN CLAY, FREQUENTLY FLOODED
-  W, WATER
-  WIA, WILSON CLAY LOAM, 0 TO 1 % SLOPE
-  WIB, WILSON CLAY LOAM, 1 TO 3 % SLOPE



0 0.25 0.5 1 Mile



Vegetation

The City of Navasota is located in between several different vegetation zones. The northern and western area of the county is within the post oak savannah region. The southern and eastern portions of the county are located in a forest and prairie region. Therefore, the City is situated in an intermediary vegetation zone, which contains a mix of these three regions. The area supports many different types of flora including the species listed in Table 4.2.



Wooded Area of Navasota

Table 4.2: Navasota Plants & Trees

Plants & Trees

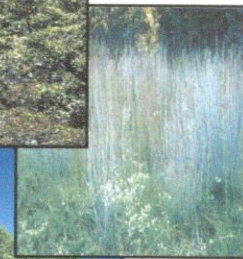
- Black Hickory
- Blackjack Oak
- Bluebonnets
- Cedar Elm
- Hackberry
- Hawthorn
- Indian Paint Brushes
- Little Bluestem
- Maple
- Mesquite
- Native Wildflowers
- Navasota Ladies-tresses
- Pecan Trees
- Post Oak
- Silver Bluestem
- Winged Elm
- Yaupon



Blackjack Oak



Cedar Elm



Little Bluestem



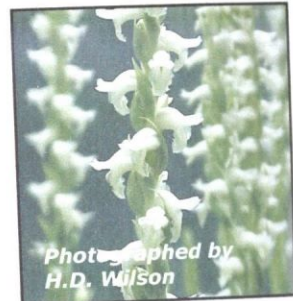
Yaupon Holly



Hackberry Tree

Endangered Species

The Navasota Ladies'-Tresses (*Spiranthes parksii*) is an endangered orchid that can be found in the Navasota River area. The flower was listed as an endangered species in 1982 at the state and federal levels. The orchid displays tiny white flowers and can range from 5 to 15 inches in height depending on the habitat. The Navasota Ladies'-Tresses are found throughout the Brazos Valley Region including an inactive strip-mining plant in Grimes County.



Photographed by
H.D. Wilson
Navasota Ladies'-Tresses

Trees

The area supports several different species of elm, holly, as well as other types of trees. Other hardwoods such as post oaks, hickory, and maple can also be found in Navasota. These trees are located in both the rural and urban areas of the City. The old, beautiful trees established within the City play a large role in the identity of Navasota.

Grasses & Wildflowers

Grimes County is also home to many different types of grasses and native wildflowers. This plant life includes Bluebonnets, Indian Paint Brushes, Little Bluestem, and many more.

Wildlife

There are many different species of wildlife found in the area. Animals such as white-tailed deer, rabbits, raccoons, possums, bobwhite quail, and other wild birds live in the Navasota area.

Sources:

- Brazos G. Regional Water Plan. (2001). "Grimes County Water Supply Plan." Retrieved June 7, 2004 from the Texas Water Development Board Website: <http://www.twdb.state.tx.us/>.
- City of Navasota. (2002). "The Most Important Thing for Life: 2002 Annual Water Quality Report." Grimes County Chamber of Commerce. (date?). "Navasota and Grimes County."
- Jackson, Charles. (2004). "Navasota, Texas." The Handbook of Texas Online. Retrieved Jan. 6, 2004, from Texas State Historical Association Website: <http://www.tsha.utexas.edu/handbook/online/articles/view/GG/hcg11.html>.
- Texas Parks and Wildlife Department (TPWD). (2003). Navasota Ladies'-Tresses. Retrieved Jan. 6, 2004 from Texas Parks and Wildlife Department Website: <http://www.tpwd.state.tx.us/nature/endang/plants/navasolt.htm>.
- The Weather Channel. The Weather Channel Interactive, Inc. Retrieved June 7, 2004 from The Weather Channel Website: <http://www.weather.com/weather/climatology/monthly/USTX0941?from=search>.

Economic Base



SECTION 5 – ECONOMIC BASE

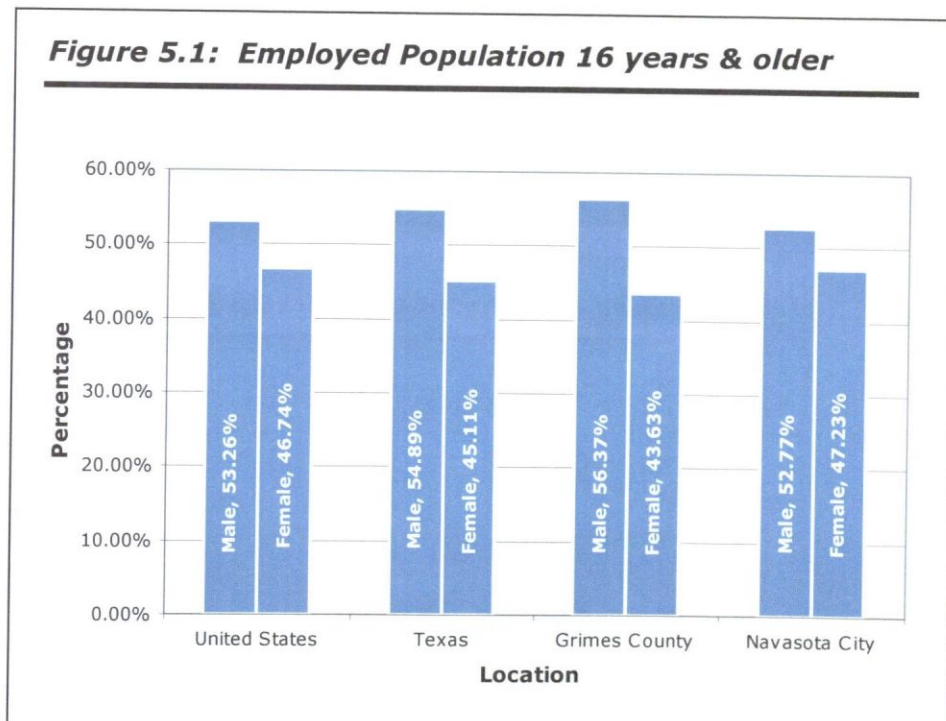
Introduction

The economic base section of the comprehensive plan provides an inventory of population, income, and employment characteristics of Navasota. To improve the City's economic prosperity, this section should be used in conjunction with the associated document, the Navasota Economic Development Plan. The information was obtained from federal, state, and local authorities, including the U.S. Bureau of the Census, Texas Workforce Commission, and citizen interviews.

Employment

There are 2,560 residents currently employed in Navasota as well as in other locations. Males within the City are slightly more likely to be employed than females. These statistics are comparable to county, state and national levels

Figure 5.1: Employed Population 16 years & older



(Figure 5.1). Almost half of the employment for Navasota occurs outside the City (Figure 5.2). This situation suggests that many of the working residents have to travel outside of Navasota to go to their jobs, possibly to the College Station/Bryan area or north Houston. The average travel time to work for Navasota is 20.4 minutes, compared with 25.5 minutes for the US (Figure 5.3).

Figure 5.6: Unemployment Rate by Sex

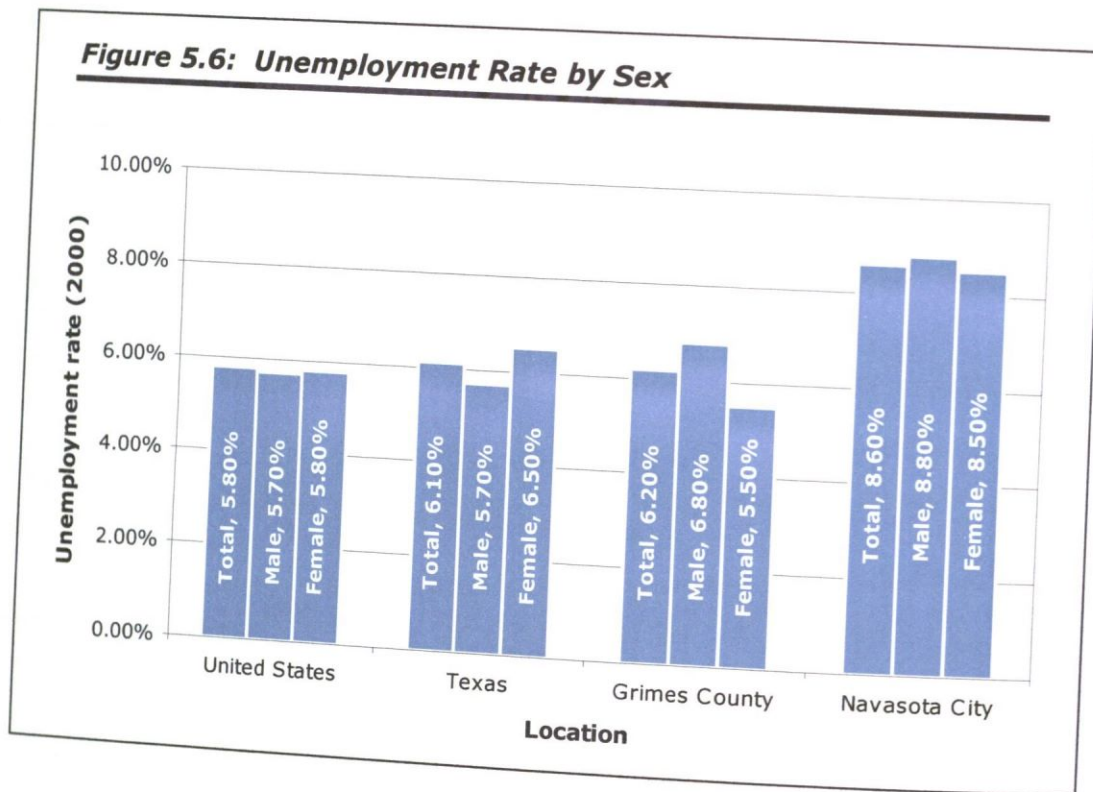
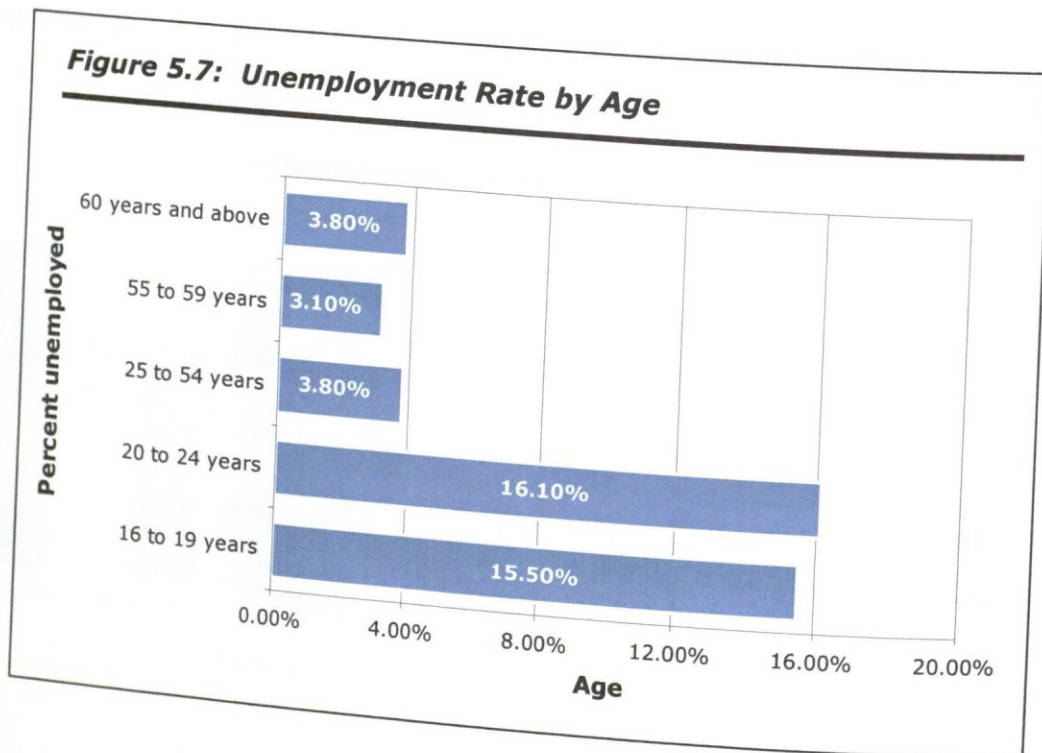
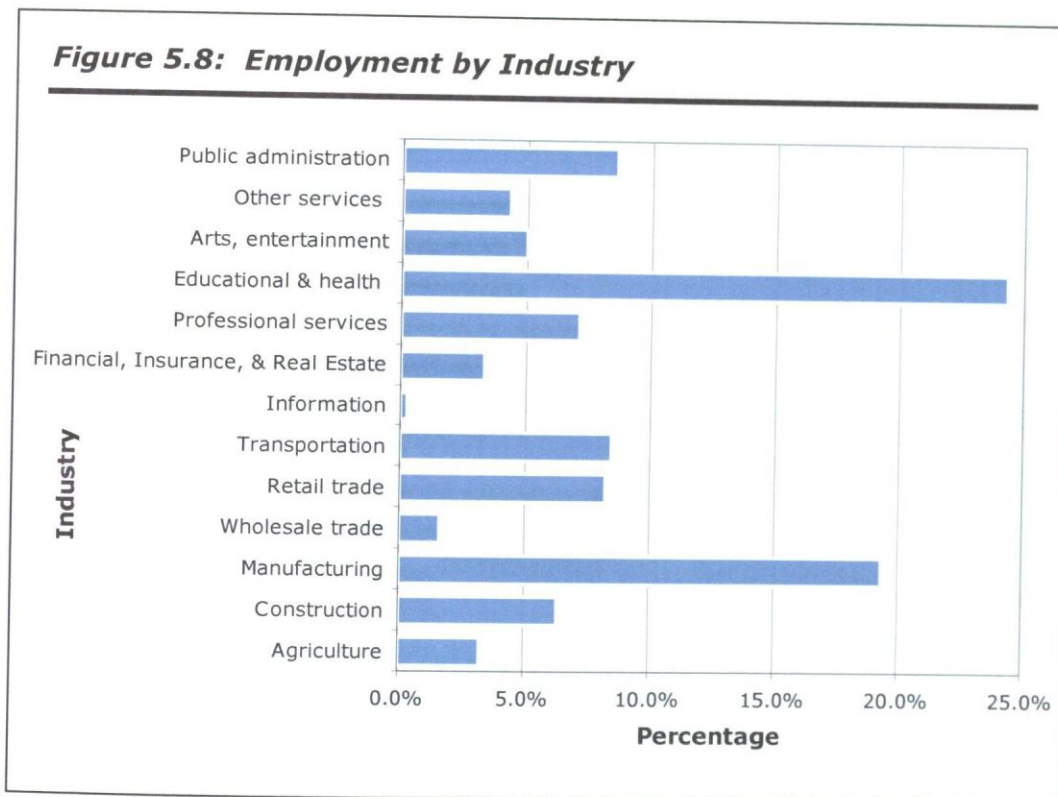


Figure 5.7: Unemployment Rate by Age



Local Economic Base

Navasota’s economy is based on a mixture of service, retail, and manufacturing industries (Figure 5.8). The largest employment category is the educational, health, and social services, which employs approximately 24.4 % (or 624 people) of the population in Navasota. Other categories include manufacturing, government, retail, agriculture, arts, recreation, and entertainment.



The educational sector for Navasota consists primarily of individuals employed by the Navasota Independent School District. The school system is made up of six educational facilities including:

- Navasota Primary School, serving Pre-Kindergarten through first grade;
- John C. Webb Elementary, serving second and third grade;
- Navasota Intermediate, serving fourth and fifth grade;
- Navasota Junior High, serving sixth, seventh, and eighth grade;
- Navasota High School, serving ninth through twelfth grade; and
- The Carver Learning Center, which serves as an alternative learning center for students in sixth through twelfth grade.

The healthcare sector consists of individuals working at the Grimes County St. Joseph Health Center, the Navasota Medical Center, three dentists' offices, and an optometrists' office.

The second largest employment sector is manufacturing, employing about 20% of Navasota's population. Companies in this sector are listed on Table 5.1. The largest private industries in Navasota are Grant-Prideco and Citation Corporation (formerly known as Interstate Southwest Forge Company), employing 581 and 300 persons respectively. Grant-Prideco is the largest private employer in Navasota and Grimes County. This company produces tubular products used in the drilling and completion of oil and gas wells. In addition, the Citation Corporation is a manufacturer of metal components for the durable goods industry. They have the ability to cast, create, and machine mechanisms.

Table 5.1: Manufacturing Employers in City of Navasota

Company Name	Product Produced	Employees
B & R Industries, Inc	Oil field products	32
Citation	Innovative metal components	300
Ergogenesis, LLC	High-end office chairs	118
Fremac Millwork, Inc	Counter tops and cabinet doors	20
Grant Prideco	Oil and gas drilling products	581
Metal Culverts, Inc.	Corrugated metal pipes	4
MVC Management	Pre-caste building slabs	7
Roof & Metal Systems, Inc	Kon-seal roof vent	9
Trinity Head Division	Pressure vessel heads	71
Texas Custom Coaters	Cosmetic coating	12
Tuboscope Vetco	Pipe coating	60
The Wood Factory	Architectural wood products	4
Total:		1218

The government sector within Navasota employs another portion of the population. The City of Navasota employs 85 people full-time and an additional 30 seasonal workers during spring and summer. This employment includes police services, fire

services, public works administration, city hall administration, and library personnel. In addition, there are two state prisons located in Navasota that employ close to 700 people.

The Wal-Mart and Brookshire Brothers stores account for the majority of the retail sector employment within Navasota. Other smaller and locally owned establishments make a further contribution to the retail workforce within the City.

Within the agricultural sector, there are agriculture supply stores and feed stores. Navasota is also home to the Bridle Ridge Quarter Horse Farm.

The arts, recreation, and entertainment sector is one of the smallest employment sectors in Navasota. The City has a theater troupe, the Navasota Theater Alliance, which performs at the Sunny Furman Theater.

Conclusion

An analysis of Navasota's economic base indicates areas that need improvement. Attention to these problems may reduce unemployment rates and bring more economic stability to the area. In order to guide economic development within the community, it is recommended that the City implement the Navasota Economic Development Plan.

Sources:

U.S. Census www.census.gov
Texas Workforce Commission www.twc.state.tx.us

Demographics

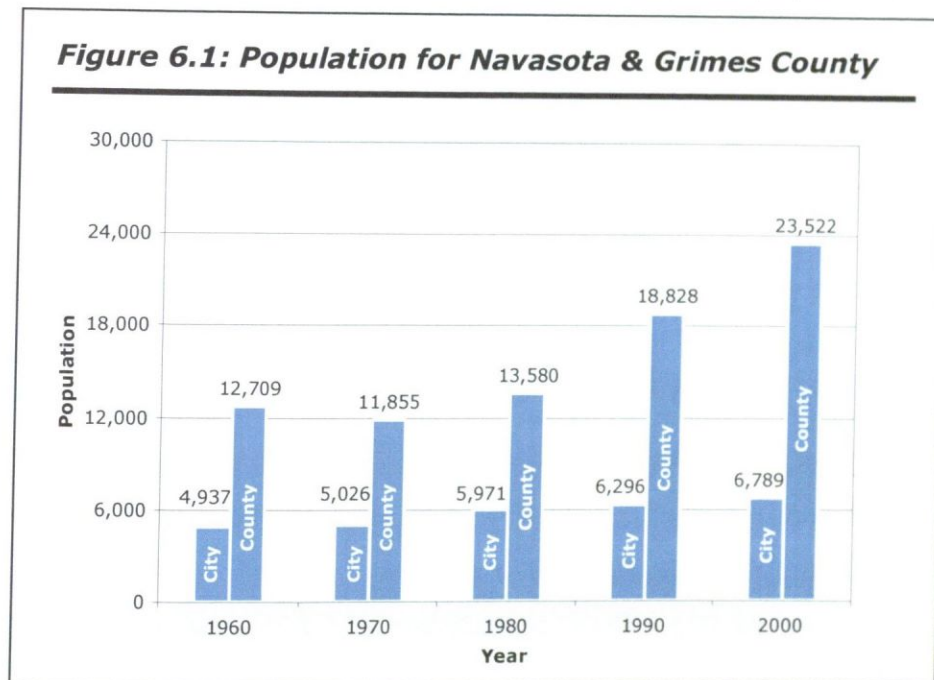


SECTION 6 – DEMOGRAPHICS

Population

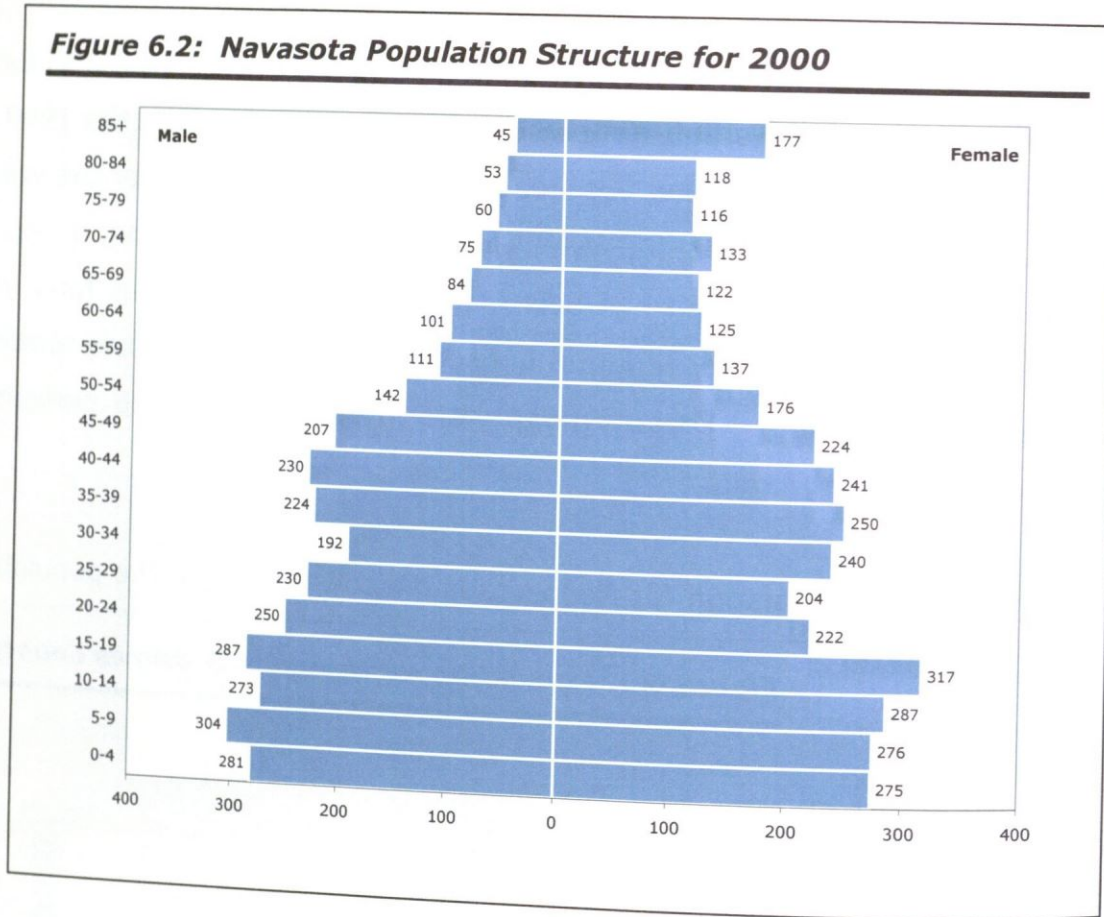
The population of the City of Navasota was 6,789 in 2000 based on the U.S. Census Bureau population data. This figure represents a 7.3% increase from the 1990 U.S. Census, following a generally slow, but steady population increase over the last fifty years. Navasota accounted for 28.8% of Grimes County's population, a decrease from 33.4% in 1990. This trend has been persistent for the previous forty years. The population can be primarily found in households, with 6,572 people residing in 2,379 households in 2000. These figures yield an average of 2.76 persons per household within the city limits.

Although the current population for Navasota is difficult to assess, the population is estimated to be 7,100 persons in 2005. Figure 6.1 is based on the Texas State Data Center's population projection for Grimes County for 2005, and assumes that Navasota will account for approximately 30% of Grimes County's population.



The population structure of Navasota is generally young with median ages for males and females at 28.9 and 35, respectively. Over half (51.6%) of the city's population is within the ages of 20 to 64, and a third (33.8%) is under the age of 20. The number of females outnumber males in Navasota, with the population of males at 3,149 and females at 3,640. This difference in population by gender can

be seen primarily in the older age cohorts; the number of females over the age of 65 is twice that of males. A detailed age structure can be seen in the population pyramid below (Figure 6.2), based on 2000 U.S. Census data.

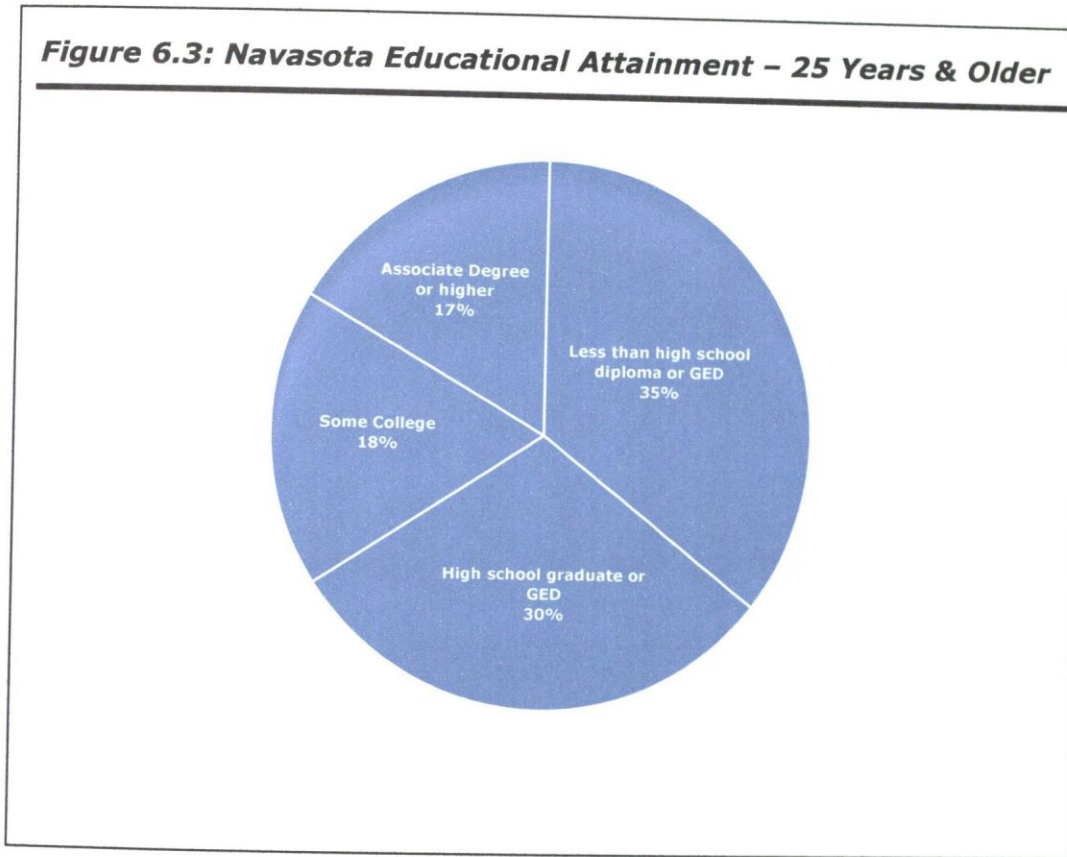


Educational Attainment

Of the 4,086 persons 25 years of age or older within the City, 64.4% have completed high school or a higher level of education. In contrast, Grimes County and Texas figures for this category are 67.3% and 75.6%, respectively. The remainder of the City's population (35.6%) has either not graduated from high school or completed GED certification.

In addition, there is very little difference in educational attainment by gender categories. Figure 6.3 displays that of the 1,766 males 25 years or older, 63.4% have a high school education or better and 65.1% of the 2,320 females have obtained the same level of education.

Figure 6.3: Navasota Educational Attainment – 25 Years & Older



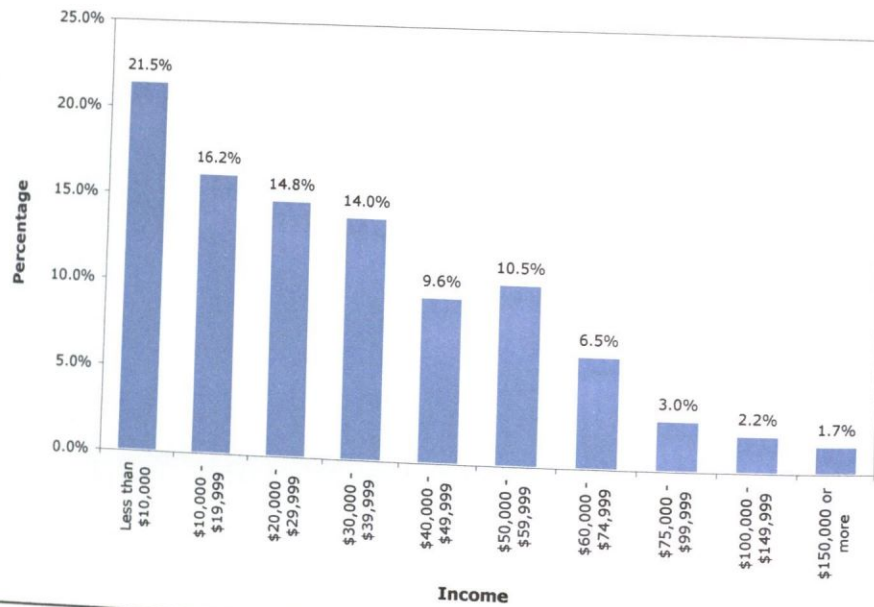
Income

The annual median household income for Navasota is \$26,990, based on the most current Economic Census completed in 1999. After correcting for inflation, the median household income for Navasota in 1989 was \$24,422 (\$18,146 before a 0.743 Consumer Price Index inflation correction). This income level represents approximately a 10% increase over a ten-year period. In contrast to county and state figures, median income is 16.3% higher in Grimes County (\$32,280) and 32.5% higher statewide (\$39,927).

The household income levels further reveal the differences in Navasota income levels in comparison to both Grimes County and the State of Texas. Households with less than \$10,000 of income make up 21.4% of the City's population, twice that of the State of Texas at 10.3% and six percentage points above Grimes County at 15.2%. In comparison to the statewide median household income of \$39,927, 66.5% of Navasota's residents rank below this level. Income levels between

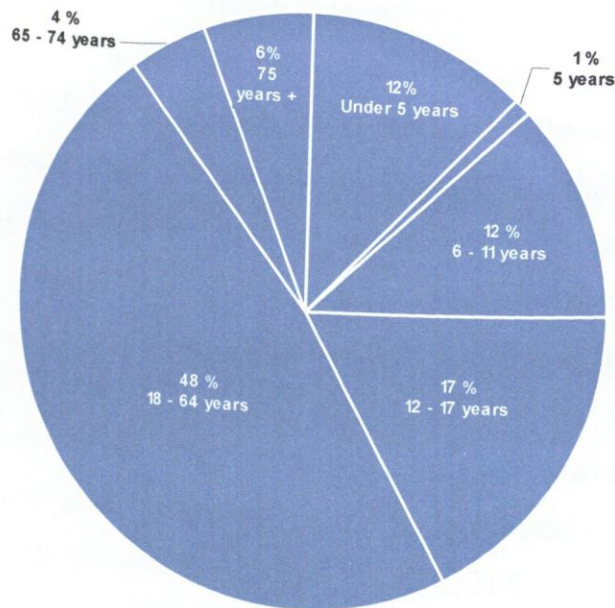
\$40,000 and \$99,999 account for 29.5% of households, with the remaining 3.8% in the above \$100,000 income brackets. Figure 6.4 gives a detailed analysis of these comparisons.

Figure 6.4: Navasota Household Income in 1999



Over 26.5% of the year 2000 population in Navasota had incomes below the federal poverty line. This figure is ten percentage points higher than Grimes County, which contains a population with 16.6% living below the poverty line, and eleven percentage points higher than the statewide Texas number at 15.4%. The age makeup of the population below the poverty line is given in the Figure 6.5.

Figure 6.5: Navasota Poverty by Age



Race

The racial composition of Navasota also differs greatly from both Grimes County and the State of Texas. Navasota's racial makeup consists primarily of the three major racial groups found in Texas, with a more even distribution than found in either the county or the state. Both population numbers and proportions are located in Table 6.1.

Table 6.1: 2000 Race Comparison of Navasota & Grimes County

Race	Navasota	Proportion	Grimes County	Proportion
Hispanic	1,898	28.0%	3,787	16.1%
White	2,495	36.8%	14,772	62.7%
Black	2,302	33.9%	4,667	19.8%
American Indian	5	0.1%	50	0.2%
Asian	28	0.4%	61	0.3%
Native Hawaiian	0	0.0%	10	0.0%
Some other race	3	0.0%	8	0.0%
Two or more races	58	0.9%	197	0.8%
Total:	6,789	100.0%	23,552	100.0%

Conclusion

The demographic summaries above help bring to light some important characteristics of Navasota. Overall, the city has a fairly young population and will continue to grow slowly, but steadily. The most disproportionate figures can be found in the older female cohorts, who greatly outnumber their male counterparts. The two biggest opportunities for improvement are evident in both household income and education categories. The City of Navasota lags behind the state and county averages in both of these categories, and challenges exist in returning these numbers to more proportionate levels.

Notes:

The 2000 U.S. Census was the sole data source used for these analyses, and it is likely that changes have occurred since this data was compiled. It does, however, represent the most complete picture that can be obtained to this level of detail. Gathering data to this level is a costly and time consuming endeavor; one that is not possible given the scope of this project. Exact figures for the City of Navasota, Grimes County and the State of Texas should be interpreted with these limitations in mind.

Land Use



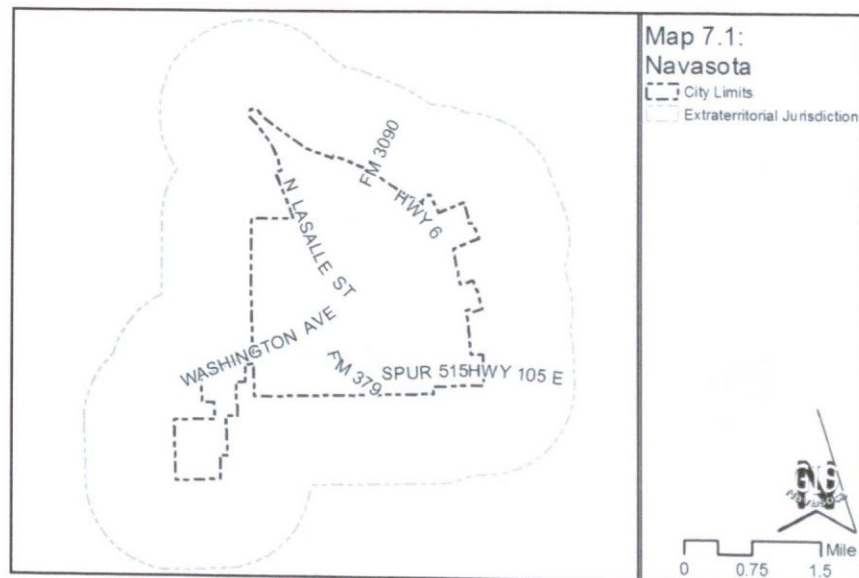
SECTION 7 – LAND USE

Introduction

Land use planning involves the arrangement of land in order to ensure the compatibility of different land uses. Proper land use is vital to promote public health, safety, morals, and the general welfare of the City. Planning for future and existing land use is also essential for a successful growth management strategy of a city.

A land use survey of the City of Navasota was completed in January of 2004. The land use for each parcel was coded, with the primary use taking precedent over minor accessory uses. The land units used for the survey were legal property parcels derived from the Grimes County Appraisal District's plat maps. The survey illustrated that the city limits of Navasota encompass roughly 4,128 acres, 3,239 of which are platted land parcels. The City of Navasota also controls an additional 10,998 acres of land within its extraterritorial jurisdiction (ETJ). The city limits of Navasota can be viewed on Map 7.1. The ETJ extends roughly one mile around the city limits. Due to the nature of the land use data collection and survey the

following area and percentage numbers are based on the parcelized land area, not the overall city limit area. Specifically, land such as right-of-way, water bodies and other non-parcelized land uses are not represented in the statistics presented here.



Land Use Classifications

During the land use survey, the following classifications were used (Table 7.1) and are shown on Map 7.2.

Table 7.1: Land Use Classifications

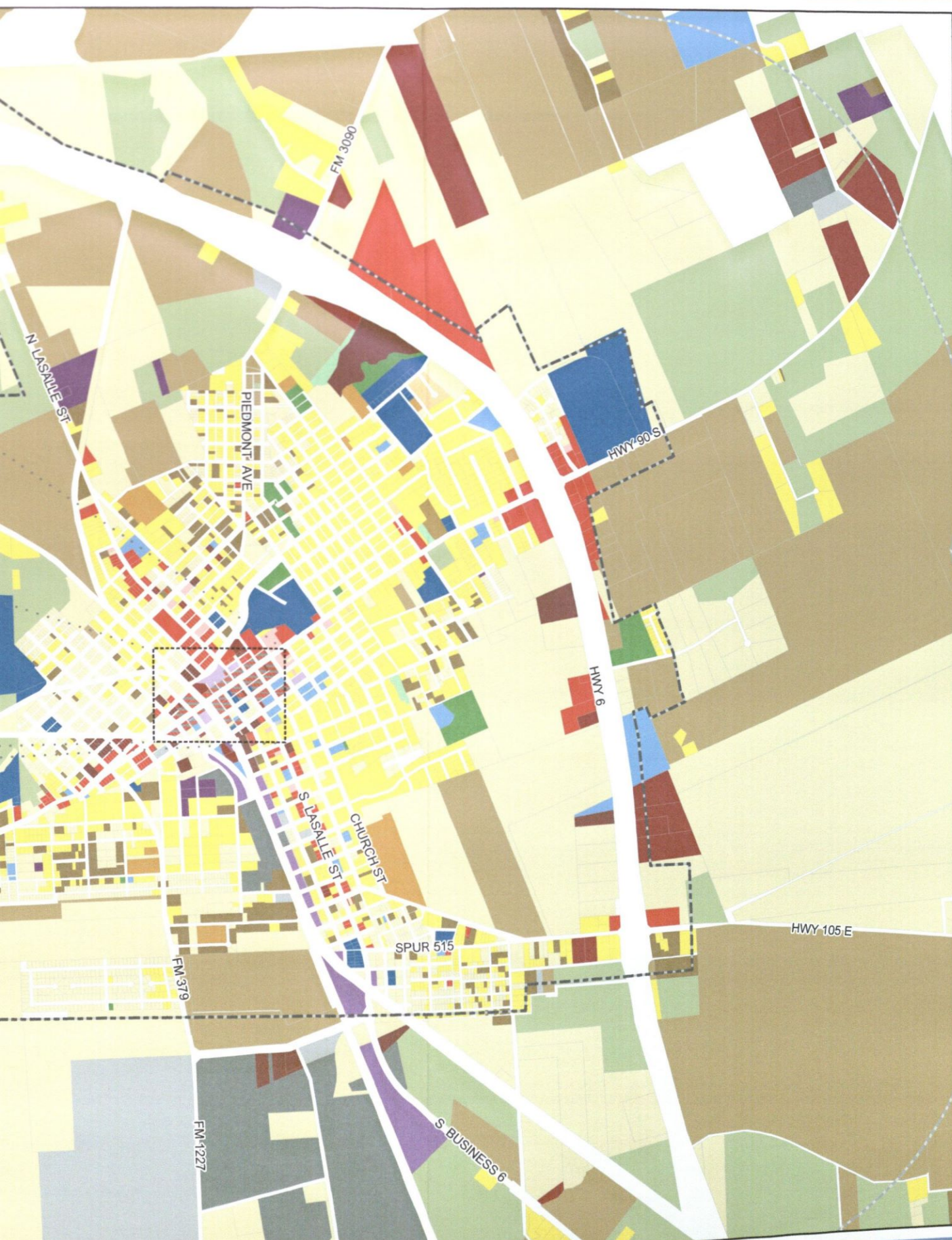
Residential	<ul style="list-style-type: none"> - Single Family Residential - Duplex Residential - Multi-Family (Tri/Four-Plexes, Apartments) - Group Quarters (Nursing Home, Assisted Living) - Mobile/Manufactured Home
Commercial	<ul style="list-style-type: none"> - Commercial Retail/Trade/Service (Banks, Stores) - Commercial Office (Reality/Professional Offices) - Commercial Other (Body Shops, Driving Ranges)
Industrial	<ul style="list-style-type: none"> - Commercial-Industrial (Warehouse Sales) - Light Industrial (Assembly Line) - Heavy Industrial (Pipe Fabrication)
Public/Institutional	<ul style="list-style-type: none"> - Public (City Buildings, Schools, Library) - Semi-Public (Religions Institutions, Hospital)
Transportation	<ul style="list-style-type: none"> - Transportation (Air, Parking as a primary use) - Railroad (Railroad Facilities) - Utilities/Communications (Telecommunications Waste Water Treatment)
Downtown	<ul style="list-style-type: none"> - Mixed Use <ul style="list-style-type: none"> Residential/Retail Residential/Office Retail/Office Mixed-Use Other Retail/Vacant Office/Vacant - Downtown Public/Semi-Public - Non-Profit - Entertainment (Theatre, Tavern, Night-Club, Restaurant) - Retail - Office - Residential - Vacant
Open Space	<ul style="list-style-type: none"> - Parks - Ball Fields - Drainage Facility (detention pond) - Golf Course
Agriculture	<ul style="list-style-type: none"> - Agriculture (As the primary use)
Rural/Unimproved	<ul style="list-style-type: none"> - Rural (residential development of > 5 acres, may contain other minor uses) - Unimproved (may include land with abandoned, or minor structures deteriorated barn)

ions were used (Table 7.1) and

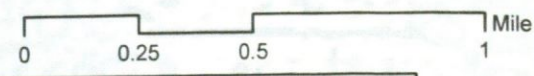
Apartment (e, Assisted Living)
ice (Banks, Stores) Professional Offices s, Driving Ranges)
ouse Sales) (e) tion)
, Library) ions, Hospital)
s a primary use)
communications Waste Water
nd)
e) of > 5 acres, may contain with abandoned, or minor



**Map 7.2:
Existing Land Use**



- Single-Family
 - Duplex
 - Multi-Family (3 units or more)
 - Group Quarters
 - Mobile/Manufactured Home
 - Rural (Large Lot Residential, > 5 acres)
 - Commercial Retail (Stores, Banks, etc.)
 - Commercial Office (Business, Service, etc.)
 - Commercial Other
 - Commercial - Industrial (Warehousing, etc.)
 - Public Facilities (CON, NISD, Library)
 - Semi-Public (Religious, Hospitals, etc.)
 - Light Industrial
 - Heavy Industrial
 - Transportation
 - Railroad
 - Utilities
 - Downtown
 - Park
 - Ball Fields
 - Drainage
 - Golf Course
 - Agricultural
 - Unimproved
-
- Residential
 - Mixed-Use Other
 - Office
 - Retail
 - Retail/Office/Residential
 - Retail with Vacant Floors
 - Office with Vacant Floors
 - Vacant Building/Land
 - Night-Club
 - Semi-Public
 - Public
 - Theater
 - Parking



Existing Land Use information was generated through a Texas Target Cities windshield survey in the fall of 2003. This information is intended for use in comprehensive planning, and do not represent land use classifications used for tax appraisals, Census estimates, or any additional studies conducted by other government agencies.



The percentages of existing land use for the City of Navasota are displayed in Table 7.2. The uses are listed in terms of the acreage for each land use classification as well as that classification’s percentage of the City’s total land area.

Table 7.2: 2004 Existing Land Use by Acreage & Percentage of City Total

Land Use Classification	Within City Limits		Within ETJ	
	Acreage	Percent	Acreage	Percent
Residential	1036	32.36%	2721	24.41%
Commercial	129	4.03%	179	1.74%
Industrial	76	2.37%	572	5.55%
Public/Institutional	201	6.28%	68	0.66%
Downtown	352	0.61%	0	0.00%
Open Space	352	10.99%	49	0.48%
Agriculture	1388	43.35%	6712	65.16%
Total	3201.64	100.00%	10301	100.00%

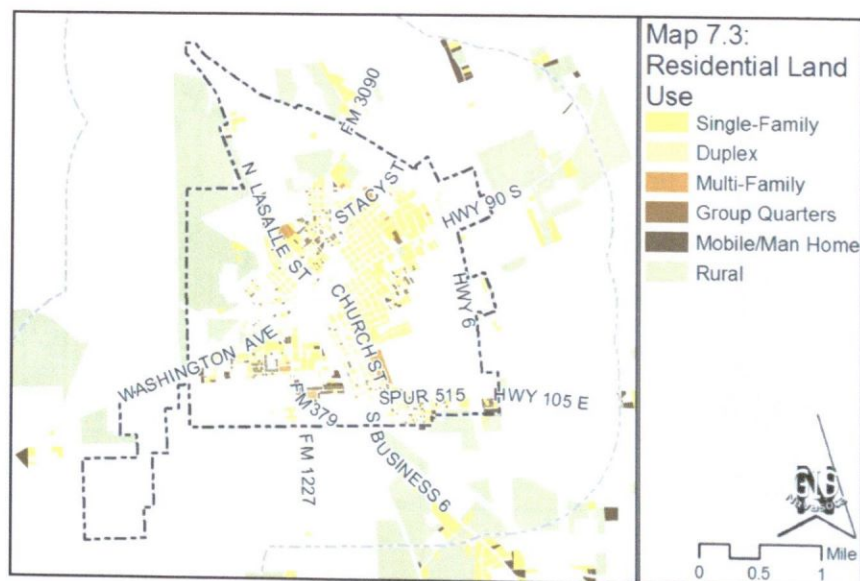
Texas Target Cities Team

Existing Land Use

The following land use statistics were determined through the collection of the land use information.

Residential

The combined single-family, duplex, multi-family, group quarters, mobile/manufactured home, and rural residential developments constituted roughly 32% of land use within the city limits of Navasota. Of this percentage, 51.50% is single-family, 0.48% is



duplex, 3.87% is multi-family, 0.39% is group quarters, 10.45% is used for mobile/manufactured homes, and 33.30% is rural residential (Table 7.3). This land included rural residential developments that were over five acres in size as well as unimproved land that may have included abandoned structures. Further information concerning the housing locations and status is discussed in the Housing section (Section 10).

Table 7.3: 2004 Existing Residential Land Use

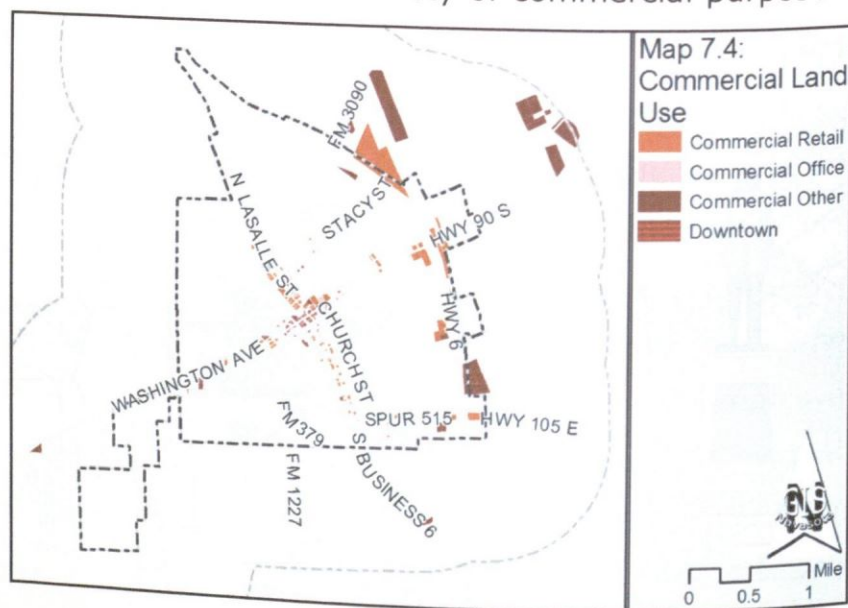
Housing Type	Percentage
Single Family Residential	51.50%
Duplex	0.48%
Multi-Family Residential	3.87%
Group Quarters	0.39%
Mobile/Manufactured Homes	10.45%
Rural Residential	33.30%
Total:	100.00%

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Commercial

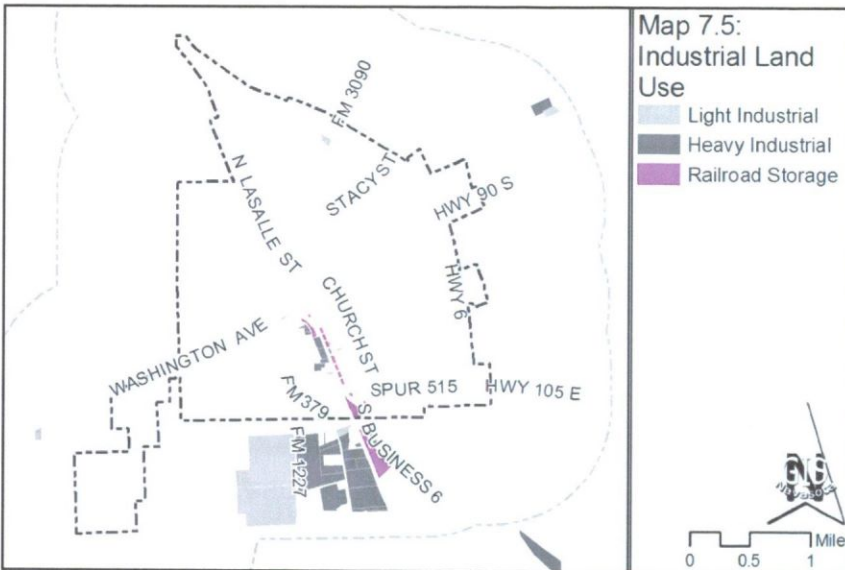
Approximately 4% of land in the City is used for a variety of commercial purposes.

These uses include office space, retail, body shops, driving ranges, motel, and many more. These commercial properties are located primarily along North and South LaSalle and State Highway 105, as well as State Highway 6.



Industrial

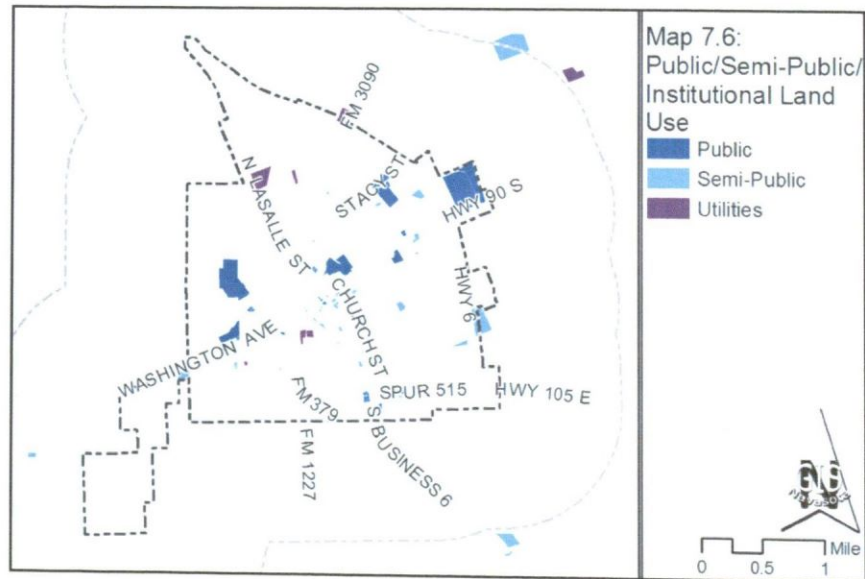
Industrial property equals approximately 2%, or 76 acres, of the City’s land use. In addition, approximately 570 acres of the lands in the ETJ are in one of the three industrial classifications. These classifications allow for uses such as warehouse



sales, assembly, fabrication, and accessory railroad storage. These land uses are primarily located in the industrial park south of the city limits, which accounts for approximately 83% of the industrial land uses in the ETJ.

Public/Semi-Public/Institutional

The public/institutional areas make up roughly 6% of the City’s parcelized land area, with 74% consisting of City buildings, schools, a public library, utilities, and other City facilities. The remaining 26% includes religious institutions as well as medical facilities. A more thorough analysis of the public institutional aspects of Navasota can be found in the Communities Facilities section (Section 11).



Transportation



SECTION 8 – TRANSPORTATION

Introduction

The Transportation section of the Navasota Comprehensive Plan concentrates on transportation by roads, rail, and air, as well as non-motorized modes such as walking and bicycling. This part focuses on the existing state of the transportation system in Navasota.

Street Network

The information for Navasota's Transportation network was compiled using data from various sources such as the City of Navasota, the Texas Department of Transportation (TxDOT), and a windshield survey conducted in November of 2003.

Based on ownership, the streets of the city were divided into three categories - state highways, city roads, and private roads. Table 8.1 shows the distribution of roads according to the ownership.

Table 8.1: Road Ownership Data

Ownership	Length (in miles)	Percentage
City Roads	54.98	65.70%
State Highways	26.74	31.96%
Private Roads	1.96	2.34%
Total	83.68	100.00%

Texas Target Cities Team

Average Annual Daily Traffic

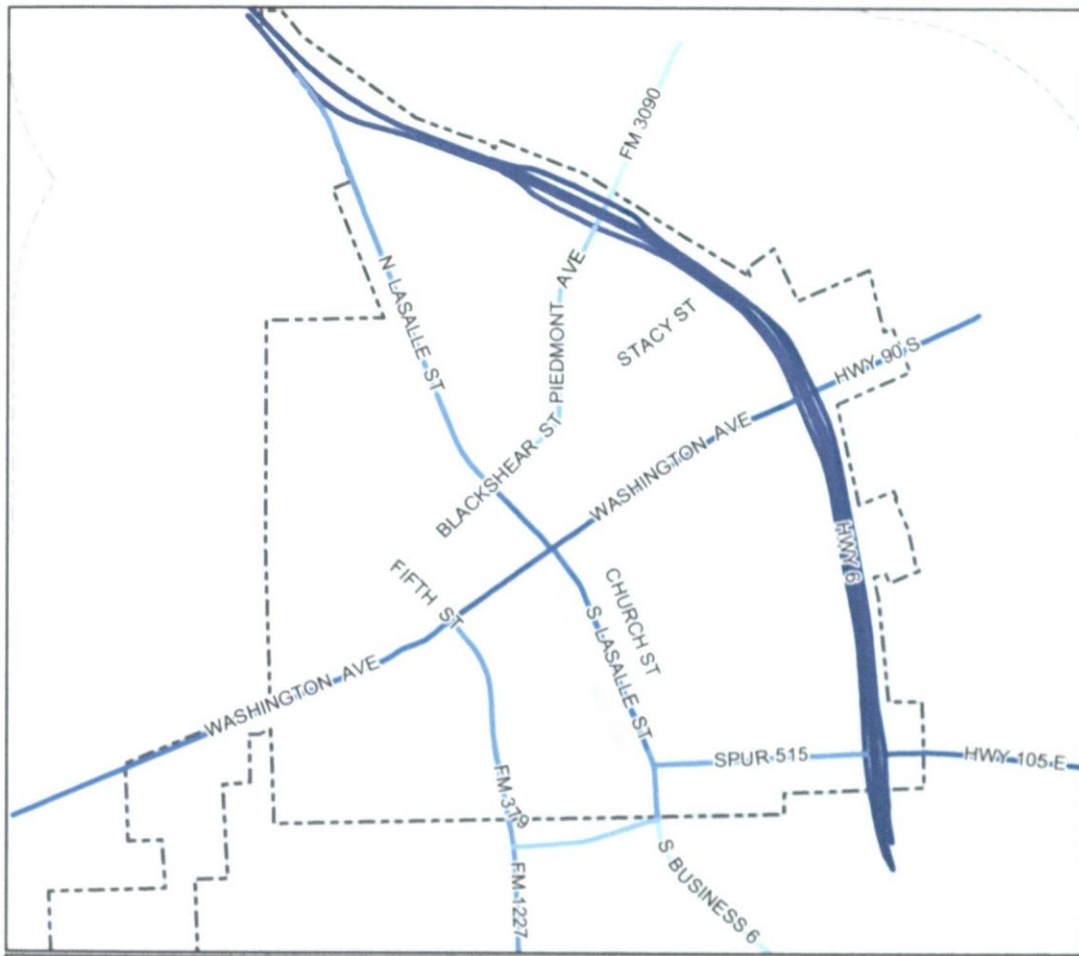
The data for the average annual daily traffic volume for Highway 6 and major arterials was obtained from TxDOT. Table 8.2 summarizes the average annual daily traffic counts for these routes for the years of 2000, 2001, and 2002 (Map 8.1 and Map 8.2).

In general, roadways associated in close proximity with Highway 6 experienced the highest increase in traffic volumes. Those roadways located near the downtown area experienced moderate increases while the remaining roads experienced very low increases. However, some roads did experience decreases.

Table 8.2: Average Annual Daily Traffic Volumes (DTV)

Route	From	To	DTV 2000	DTV 2001	DTV 2002	% Change 2000-2002
N. La Salle	Hwy 6	BlackShear	4700	4350	4750	1.06%
N. La Salle	BlackShear	Washington Ave.	8600	8500	8100	-5.81%
S. La Salle	Washington Ave.	Spur 515	7400	7100	7400	0.00%
S. La Salle	Spur 515	FM 379	5000	4600	4600	-8.00%
S. Business 6	FM 379	CR 420	2600	2300	2600	0.00%
FM 379	S. Business 6	Jct FM 1227/379	2800	3100	3000	7.14%
FM 379	Washington Ave.	Jct FM 1227/379	3800	4150	3850	1.32%
FM 1227	Jct FM 1227/379		3800	4150	3850	1.32%
Hwy 105W	FM 379		5200	5600	5600	7.69%
Hwy 105W	FM 379	N. La Salle	8200	8800	9400	14.63%
Hwy 105W	N. La Salle	Hwy 6	10250	10650	9900	-3.41%
Hwy 90 S	Hwy 6		7000	7800	7400	5.71%
Spur 515	S. La Salle	Hwy 6	5000	4600	4600	-8.00%
Hwy 105E	Hwy 6		8100	8300	8800	8.64%
Piedmont Ave.	N. La Salle	Hwy 6	2550	2750	2900	13.73%
FM 3090	Hwy 6		1450	1600	1600	10.34%
Hwy 6 N bound	FM 3090		20400	21000	22000	7.84%
Hwy 6 S bound		Piedmont Ave.	18800	18600	19200	2.13%
Hwy 6	FM 3090	Washington Ave.	20900	20300	21100	0.96%
Hwy 6	Washington Ave.	Spur 515	23000	22000	23000	0.00%
Hwy 6	Spur 515		14700	14400	15400	4.76%

TxDOT



Map 8.1: Traffic Counts for TxDOT Streets in 2002

vehicles / day

- 1450 - 2800
- 2801 - 3800
- 3801 - 5250
- 5251 - 8600
- 8601 - 10250
- 10251 - 14700
- 14701 - 23000



Map 8.2: Traffic Count Percent Change From 2000 to 2002

- 10.5 - -8.0
- 7.9 - -3.4
- 3.3 - 0.0
- 0.1 - 5.7
- 5.8 - 10.3
- 10.4 - 14.6

0 0.25 0.5 1 Mile



Traffic counts were digitized from TxDOT maps for the years 2000, 2001, and 2002. These data cover streets maintained by TxDOT, which may or may not represent the highest traffic volumes in the City. Therefore, streets without data should not necessarily be assumed to have significantly lower traffic volumes. Percent change values were derived from these three time periods.

Map 8.3: Street Condition Rating

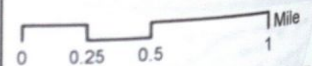


- 5 (best)
- 4
- 3
- 2
- 1 (worst)

Map 8.4: Street Surface Type



- asphalt
- concrete
- gravel
- dirt



The street condition rating is a subjective measure including such influences as pavement condition, material quality, potholes, and needed repairs. This rating was calculated through a windshield survey and should not be used exclusively to determine maintenance or replacement schedules. Rather, it can be used as an overall indicator of street network conditions.

Road Conditions

The road condition category helps identify those areas that are stressed and may benefit from increased maintenance and repair. The road condition rating system was a compilation of multiple factors including the presence or absence of potholes, large cracks in the material that affect vehicles, lane width appropriateness, and overall quality of the driving surface. Other attributes included elsewhere in this section were used to derive the overall condition rating. According to the ratings, the road network is in good condition. Detailed local street conditions can be found on Map 8.3. Table 8.3 summarizes the overall condition for all roadways.

Table 8.3: Road Conditions

	Condition	Length in Miles	% of Total
Best	5	4.15	4.80%
	4	26.11	30.21%
	3	40.45	46.79%
	2	11.30	13.08%
	1	4.43	5.12%
Worst	Total	86.44	100.00%

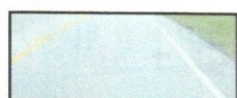
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Road Materials

The road material types were classified into four categories – concrete, asphalt, gravel, and dirt roads (Map 8.4). Table 8.4 summarizes the road materials. Asphalt roads provide the best overall solution as a roadway surface based on characteristics such as, cost, speed of installation, durability, ability to be recycled, and ability to provide a smooth ride. Concrete is another viable option, which provides for long term durability. Most of the roads in Navasota are asphalt. The remaining roads are comprised of concrete, gravel, or dirt.



Concrete



Asphalt



Gravel



Dirt

Table 8.4: Road Materials

Material	Length in Miles	% of Total
Concrete	8.98	10.73%
Asphalt	65.97	78.84%
Gravel	7.13	8.52%
Dirt	1.60	1.91%
Total	83.68	100.00%

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Curb-and-Gutters

Curbs and gutters provide storm water drainage and are a desired feature to maintain the condition of the roadways (Map 8.5). The survey found that two-thirds of the streets in Navasota lack curb-and-gutter. The data is summarized in Table 8.5.



Curb & Gutter

Table 8.5: Existing Curb-and-Gutters

Curb/Gutter	Length in Miles	% of Total
Yes	29.28	34.99%
No	54.40	65.01%
Total	83.68	100.00%

Target Texas Cities Team

Street Lighting

Street lighting provides a safe environment for drivers, pedestrians, and neighborhoods. According to the windshield survey, the City needs improvement in this area because approximately two thirds of the streets did not have adequate lighting (Map 8.6 and Table 8.6).



Navasota Street Lighting



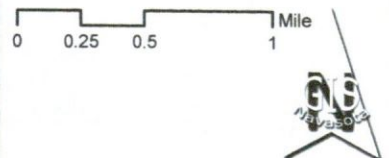
Map 8.5: Curb & Gutter

- none
- curb & gutter



Map 8.6: Street Lighting

- none
- lighted



The location of street lighting and curb & gutter was determined by a windshield survey in the fall of 2003.

Table 8.6: Street Lighting Conditions

Street Lights	Length in Miles	% of Total
Yes	28.87	34.50%
No	54.81	65.50%
Total	83.68	100.00%

Target Texas Cities Team

Sidewalks/Bikeways

Sidewalks promote pedestrian scale streetscapes and can encourage walking as an alternative mode of travel. Pedestrian walkways, such as sidewalks, are important to neighborhoods and busy streets for user-friendliness. The majority of the City lacks sidewalks along streets. The Downtown area appears to have adequate sidewalks (Map 8.7). In addition to the sidewalks, there is a hike/bike nature trail available that provides connectivity between the parks located along Cedar Creek. The Community Facilities section (Section 11) discusses the state of this trail.

Number of lanes

The number of lanes on a roadway relates to traffic capacity and is one element in determining roadway classification. The majority of streets in Navasota have two lanes. However, in some residential areas the streets are single lane. Table 8.7, summarizes the number of lanes for the streets of Navasota (Map 8.8).

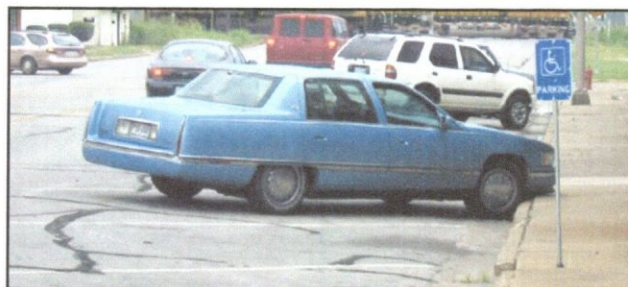
Table 8.7: Streets by Number of Lanes

Number of Lanes	Length in Miles	% of Total
1 Lane	9.01	10.77%
2 Lanes	73.77	88.16%
4 Lanes	0.90	1.08%
Total	83.68	100.00%

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On-street Parking

Only the Downtown and Church Street areas in the City of Navasota have notable quantities of designated on-street parking (Map 8.9) Table 8.8 summarizes the parking conditions based on the categories of designated parking on both sides of the street, parking on one side of the street, and no parking on either side.



On-Street Parking

Table 8.8: On-Street Parking Conditions

Parking Condition	Length in Miles	% of Total
None	83.06	99.26%
One side	0.07	0.08%
Two side	0.55	0.66%
Total	83.68	100.00%

Texas Target Cities Team

Transit

Navasota currently does not have a fixed route for public transportation. Demand/Response and Para-transit services are provided through “The District”, formerly known as Brazos Valley Transit. “The District” provides service for anyone wanting to travel within the service area. In order for a passenger in Navasota to receive service they must contact “The District” 24 hours prior to when such service is needed. The passenger then gives the dispatcher their origin and destination. If a vehicle is available, it is dispatched with service cost varying based upon destination points. If a passenger is traveling within the same county the price is \$2.00 and \$2.50 for inter-county travel. Greyhound Bus Lines has a stop in Navasota at the Circle H Store at the intersection of Highway 105 East and Highway 6. The store is open for the sale of bus tickets weekly from 5:30 a.m. till 10:00 p.m.



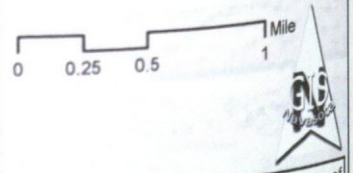
Map 8.7:
Sidewalks

- both sides
- one side
- none



Map 8.8: Number
of Undivided
Lanes

- 4
- 2
- 1



The location of sidewalks and number of lanes was determined by a windshield survey in the fall of 2003. Some residential streets have a narrow pavement width placing them between standard one and two lane sizes, such streets were classified as two lanes to maintain consistency. Turn lanes were not included.



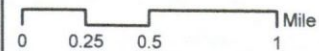
Map 8.9:
On-Street Parking

- none
- one side
- both sides



Map 8.10: Access Management

- none
- solid median
- turn lane
- mixed turn/med



The location and type of access management as well as on-street parking was determined by a windshield survey in the fall of 2003.

Taxi

There is not an operating taxi service available within the City of Navasota. However, several taxi companies in the College Station/Bryan area do provide service.

Railroads

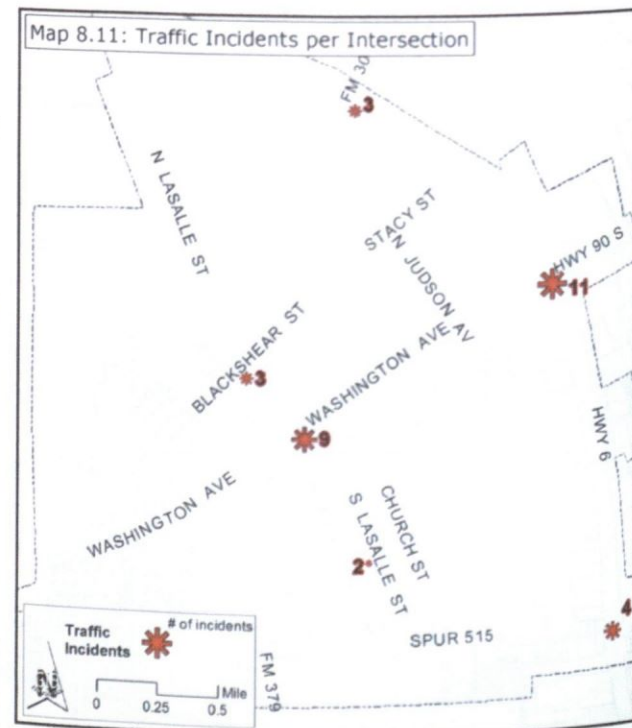
The City of Navasota currently has two rail lines traveling through it. The two rail companies are the Burlington Northern Santa Fe (BNSF) and Union Pacific (UP). Each of these rail lines originates in other areas and travel through Navasota. Cargo service is available, however, passenger rail is not.



Navasota Railroad

Traffic Incidents

For the year of 2003, there were seven intersections that had the highest reports of accidents. The intersection of Washington Avenue and Highway 6 had eleven incidents. Nine incidents were reported at the intersection of Washington Avenue and LaSalle Street. Highway 6 and SPUR 515 reported four incidents. Three incidents were reported at Highway 6 and FM 3090. The intersection of LaSalle Street and Blackshear Street also reported three accidents. Two accidents were reported



at the intersections of LaSalle Street and Anderson Street. The intersection of Washington Avenue and 5th Street also had two. The information concerning accidents was provided by the police department and the causes of these accidents were not given.

Table 8.9: Traffic Incidents

Intersection	Number of Incidents
Washington Avenue & Highway 6	11
Washington Avenue & LaSalle Street	9
Highway 6 & SPUR 515	4
Highway 6 & FM 3090	3
LaSalle Street & Blackshear Street	3
Washington Avenue & 5 th Street	2

Navasota Police Department

Aviation Transportation

Navasota Municipal Airport

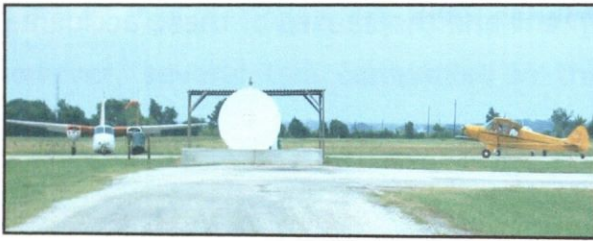
The Navasota Municipal Airport is located approximately 2 miles southwest of Downtown Navasota on Highway 105 West. It is an unattended public-use General Aviation (GA) airport owned by the City of Navasota. It is part of the Federal Aviation Administration (FAA) Airport System and TxDOT’s Texas Aviation Commission (TAC) Airport System.



Navasota Municipal Airport

The airport maintains one, 60-foot by 3,204-foot asphalt paved runway. The runway is limited to an axle weight of 12,000 pounds and can only serve propeller-driven and some small business jet aircraft. The airport is also qualified for night operations through a remote control lighting system.

The facilities provide aviation gas with one 4,500 gallon and one 2,000 gallon fuel storage tanks. There are approximately 12 hangars at the airport that are fully



Fuel Storage Tank

occupied. Additional plane parking is available outside with tie down parking on the remaining apron. There are two businesses at the airport.

Currently, there are 16 aircraft based at the airport, with approximately 90 aircraft movements a week. Airport traffic in the past year has increased significantly with the arrival of West Wings, Inc. Currently there is no Fixed-Base Operator (FBO).

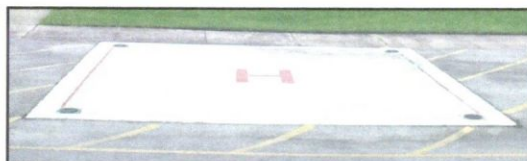
An Economic Impact Assessment for the Navasota Municipal Airport was prepared by Wilbur Smith Associates for TxDOT. This study reported that the airport supported 10 jobs with a payroll of \$211,000 and it could have a direct economic impact of \$528,000.

The closest regional-commercial passenger service is provided by Easterwood Airport, located approximately 25 miles to the north in College Station. The closest major domestic/international airport is at Bush Intercontinental Airport (IAH), approximately 65 miles to the southeast of Navasota in Houston.

According to TxDOT's Aviation Division, there is desire to add additional facilities at Navasota Municipal Airport. Suggested facilities would include a pilot's lounge/terminal building with restrooms, weather information, Jet A fuel services, a parallel taxiway next to the existing runway, and additional parking apron space. The City of Navasota is working on plans to add some 20 additional hangars. The City is also in the process of installing an infrared camera at the airport to begin monitoring traffic and security. The City is also preparing a five-year development plan for the airport.

Navasota Heliport

The Navasota Regional Hospital owns and operates Navasota’s only heliport, located just south of Washington Avenue between downtown Navasota and the Highway 6 Bypass. The heliport is constructed of concrete with a wind indicator and edge lights.



Navasota Heliport

Conclusion

The users of Navasota’s transportation network concentrate on the roads, railroads, and airways. Overall, the roadways are in fairly good condition. Information also indicates that the railroads and the airport bring vital additional economic sources to Navasota; with growth potential through possible commuter railway connections from the Houston area, and recommended airport expansion. Navasota has a small hike/bike trail system.

Sources & Methodology:

The information for analysis of the street network of Navasota was obtained by two methods – 1) GIS data showing street centerlines from the Brazos Valley Council of Governments 9-1-1 Addressing Division and 2) a site survey conducted to determine physical conditions. Additional data related to the road ownership, the Average Annual Daily Traffic (AADT) for various streets was obtained from the Texas Department of Public Transportation (TxDOT). All obtained information was converted to GIS format, and will be available for future use by city staff.

AirNav (2003) Navasota Municipal Airport (60R). Retrieved Oct., 7, 2003 from website: <http://www.airnav.com/airport/60R> and <http://www.airnav.com/airport/7TA1>

Greyhound Bus Line information came from the website: <http://www.greyhound.com>

The District provided all information concerning transit in Navasota.

Texas Transportation Institute. (Oct. 20, 2003.) "Draft of the Brenham Regional Planning Meeting, Grimes County – Navasota Municipal Airport," Texas Transportation Institute (TTI), Texas A&M University, draft prepared for the TxDOT, Aviation Division.

Texas Transportation Institute (TTI). (2003.) *Grimes County Community Data*, TAMU, College Station, Texas.

Texas Transportation Institute (TTI). (2003.) *Navasota Municipal Airport (60R)*, TAMU, College Station, Texas.

Traffic Incident Information was retrieved from the Navasota Police Department, 2004.

Union Pacific and Burlington Northern Santa Fe (2003) Navasota Rail Lines. Retrieved Nov. 7, 2003 from Texas Railroad Commission website: <http://www.rrc.state.tx.us>.

Wilbur Smith Associates. (2003.) "The Economic Impact of Navasota Municipal Airport."

Urban Infrastructure



SECTION 9 – URBAN INFRASTRUCTURE

Introduction

Infrastructure is the framework by which a city functions and consists of built facilities (under and above ground) that assist in the promotion of the public's health, safety, and welfare. In the City of Navasota, the water, wastewater, gas, solid waste, and storm water systems comprise the infrastructure for the community. The infrastructure systems and components are described in this section.

Water System

The water system of the City of Navasota was initially constructed in the 1920's. Installation started in the Downtown area and spread outward as the City grew. Today, water lines are constructed as needed in developing areas and rehabilitated when needed in established areas. One project the City recently undertook was the replacement of water meters from dated technology to a new digital system that allows the meter reader to access information using a laptop computer.

Navasota currently has six well sites located in various parts of the City. These wells draw water owned by the City as well as the Bluebonnet Water Conservation District. Map 9.1 displays well locations and Table 9.1 identifies individual well capacities. Two wells are located outside of the city limits.

Table 9.1: Water Well Description

Well	Established	Depth in Feet	Daily Capacity Gallons
2	1955	755 ft	856,800
3	1948	260 ft	439,200
4	1968	342 ft	433,200
5	1981	355 ft	607,680
6	1988	420 ft	849,600
7	1997	420 ft	1,298,880

Texas Target Cities Team

Table 9.2 shows the Water Analysis Metals Report from Texas Department of Health, which lists the Navasota water constituents.

Table 9.2: Water Analysis Metals Report

Constituent name		Result	Units
Aluminum	<	0.05	Mg/1
Arsenic	<	0.002	Mg/1
Barium		0.152	Mg/1
Cadmium	<	0.0012	Mg/1
Calcium		25.30	Mg/1
Chromium	<	0.02	Mg/1
Copper		0.006	Mg/1
Iron		0.79	Mg/1
Lead	<	0.0011	Mg/1
Magnesium		2.66	Mg/1
Manganese		0.024	Mg/1
Mercury	<	0.0004	Mg/1
Nickel	<	0.02	Mg/1
Selenium	<	0.0025	Mg/1
Silver	<	0.01	Mg/1
Sodium		213.00	Mg/1
Antimony	<	0.0040	Mg/1
Beryllium	<	0.001	Mg/1
Thallium	<	0.0010	Mg/1
Zinc	<	0.02	Mg/1
Total hardness as CaCO ₃		74.1	Mg/1

City of Navasota Staff

Wastewater System

The majority of Navasota is served by a traditional centralized wastewater system, however, approximately 3% of the City utilizes septic systems. Wastewater collected from residential, commercial, and other land uses is collected utilizing wastewater lines and treated at the City's wastewater treatment plant. The treatment plant utilizes primary, secondary, and tertiary treatment. The wastewater treatment plant is currently operating at 50% capacity, treating approximately 1.8 million gallons per day.

Wastewater lines range in size from 6 inch, 8 inch, 10 inch, and 12 inches. There are two 18" trunk lines that directly feed into the wastewater treatment plant.

Forced main lines (pressurized wastewater lines) are installed in areas where gravity sewers cannot function. Map 9.3 displays the location and size of sewer lines. The City also has eleven lift stations to assist in the wastewater collection process where the topography does not allow for gravity flow. Once waste is collected, it undergoes several processes including chlorination, oxidation, and dechlorination. When the tertiary process is complete the liquid outflow is released into Cedar Creek. The solid waste, also known as "sludge" is removed from the cleaning units and hauled to the Brazos Valley Compost Center.

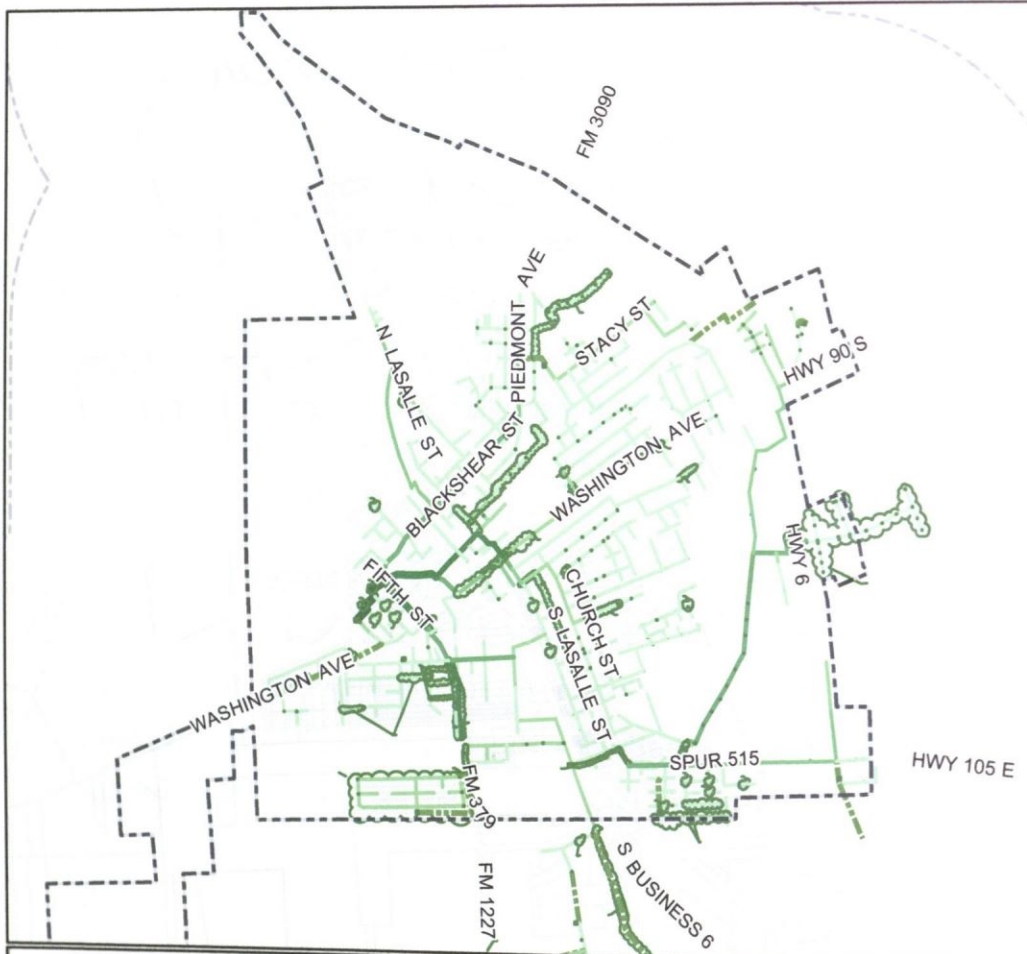
Most residential homes, commercial businesses, and industrial companies tie directly into the Navasota wastewater treatment system for processing. However, one company located in the industrial park, the International Paper Company pre-treats its wastewater before it is discharged into the City's wastewater system. This procedure ensures proper treatment of wastewater so as not to contaminate the City's system.

Natural Gas

The City of Navasota owns the gas lines in the community and is involved in the installation, maintenance, and operations of all gas lines. The Celco Company is the City's natural gas supplier. Natural gas enters the City through a gas gate located in the southeastern section of Navasota where the natural gas provider monitors the volume. From that point the natural gas flows through pipes to service residential, commercial, and industrial users. Natural gas lines are mainly made of PVC. The meter and regulator station reduce the pressure from 175-275 psi to 56 psi, which is a more manageable level. The gas is then distributed to households and businesses. Map 9.4 displays the location and size of the gas lines.

Solid Waste Management

Prior to 1986, the City of Navasota operated a landfill in the southeast part of the city on county road 415. Navasota's landfill was closed in 1986 because it had reached its design capacity. The landfill was reclaimed and the land is currently being leased out to a hay farmer.



Map 9.3:
Wastewater
System

Miscellaneous Notations

— other

Sewer Lines

— Air Release Valve

— 21 inch

— 18 inch

— 15 inch

— 12 inch

— 10 inch

— 8 inch

— 6 inch

--- Forced Main



Map 9.4:
Natural Gas

Gas Lines

Line Type

— 6 Inch Steel

— 4 Inch Steel

— 2 Inch Steel

— 6 Inch Poly

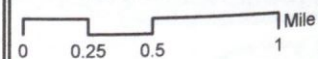
— 4 Inch Poly

— 2 Inch Poly

— 1 1/4 Inch Poly

— 1 Inch Poly

— 2 Inch PVC



Wastewater and natural gas lines were converted from AutoCAD files which are maintained by the Navasota Public Works Department. The GIS conversion represented in this map should not be considered highly accurate, particularly in the southern portion of the City. These converted files should be used merely for general location and size analysis, and where accuracy beyond the scope is needed, the official CAD files should be utilized.

The City of Navasota is currently under a contract with Browning-Ferris Industries (BFI) for its residential trash collection. Annually, Navasota discards approximately 3,673 tons of trash. The City is divided into two collection areas. Curbside collection occurs for the two collection areas. Each resident of Navasota is allowed to place one large bulk item for weekly collection. BFI contracts separately with the commercial businesses in Navasota in which trash is collected five days a week from trashcans as well as small and large dumpsters.

The City of Navasota does not have a city sponsored recycling center. BFI does not collect wood and brush debris. Instead, the City collects the material for one quarter of Navasota each week on a continuous rotating cycle. With funds provided from grants, the City was able to purchase a commercial wood chipper. The collected material is chipped and composted for resale to the public at a cost of \$5 per cubic yard.

Storm Water System

According to City Staff, the storm water sewer system was installed as a Works Progress Administration (WPA) project in the 1930's. The storm drainage system has pipes 6 feet in diameter made from quarried sandstone. Currently, there is no documentation as to the location of this infrastructure. The locations are known only through the individual recollection of the staff of the Public Works Department. The system discharges into Cedar Creek, which runs just north of Washington Avenue in Downtown Navasota and to Sandy Creek, which runs south of Downtown Navasota. Navasota is currently involved in mitigation procedures of these outlets caused by sedimentation occurring during times of inclement weather.

Electrical, Cable, and Telephone

Electricity providers for the City of Navasota are Entergy and Synergy. The cable service is provided by Northland. Telephone service is provided by Sprint.

Utilities Outside The City Limits

Water supply and natural gas services are provided to residents and businesses located outside of the city limits. These services cater primarily to the industrial area and to some residential developments.

Industrial park users must pay a fee to the City of Navasota for the utilities provided. The fee is roughly 50% of the ad valorem property taxes based on the assessed property valuation. Residential areas located outside of the city limits must pay for utility services provided by the City and their rates are 1.5 times higher than the rates of the people living in the City.

Current Trends

Navasota has not experienced significant growth over the last 10 years. The current growth is mainly near the Highway 6 Bypass.

The southwest part of Navasota near the airport is also growing but not at a high rate. Navasota growth depends largely upon where developers are willing to invest their money. Since there is no major infrastructure in the southwest part of the City, development proves to be costlier than the area near the Highway 6 Bypass. There is infrastructure (water, sewer and natural gas) between Highways 105 West and 90. However near Highway 3090 there are limited infrastructure facilities.

Sources:

City of Navasota Staff

Housing



SECTION 10 – HOUSING

Introduction

The presence of safe and affordable housing is a necessity for every community. Housing is classified in different categories: single-family residences, duplexes, multifamily units, group quarters, manufactured homes, rural residential, and downtown units. A windshield survey was conducted in the City of Navasota to evaluate each housing type, except for the downtown loft housing. This section discusses the current housing conditions in the City of Navasota as well as other important information concerning housing issues.

Definitions

Single-Family Residence

A single-family residence, hereafter called a house, can be defined as a non-moveable structure constructed on the site of its permanent location. The house is designed to serve as a home for a single person or family rather than multiple individuals or families. A house normally has a solid attached foundation.



Single-Family Residence

Manufactured Home

A manufactured home is a movable or portable dwelling unit. This structure is delivered to its site by a motor vehicle. Under special permit it may be connected to



Manufactured Home

utilities and designed without a permanent foundation for year-round living. This structure may consist of one or more units travel separately in tow and are designed to be joined into one integral unit.

Duplex

A duplex is similar to a house but is composed of two separate and distinct dwelling areas within the same structure. This concept allows for the independent housing of two individuals or families within one structure.



Duplex

Multifamily Structure/Apartment Building

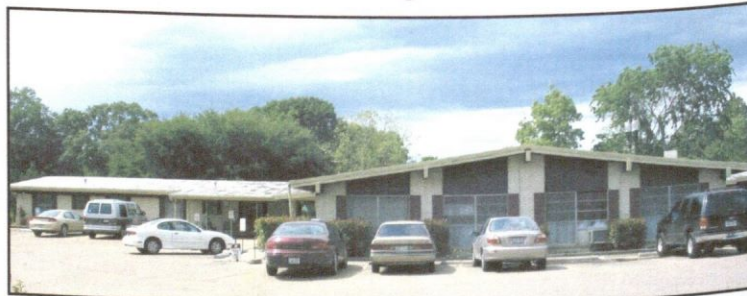


Multifamily Structure/Apartment Building

A multifamily structure or apartment building can be utilized to house three or more families or individuals within one building. The individuals or families live independently of each other, but all within the same structure.

Group Quarters

A group quarters structure has the capacity to house multiple unrelated individuals, where each individual may have a separate or shared living area or room. Meal preparation occurs at one location for all residents and assistance is provided. Such structures are sometimes referred to as "assisted living facilities."



Group Quarters

Rural Residential



Rural Residential

The rural residential category includes both single-family homes and mobile/manufactured homes. These structures must be located on large parcels of land, over five acres.

Downtown Residential Units

Downtown residential units are identified as housing that is generally attached or associated with another land use activity such as commercial or retail use. For example, a downtown residential unit may be located on the second floor of a building whose primary use is a retail shop.

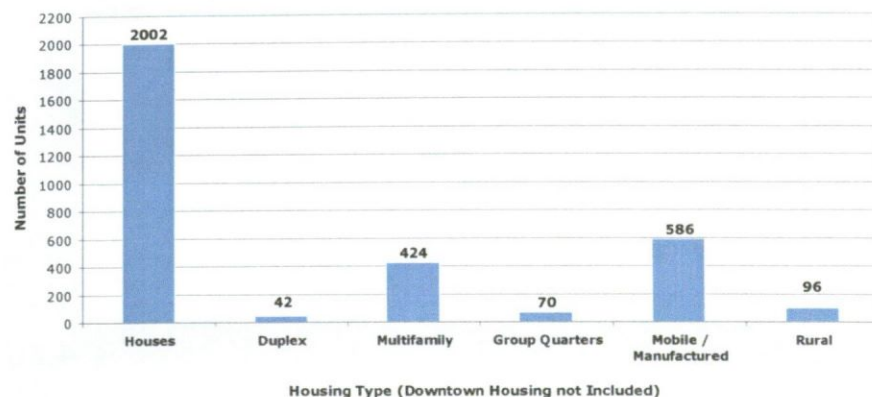


Downtown Residential Units

Current Housing Status

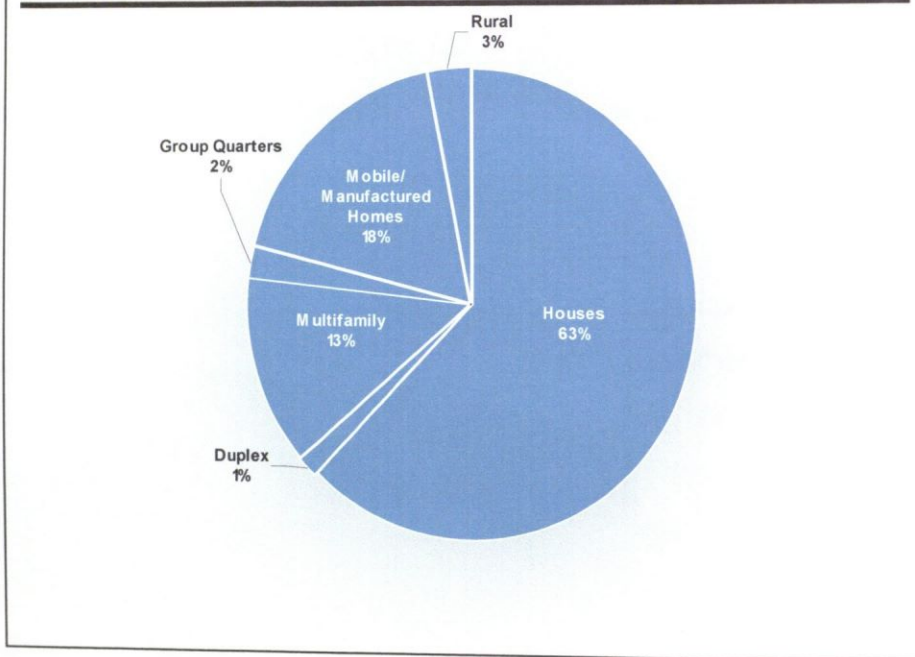
The housing stock of Navasota is varied, but includes primarily single-family homes. Currently there are 2002 single-family homes, 42 duplex units, 424 multifamily units, 1 group quarter, 586 mobile/manufactured homes, and 96 rural residential units for a total of 3,151 dwellings (Figure 10.1).
Downtown units

Figure 10.1: Housing Types by Number of Dwelling Units



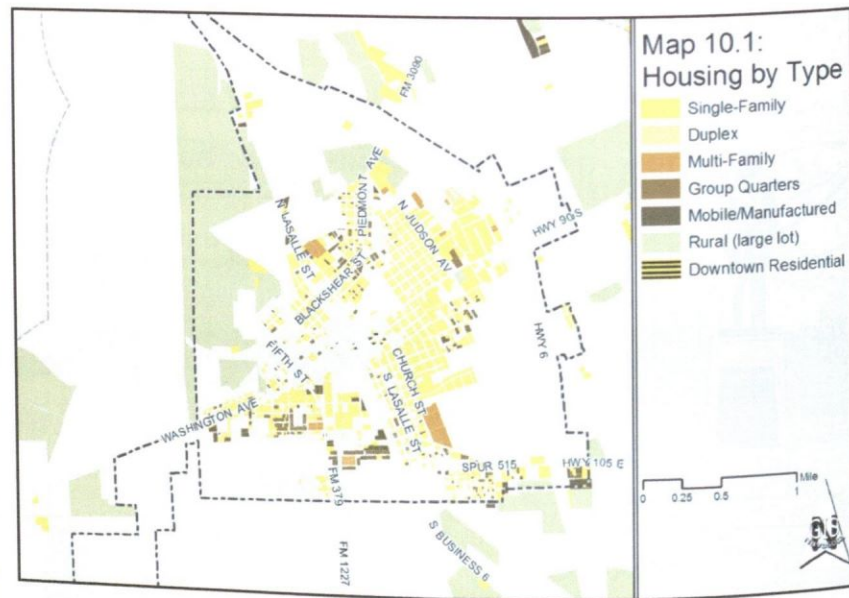
were not included as a part of the study due to the planning team’s inability to secure this information from a windshield survey. Through examination of the data, it is clear the most popular form of dwelling in Navasota is single-family housing comprising 62.17% of the housing. Mobile/manufactured homes are second comprising 18.2% of the housing stock (Figure 10.2). The remainder of the housing stock is comprised of multi-family units at 13.17%, rural housing at 2.98%, group quarters at 2.17%, and duplexes at 1.30%.

Figure 10.2: Housing Units by Percentage of Total Housing



second comprising 18.2% of the housing stock (Figure 10.2). The remainder of the housing stock is comprised of multi-family units at 13.17%, rural housing at 2.98%, group quarters at 2.17%, and duplexes at 1.30%.

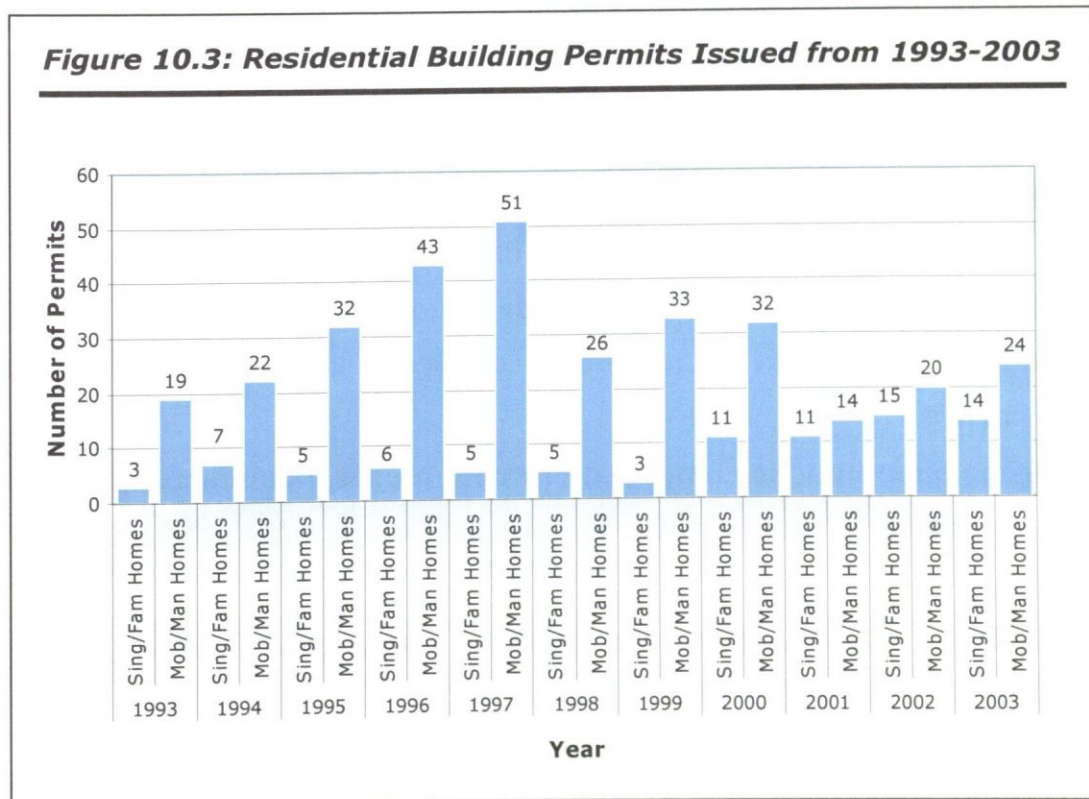
Map 10.1 indicates each housing type and location in the City of Navasota. According to the current City zoning ordinance, the minimum lot size for a single-family unit is 6,000 square feet, with a minimum setback of 25 feet in the front and 20 feet in the rear. The



average lot size for a mobile/manufactured home is 4,800 square feet with a 25-foot front yard setback and a 15-foot back yard setback. Multi-family residential

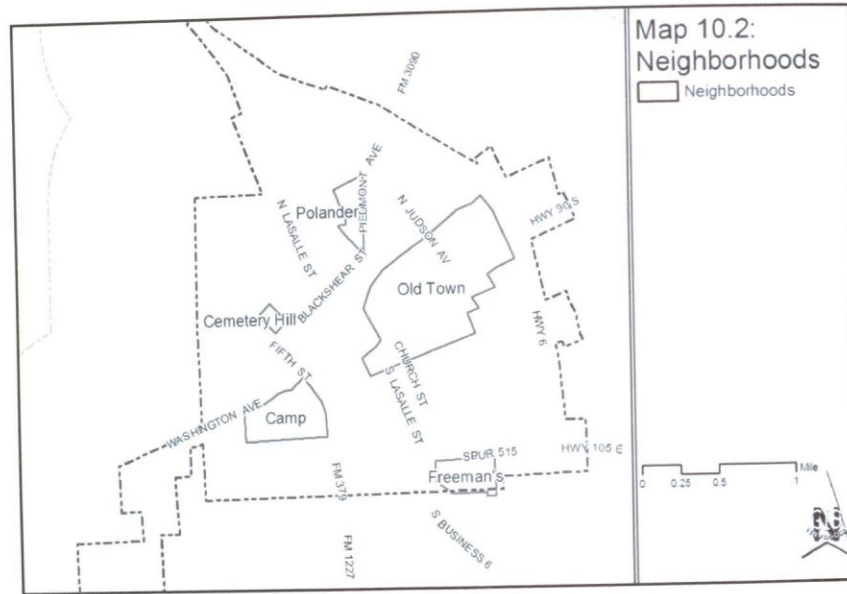
lots must be a minimum of 7,500 square feet for the first two units and 1,500 square feet for each additional unit. The multi-family front yard setback must be a minimum of 25 feet with a 20-foot rear setback. Restrictions for duplex and group quarters are grouped under the multi-family sections in the current zoning code and rural housing units are not addressed.

Most houses have a slab-on-grade foundation, wood framing, and a brick façade. The average residential house is approximately 3,500 square feet and has a fair market value of \$58,500 according to 2000 Census data. When examining Figure 10.2, it is evident that single-family housing and mobile/manufactured housing composes a majority of the dwellings within Navasota. The Grimes County tax appraisal office has determined the average appraised value of a single-family home is \$52,000 and \$19,000 for a mobile/manufactured home in Navasota.



Neighborhoods

The City of Navasota does not have neighborhoods in the traditional sense but does have five distinct areas based on the legal description of the property itself as well as the subdivisions of land (Map 10.2).



The neighborhoods or parts of the City are:

- **Freeman's Town**
 - This neighborhood is located south of SPUR 515.
 - The area is composed of smaller single-family homes and mobile/manufactured homes. Many of the homes as well as the roads in this area are stressed and in need of repair.
- **Camp Subdivision**
 - It is located south of 105 and west of FM 379.
 - Separated from rest of the City by roads, this is actually a traditional neighborhood with commercial services in walking distances of residences.
 - The neighborhood is comprised of many mobile/manufactured and single-family homes. There are several stressed areas within the area.
- **Old Town**
 - Old Town is located north and south of Washington Avenue (ends around Manley in the south and Neal in the north).
 - The homes in this area were mostly built in the 1920's and 1930's.
 - It is composed of traditional Victorian homes.
 - Old Town is the largest and oldest neighborhood area in Navasota. There are many historical structures in this area and the majority of homes are

in excellent or good shape. Most of the residential structures are single-family homes.

- **Cemetery Hill**

- This area is located east of the cemetery.
- Cemetery Hill is a smaller neighborhood. There is a mix of single-family and mobile/manufactured homes in the area and most are in good to fair condition.

- **Polander**

- This neighborhood is located north off Piedmont Avenue and along Chinski Street
- Polander is also comprised of mixed single-family homes and mobile/manufactured homes. A majority of the homes in this neighborhood are considered to be in fair to poor condition, making the neighborhood a stressed area in the urban fabric of Navasota.

Housing Analysis

A block-by-block analysis was conducted to evaluate the housing stock through a windshield survey in Navasota. However, downtown housing was not included in this survey. The City was separated into block sections and evaluated based on foundation, frame, roof, and yard condition. From the block analysis conducted, most homes in Navasota are in good condition. Each housing type was evaluated on the basis of the following criteria:

- **Roof**

- 4: Overall good condition with no obvious damage or wear
- 3: Fair condition, minimal damage or wear is evident, small repairs may be required
- 2: Poor condition, more extensive problems such as missing shingles
- 1: Holes in the roof, need complete repair and replacement

- **Frame**

- 4: Overall good condition, no obvious damage or wear
- 3: Fair condition, minimal damage or wear is evident, only slight maintenance required

- 2: Poor condition, more extensive work required such as painting, new siding, brick replacement
- 1: Exterior wall instability
- **Foundation**
 - 4: Overall good condition, no obvious damage or wear
 - 3: Fair condition, minimal damage or wear is evident, only slight maintenance required
 - 2: Poor condition, in need of major repair, cracks in the foundation, crumbling
 - 1: In need of replacement
- **Yard**
 - 4: Overall good condition, nice landscaping and well manicured yard, no trash lying around
 - 3: Fair condition, less landscaping but mainly well kept, no trash lying around
 - 2: Poor condition, poorly landscaped, un-kept trees/shrubs/grass, trash and junk piles in the yard/porch
 - 1: No yard, no landscaping, and in need of extensive maintenance

The housing condition data was collected according to previously defined study areas. The determined rating was an average of what was seen across the entire study site for each variable: roof, frame, foundation, and yard. Maps 10.3, 10.4, 10.5, and 10.6 show the results of each individual criterion, while Map 10.7 is an average for all four factors.

After review of the collected housing condition data, it is clear that housing conditions tend to follow subdivision lines, thus emphasizing the importance of building codes and high development standards from project start to finish. Enforcement of these standards throughout the entire community and in places of new development is a key element for the improvement of housing in Navasota. If high standards are implemented from the beginning of the development process, higher quality homes and neighborhoods will most likely be built. Likewise, if high

building and development standards are not enforced, lower quality homes are built most likely resulting in lower quality residential units and neighborhoods.

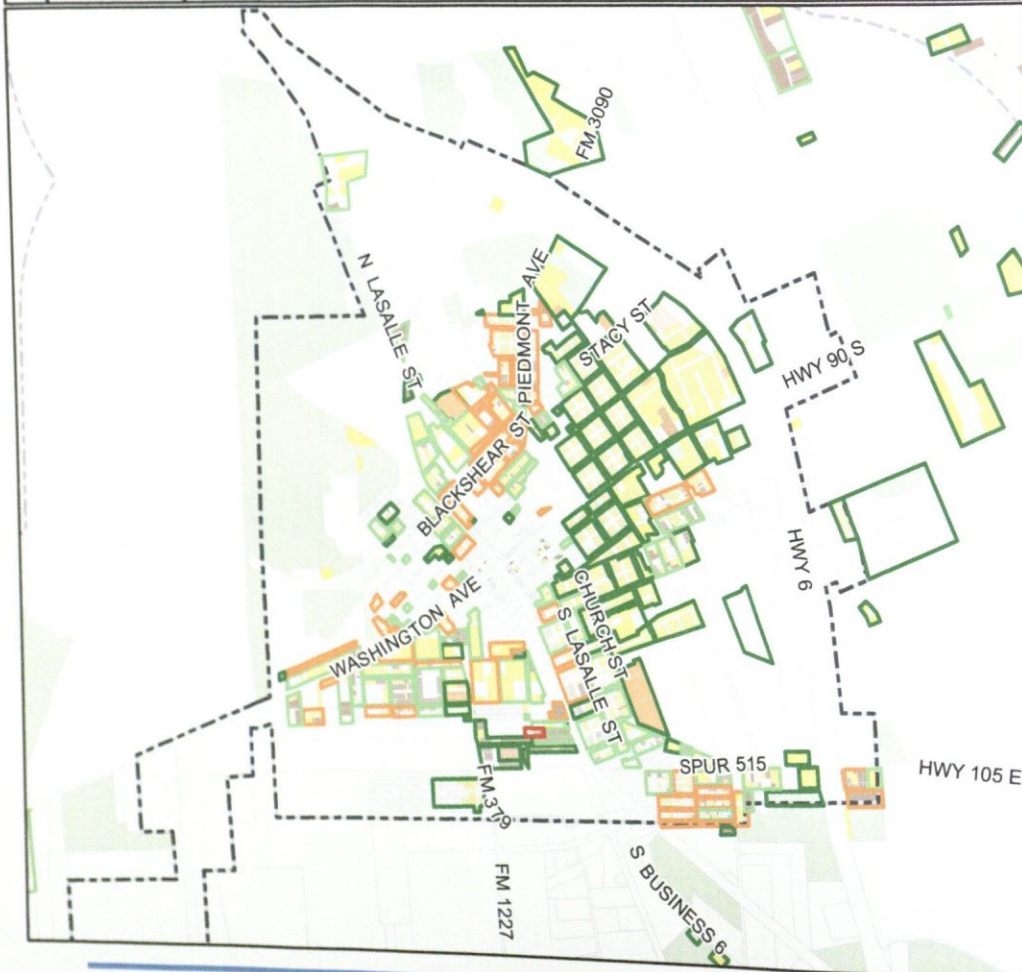
There is a clear dividing line between high quality housing and lower quality housing in the City. LaSalle Street bisects the City not only physically, but also as a clear identification of the change in residential fabric from north to south. A few other thoroughfares such as Piedmont Avenue and FM 379 delineated changes in residential quality. When examining the conditions north of Highway 105, several problem areas include the following:

- Piedmont Avenue appears to be the dividing line between the good and fair rating scale utilized in the housing survey. Both the yards and structure of homes along and to the west of Piedmont appear to be in worse shape (mainly as 2's and 3's) than homes to the east (mainly 3's and 4's)
 - Building foundations mainly appear to be in good conditions across Navasota (mainly 3's and 4's) except for several problems areas west of Piedmont and along Chase Street.
 - Building roofs also appear to be in good condition across Navasota except for a small area east of Piedmont and north of Chase Street



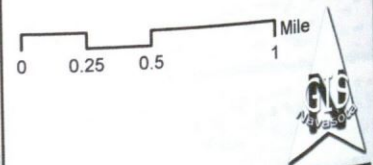
Map 10.3: Roof

- overall good condition
- fair condition
- poor condition
- holes in the roof

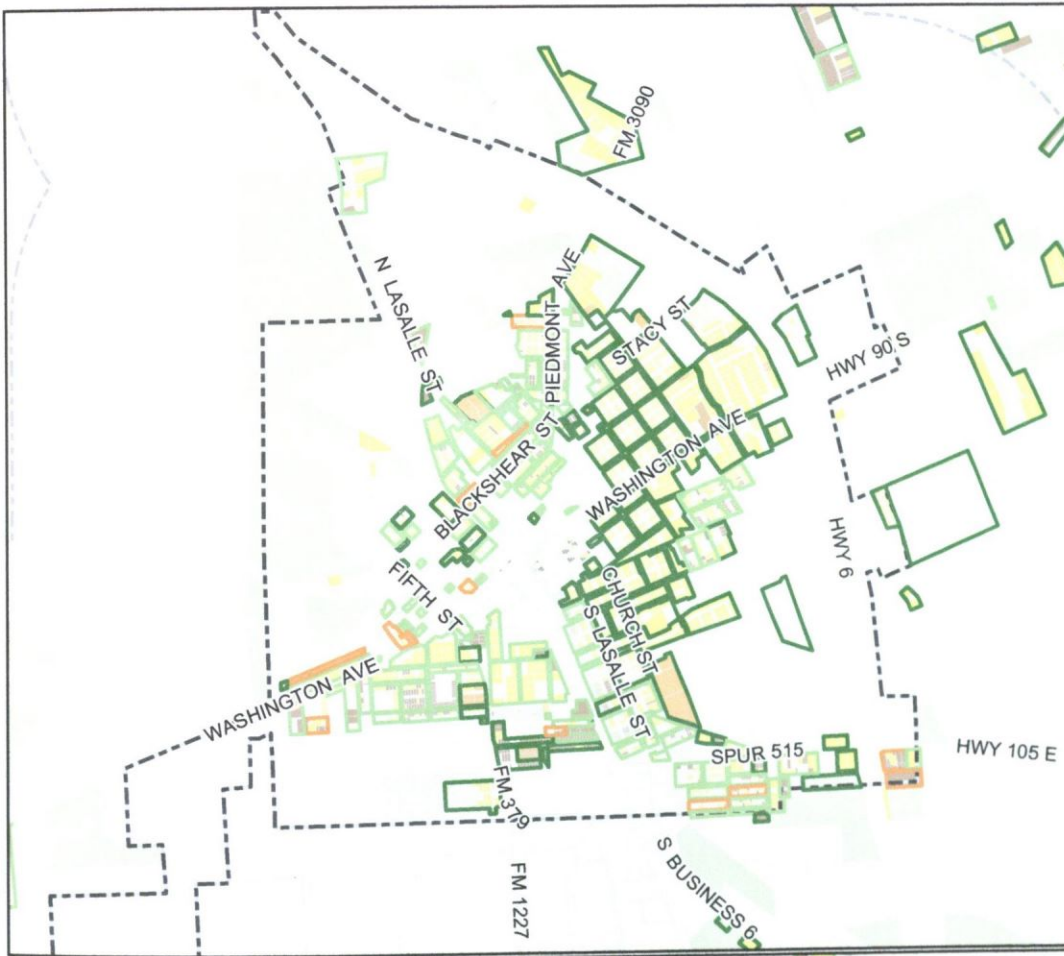


Map 10.4: Frame Wall

- overall good condition
- fair condition
- poor condition
- exterior walls caved in



The housing condition rating is a subjective measure conducted on a "block-by-block" basis through a windshield survey in the spring of 2004. Rankings do not represent specific houses, rather the overall block's condition for each criteria rated. In some cases particular homes were maintained in a significantly better or worse condition than the other homes within its block.



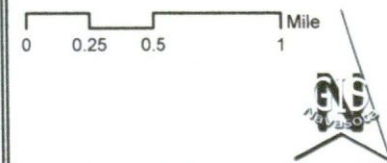
Map 10.5:
Foundation

- overall good condition
- fair condition
- poor condition
- in need of replacement

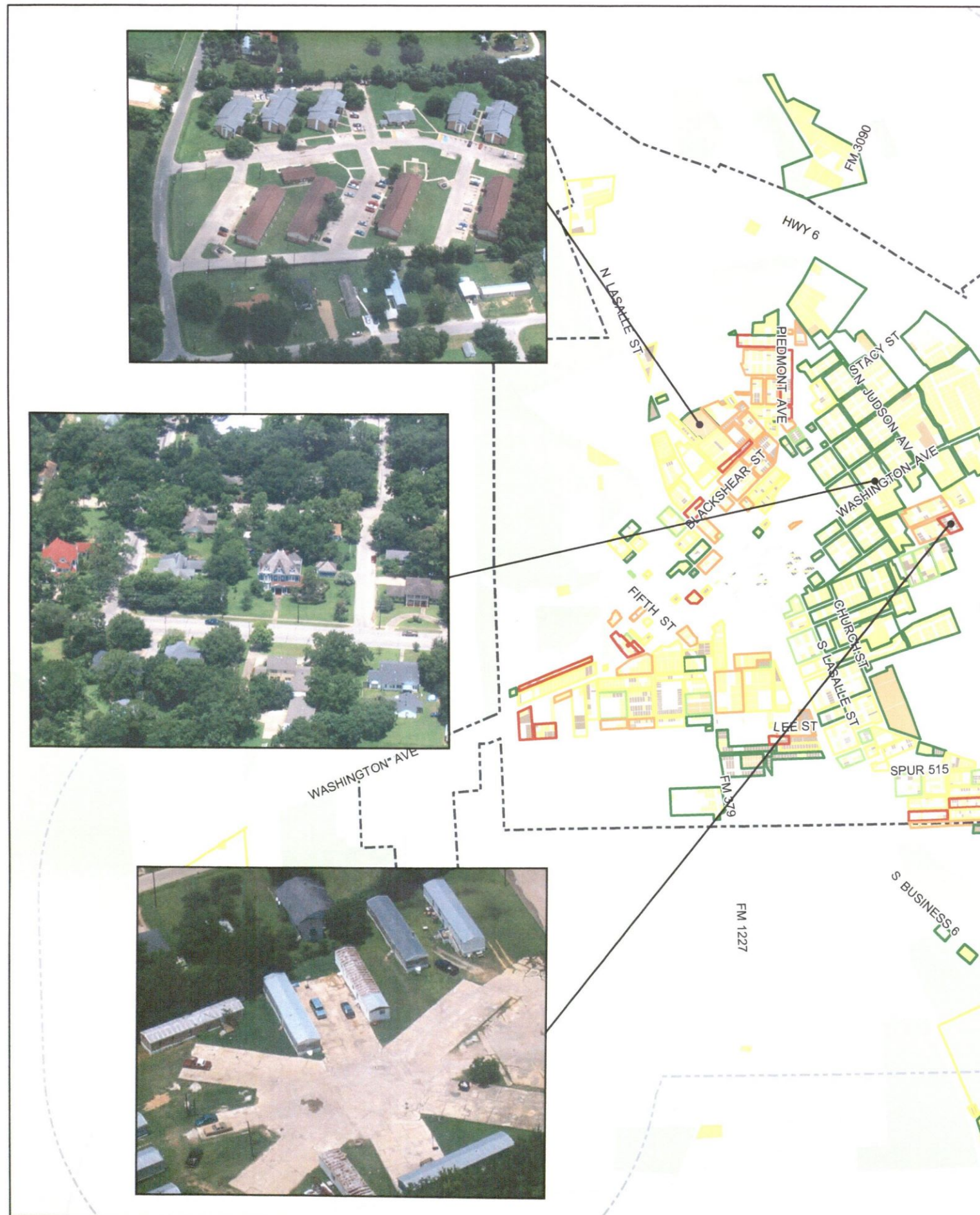


Map 10.6:
Yard

- overall good condition
- fair condition
- poor condition
- no yard, no landscaping

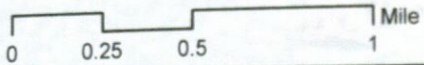


The housing condition rating is a subjective measure conducted on a "block-by-block" basis through a windshield survey in the spring of 2004. Rankings do not represent specific houses, rather the overall block's condition for each criteria rated. In some cases particular homes were maintained in a significantly better or worse condition than the other homes within its block.



Map 10.7: Average Housing Condition Rating

- 3.51 - 4.00
- 3.01 - 3.50
- 2.51 - 3.00
- 2.26 - 2.50
- 1.50 - 2.25



The average housing condition rating is a subjective measure conducted on a "block-by-block" basis through a windshield survey in the spring of 2004. Rankings do not represent specific houses, rather the overall block's condition for each criteria rated. This average rating includes a non-weighted average of surveyed attributes such as: roof, frame wall, foundation, and yard.





When examining the conditions south of Highway 105, several problem areas include the following:

- The area west of FM 379, known as the Camp Subdivision is somewhat blighted in comparison to surrounding areas. The area is poorly maintained, but structurally sound.
 - Most yards in this area are overgrown or poorly maintained.
 - Roofs and foundations are in good condition, however the frame walls of many structures are failing.
- Another blighted area in Navasota is an area known as Freeman’s Town. In comparison to other parts of the City, this area is slightly overgrown and unmanaged. The homes are not in the best condition.

Public Housing

The Navasota Housing Authority (NHA) currently operates only one public housing facility, Allen White, which is composed of 50 units. The NHA is concerned about the availability of public housing in Navasota because currently many of the housing units do not conform to Section 8 housing standards.

Section 8 vouchers are rental subsidiaries for low-income residents provided by the U.S. Department of Housing and Urban Development. There are four privately owned rental housing complexes in Navasota that accept Section 8 vouchers to assist low income individuals and families. There is currently only one nursing home in Navasota, Daybreak Nursing and Rehab, but there are plans underway to develop another facility.

Additionally, Navasota High School and the Brazos Valley Affordable Housing Corporation (BVAHC) have partnered to build homes for the community in an effort to assist with affordable housing. This private/public partnership is a benefit to each party and the community. Students have the opportunity to work with licensed and skilled tradesmen to learn how to build homes. In turn, the high school program utilizes the labor of students to assist in the home construction

process, saving the community money on the final product. The result of this partnership is the construction of affordable homes for citizens of Navasota.

Another joint venture between the City and the Brazos Valley Affordable Housing Corporation (BVAHC) involves the construction of an affordable housing neighborhood. BVAHC is constructing houses on a parcel of land dedicated by the City to the corporation.

Through projects, such as the two discussed above, the City of Navasota is taking a proactive role in assisting with affordable housing.

Housing Needs

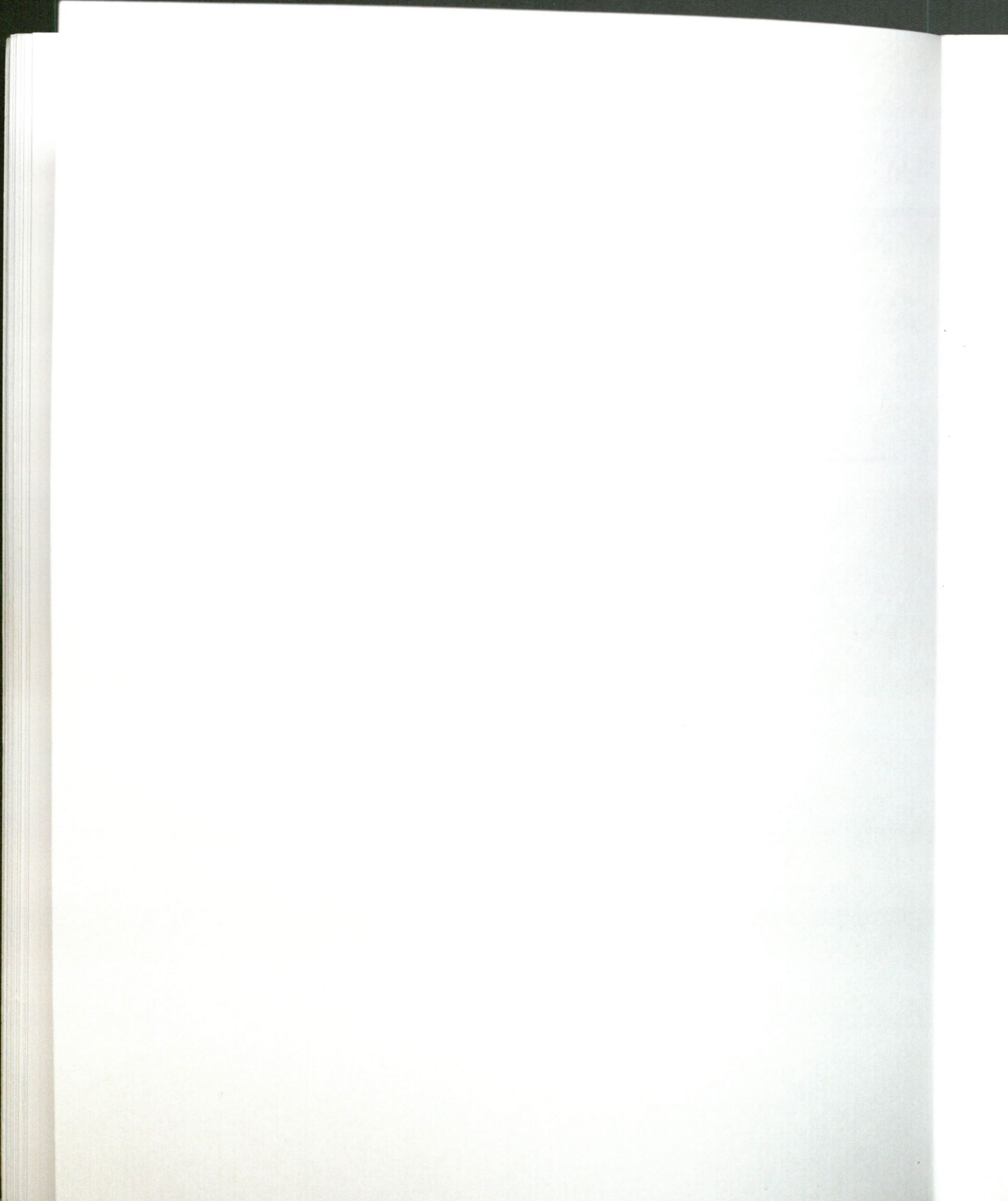
In addition to affordable housing issues, a sufficient quantity of elderly housing is another item of concern. With the growing elderly population in Navasota, additional assisted living facilities are needed.

Sources:

City of Navasota Staff, 2004.
Navasota Housing Authority, 2004.

Community Facilities





SECTION 11 – COMMUNITY FACILITIES

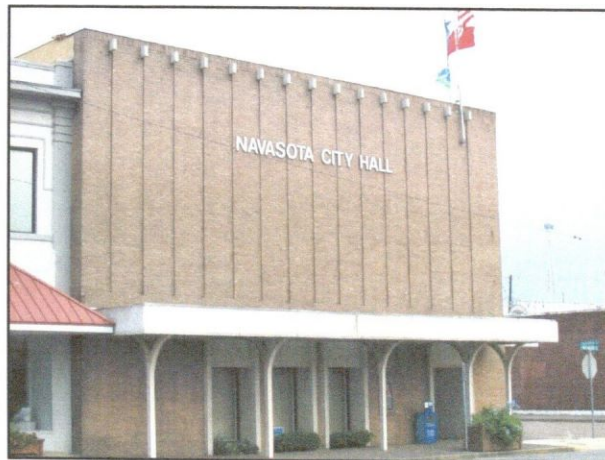
Introduction

Community facilities and services are necessary to maintain the health, safety, and general welfare of the citizens. The general quality of life in the community can be measured by the integrity and availability of these facilities and services. High quality community facilities add to the ability of the city to attract and maintain industries as well as residents. Available services also promote the protection of citizens for the provision of adequate fire and police, in addition to recreational opportunities.

Community facilities in Navasota are dispersed throughout the City. The primary facilities and public services include the municipal government, police services, fire services, parks and recreation, schools, and health services (Map 11.1). Although some of these service providers are not under the authority of Navasota's municipal government, an analysis of them is included.

Municipal Government

The Navasota Municipal Government has approximately 85 full-time staff members and employs an additional 30 employees on a part-time basis. The part-time jobs are seasonal, mainly provided during the spring and summer months. The municipal government occupies a total of six buildings for day-to-day operations. The majority of the municipal buildings are located in Downtown Navasota. Navasota's municipal government consists of five City departments, which include: Police, Fire, Public Works Administration, City Hall Administration, and Library personnel.



Navasota City Hall

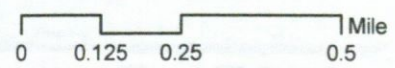
Section 11 - Community Facilities





Map 11.1:
Community Facilities

Facility Site





Navasota’s human and physical resources compare favorably to nationally accepted standards. According to the book Municipal Benchmarks, a 10% turnover ratio is the nationally accepted standard concerning City employment. During the 2003 fiscal year Navasota had a turnover ratio of 7.2%, which places the City slightly ahead of the national rate.

Navasota’s physical resources are adequate for a municipality of its size. However, with the potential for increased staff in the future, more space may be needed. Listed below are the primary municipal buildings of Navasota as well as their addresses.

- City Hall, 202 East Washington Avenue;
- Library, 1411 East Washington Avenue;
- Police Department, 204 East McAlpine Street;
- Public Works, 221 South Railroad Street; and
- City Garage, 520 Malcomn Street.

Police Services



Navasota Police Department

The Navasota Police Department is located at 204 East McAlpine Street. The staff consists of 18 sworn officers including the Chief of Police. Other employees include two secretaries, one judge, two clerks, and one animal control officer. The department currently operates

four 8-hour shifts per day. The shifts are 6 a.m. to 2 p.m., 2 p.m. to 10 p.m., 10 p.m. to 6 a.m., and 8 p.m. to 4 a.m. The department is currently understaffed and plans to switch to 10-hour shifts once a full staff exists. The department uses nine police vehicles, with the units ranging in age from 2 to 4 years old.

Assistance is also provided by the Texas Department of Public Safety, which has four officers serving Navasota. The Grimes County Sheriff's Department provides assistance with thirteen sheriff's deputies. Other agencies that support the Navasota Police Department include:

- The Texas Rangers;
- The Texas Alcoholic Beverage Commission;
- The Texas Attorney General's Office;
- The Federal Bureau of Investigation; and
- The U.S. Immigration and Naturalization Service.

The Navasota Police Department plays a role in community education within the City. It is currently in the process of setting up a Citizens Police Academy and Youth Mini Academy for the fall of 2004. In addition, a process has been started to create a Neighborhood Watch program within the City.

Based on 1999-2002 statistics, the Navasota Police Department handles an average of 284 cases yearly. Table 11.1 provides the crime statistics for the City of Navasota and Grimes County based on a rate per 100,000.

Table 11.1: 2002 Crime Statistics

Agency	Murder	Rape	Robbery	Aggravated Assault	Burglary	Larceny	Auto Theft
Navasota	14.1	28.2	28.2	296.2	1198.7	3342.3	155.1
Grimes County	22.8	11.4	5.7	102.8	611.1	919.5	125.6

Texas Department of Public Safety 2002 ONLINE

Based on FBI Uniform Crime Reports, an average of 2.3 sworn officers should be available for every 1,000 residents (FBI 2002 ONLINE). For cities with a population less than 10,000, the average is 3.2 sworn officers per 1,000 residents. With a population of approximately 7,000 and 18 sworn officers, the current ratio for the City of Navasota is 2.57 officers per 1,000 residents. Navasota meets the general national average, but in order to meet the FBI supported standards, four more

sworn officers would need to be employed. The department is currently seeking to increase the number of sworn officers within the City.

Fire Services

The Navasota Fire Department is located at 1500 South LaSalle Street. The Fire Department serves 200 square miles. A total of 263 fire incidents occurred in 2003. The department has three full-time firefighters, two part-time firefighters, and thirty volunteer firefighters. Each full-time firefighter works a 24-hour shift followed by 48 hours of off-duty. This rotation is common among cities in the United States (Ammons 2001, p. 141).



Navasota Fire Department

All full-time firefighters are Emergency Medical Technician (EMT) certified as required by law. The department provides assistance to EMS operators, but does not provide stand-alone EMS services. The department is capable of handling a 500-acre wildland/urban interface fire, but as a safety precaution requests assistance from other departments such as the Brazos County Volunteer Fire Department. The Fire Department provides community education through outreach programs held at Navasota ISD schools.

A total of 10 pieces of equipment are available for fire protection for the City of Navasota ranging from a large utility vehicle to heavy rescue vehicles. The average age of rescue vehicles is 5 to 6 years, while the department's first line of defense vehicles are 2000 year models or newer. The fire department facility and vehicles are in good condition and meet National Fire Protection Association standards.

The Fire Department is considered a “Mostly Volunteer” type of department, which means up to 50% of the department’s staff members are career firefighters. Despite this label, Figure 11.1 shows that Navasota employs more career firefighters as a “Mostly Volunteer” type of department than the majority of fire departments within its population range. The other departments within the population range are mostly classified as “All Volunteer” department types.

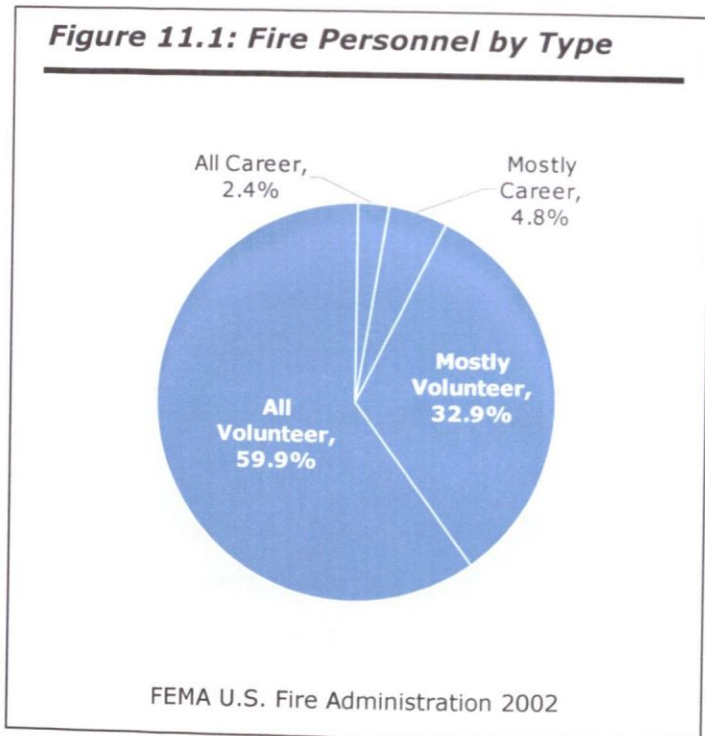


Table 11.2 shows that Navasota also meets equipment standards for a city of its size as compared with the national average.

Table 11.2: Fire Department Equipment and Facilities

	Number of Pumpers per Population	Number of Aerial Apparatus per Population	Number of Fire Stations per Population
National Average	1 per 3,800	1 per 41,700	1 per 5,700
Navasota	2 per 7,000	1 per 7,000	1 per 7,000

Ammons 2001, p. 147

Parks & Recreation

The City of Navasota provides six pocket parks, five neighborhood parks, two community parks as well as four athletic facilities. These classifications were determined by the City of Navasota. The athletic facilities include a nine-hole golf course, little league fields, and soccer fields. The City manages roughly 125 acres of parkland. The park system is primarily located along the Cedar Creek corridor,

which travels through Navasota. These parks are connected by a Nature Trail that ties the northeast area to Downtown Navasota. This linear park trail system was developed along the Cedar Creek Corridor utilizing funds from a Texas Parks & Wildlife Recreation grant. The trail is paved throughout most of the parks. It connects different areas utilizing streets and sidewalks through Navasota.



Cedar Creek Trail

In addition to the parks along Cedar Creek, there are also several neighborhood and pocket parks in the southern area of the City. The park sizes range from the smaller quarter acre pocket parks to the golf course at 64 acres. The largest traditional style park in the City is Austin/Stacey Park, which is located close to the



Playground Equipment

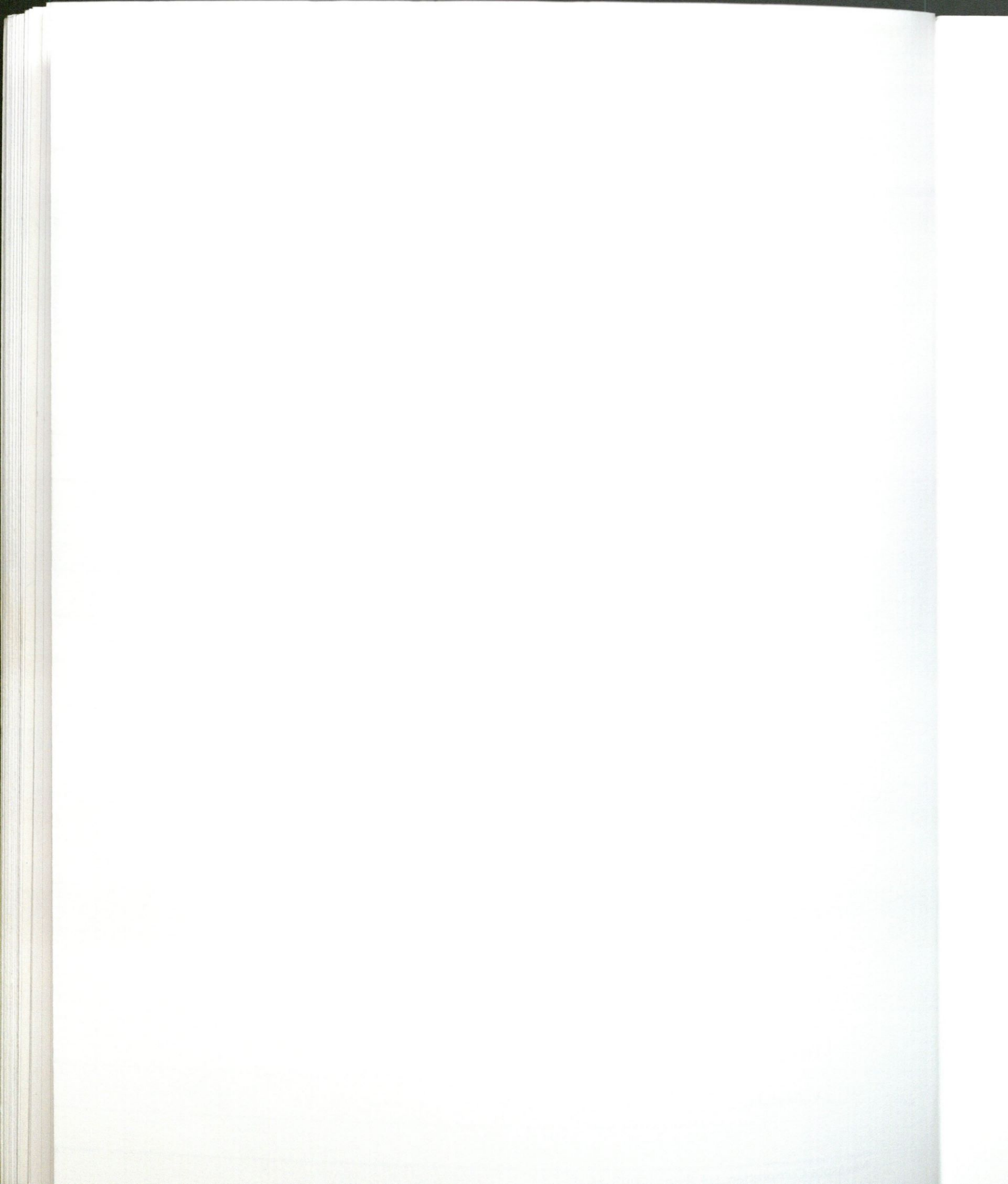
Cedar Creek. The parks offer a wide range of amenities to visitors. These amenities are categorized by park type in Table 11.4. The amenities include picnic tables, playgrounds, trails, basketball goals, volleyball courts, fishing structures, ponds, pavilions, a swimming pool, tennis courts, and soccer fields.

The Navasota park system approaches the minimum level of park acreage standards listed in the Municipal Benchmarks book. The national standards determine the amount of parkland needed based on the population of a city (Table 11.5). The National Recreation & Park Association (NRPA) has guidelines for cities. They have identified three different types of “core” parkland that should be

Table 11.4: Navasota Existing Recreational Facilities

	Pocket Parks							
	Austin / Stacey	Duke	Heritage Meadows	Ketchum	Police Station Park	Manley	Virginia	
Total Acreage		0.25	0.25	0.5	0.25	0.25	0.5	
Baseball Fields								
Basketball Goals								
Driving Range								
Fishing Structure								
Golf Holes								
Group Pavilion								
Picnic Tables	2	✓		✓				
Playground Areas		1	1	1		1	1	
Pond								
Practice Field								
Soccer Fields								
Softball Fields								
Swimming Pools								
Tennis Courts	✓	✓						
Trail (Walk/Bike)								
Volleyball								

Neighborhood Parks					Community		Athletic Facilities			
Virginia	Cleveland	Victoria	Hillside	Rivers Patout	Horst Pavilion	City Pool	Golf Course	Little League	A. Horst Park	RV Soccer
0.5	1.5	1.75	4	3.05		1	64	3	5	3
									1	
		2	2							
							✓			
			✓							
							✓			
					✓					
		4	5	2	✓	1				
1	1	1			1					
			✓	✓						
									1	2
								3	2	4
						1				
									2	
	✓	✓	✓	✓						
		1			1					



provided. Cities should support miniparks, neighborhood parks, and community parks. Table 11.5 displays the different requirements for each type of park.

The City of Navasota has an approximate population of 7000. The benchmarks indicate cities should have at least 6.25 to 10.5 acres of parkland per 1,000 people. Based on Navasota's population the City should provide 42.43 to 71.28 acres of parkland. Currently, Navasota has 36.78 acres. This number does not include the golf course property because it is not identified as a traditional parkland use according to the NRPA.

The City does not sponsor or administer a significant number of recreational programs. The primary programs revolve around the City pool, where swimming



Navasota Swimming Pool

lessons and water aerobics are offered. Other City sponsored recreational programs include little league baseball and softball. The primary recreational amenity offered by the private sector is Pecan Lakes Golf Course, an 18-hole golf course located at southwest side of the City.

Table 11.5: Neighborhood and Community Park Acreage Standards

Component	Use	Service Area	Desirable Size	Acre per 1,000 population	Desirable Size Characteristics
Minipark	Specialized facilities that serve a concentrated or limited population or specific group, such as tots or senior citizens	Less than ¼ mile radius	1 acre or less	0.25 to 0.5 acres	Within neighborhoods & in close proximity to apartments, town house development, or housing for the elderly
Neighborhood Park / Playground	Area for intense recreational activities, such as field games, court games, crafts, playground apparatus area, skating, picnicking, wading pools, etc	¼ to ½ mile radius to serve a population up to 5,000 (a neighborhood)	15+ acres	1.0 to 2.0 acres	Suited for intense use; easily accessible to neighborhood population – geographically centered with safe walking & bike access; may develop as a school - park facility
Community Park	Area of diverse environmental quality; may include areas suited for intense recreational facilities, such as athletic complexes, swimming pools, an area of natural quality for outdoor recreation, such as walking, sitting, picnicking	Several neighborhoods 1 to 2 mile radius	25+ acres	5.0 to 8.0 acres	May include natural features, such as water bodies, & areas suited for intense development; easily accessible to neighborhood served

Ammons, D. N. *Municipal Benchmarks*. (2001). Second Edition. Thousand Oaks, CA, Sage

Educational Facilities

The school system in Navasota consists of six educational facilities serving over three thousand students. The Navasota Primary School, located at 1605 Neal Street, serves Pre-Kindergarten through first grade and has 554 students. John C. Webb Elementary, located at 1604 Stacey Street, administers to second and third grade students comprising a total of 446 students. Navasota Intermediate, located at 203 Brosig Street, serves fourth and fifth grade students making up a population

body of 465. Navasota Junior High, located at 9038 Highway 90 South, serves 668 sixth, seventh, and eighth grade students. Navasota High School, located at 9238 Highway 90 South, serves ninth grade through twelfth grade and has 837 students (Table 11.6). The Carver Learning Center serves as an alternative learning center for students sixth through twelfth grade. The Center offers programs in adult education as well as English as a Second Language (ESL) courses.



Navasota Junior High School

Table 11.6: Number of Students per Educational Facility

School	Number of Students
Navasota Primary	554
John C. Webb Elementary	446
Navasota Intermediate	465
Navasota Junior High	668
Navasota High School	837
The Carver Learning Center	65
Total	3035

There is one private school in Navasota, located on Highway 6 Loop South, which serves twenty-three students ranging from Kindergarten through eighth grade. The ratio of students per teacher for Navasota ISD is 13.0, which is better than the national average of 16.5 students per every certified teacher.

Health Services

The existing health services of Navasota include the Grimes St. Joseph Health Center, the Navasota Medical Center, three dentists’ offices, and an optometrists’

office. The Grimes St. Joseph Health Center, located at 210 Judson Street, is a critical access facility with numerous services. The Center provides care for approximately 450 to 500 patients in the emergency room each month. Information for Grimes St. Joseph Health Center is listed in table 11.7.

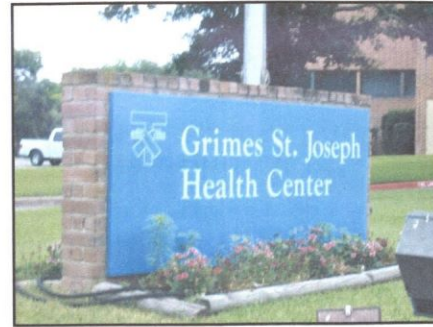


Table 11.7: Grimes County St. Joseph Information

Number of Beds	25.0
Dieticians	1.0
Inhalation Therapists	1.0
Licensed Nurses	7.5
Occupational Therapists	1.0
Physical Therapist	1.0
Registered Nurses	9.0
Registered Pharmacist	0.5

(Number of employees is given as equivalent to full-time status)

The Health Center also has a Behavioral Health Unit, which provides short-term care for adult psychiatric patients. Four physicians' offices are located at the Navasota Medical Center and three in the Navasota Professional Building. There are currently three Dentist's offices, that each currently serve approximately one third of Navasota's population. There are currently no orthodontists permanently located in the City, however one such physician visits Navasota each week from College Station. There are currently no ophthalmologists' offices, however there is one optometrist. Due to Navasota's close proximity to College Station, many patients visit facilities and physicians in the College Station/Bryan area.

Sources:

Ammons. D. N. Municipal Benchmarks. (2001). Second Edition. Thousand Oaks, CA, Sage Publishing.
 City of Navasota Comprehensive Parks Plan (1999).
 Federal Bureau of Investigation (FBI). (2002). Uniform Crime Reports: Crime in the United States – 2002.
 Retrieved Feb. 3, 2004 from the FBI websites: <http://fbi.gov>
 Texas Department of Public Safety (DPS). (2002). 2002 Crime in Texas. Retrieved Feb. 3, 2004 from the
 Texas DPS websites: <http://www.txdps.state.tx.us>

Historic Resources





SECTION 12 – HISTORIC RESOURCES

Introduction

Originally settled in 1822, the site of present day Navasota is rich in both history and historical assets. Historic resources in Navasota are important to the quality of life by giving it a sense of place, character, and individuality. This section includes the identification, evaluation, mapping, and potential protection of historic sites.

Historic Preservation Efforts in Navasota

Historical Character

Navasota is a city of unique character, oriented to the development of the railroad. In order to preserve Navasota's character, the historic fabric in Downtown Navasota and the surrounding residential neighborhoods should be protected. The City contains two structures listed on the National Register of Historic Places and twenty-seven structures recognized by the Texas Historical Commission. Navasota's character is not strictly derived from pristinely preserved structures, but rather a large and diverse collection of historic of resources.

Hannibal Boon Organization

In 1901, one of the first historic preservation efforts was the organization of the Hannibal Boon Chapter of the Texas Society of the Daughters of the American Revolution. The primary mission of this society was to promote historic preservation within the City of Navasota. Their involvement included significant efforts in the establishment of the LaSalle Monument in 1930.

Navasota Bluebonnet

In 1954, Miss Maurine Chinski wrote the Navasota Bluebonnet. Following her death, the Historical Committee of Navasota and the Grimes County Chamber of Commerce published her work. This document is a historical account of the City's development from 1854 to 1954. The Navasota Bluebonnet was one of the first

identify buildings that were listed with the National Register of Historic Places and the Texas Historic Commission.

Windshield Survey

A windshield survey was conducted on Navasota's historical resources by driving throughout the City and noting historic buildings and markers. The buildings included both residential and commercial properties that had not been previously identified.

Geographic Information System (GIS)

In preparation for the Historic Resources Plan an inventory was conducted and a Geographic Information System (GIS) database was created. Resources identified through documented lists and the windshield surveys were mapped in relation to existing land uses, transportation networks, and other various data sources within the city-wide GIS. For the purposes of this plan, these mapped features were linked to scanned data and photographs, allowing users to view the documents quickly.

Attributes such as age, condition, and architect were entered for each site. This data provides for quick mapping and analysis of historic resources. Examples of possible analysis include the impact on property values of adjacent historic structures, spatial location of resources, and an analysis of possible impacts on historic resources due to future development.

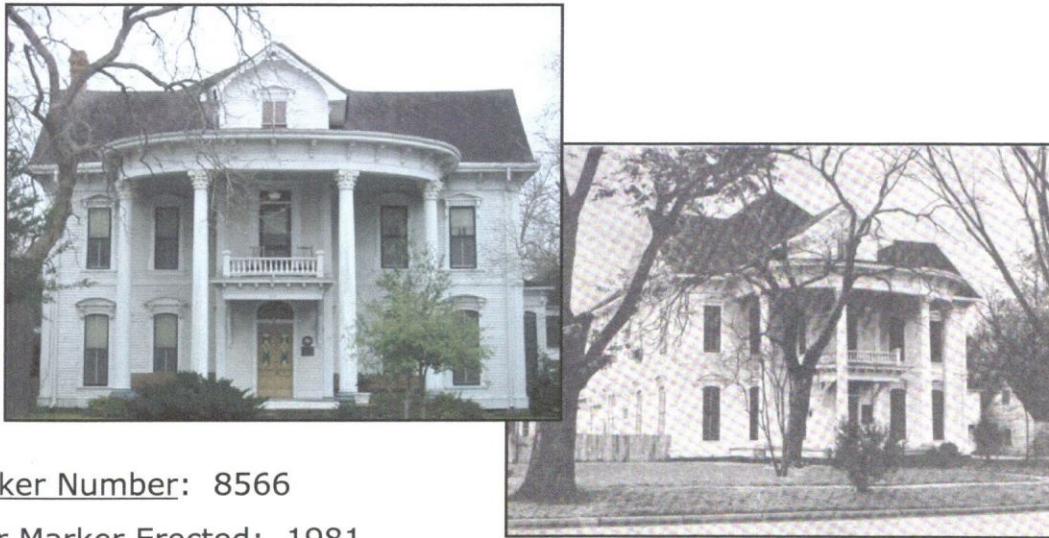
Possible future uses of this database could include an interactive map on the City's website. Though not included in this project, such a service would allow citizens quick and relatively inexpensive access to a wide range of historic images, text, audio, and video about historic structures and sites in Navasota. This type of resource may also play a key role in encouraging redevelopment and new economic development within the City.

Historic Resources Survey

The survey includes residential homes, commercial buildings, and historic sites. The following structures are listed with the Texas Historical Commission and/or the National Register of Historic Places and can be found on Map 12.1 at the end of this document. Other structures that could be considered historic but are not listed are documented in Table 12.1. Marker text information was gathered from <http://atlas.thc.state.tx.us>.

Texas Historical Commission Listings:

1. Joseph Brooks Home: 612 East Washington Avenue



Marker Number: 8566

Year Marker Erected: 1981

Marker Text: "A native of England, Joseph Brooks (1831-89) migrated to Texas with his wife Mary Ann (Farrer) (1833-1900) in 1853. After serving in the Civil War, Brooks moved to Navasota, where he survived an 1867 yellow fever epidemic and became a leading area lumberman. In the 1870s he had this home built for his family. Originally Victorian in design, it was modified with classical revival detailing in 1909-11 by the Brooks' daughter Mary Elizabeth Brooks Salyer. Recorded Texas Historic Landmark – 1981"

2. Evans House: 412 Manley Street

Marker Number: 8572

Year Marker Erected: 1991

Marker Text: "Newlyweds John Thomas and Maude Martin Evans built this house in 1894 on land given to them by his mother. A ticket agent for the International and Great Northern Railway Company, Evans also served the city of Navasota as alderman and city treasurer. The typical 19th-century vernacular house features a gable roof, and a three-bay porch with elaborate balustrade, turned wood posts, spindlework frieze, and jig-sawn brackets. Recorded Texas Historic Landmark – 1991"



3. First Baptist Church of Navasota: 309 Church Street



Marker Number: 8574

Year Marker Erected: 1977

Marker Text: "In the spring of 1860, six men formed this church, one of the first of any faith in the railroad town of Navasota. By fall there were 52 members, and growth continued. Services were held in the town's

schoolhouse, and then in a Methodist church, until the Baptists received a site as a gift from the Houston & Texas Central Railway, and built a small frame sanctuary about 1872. A permanent edifice of native stone was started after Mrs. A. E. Baten, wife of the pastor, drew plans in 1889. Funds came from members and non-members, sometimes as donations of cattle, and a 46' x 67' x 37' x 67' stone building with a steeple was completed in 1890. By 1925 more room was needed; a 2-story annex was constructed. Although a new, larger sanctuary was erected in 1955, the 1890 building is still used. In 1969, it was converted into a fellowship hall, and after a disastrous fire the next year was restored in 1971. The congregation-- now numbering more than 900 members-- founded and financed one local mission that became self-supporting, and now underwrites another. During the church's first 116 years, it has been served by 35 pastors."

4. Old First National Bank of Navasota: 107 West Washington Avenue

Marker Number: 8576

Year Marker Erected: 1981

Marker Text: "Local architect, contractor and stonemason James Davern and his brother-in-law C. C. Camp built this commercial edifice in the 1880s. Constructed of cement-covered stone rubble, it was remodeled with Renaissance Revival detailing in the 1890s, during the ownership of the First National Bank of Navasota. Occupied by the bank until



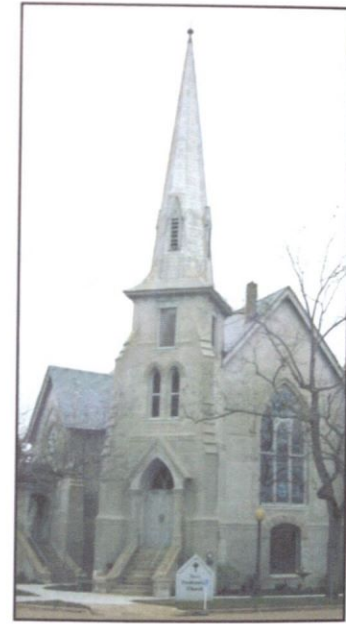
1952, it has also housed a hotel, offices, a telephone company, and a variety of stores. Recorded Texas Historic Landmark – 1981"

5. First Presbyterian Church of Navasota: 302 Nolan Street

Marker Number: 8577

Year Marker Erected: 1970

Marker Text: "Organized in 1866, drawing members from old church at Washington, Texas. First building, erected in 1876, was replaced in 1894 by this Victorian edifice finely crafted in the taste of its English builders. Recorded Texas Historic Landmark – 1970"



6. First United Methodist Church of Navasota: 616 Holland Street

Marker Number: 8575

Year Marker Erected: 1984



Marker Text: "The first worship services of the Methodist church in Navasota were held in 1853 in the community schoolhouse. The Rev. T. W. Blake served as part-time pastor for most of the antebellum and Civil War years. In 1866 the Houston & Texas Central Railroad deeded land at this site for use by the Methodist congregation. In that year, a frame building with shuttered windows was constructed for the fellowship. It was named Robert Alexander Chapel in honor of an early Methodist circuit rider in Texas. The chapel was

also used by Navasota's Presbyterian congregation. In 1891 a rock building replaced the frame structure and was used until 1912, when a brick sanctuary was built. The current sanctuary was completed in 1959. Although the size of the congregation is relatively small when compared with that of other churches in the area, the First United Methodist Church of Navasota has served as host to the Texas Annual Conference of Methodist Churches. Throughout its history, this congregation has provided significant service and leadership to the community and has continued to uphold the ideals and traditions of its pioneer founders."

7. Foster Home: 1015 East Washington Avenue

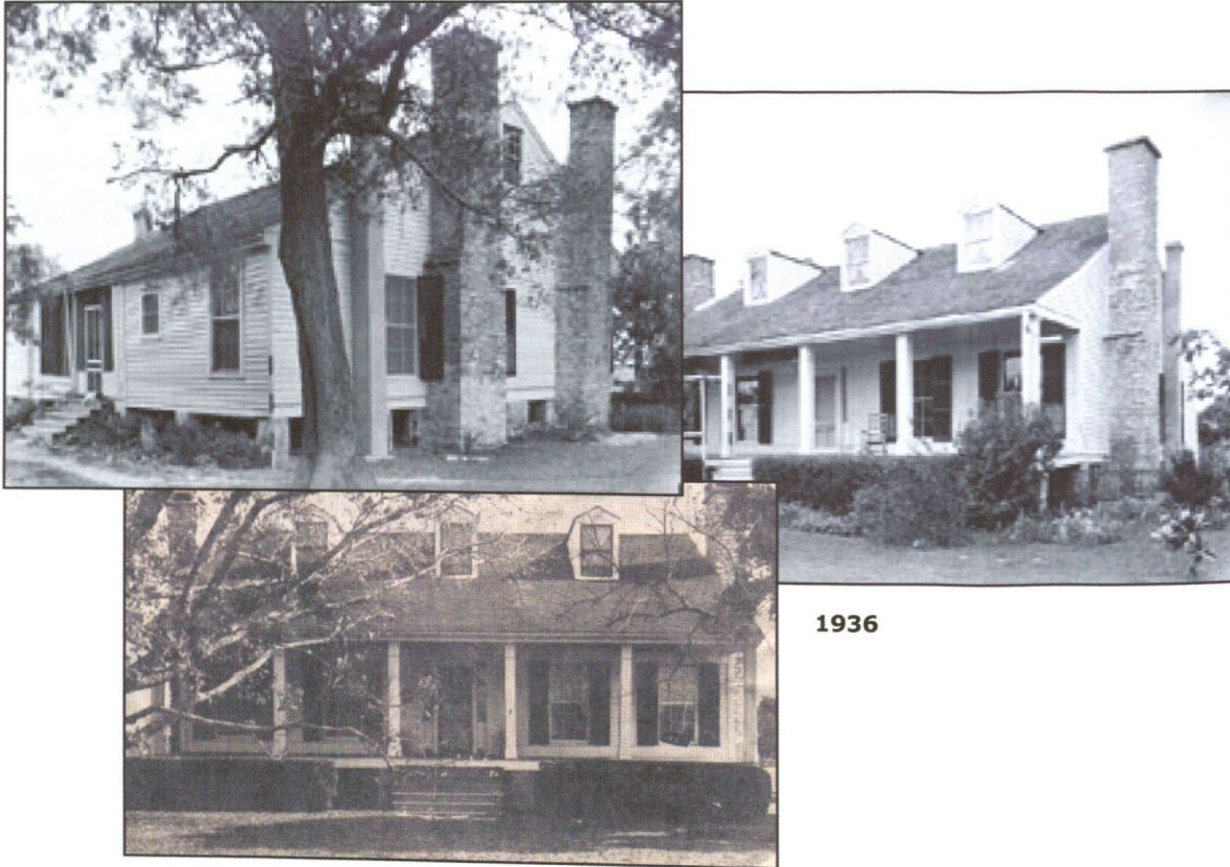
Marker Number: 8578

Year Marker Erected: 1982

Marker Text: "Mattie Brigance Foster, daughter of Grimes County settler Franklin Brigance, had this home built in 1900 shortly after the death of her husband. Incorporating elements of the colonial revival and shingle styles, the house is of cypress frame construction and features a multi-gabled roof. Its design is indicative of the movement away from the elaborate detailing of the Victorian era. The home remained in the Foster family for 60 years. Recorded Texas Historic Landmark - 1982 Incise on base: Sponsored by Salih M. Yilmaz, M.D., Ph.D."



8. R.B.S. Foster Home: from the intersection of SH 6 and SH 90 take SH 90 approximately 1.5 miles.



Marker Number: 8579

Year Marker Erected: 1968

Marker Text: "Early Texas plantation home in architectural style of the Atlantic states. Malcolm Camp, wealthy cotton planter, built this structure in 1859, with lumber hauled from East Texas sawmills. High-ceilinged rooms are very large. Formal dining room in sandstone-lined cellar was unique. Had detached kitchen. Purchased 1883 by a leading local citizen, R.B.S. Foster (1848-1889), this was birthplace of his three children-- Georgia, Robert F. and Nettie Rose. So stable is this locality that home was continuously occupied until 1966 by Fosters or their agents."

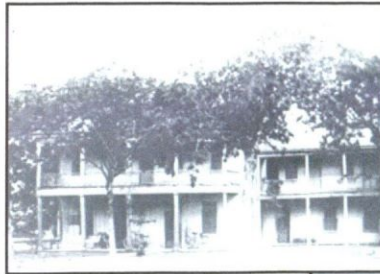
9. Site of Freeman Inn: 500 East Washington Avenue

Marker Number:

8580

Year Marker

Erected: 1968



Marker Text:

1936

"Built by Ira M. Freeman, 1856; way station and hotel for passengers on several stage lines through city. Two-story pine building housed many travelers, among them, Sam Houston. Important visitors, officers stayed here in Civil War. Coaches and teams were kept in Freeman's barns."

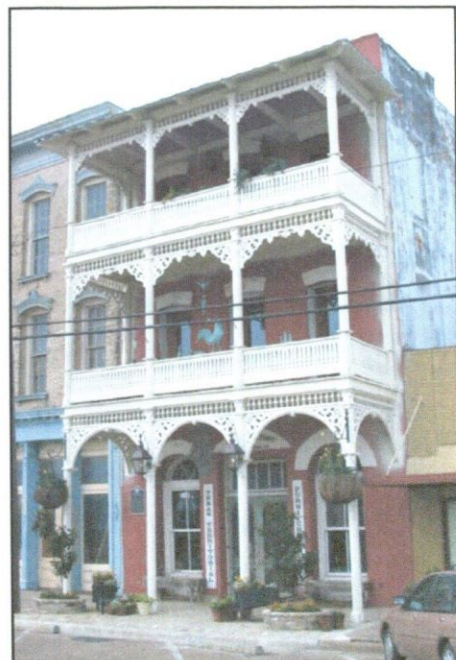


10. The Giesel House: 113 Railroad Street

Marker Number: 8581

Year Marker Erected: 1977

Marker Text: "Situated near the Houston & Texas Central Railroad Depot, this three-story stone building was erected in 1860 by R. H. Giesel (1833-1872) and his German-born wife Fannie (1828-1881) to house a restaurant and hotel. A two-story frame porch originally extended across the front of the structure. Giesel, a Confederate veteran, served as temporary mayor in 1867, when a yellow fever epidemic struck Navasota. Fannie Giesel renamed her restaurant "The Good Morning John" in 1871. She managed the business



until her death in 1881. Later owners operated the hotel as "The Exchange" and "The Hoyle"."

11. Rosanna Ward Grimes and Jesse Grimes

Marker Number: 8583

Year Marker Erected: 1965

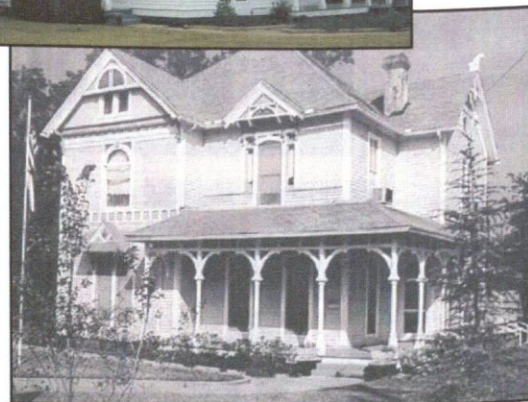
Marker Text: "Home of Rosanna Ward Britton Grimes (1803-1871) and Jesse Grimes (1788-1866). Signer of the Texas Declaration of Independence and the Constitution of the Republic of Texas; Member of the Congress of the Republic; State Senator; in his honor Grimes County was named."

12. Robert A. Horlock House: 1215 East Washington Avenue

Marker Number: 8590

Year Marker Erected: 1984

Marker Text: "Alabama native Robert Augustus Horlock (1849-1926) came to Navasota in 1871. Here he became a prominent businessman and civic leader. He and his wife, Agnes (White), had this home built in the early 1890s. The house, which remained in the Horlock family for nearly 100 years, exhibits influences of the eastlake and stick styles of architecture. Prominent features include the corner porch, the arched windows with small gabled hoods, and the decorative woodwork. Recorded Texas Historic Landmark – 1984"

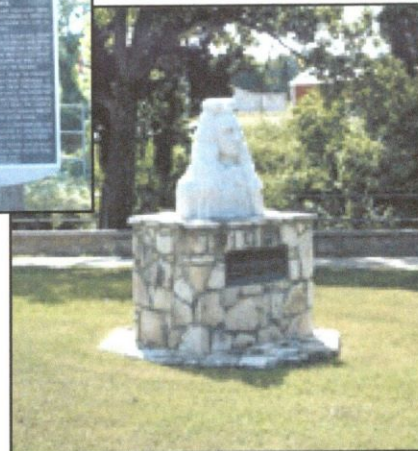


13. La Bahia Trail: Intersection of LaSalle Street and Bruce Street

Marker Number: 8595

Year Marker Erected: 1967

Marker Text: “Originally an Indian trail through Southern Texas and Louisiana; known to Spanish explorers as early as 1690, when the De Leon Expedition passed this site on the way from Mexico to East Texas. With 115 men, 721 horses, 82 loads of flour, and other supplies, Alonso de Leon, Governor of Coahuila, and Father Massanet, a Franciscan priest, entered the wilds of Texas. The purpose of the expedition was to discourage French



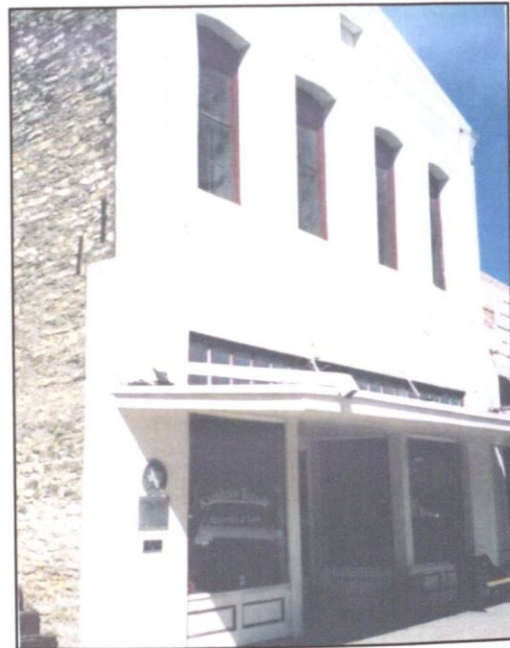
encroachment from the north, as well as to explore, colonize, and Christianize the Indians. They followed the rugged trail from the present town of Refugio to Goliad and continued northeast to Navasota, probably following Cedar Creek through this town. Then they journeyed north until reaching the Neches River, where (near present Weches) they founded the Mission of San Francisco de Los Tejas. The church was called after the Tejas, or "Friendly" Indians, whose name was eventually given to the entire state. Although de Leon's party went no farther on the western section of the trail, known as Atascosito Road, the eastern section extended into Louisiana. In nineteenth century, the route gained importance as a cattle trail, the Opelousas Road, that moved Texas herds to market in the north and east.”

14. Leake Building: 211 East Washington Avenue

Marker Number: 8597

Year Marker Erected: 1977

Marker Text: "Originally a one-story frame business house built in 1873 by Walter J. and Julia C. Peterson, this structure was enlarged in 1885. Native sandstone walls and a second story were added. John Wesley Leake (1852-1940), a builder, horse breeder, and race track owner, bought the property in 1886. He and his descendants owned the building more than 80 years. The Victorian commercial structure has housed many important firms. Recorded Texas Historic Landmark – 1977"



15. Lee Tabernacle Methodist Church: 302 Teague Street

Marker Number: 8598

Year Marker Erected: unknown

Marker Text: "This Methodist congregation was founded in 1860, and worshipped with the Baptist church in shared facilities in Navasota. A church building was erected in 1866 in what was called "Freeman's Town." The Methodist group was formally organized in 1876, and built a separate



facility a few years later. This church building was erected in 1896. During construction, services were held in the basement until the sanctuary was

finished. When the structure was completed, the congregation changed its name to honor the pastor at that time, The Rev. Edward Lee, becoming the Lee Tabernacle Methodist Church. Interior modifications have occurred over the years, including the restoration of the stained glass windows, the addition of a choir room, and general remodeling, but the exterior remains essentially intact. A parsonage was added to accommodate the pastor. This church structure is a fine example of a Gothic revival design, featuring arched windows, a tower entry, stained glass windows, double wood paneled doors, and a gabled roof. The Lee Tabernacle Methodist Church continues to serve its dedicated members as it has for over 130 years in the Navasota community.”

16. Mickelborough Building: 115 East Washington Avenue

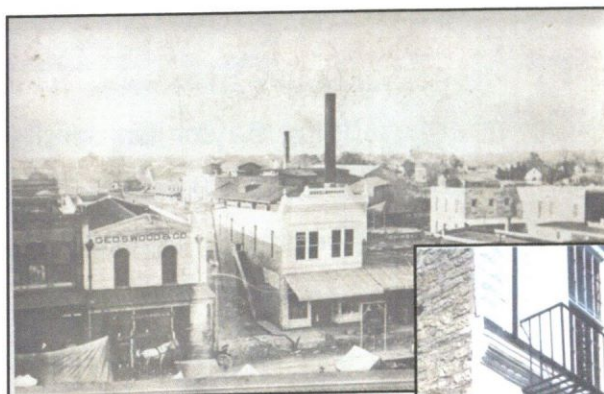
Marker Number: 8601

Year Marker Erected:

1980

Marker Text: “Eliza Johnson (d. 1876) had this building

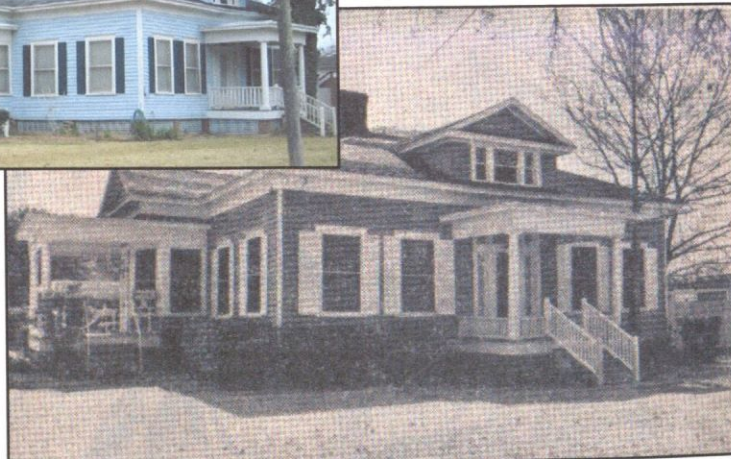
constructed in 1874 following a fire which destroyed several structures on the block. It was made of limestone rubble to comply with a city ordinance requiring all new construction to include fireproof materials. August Horst (d. 1920), a local investor, bought the property in 1877 and sold it two years later to his wife's brothers, E. P. and J. H. Mickelborough. Members of their families owned it until 1929. The building has housed a saloon, grocery, confectionary, ice cream parlor, and offices for attorneys and dentists.”



17. Home of Lt. Gov. George D. Neal: 504 Church Street

Marker Number: 8604

Year Marker Erected: 1974



Marker Text: "(Oct. 7, 1853 - July 13, 1916) Born in Amelia County, Va. The Neal Family moved to Washington County, Texas,

in 1866. Neal, after attending Baylor University, was admitted to the Bar in 1876. He married Fannie C. Brooks in Oct. 1880, moved to Navasota in 1881, and purchased this residence in 1883. The couple had 3 children. Neal served as county judge, 1884-86; city attorney, 1888-96; and as a State Senator, 1896-1902. He was elected Lieutenant Governor in 1902 and 1904, serving with Gov. S. W. T. Lanham. Neal retired from politics in 1907 and returned here to practice law."

18. Norwood House: 207 Ketchum Street

Marker Number: 8605

Year Marker Erected: 1984

Marker Text: "Built to serve as the first residence of Ewing and Mattie (Brosig) Norwood, this house was completed in 1898, while Ewing Norwood was president of the First National Bank of Navasota. Designed and built by local architect Ernest Lord, the home exhibits Queen Anne influences in the entry and porch detailing and features a depressed arch and a balustrade over the entryway. The house remained in the Norwood family for more than sixty years. Recorded Texas Historic Landmark – 1984"



19. Sangster House: 1113 East Washington Avenue

Marker Number: 8613

Year Marker Erected: 1974

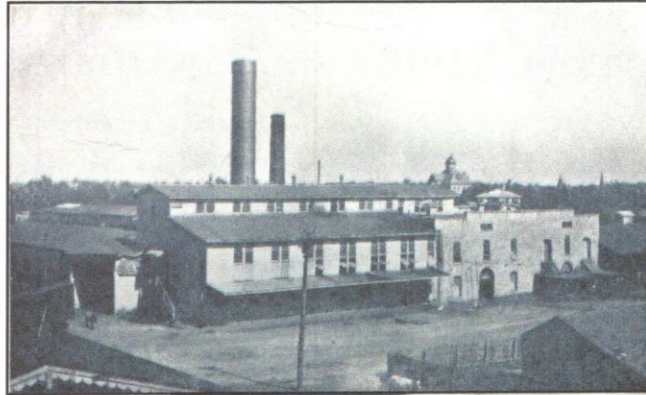
Marker Text: "Built in 1902 by Robert Andrew "Buck" Sangster (1878-1957), with part of the proceeds from a winning lottery ticket. Constructed in the Queen Anne revival style with classic revival elements on the exterior. Curly red pine woodwork decorates the 12-room interior. Ernest Lord (1860-1941) was the architect. The house was purchased in 1929 by Sangster's brother, W. W. Sangster, and it remained in the Sangster family until 1965. Recorded Texas Historic Landmark – 1974"



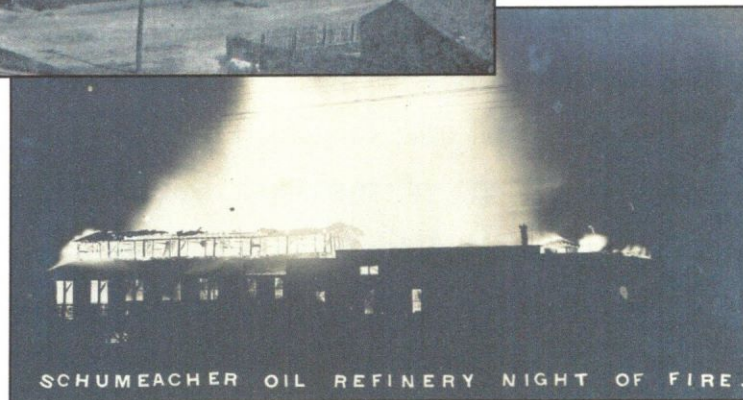
20. H. Schumacher Oil Works: 206 Duke Street

Marker Number: 8615

Year Marker Erected: 1974



Marker Text: "Henry Schumacher (1832-1901), a native of Germany, opened one of the first cottonseed oil mills in this region in 1873, assembling



the machinery with only the aid of an old encyclopedia. The oil works produced cottonseed oil, meal, and cake, and processed about 1500 tons of seed per year. Schumacher was honored for his contributions to the cottonseed oil industry about 1883 with a dinner at the White House given by President Chester A. Arthur. The first mill burned in 1910, but was soon rebuilt, complete with modern machinery. The oil works ceased operation in 1954."

21. Henry Schumacher Home: 306 Duke Street

Marker Number: 8614

Year Marker Erected: 1974

Marker Text: "Built by Henry Schumacher (1832-1901), a native of Germany who came to Texas in 1849. In 1866, after serving with the Texas Infantry in the Civil War, he settled in Navasota, was a charter member of the First Presbyterian Church, and about 1868, married Emma Louise Horlock. They had eight children. In 1873, Schumacher built this home and a cottonseed oil mill, for which he was well-known. He was president of the First National Bank at his death."

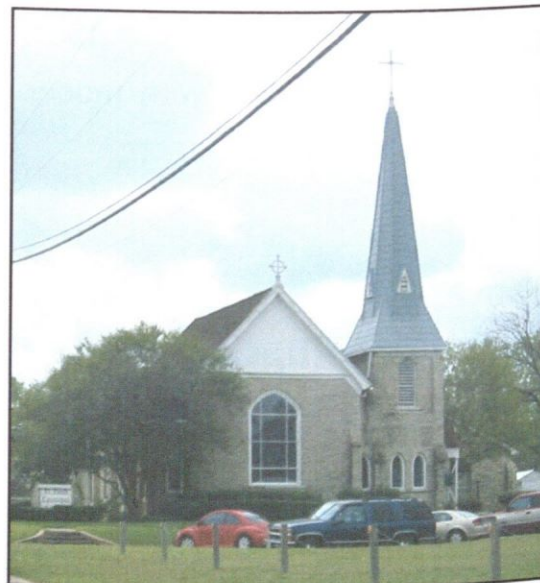


22. Saint Paul's Episcopal Church: 414 East McAlpine Street

Marker Number: 8612

Year Marker Erected: 1974

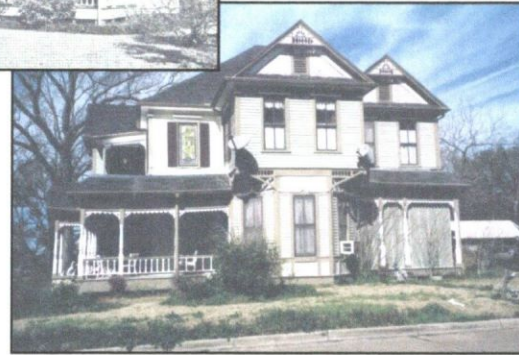
Marker Text: "In 1864, Bishop Alexander Gregg organized an Episcopal mission in Navasota that became a parish in 1866. Originally known as the Church of the Holy Comforter, it was renamed in 1870, when the church building from St. Paul's in Washington (7 mi. SW) was acquired and relocated to Navasota on land donated by the Houston and Texas Central Railway. The congregation completed a new church building in 1891. Throughout its history, St. Paul's has been actively involved in the community with worship, education, and outreach programs."



23. Steele House: 217 Brewer Street

Marker Number: 9408

Year Marker Erected: 1974



Marker Text: “In the late 1800s, two brothers named Steele had large cotton operations near Navasota, at Allen Farm, and residences diagonally across this corner from each other. A. G. Steele (1853-1900) and wife Etta had this late Victorian home built in 1896 by contractor J. E. Watkins. Eastlake architectural features embellish the porches and entrances. Descendants lived here until 1970. the house now (1974) is owned and preserved by Syd and Margaret Van Wagner. Recorded Texas Historic Landmark – 1974”

24. Templeman House: 1403 East Washington Avenue

Marker Number: 8620

Year Marker Erected: 1987

Marker Text: “Built in the mid-1890s for newlyweds Ward B. and Annie Foster Templeman, this home is reminiscent of Navasota's early cotton boom era. Originally a Queen Anne design, the house was bricked and modified in the early twentieth century to reflect elements of the Prairie School style of architecture. Prominent features include its wraparound porch, multi-light windows and doors, and copper-clad dome



over a projecting corner turret. Incise on base: Sponsored by Capt. and Mrs. W. T. Urquhart Recorded Texas Historic Landmark – 1987”

25. Terrell House: 412 East Washington Avenue

Marker Number: 8621

Year Marker Erected: 1981

Marker Text: “In 1897 Elizabeth Owen had this two-story residence constructed for her daughter Emmeline B. Terrell (b. 1849), the widow of local pharmacist Joel W. Terrell, II, who had died the previous year. In 1899 the home was purchased by John H. Mickleborough, a leading Navasota banker and businessman, and his wife Georgia. An example of Queen Anne styling, the Terrell House features intricate eastlake ornamentation on the gallery and gable ends. Recorded Texas Historic Landmark – 1981”

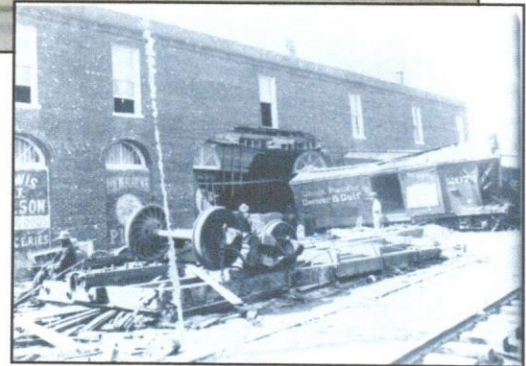


26. Lewis J. Wilson Building: 100 West Washington Avenue

Marker Number: 8625

Year Marker Erected: 1980

Marker Text: "A native of Connecticut, Lewis J. Wilson (1832-1895) moved with his parents to Grimes County in 1851. His father Samuel opened a general merchandise business in Anderson. Lewis managed the store until 1861 when he left to serve in the Civil War. After the war he returned to Anderson and opened a mercantile store in partnership with W. R. Howell and John Quincy Yarborough. They completed construction of this brick building in 1871 for a second establishment. Wilson was the sole proprietor by 1881 and continued to manage the business until his death."



Lewis J. Wilson Building after Train Wreck

27. Jesse Youens Home: 708 Holland Street

Marker Number: 8626

Year Marker Erected: 1967

Marker Text: "Jesse Youens home built 1871 in style of Youens' home, "Tower Cottage", Dartford, Kent, England, occupied by his family continuously. Recorded Texas Historic Landmark, 1967"



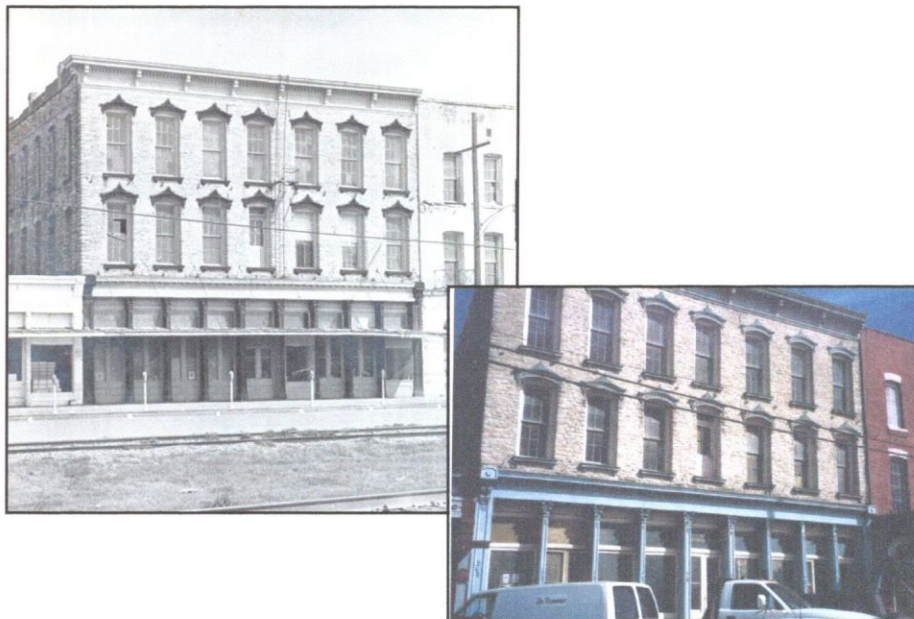
National Register:

28. Navasota Commercial Historic District: Roughly bounded by LaSalle Street, Holland Street., 9th Street, and Brule Drive.

Date Listed: 1982



- 29. P.A. Smith Hotel: 111 Railroad Street
Date Listed: 1976



- 30. Steele House: 217 Brewer Street
Date Listed: 1978
Notes: This house is also listed with the Texas Historic Commission.



Table 12.1: Historic Building Survey

Building Name	Address	Original Use	Current Use	Listed THC	Listed NRHP
Joseph Brooks Home	612 East Washington Avenue	home		✓	
Evans House	412 Manley Street	home		✓	
First Baptist Church of Navasota	309 Church Street	church	church	✓	
Old First National Bank of Navasota	107 West Washington Avenue	hotel/store		✓	
First Presbyterian Church of Navasota	302 Nolan Street	church	church	✓	
First United Methodist Church of Navasota	616 Holland Street	church	church	✓	
Foster Home	1015 East Washington Avenue	home		✓	
R.B.S. Foster Home	from the intersection of SH 6 & SH 90 1.5 mi on SH 90	Home		✓	
Site of Freeman Inn	500 East Washington Avenue	way station/inn	site of med center	✓	
The Giesel House	113 Railroad Street	restaurant/office/hotel		✓	
Rosanna Ward & Jesse Grimes	Marker could not be located by THC.	home		✓	
Robert A. Horlock House	1215 East Washington Avenue	home	museum	✓	
La Bahia Trail	Intersection of LaSalle Street & Bruce Street	trail		✓	
Leake Building	211 East Washington Avenue	store		✓	
Lee Tabernacle Methodist Church	302 Teague Street	church	church	✓	
Mickelborough Building	115 East Washington Avenue	saloon, grocery		✓	
Home of Lt. Gov. George D. Neal	504 Church Street	home		✓	
Norwood House	207 Ketchum Street	home		✓	
Sangster House	1113 East Washington Avenue	home		✓	
H. Schumacher Oil Works	206 Duke Street	processing		✓	
Henry Schumacher Home	306 Duke Street	home		✓	
St. Paul's Episcopal Church	414 E. McAlpine Street	church	church	✓	
Steele House	217 Brewer Street	home	home	✓	✓
Templeman House (Castle Inn)	1403 East Washington Avenue		Bed & Breakfast	✓	
Terrell House	412 East Washington Avenue	home		✓	

Section 12 – Historic Resources

Building Name	Address	Original Use	Current Use	Listed THC	Listed NRHP
Lewis J. Wilson Building	100 West Washington Avenue	store		✓	
Jesse Youens Home	708 Holland Street	home		✓	
Navasota Commercial Historic District	LaSalle Street, Holland Street., 9 th Street, & Brule Drive.	historic district	historic district		✓
P.A. Smith Hotel	111 Railroad Street	hotel	vacant 11/1980		✓
Rene Robert Cavalier De LaSalle (statue)	400 Block E. Washington Avenue	statue	statue		
Emory - Terrell House	415 Johnson Street	home			
Wilkerson - Fahey House	703 Church Street	home			
Steward - Davis House	1400 East Washington Avenue	home	home		
Hill - Cochran House	216 McNair Street	home	home		
Craig House	508 Holland Street	home	church		
Patout Building	205 East Washington Avenue	central store house	Patout's Inc		
Levy Building	101 West Washington Avenue	Levy Furniture Co	Navasota Bank		
Brown-Pierson House	911 Church Street	home	home		
Stewart Home	808 S. LaSalle Street	home	funeral home		
Baylor House	North 10th Street	home			
Johnson Rash House	902 East Washington Avenue	home			
Neal-Scott House	504 Church Street				
Smith-Milligan House	904 East Washington Avenue				
Stein-Hancock House	804 Church Street				
Ahrenbeck Building	West Washington Avenue	garage & machine shop			
Miller's Theater	304 East Washington Avenue		Theater		
George Hoenke House	Teague Street				
Old City Hall	Razed	City Hall			
Brosig Home					
Union School		school			
Fahey House		home			
Atcheson School					
Coleman					

Section 12 – Historic Resources

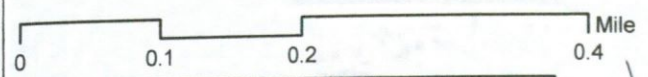
Building Name	Address	Original Use	Current Use	Listed THC	Listed NRHP
Cook Ashburn House					
Franklin Hancock House					
Harris-Lucas House					
John D. Rodgers House					
McGee Home					
Owens House					
Pierce					
Quinn House					
Walker House					
Bechtol House		Navasota Beauty Shop			

Sources:

<http://www.thc.state.tx.us/>
 City of Navasota Library
<http://atlas.thc.state.tx.us>

Map 12.1: Historic Structures

- Candidate for Further Study
- THC or NRHP Listed Structure/Site



Numbered landmarks represent documented sites or structures which can be found on the National Register of Historic Places and/or listed with the Texas Historical Commission. The numbers found on this map reference each landmark back to the Historic Resources Survey. In addition, other structures were identified as candidates for further study through a windshield survey conducted in the spring 2004.





Hazards



SECTION 13 – HAZARDS

Introduction

The purpose of this section is to identify the main hazards that the City of Navasota is most likely to face. Due to its geographic location, Navasota does not encounter the broad range of possible natural and technological hazards that other communities must deal with. The two main threats to the City are hazardous cargo spills from both rail or truck transportation, and flooding as shown on the Federal Emergency Management Agency's flood plain designations. These two threats are discussed in detail in this section. Although other natural hazards such as tornados and severe weather exist, deficiencies in their planning will be addressed in the Future Hazards section (Section 23) included in the second part of this document.

Hazardous Material Release

Railroads

The most significant threat for a hazardous materials release in the City of Navasota comes from the presence of the railroad that runs through the City.



Navasota Railroad

Because of Navasota's

prominence of the train route between Houston and Dallas, it is likely that various hazardous materials travel through the City on a regular basis. Information on what and how much hazardous material travels through the city is not available at this time due to information restrictions enforced by the Department of Homeland Security.

In the worst-case scenario, a large chlorine gas spill has the potential to affect all residents within a half-mile radius from the spill site (Map 13.1). In order to demonstrate the potential impact of such an event, a GIS analysis was conducted. This analysis used 17 randomly selected "spill sites" to determine an average number of citizens who may require evacuation or medical treatment. According to the analysis, an average of 643 people could be affected by such a spill. Map 13.1 shows the random spill sites, population density, and public facilities which might impact the number of people affected. It also contains a table showing the impact from each spill scenario. Weather conditions may also significantly increase or decrease the number of people exposed in any given situation. Most of Downtown Navasota and two Navasota Independent School District facilities are located within a half-mile of the railroad lines. The high density of students at these two locations during school hours makes them a high priority for emergency evacuation planning.

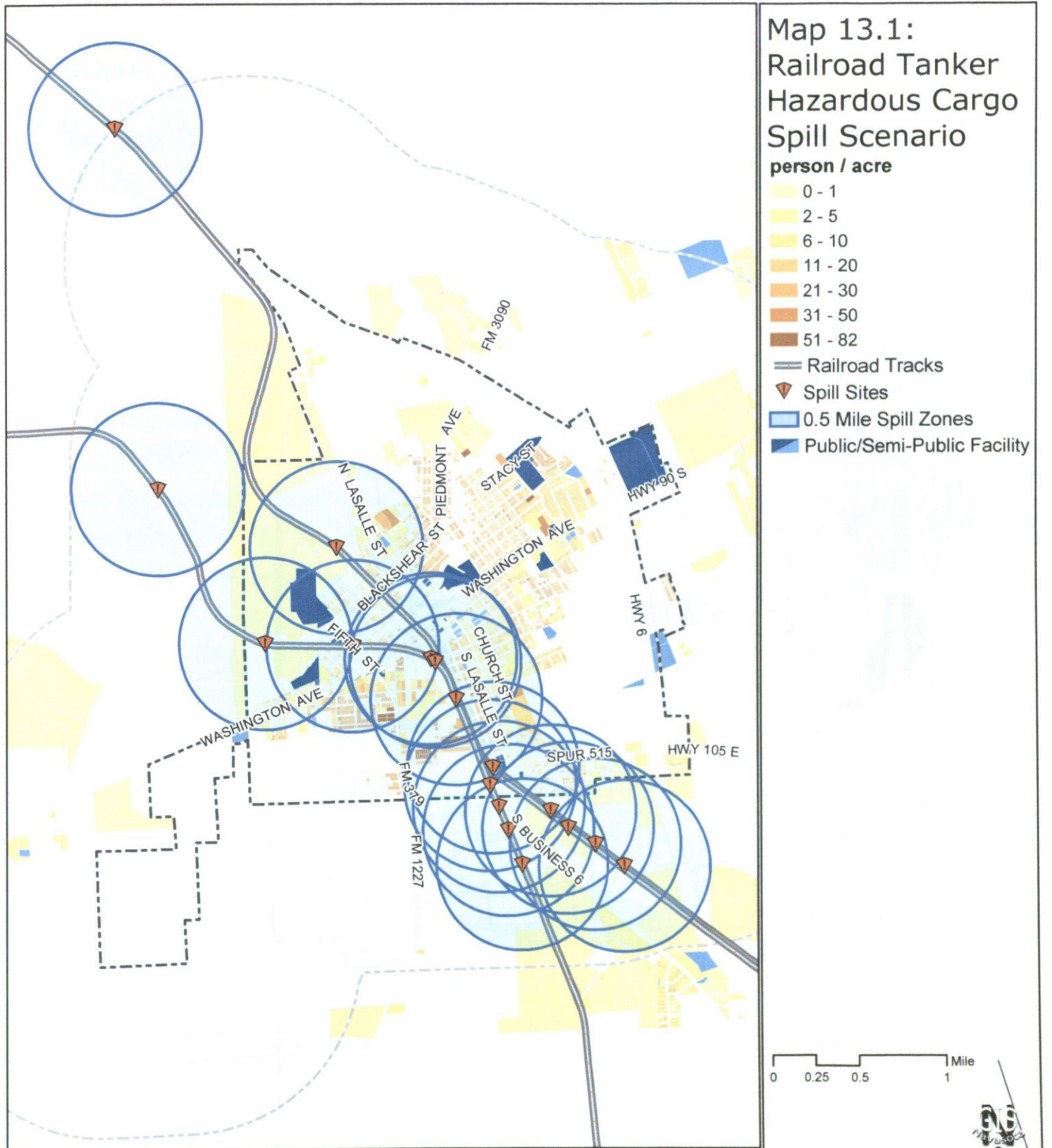
Highway Corridors

The City of Navasota also contains hazardous material corridors on its thoroughfare system. A serious hazardous materials release on the City's highways is less likely than on the railroad. Specific materials and the quantity carried through the city could not be obtained, also due to Homeland Security measures.



Highway Corridor

A hazardous cargo spill analysis was conducted for these truck routes. This analysis was similar to the one described previously for a railroad tanker accident. Due to smaller storage capacities on trucks, the spill release range was reduced to two tenths of a mile. Map 13.2 shows the results of this analysis, and that an average of 170 residents could be affected in such a scenario. It is also important to note the potential impact of a spill occurring on Highway 6 close to Navasota High School. Under certain weather conditions the high school as well as the middle school may require evacuation.



Map 13.1:
Railroad Tanker
Hazardous Cargo
Spill Scenario
person / acre

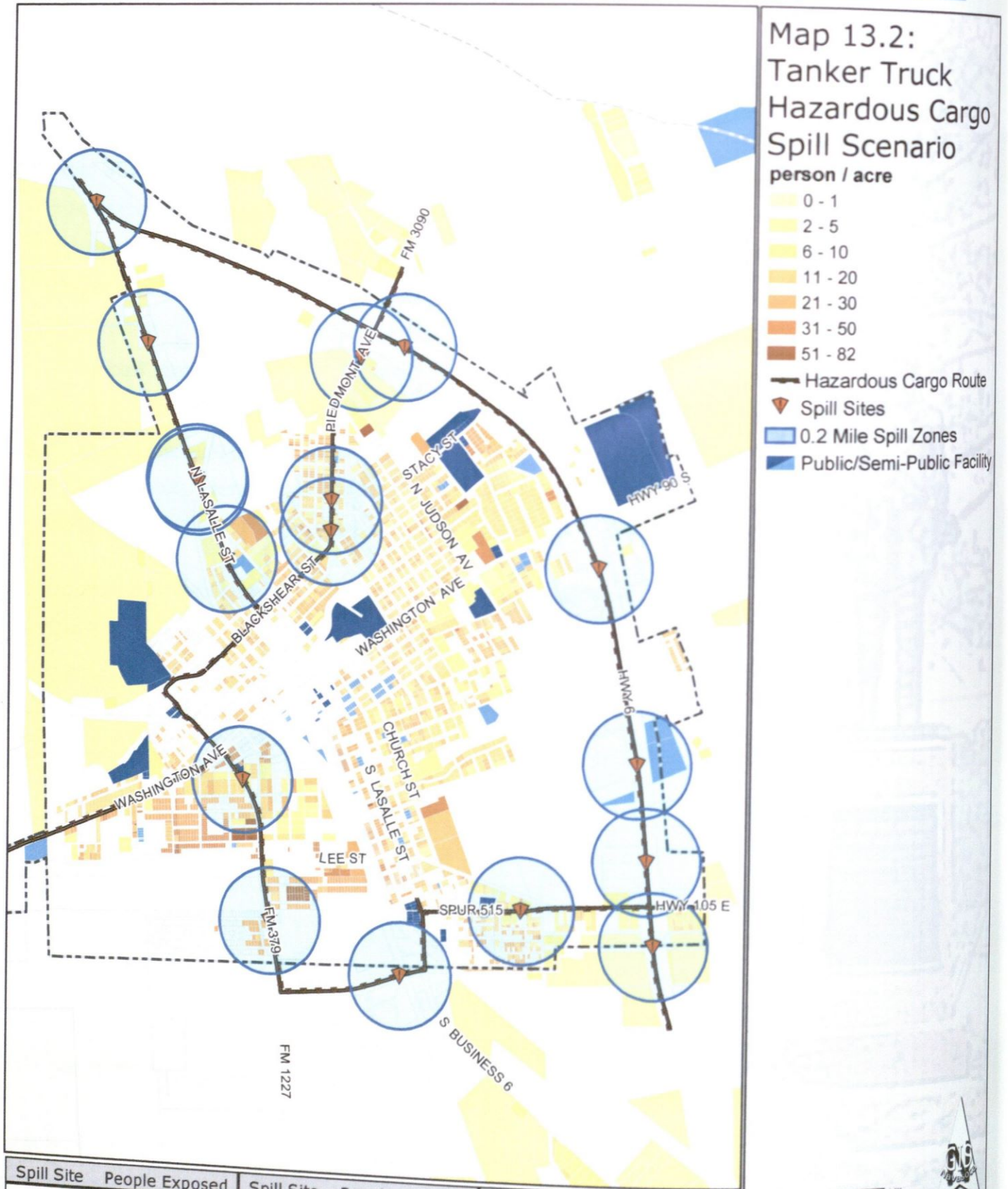
- 0 - 1
- 2 - 5
- 6 - 10
- 11 - 20
- 21 - 30
- 31 - 50
- 51 - 82

- Railroad Tracks
- ▲ Spill Sites
- 0.5 Mile Spill Zones
- Public/Semi-Public Facility

Spill Site	People Exposed	Spill Site	People Exposed	Spill Site	People Exposed
1	1037	7	1814	13	0
2	775	8	281	14	505
3	1624	9	255	15	195
4	1359	10	368	16	911
5	0	11	3	17	22
6	1602	12	180	average	643

Seventeen points along the three railroad lines traveling through Navasota were randomly selected. At each of these points a half-mile "spill zone" was used to determine how many people would be affected by a hazardous cargo release at that random point. Population statistics were determined using Census data normalized to residential land use location and unit counts.

Map 13.2:
Tanker Truck
Hazardous Cargo
Spill Scenario



Spill Site	People Exposed	Spill Site	People Exposed	Spill Site	People Exposed
1	758	7	449	13	378
2	444	8	5	14	15
3	31	9	5	15	3
4	419	10	55	16	41
5	237	11	0	17	0
6	31	12	18	average	170

Seventeen points along the hazardous truck routes within Navasota were randomly selected. At each of these points a 0.2-mile "spill zone" was used to determine how many people would be affected by a hazardous cargo release at that random point. Population statistics were determined using Census data normalized to residential land use location and unit counts.

Natural Hazards

Flooding

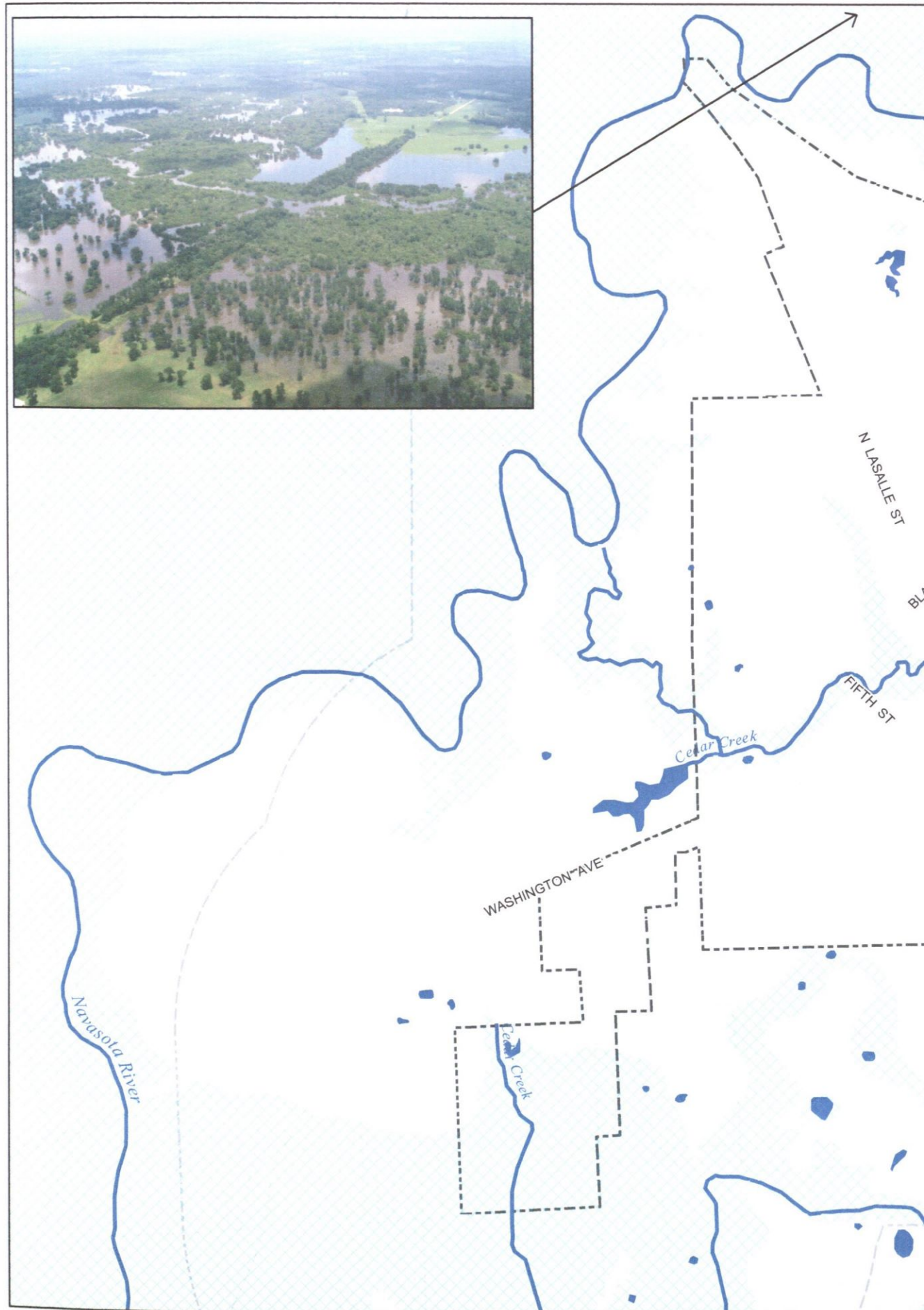
Portions of the City of Navasota have been built within both of the Federal Emergency Management Administration (FEMA) 100-year and 500-year designated flood plains. By definition, areas within a 100-year or 500-year flood plain respectively have a 1% or 0.2% chance in any one-year of being inundated. The FEMA flood plain maps were created in 1988, making them somewhat dated. Although the date of these maps is a concern, the rate of growth in terms of land use conversion from open and agriculture to urban uses has not been rapid during this time period. With this in mind, the accuracy of the FEMA maps should not be a topic of great concern.

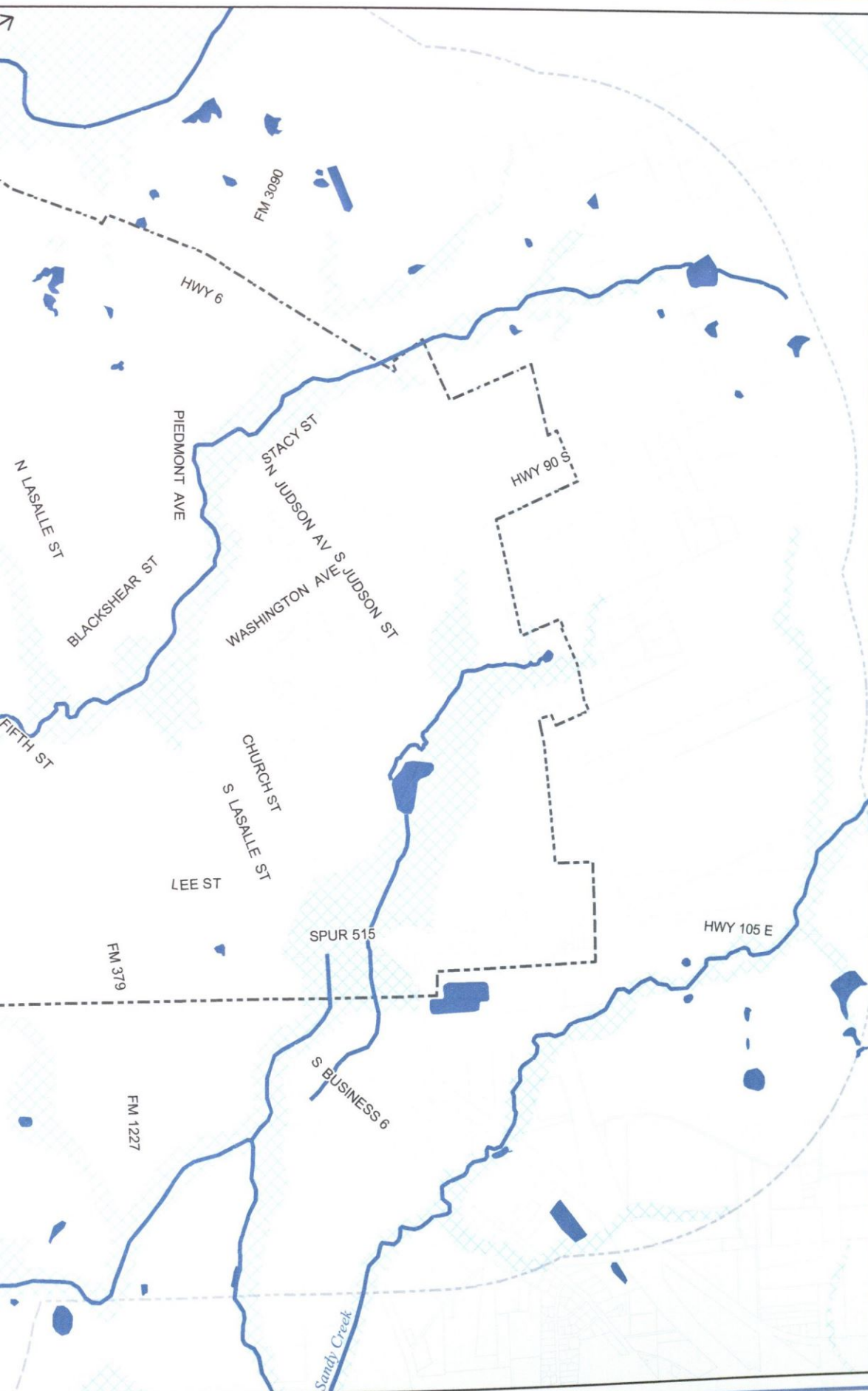


Navasota 1912 Flood

The City of Navasota is a participating community in the National Flood Insurance Program. Essentially, this allows the community's residents to purchase flood insurance. A secondary benefit of this program is reduced insurance costs through the "Community Rating System" program and other mitigation related activities that are open to the City. At present, Navasota does not participate in any additional FEMA programs.

An analysis was conducted with a Geographical Information System (GIS) (Map 13.3 and Table 13.1). The flood data used for this analysis is known as the FEMA Q3 data, a digital reproduction of the original Flood Insurance Rate Map (FIRM). The results of this analysis are fairly encouraging: 65% percent of the parcels within the 100-year flood plain are undeveloped, either in Open Space or Vacant land use classifications. Another 11% of the flood plain is an Agricultural use. Only 150 acres, roughly 24% of lands within the flood plain, are urban uses. Although this percentage of urban uses within the flood plain appears to be high, considering that roughly 18.5% of the city's area is within the flood plain puts this figure in a different perspective.





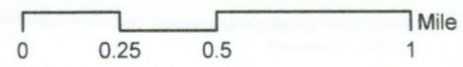
Map 13.3:
FEMA Flood Zones

Surface Water

- pond
- rivers and stream

Flood Plains

- 100 Year





The properties within the 500-year flood plain should not be of great alarm considering their relatively low numbers and small flood probabilities, but are still worth mentioning. A small portion of the City of Navasota is categorized as 500-year flood plain. These areas lie primarily along the thin borders of the 100-year designation (Figure 13.2). The 500-year flood plain area encompasses a mere 21 acres, approximately 39% of which is in residential uses. About 37% of the 500-year flood plain is not in urban uses, and it is made up primarily of vacant or undeveloped land.

Table 13.1: Description of Land Parcels Within the 100-year Flood Plain

Land Use Classification	Number of Land Parcels	Area (Acres)	Percent of Area by Land Use
Residential	263	49.4	7.8%
Commercial	65	62.0	9.8%
Industrial	24	18.5	2.9%
Public/Institutional	34	8.2	1.3%
Transportation	17	1.7	0.3%
Downtown	102	10.8	1.7%
Open Space	54	214.1	34.0%
Agriculture	9	68.4	10.9%
Vacant	351	196.1	31.2%
Total:	919	629.3	100.0%

Texas Target Cities Team

On the whole, the City of Navasota is subject to risks to life and property from flood events. The risk is, however, small in comparison to other communities that are located in areas of chronic flooding. While certain areas may encounter frequent drainage or puddling problems, there is no recent record of wide-scale flooding within the City. There are some residential and commercial areas, including portions of the Downtown, which are at risk to flooding in terms of the 100-year flood plain. Fortunately, the bulk of the at-risk areas are undeveloped or in agricultural uses, drastically reducing property loss threats from floods.

Table 13.2: Description of Land Parcels Within the 500-year Flood plain

Land Use Classification	Number of Land Parcels	Area (Acres)	Percent of Area by Land Use
Residential	49	8.3	39.4%
Commercial	11	2.9	13.8%
Industrial	0	0.0	0.0%
Public/Institutional	10	1.4	6.8%
Transportation	1	0.1	0.3%
Downtown	5	0.7	3.1%
Open Space	9	1.5	7.0%
Agriculture	1	1.5	7.3%
Vacant	16	4.7	22.2%
Total:	102.0	21.0	100.0%

Texas Target Cities Team

Conclusion

Hazardous cargo spills associated with the railroad, and flooding are the two most pressing hazard issues to be faced today in Navasota. Solutions on how to confront these hazards is discussed in the Hazard Mitigation Plan covered in the Future Hazards section (Section 23), including planning activities, mitigation strategies, and possible funding sources.

Urban Image





SECTION 14 – URBAN IMAGE

Introduction

The following section is a critical analysis of the visual image of the City of Navasota, as conducted by a team of graduate students at Texas A&M University. This team consisted of students with degrees in architecture, urban planning, and landscape architecture. Over a period of two months, the team compiled a visual survey of the City's gateways and its Downtown as a whole. The team met with citizens in a public participation meeting and a public design workshop. The workshop was specifically intended to seek public opinion about the revitalization of Downtown Navasota. The observations contained in this document reflect both the opinions of team members and the general feelings of the citizens of Navasota.

The visual image of a city is believed to correspond directly with the quality of life of its citizens. People who live in attractive, well-planned communities generally feel better about their community. Specific issues of concern are urban gateways, occurrences of urban blight, general streetscape, downtown parking demands, and underutilized resources.

Gateways

A gateway serves as a marker or landmark that announces the entrance into a community. Typically, gateways are defined with landscaping, signage, flags, or even statues, and when well-designed and properly placed, can foster a sense of civic identity and pride. During the public participation meeting, several citizens noted their concern with the appearance of gateways leading into both the City of Navasota as a whole, and the area identified as Downtown Navasota.

City Gateways

A total of five gateways have been identified in Navasota (Map 14.1). They include:

1. The intersection of North LaSalle Street and State Highway 6
2. The intersection of Washington Avenue and State Highway 6.

3. The intersection of State Highway 105 and State Highway 6.
4. The intersection of State Highway 6 and South LaSalle.
5. The western extent of the City at State Highway 105 West (Washington Avenue).

Downtown Gateways:

In addition to the primary gateways, Downtown gateways were also identified. Generally, citizens who were surveyed liked the “boulevard” feel of East Washington Avenue, with its landscaped medians and the LaSalle statue serving as a gateway marker (Map 14.2).



Landscape Median on East Washington Avenue

These Downtown gateways include:

1. The intersection of LaSalle Street and Washington Avenue.
2. The intersection of Washington Avenue and 10th Street.
3. The intersection of LaSalle Street and Holland Street.
4. The intersection of LaSalle Street and Brule Drive.

Citizens expressed a dislike for the western gateway along Washington Avenue. One citizen in particular noted the need for an additional statue to mark the western entrance into Downtown. Citizens also offered criticism regarding the north-south gateways along LaSalle Street. Currently, there are many automotive use and open automobile storage facilities along LaSalle Street. Citizens expressed an interest in establishing stricter design standards and sign controls.

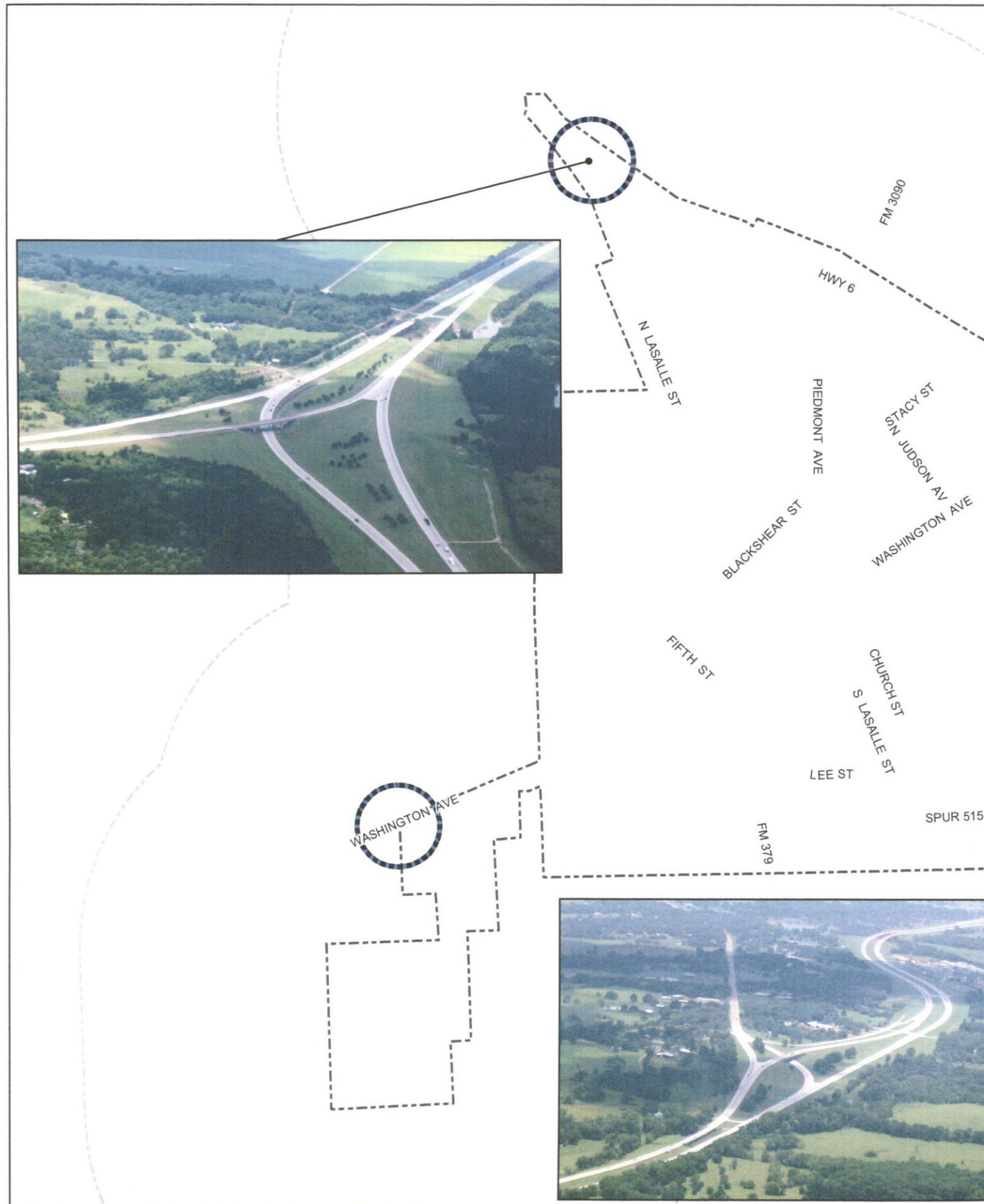
Highway 6.
 LaSalle.
 Highway 105 West (Washington



Median on East Washington Avenue

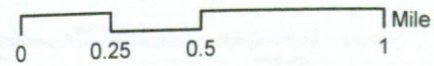
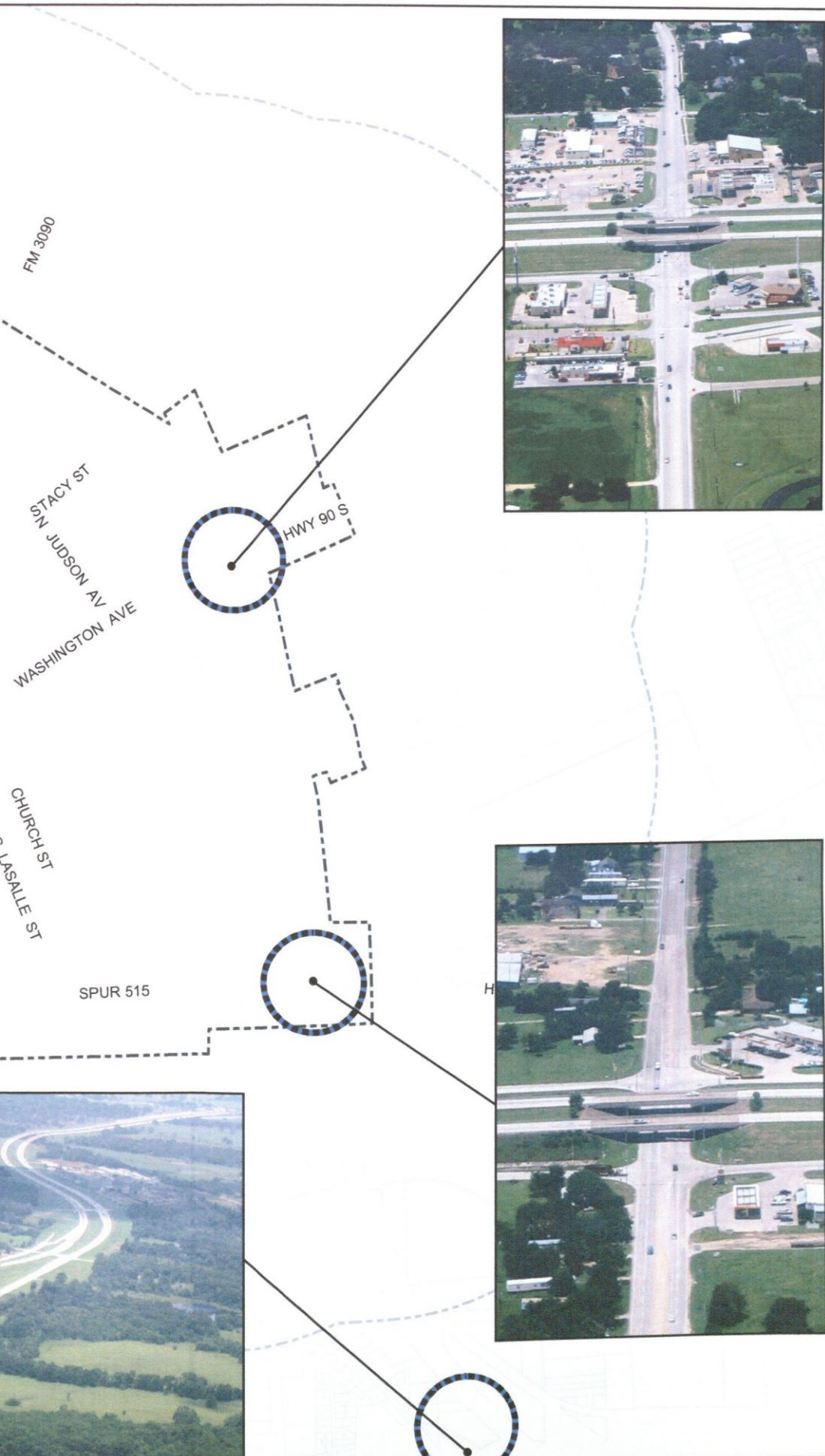
on Avenue.
 Street.
 Street.
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y along Washington Avenue.
 Additional statue to mark the
 offered criticism regarding the
 y, there are many automotive
 le Street. Citizens expressed
 d sign controls.

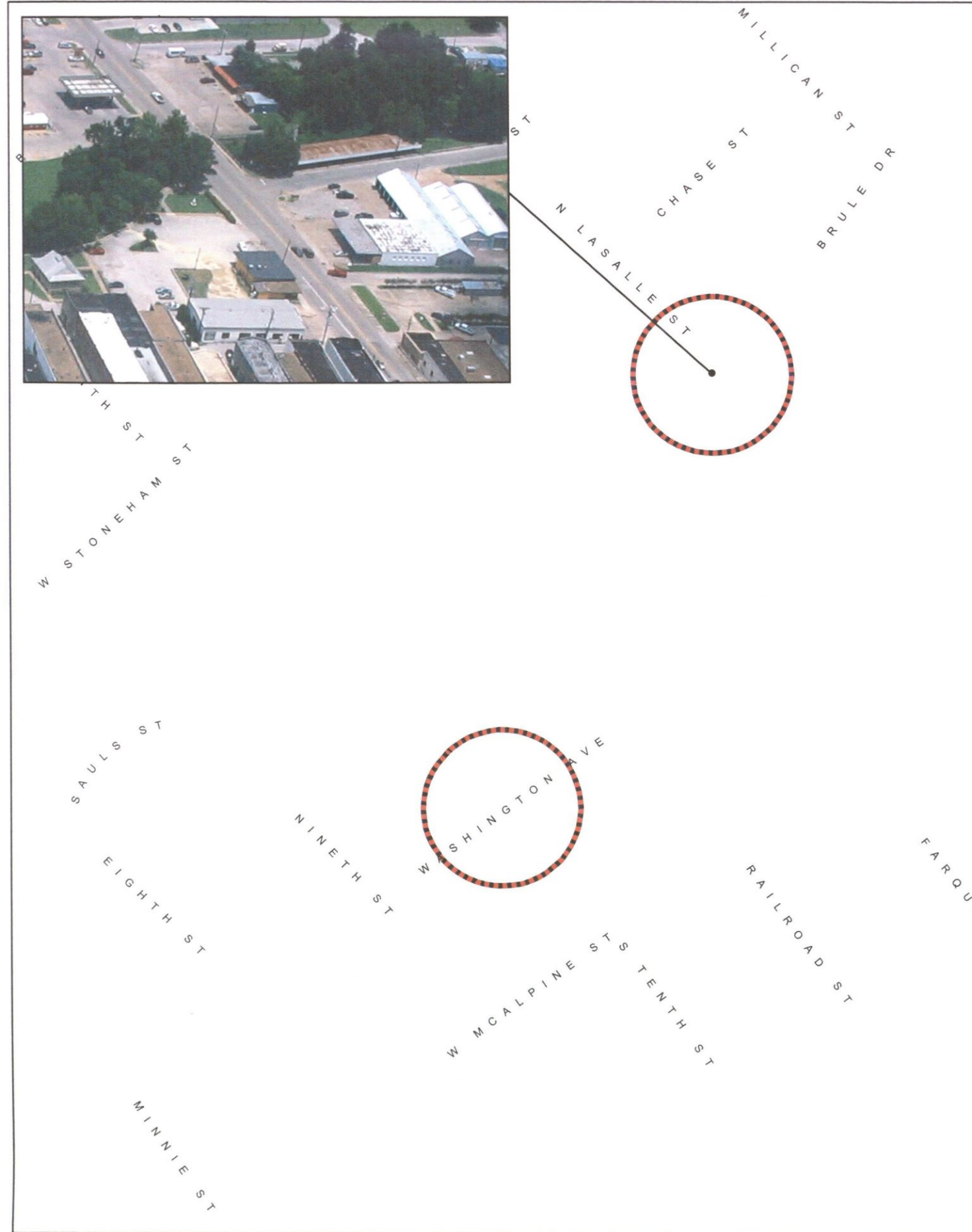


Map 14.1: City Gateways

----- City Gateways

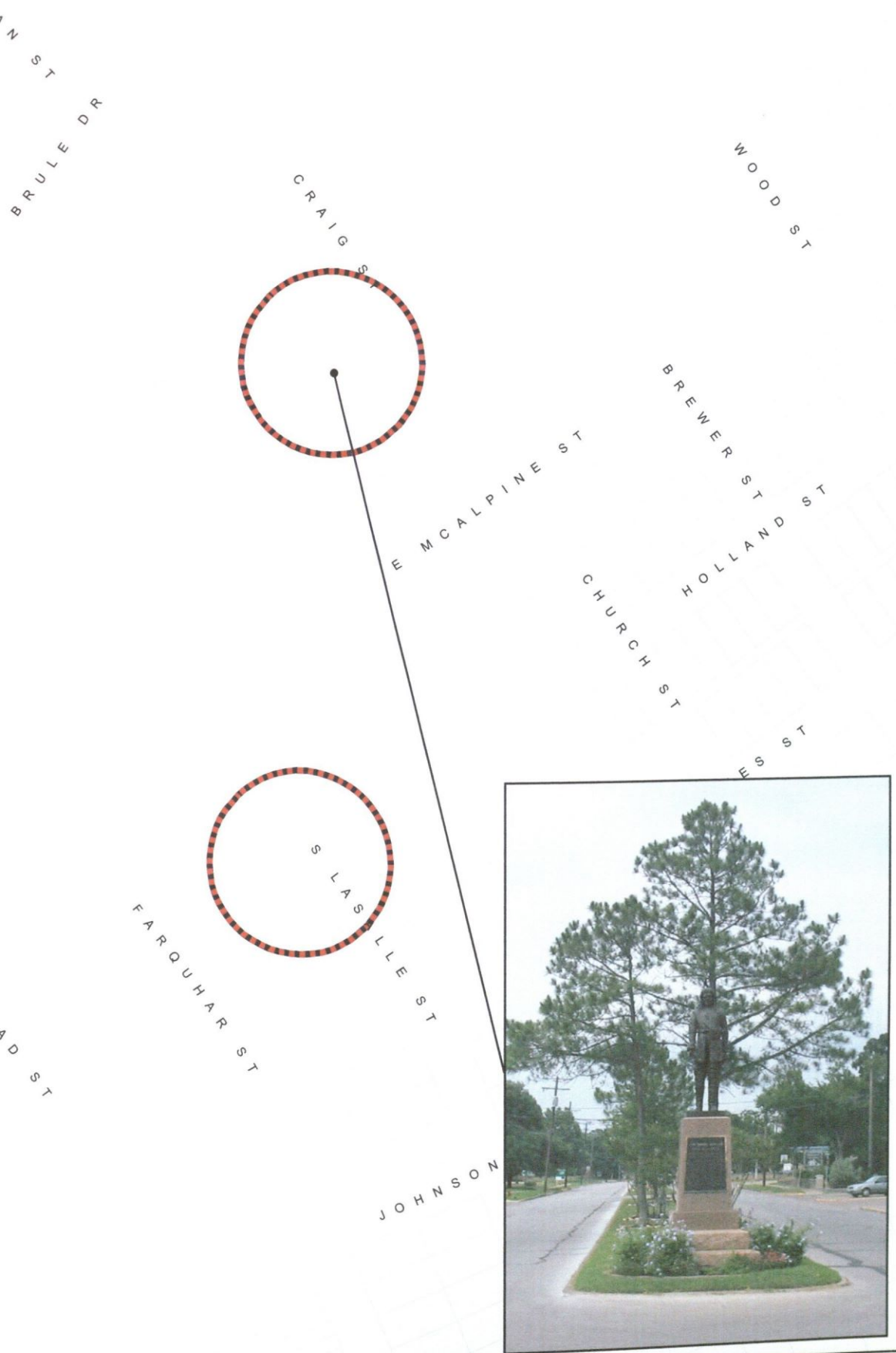


Section 14 - Urban Image



Map 14.2: Downtown Gateways

 Downtown



0 0.025 0.05 0.1 Mile

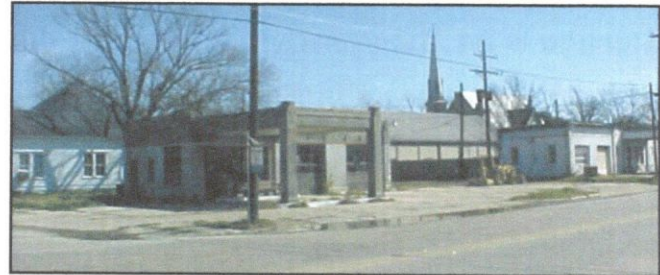




Urban Blight

Urban blight can be defined as the deterioration of urban fabric. Evidence of urban blight may include abandoned buildings, abnormally high vacancy rates, dilapidated structures, litter and debris, or undeveloped property with unkempt, overgrown lawns.

Overall, Navasota’s urban fabric is in relatively good condition, though some structures are currently underutilized. Storage remains the primary use for most buildings in the Downtown. Opportunities exist for the establishment of loft living in the upper stories of buildings, allowing for a more dynamic mix of land uses along Washington Avenue. Navasota’s historic commercial buildings are the downtown area’s most marketable assets. Vacant buildings and open storage of vehicles and machinery are the primary sources of blight confronting travelers driving through Navasota. On the positive side, trash receptacles have been placed throughout the Downtown, resulting in a largely litter free environment along Washington Avenue, LaSalle Street, and Farquar Street.



Underutilized Structures in Navasota

Streetscape



Navasota Streetscape

Streetscape may be defined as the visual experience resulting from the combination of elements such as streets and sidewalks, lighting, street furniture, landscaping, and signage. The streetscape is one of the most visible reflections of the vitality of an area. The

Downtown streetscape consists of façades, walkways, street furniture, utility lines, and planters. Each of these elements has an impact on pedestrians and their sense of place within Downtown. Existing walkways provide pedestrians with access to local shops and businesses. Access across intersections, however, can be difficult at times due to the length pedestrians must travel, as well as American Disabilities Act accessibility issues.

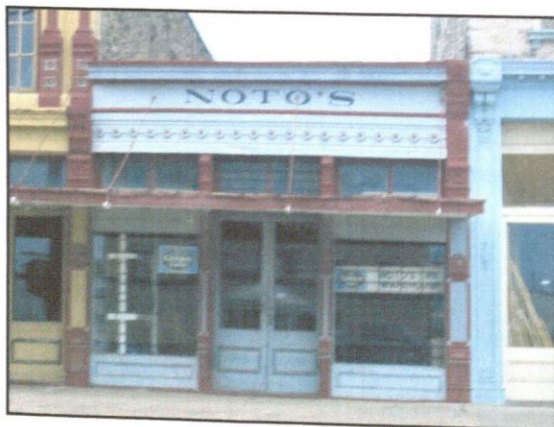
Trash receptacles and benches are adequate in number, but could incorporate historic themes to better complement the area. The existing planters in the area are adequate, but an infusion of additional plant material would significantly improve the overall look of the Downtown. The impact of overhead utility lines is minimal throughout Downtown.



Trash Receptacle

Signage

Signage is an important visual element of the built environment. Though signage is necessary to attract business, it must be used with restraint in order to protect the



Downtown Signage

overall visual appearance of an area. The signage in Navasota appears to be largely uncontrolled. The current signage is inconsistent, thematically incompatible, and presents a generally unflattering image of the City. During the public involvement process, some citizens felt a need for better signage regulation to provide consistency and harmony.

Parking

Downtown Navasota has three types of parking: parking lots, on-street diagonal parking, and on street parallel parking. The survey count of various types of parking revealed 627 parking spaces in and around Downtown Navasota. The number of spaces by each parking type is shown in Table 14.1:

Table 14.1: Spaces by Parking Type

Parking Type	Number of Spaces
Parking lots	288 spaces
On street diagonal parking	310 spaces
On street parallel parking	29 spaces

Merchants and customers have expressed a concern for parking scarcity in Downtown. The Geographic Information System (GIS) analysis for the proximity of parking spaces around Downtown shows 627 parking spaces within 800 linear feet of the focus area. The following Table 14.2 shows the available parking spaces within various distances from Downtown Navasota.



On Street Parking in Navasota

Table 14.2: Available Parking in and Around Downtown Navasota

Within a distance of	Number of spaces
100 ft	229 spaces
200 ft	378 spaces
400 ft	507 spaces
600 ft	567 spaces
800 ft	627 spaces

The Texas A&M University Team concluded that there is currently an adequate amount of parking in and around Downtown. The parking issue may be more of a parking management problem than an actual case of inadequate parking. During the public involvement process, some Downtown property owners indicated that businesses are allowing employees to park directly in front of the businesses rather

than behind them. These property owners expressed concern for their employees' safety, and indicated that they might be more willing to require that their employees park elsewhere, so long as more adequate lighting and a stronger police presence were provided after dark.

Some citizens were also concerned about the diagonal on-street parking along Washington Avenue. Washington Avenue is a two-lane street with a center turn lane and on-street parking. The process of backing out of these diagonal parking spaces conflicts with moving traffic, and creates congestion along Washington Avenue. However this activity also serves as an excellent traffic-calming device, ensuring slower speeds and a more comfortable pedestrian life.

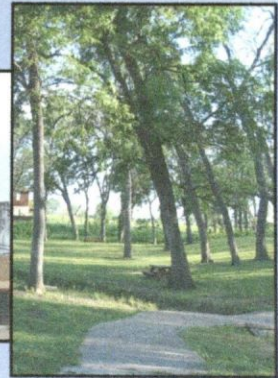
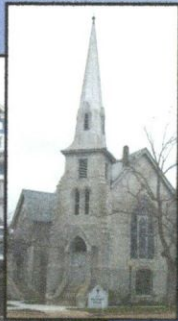
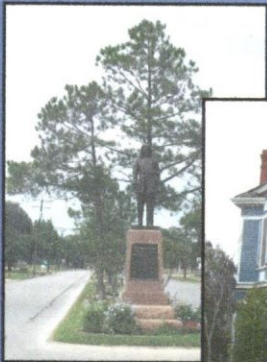
Underutilized Resources

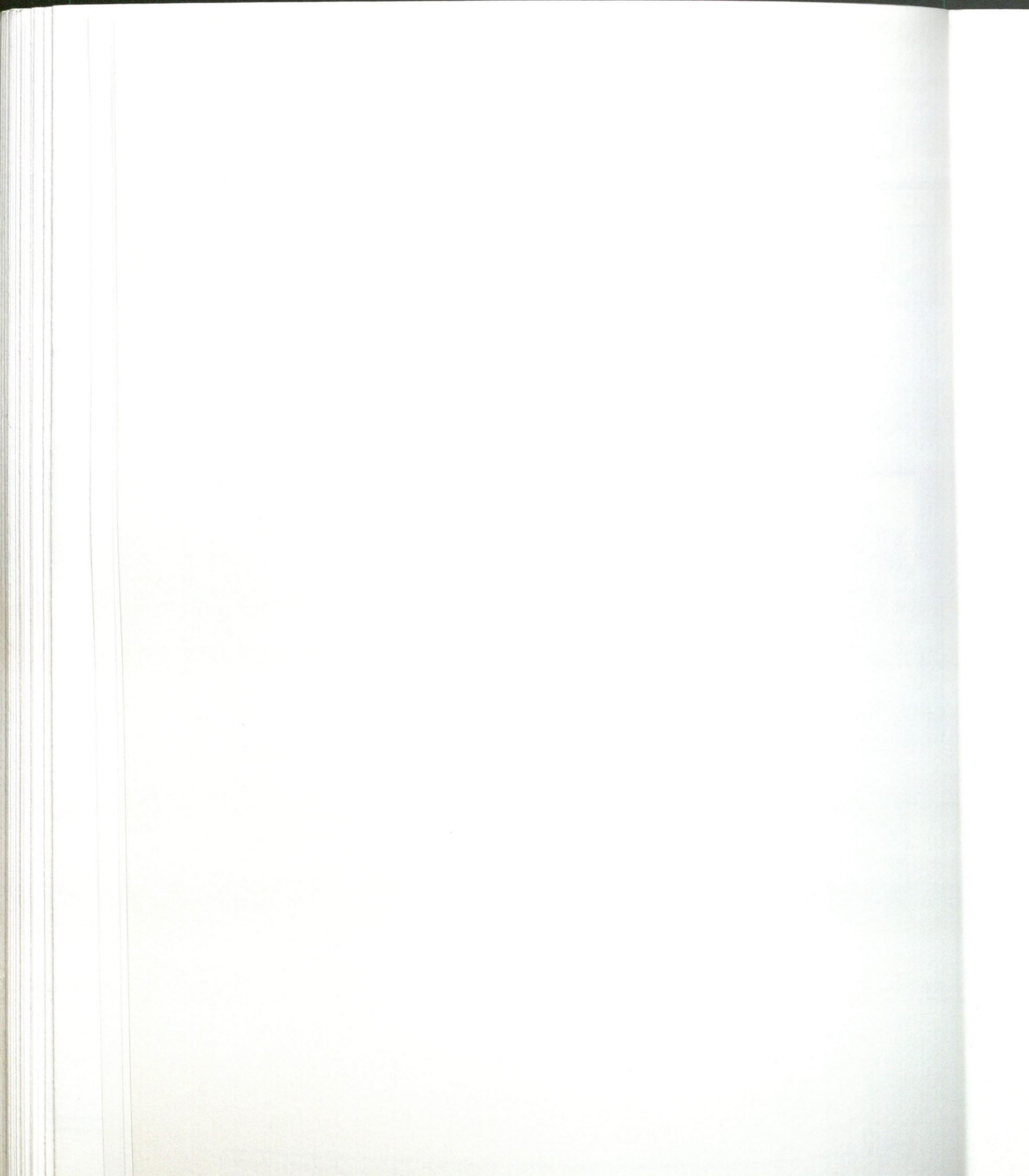
In addition to Navasota's vacant commercial structures, other underutilized resources in the City include vacant buildings and underutilized tracts of land. Unimproved property provides opportunities for infill projects. In the public participation meetings, citizens identified the need for more parks and green space in Downtown, extending beyond the railroad tracks into western Downtown Navasota. Citizens also expressed the need provide better connections to the hike/bike trail along Cedar Creek.



Vacant Structure in Navasota

THE FUTURE CITY





Future City Introduction





SECTION 15 – INTRODUCTION

The Future City part of the Comprehensive Plan is designed to provide goals, objectives, and implementation actions for the City of Navasota in order to give direction to the community for the next ten years.

This document can be used as a reference guide for decision-making and municipal policy. This plan is intended to help guide the location, design, and development of the City including provisions on how the City can meet the demands concurrent with anticipated population growth. In addition to the goals and objectives, an accompanying action agenda with suggested dates and proposed measures is provided.

The recommendations and suggestions in this document should be used in conjunction with the associated Economic Development Plan to create a sustainable future for Navasota.



Future Demographics



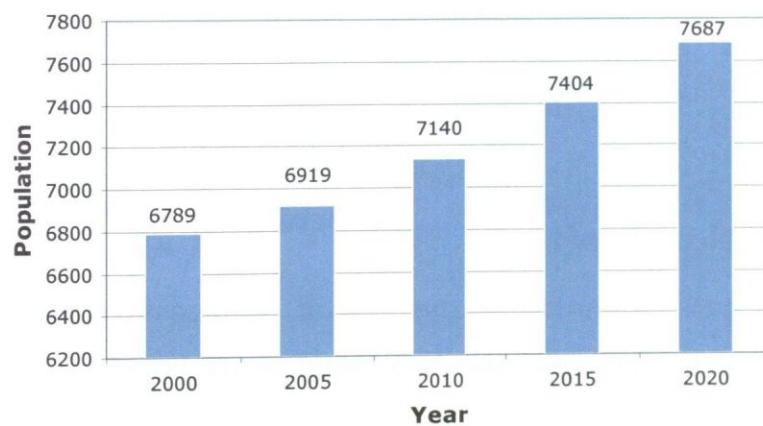


SECTION 16 – FUTURE DEMOGRAPHICS

Population

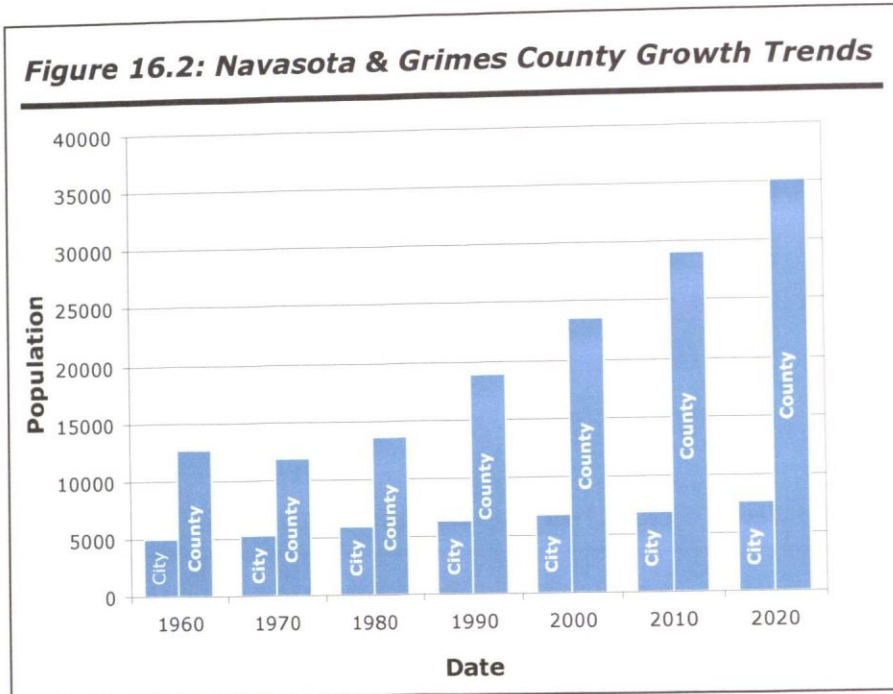
The population of Navasota has been growing at a slow, but steady pace over the past 50 years. This trend is expected to continue through the foreseeable future. Population projections for the City of Navasota are shown in Figure 16.1. The population growth trend was projected through the year 2020 using national averages for birth and death rates and the current Navasota population profile. This projection assumes an immigration rate of zero. The calculated population profile closely follows historic trends.

Figure 16.1: Projected Population Through 2020



Regional Characteristics

Grimes County has undergone heavy growth over the past 30 years, in contrast to Navasota's steady but relatively slow population expansion. The Grimes County population projection was calculated by the Texas State Data Center. The population projection shown in Figure 16.2 assumes that Grimes County will continue on with its aggressive growth rate experienced during the 1990's. Between the years of 2000 and 2010, it is expected that Grimes County will expand its population by 5,624, an increase of 24%. During this time, Navasota is expected to add 351 people to its population, an increase of 5%. The population gap is expected to further increase from 2000 to 2020, with Grimes County experiencing 49% growth over this period from 23,522 people to 35,137 while

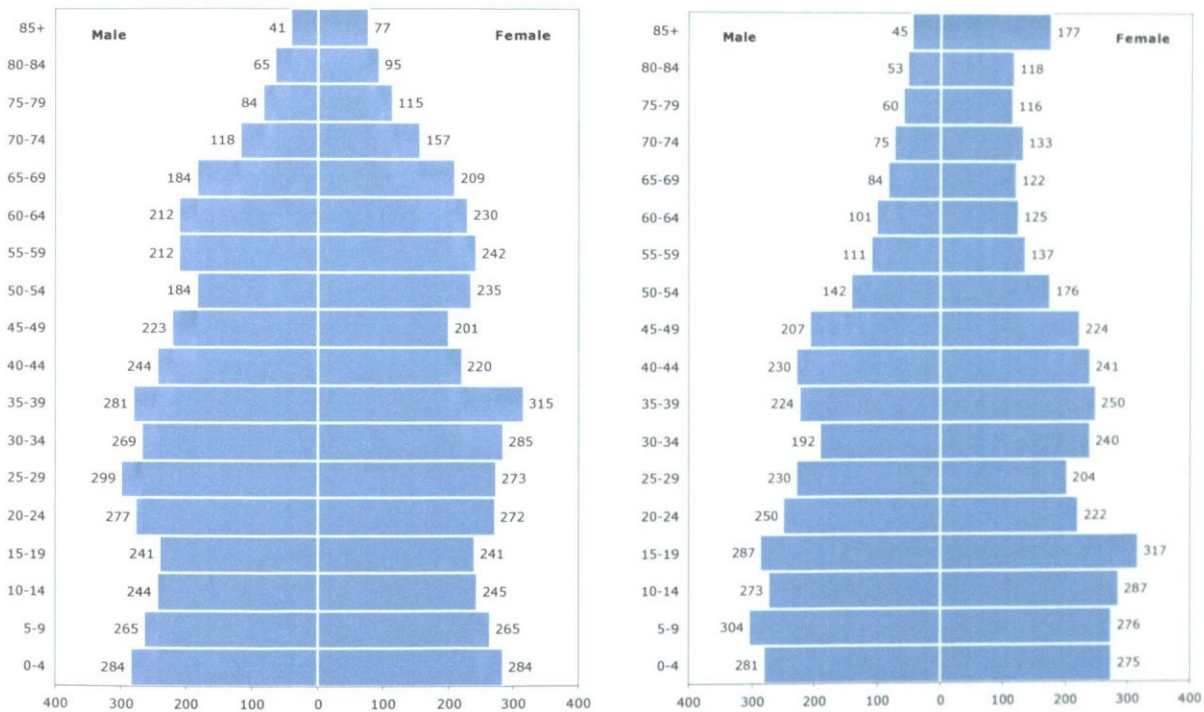


Navasota is expected to continue its modest growth at 13% from 6,789 to 7,687. Over this period of time, it is anticipated that Navasota's population will drop as a proportion of Grimes County's total population.

Population Profile

The current population of the City of Navasota according to 2000 census data is dominated by females, and this trend is predicted to continue on through the year 2020 (Figure 16.3). However, there should be a slight shift in the age structure of the community. The 20 to 64 year age group, which makes up 51.6% of the 2000 community profile, is predicted to grow to 58.2% of the population. This change is predicted to coincide with a decline in the 20 and under age groups from 33.8% of the population in 2000 to 26% of the population in 2020. The 64 and older cohort is expected to slightly increase during this same period.

Figure 16.3: Navasota’s Population Profile Comparison for 2000 & 2020



Notes:

The 2000 U.S. Census and the Texas State Data Center were the data sources used for these analyses, and it is likely that changes have occurred since this data was compiled. This data represents the most complete picture that can be obtained at this level of detail.

Future Land Use





SECTION 17 – FUTURE LAND USE

Introduction

The purpose of this section is to recommend how and where the City of Navasota should grow. Planned growth should provide a safe, healthy and pleasing environment for the citizens of Navasota. Planning can mitigate conflicts between different land uses, consider long-term impacts on transportation and public infrastructure, and promote the general harmony and efficiency of land development. The plan should guide land use decisions. In addition, the goals of this section will suggest viable opportunities for the economic growth of Navasota through its land use patterns.

Goals & Objectives

Goal #1: Establish land use policies that encourage cost-effective development.

- Objective 1: Navasota should encourage infill, structure rehabilitation, and redevelopment to take advantage of the existing infrastructure and transportation.
- Objective 2: The costs of new infrastructure and services should be evaluated before annexing unincorporated land.
- Objective 3: The City should refrain from using a standard zoning holding district classification on newly annexed land. Rather, the City should plan future land uses for areas within its Extraterritorial Jurisdiction (ETJ), and apply the appropriate permanent zoning classification at the time of annexation.

Goal #2: Promote the health and safety of the citizens through addressing unique land use situations with appropriate and specific policies.

- Objective 1: Navasota should zone and plan flood plain areas for the least intensive land use.

- Objective 2: Citizens should be advised and encouraged to purchase flood insurance for existing developments within the 100-year flood plain.
- Objective 3: The City should allow development of lands in the flood plain only when the property owner builds according to city approved technical standards to avoid harm to people and property.
- Objective 4: Lands adjacent to railroad right of ways should be used for compatible uses, such as light industrial, large-lot residential, warehousing, or commercial.
- Objective 5: Navasota should prohibit new manufactured homes in areas that are zoned for Single Family Residential or Multi-Family Residential, allowing them only in Manufactured Housing Districts as proposed in the Future Housing section (Section 10).
- Objective 6: Structures that pose a safety or health threat to the public should be condemned.

Goal #3: Promote a community with an aesthetically pleasing environment

- Objective 1: Standards for existing historic property uses should be developed and enforced uses as identified in the Future Historic Resources section (Section 22).
- Objective 2: The City should schedule more “Clean Up Days” throughout the year to encourage citizens to participate in rehabilitation (exterior painting and repairs, landscaping, trash removal) on their properties.
- Objective 3: Navasota should encourage rehabilitation projects in the downtown area as mentioned in the Future Urban Image section (Section 24).

Goal #4: The City should promote new developments that are beneficial for the community and compatible with existing uses.

- Objective 1: Navasota should discourage incompatible land uses, with special attention to commercial and light industrial uses within residential land use designations. The insertion of a buffering section into the zoning ordinance would facilitate an appropriate visual screen between residential and non-residential uses.
- Objective 2: The City should create a portfolio of acceptable and recommended site designs for various areas that will be developed as residential subdivisions.

Goal #5: The City should promote the Future Land Use Plan and require zoning to be consistent with it.

- Objective 1: The Comprehensive Plan should be adopted.
- Objective 2: The City should review the Comprehensive Plan periodically, and revise if necessary.
- Objective 3: Navasota’s zoning system should be modified to be consistent with the Comprehensive Plan.

Revised Land Use Classifications

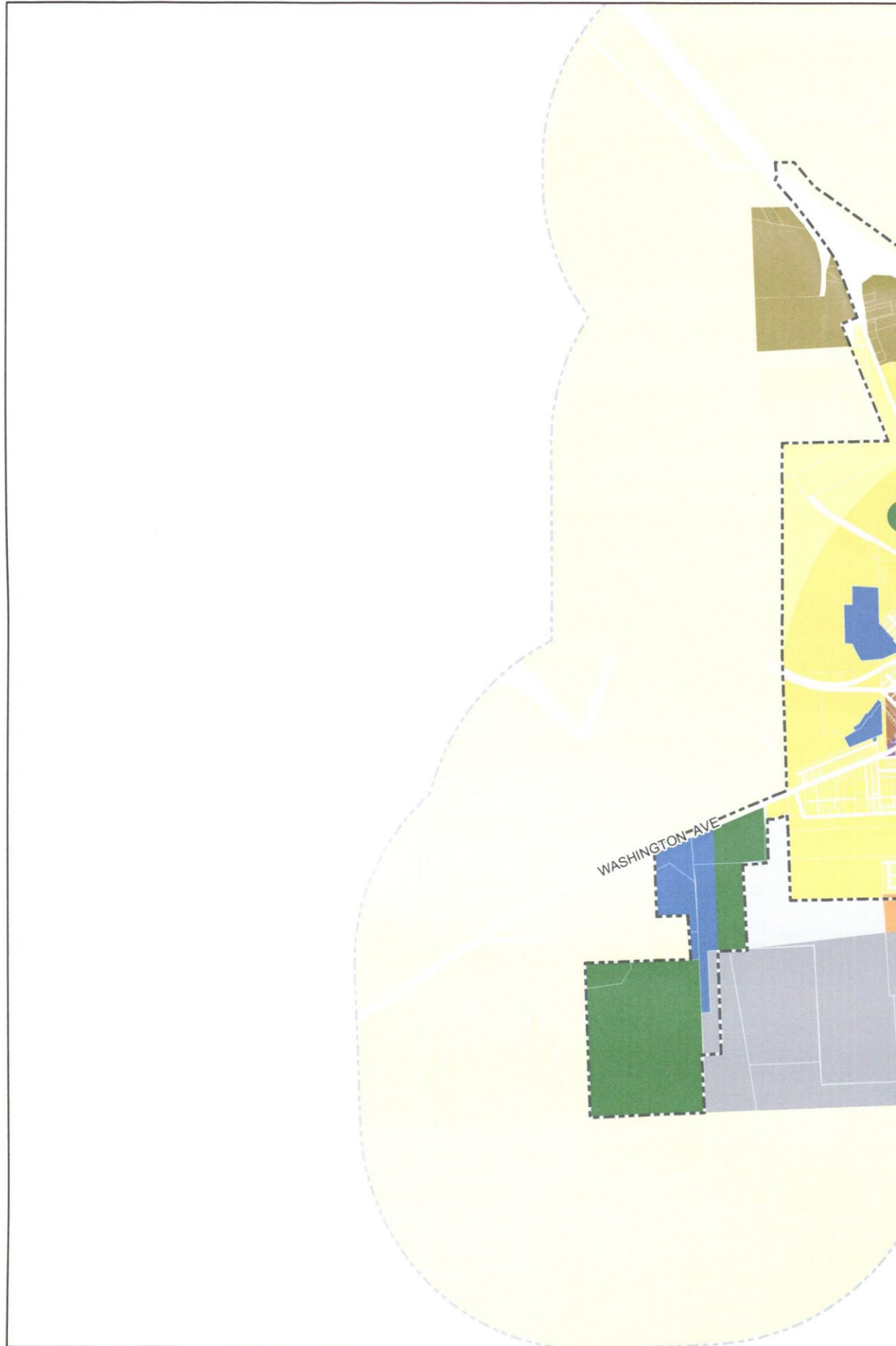
For purposes of this section of the Comprehensive Plan, the following land use classifications were utilized:

Central Business District

The Central Business District (CBD) maintains its historic boundaries in the Future Land Use Plan. This district includes the land uses located along Washington Avenue and the current boundaries are identified on Map 17.1.

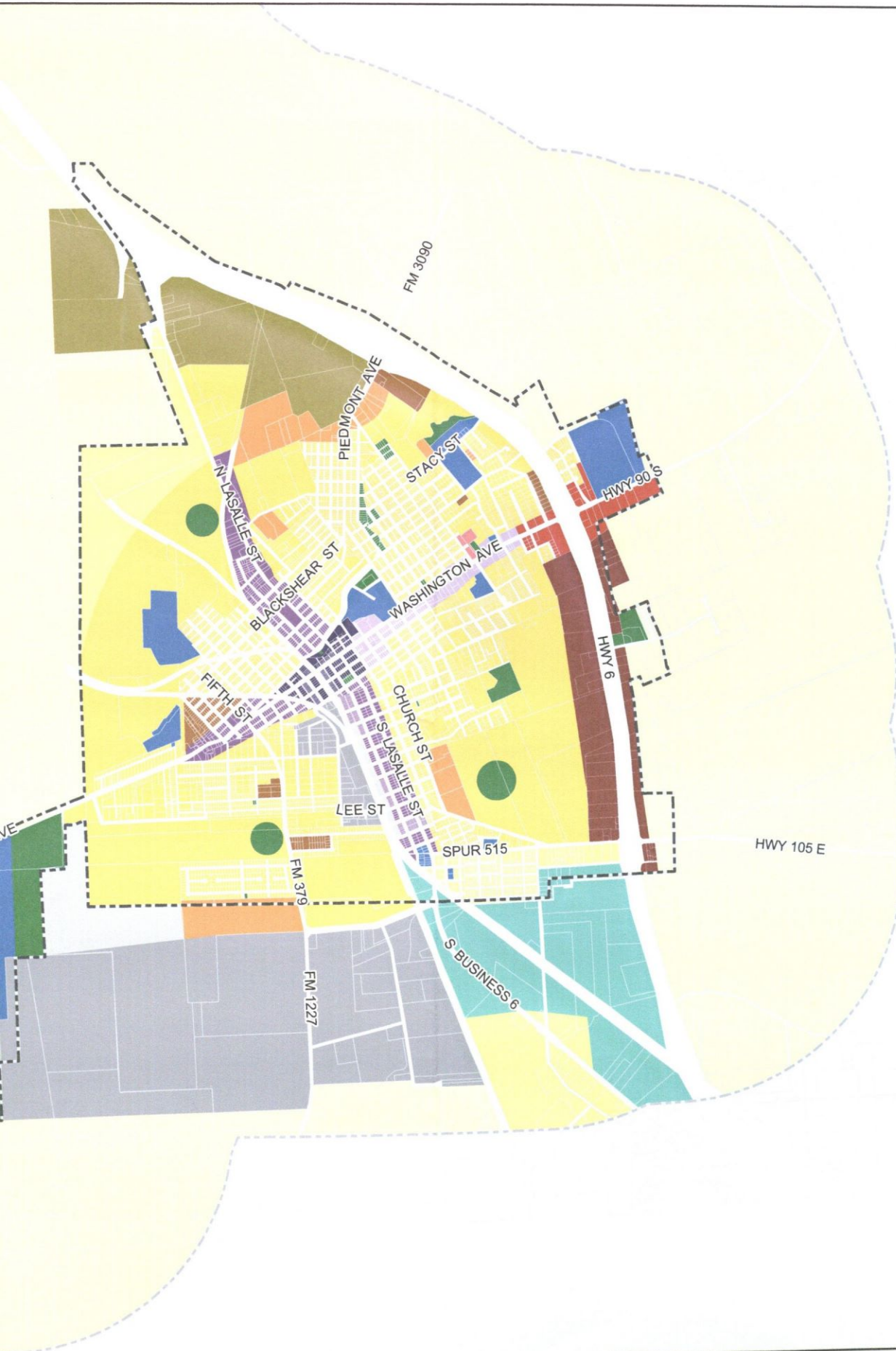
Commercial

The Commercial land use category is for land dedicated to non-industrial business uses, including retail sales, office, service, and entertainment facilities. These types



Map 17.1: Future Land Use

- Low Density Single-Family
- Medium Density Single-Family
- Neighborhood Density Single-Family
- Low Density Multi-Family
- Medium Density Multi-Family
- Commercial
- Neighborhood Retail
- Research and Development
- Warehousing
- Industrial
- Public Use
- Pedestrian Mixed Use
- Historic Mixed Use
- Corridor Mixed Use
- Central Business District
- Parkland
- Redevelopment



0 0.25 0.5 1 Mile



This comprehensive plan or future land use map does not constitute zoning regulation or district boundaries

of commercial uses are generally developed along major roads. Commercial uses may be located as a single use in one building or grouped together in a shopping center or office building.

General Retail

The General Retail classification consists of developments such as retail centers, restaurants, service, hotel/motel, and other commercial developments for the community as well as the region. General Retail uses typically include larger supermarkets, discount stores, department stores, appliance stores, furniture stores, specialty shops, etc. These types of land uses rely on a market area much larger than that of the local commercial areas and can provide either convenience and/or comparison goods. Other uses such as existing churches and government facilities are also included in this classification.

Neighborhood Retail

Neighborhood Retail allows for neighborhood-scale development in predominantly residential areas. Examples of acceptable uses include small-scale retail, corner convenience stores, and smaller restaurants. Parking and traffic generation should be minimal to prevent incompatibility with nearby homes. Amendments to the Future Land Use Plan providing additional neighborhood retail should be encouraged, provided that such amendments consider compatibility among the uses.

Warehousing

The warehousing category identifies storage areas for industrial uses in addition to private warehouse facilities.

Industrial

This category is for land dedicated to manufacturing facilities, processing plants, factories, wholesale trade facilities, or other similar uses. These uses are intended to be enclosed within a building. Stored products or equipment should be covered in order to prevent a poor public appearance. The use of plant material or property setbacks are tools that can be used to buffer industrial uses from public view.

Light Industrial

The Light Industrial category includes, but is not limited to assembly, automotive body shops, and other light industrial processes. This less intensive industrial classification can also permit other nonpolluting businesses and services.

Heavy Industrial

The Heavy Industrial category is intended for high intensity land uses such as manufacturing, fabrication, and industrial uses that are likely to produce high levels of disturbance, such as noise, vibrations, and/or odors. Heavy Industrial activities are likely to be regulated by state or federal law.

Public Use

The Public Use category includes areas intended for public and quasi-public use. Examples of these uses can include schools, churches, fraternal organizations, government buildings, and hospitals.

Residential

There are five recommended categories of residential land use. The aim of these recommended categories is to preserve areas of existing single family homes while also offering opportunities for increased housing options. A description of each class follows.

Neighborhood Density Single-Family Residential

The first residential land use category is Neighborhood Density Single-Family Residential. This classification consists of traditional single-family homes with a maximum lot size of 7,200 square feet. Neighborhood Density Single Family Residential includes land planned for single-family residential purposes and accessory uses. Homes that are located on such lots create a density that is found in traditional neighborhoods throughout the country. This category is designed to accommodate sufficient, suitable residential neighborhoods protected from incompatible land uses.

Medium Density Single-Family Residential

The second residential land use category is Medium Density Single-Family Residential. This classification consists of traditional single-family homes, with one-acre minimum lot sizes. Land use in this category is designed to provide for detached single-family residential homes located on large lots. This type of residential development minimizes the need for municipally based water and wastewater systems.

Agricultural/Residential

The third new residential land use category is Agricultural/Residential. The goal of this land use classification is to retain a rural land use character. This land use category requires a minimum lot size of five acres. The majority of land uses in Navasota's ETJ have been designated Agricultural/Residential (Map 17.1), and upon annexation should be zoned in accordance with this classification.

This classification utilizes different infrastructure standards from those associated with regular urban development. It allows for lower-cost infrastructure such as decentralized wastewater treatment. Generally, these locations are intended to be outside of the city limits where infrastructure may not yet be available, or areas where infrastructure provision would be cost prohibitive.

Low Density Multi-Family Residential

The fourth residential category is Low Density Multi-Family Residential. This category promotes structures intended for multiple families at a lower density. Low Density Multi-Family Residential consists of residential complexes such as a fourplex, triplex, duplex, apartment, and town home. This type of structure has a maximum density of 15 dwelling unit per acre. This category may serve as a transitional zone between lower density residential areas and other residential or non-residential areas.

Medium Density Multi-Family Residential

The fifth and final residential category is Medium Density Multi-Family Residential. The purpose of this classification is the development of traditional apartment

complex structures. This category allows for a maximum density of 25 dwelling units per acre. This classification includes land used for a variety of housing types, but primarily for multiple family dwellings. Such as high density fourplex, triplex, duplex, apartments, condominiums, town homes, and group quarters are examples of development within this category.

Mixed Use Classification

The Mixed Use category was established to accommodate existing developments and to promote new projects in areas which traditionally provided for various types of general retail, office, business, and service uses while encouraging secondary uses on the upper floors of buildings. The application of the Mixed Use category promotes pedestrian activity, contributes to a unique blend of commercial developments, and allows for an increase in infilling opportunities within the City. In order to provide flexibility for existing and new developments, the Mixed Use classification is broken into three different groups.

Pedestrian Mixed Use

The Pedestrian Mixed Use group allows residential as well as commercial development. Residential units are not permitted on the first floor of these structures. A maximum of 60% residential use is permitted in all structures within this category. Furthermore, there is a minimum size requirement of 500 square feet per residential unit. The goal of this type of development is similar to the Central Business District Mixed Use, which encourages loft style apartments above commercial buildings.

Corridor Mixed Use

Corridor Mixed Use permits commercial development, high density residential (apartments), office space, and light industrial. The purpose of this classification is to accommodate a diverse area made up of different, yet compatible, structures and uses on the same site or in the same area. There are no restrictions concerning the required amount of residential use in these structures. The aim of this classification is to allow flexibility by permitting other land uses in addition to commercial.

Historic Mixed Use

The final mixed use classification, Historic Mixed Use, allows for Bed and Breakfasts, cafés, artisan studios/galleries as well as single family residential. This category requires a minimum of 30% residential use per lot. For example, a historic home can be converted into a Bed and Breakfast as long as 30% of the lot is being used for residential purposes. This classification excludes traditional style apartment buildings and other intense residential uses. This mixed use classification promotes diversity in development while permitting and encouraging neighborhood and historic preservation of the Old Town Neighborhood along Washington Avenue.

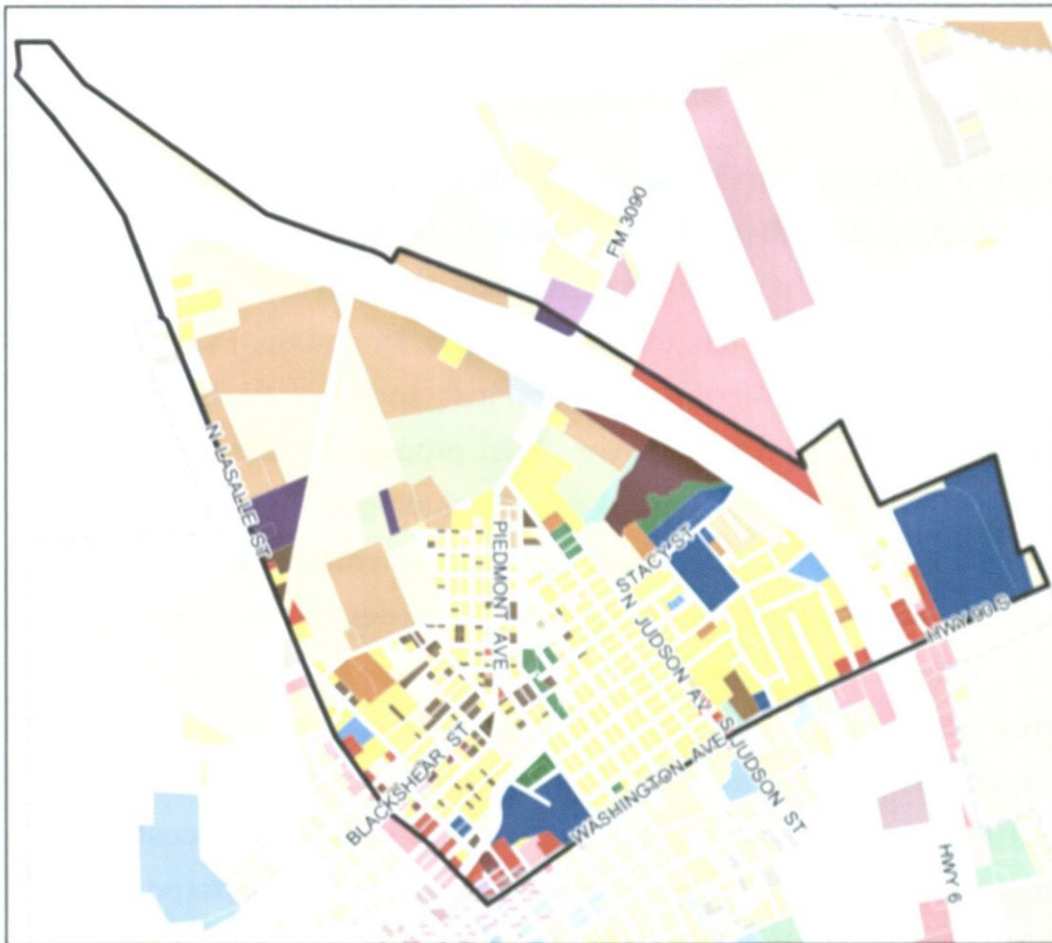
Redevelopment

In order to promote the economic health of Navasota, particular areas have been categorized as Redevelopment. Areas located primarily in the northern portions of the current city limits have been designated with this redevelopment classification (Map 17.1). Further details on potential projects within these areas can be found in the associated document, the Navasota Economic Development Plan.

Planning Area 1

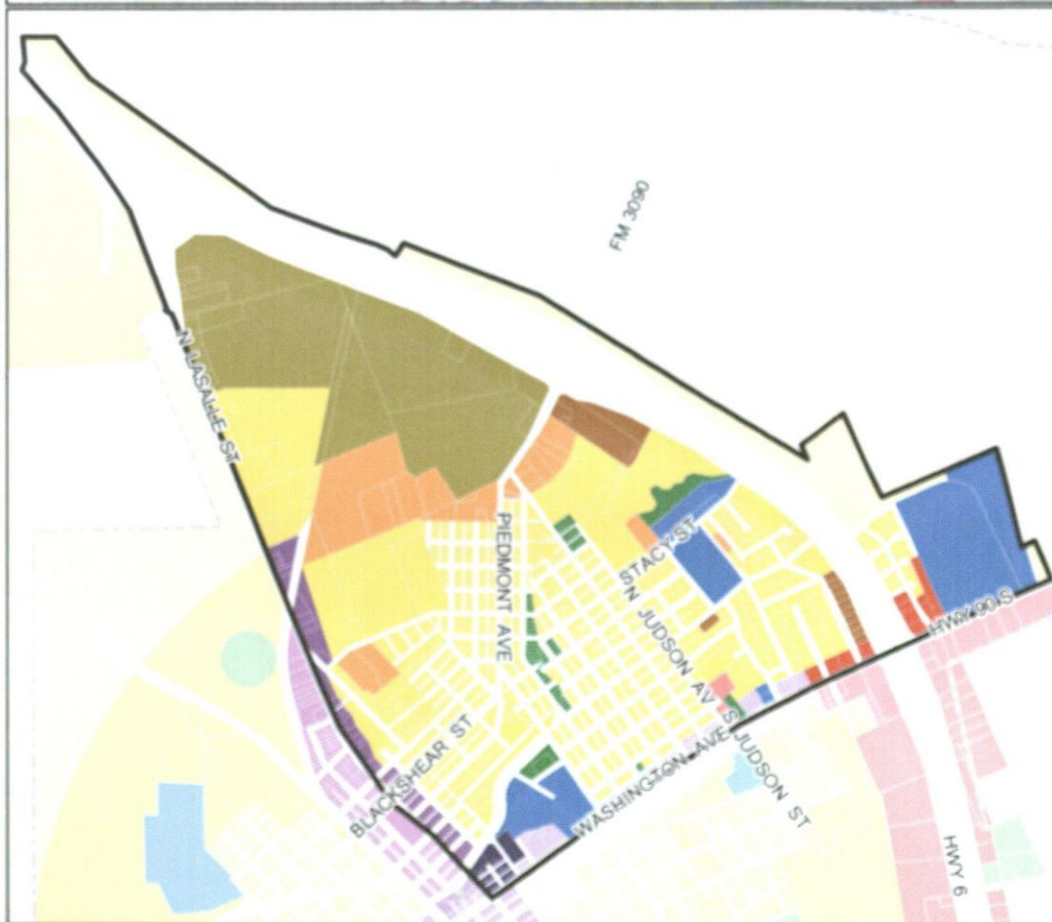
Planning Area 1 includes the area on the northeastern side of Navasota. The area south of the intersection of Highway 6 and North LaSalle Street has been designated as Redevelopment. This land could potentially be developed as an arboretum, amphitheater, and trade venue. This improvement to the northern gateway offers the opportunity to encourage several activities that could benefit Navasota. The goal of this area is to offer an attractive entrance into Navasota, while also giving residents a place to hold concerts, performances, and other related events. The second area of the northern gateway, also identified on Map 17.2 and 17.3 as Redevelopment, is suggested to be an area for trade events similar to those found in Round Top and Canton, Texas. The purpose of this area is primarily the attraction of visitors to Navasota. Due to Navasota's geographic location and the success of similar events, such a use could serve as a draw to both the event location as well as south, down along the LaSalle corridor into the Downtown. Further details of this proposal can be found in the Navasota Economic Development Plan.

In order to maintain consistency with Planning Area 4 and promote attractive development, the east side of LaSalle Street has a recommended land use classification of Pedestrian Mixed Use. The north side of Washington Avenue is also assigned this mixed use category.



Map 17.2:
Area 1
Existing Land Use

- Single-Family
- Duplex
- Multi-Family (3 units or more)
- Group Quarters
- Mobile/Manufactured Home
- Rural (Large Lot Residential, > 5 acres)
- Commercial Retail (Stores, Banks, etc.)
- Commercial Office (Business, Service)
- Commercial Other
- Commercial - Industrial (Warehousing, etc.)
- Light Industrial
- Heavy Industrial
- Public Facilities (CON, NISD, Library)
- Semi-Public (Religious, Hospitals, etc.)
- Transportation
- Railroad
- Utilities
- Downtown
- Park
- Ball Fields
- Drainage
- Golf Course
- Agricultural
- Unimproved



Map 17.3:
Area 1
Planned Land Use

- Low Density Single-Family
- Medium Density Single-Family
- Neighborhood Density Single-Family
- Low Density Multi-Family
- Medium Density Multi-Family
- Commercial
- Neighborhood Retail
- Research and Development
- Warehousing
- Industrial
- Public Use
- Pedestrian Mixed Use
- Historic Mixed Use
- Corridor Mixed Use
- Central Business District
- Parkland
- Redevelopment



This comprehensive plan or future land use map does not constitute zoning regulation or district boundaries.

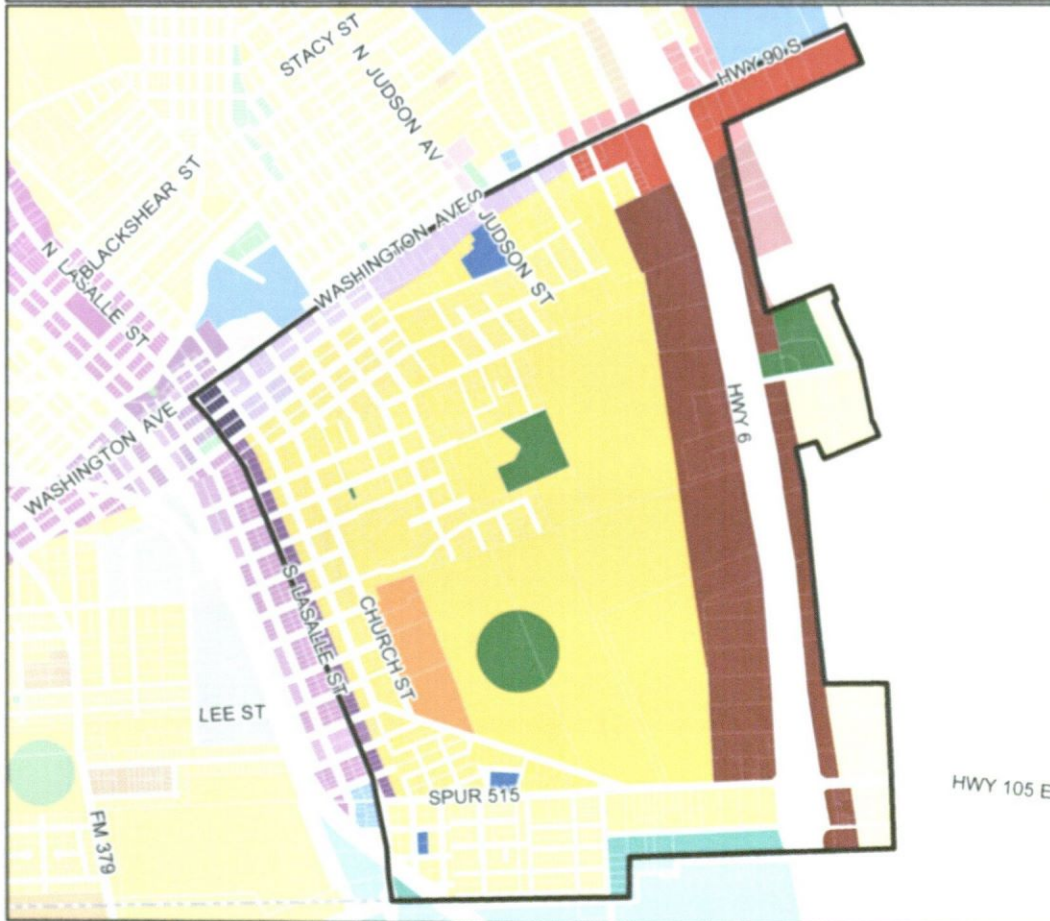
Planning Area 2

Planning Area 2 consists of southeastern Navasota as indicated on Map 17.4 and 17.5. The mixed use category is used extensively within this planning area. In order to create consistency in terms of aesthetic properties and corridor locations, Pedestrian Mixed Use is the advised land use along this span. In addition, Corridor Mixed Use has been proposed along Highway 6 from just south of Washington Avenue to the southeastern city limits. Given the proposed uses of this classification, Corridor Mixed Use will allow various uses, including both commercial and residential along this area. The third multi-use category, Historic Mixed Use is recommended on the south side of Washington Avenue. In order to promote and increase the economic activity of Navasota, the corner of Highway 6 and Washington Avenue has been designated solely for Commercial land uses. The location of this area, in terms of traffic and visibility make it ideal for commercial uses. The remainder of Planning Area 2, includes the existing subdivisions east of Highway 6 and a small area south of SPUR 515, and has been designated as Agricultural/Residential. It should be noted that there is a tremendous opportunity for residential infill in Planning Area 2, which would be facilitated through the presence of existing urban infrastructure.



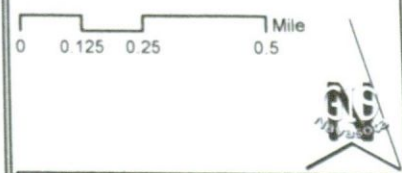
Map 17.4:
Area 2
Existing Land Use

- Single-Family
- Duplex
- Multi-Family (3 units or more)
- Group Quarters
- Mobile/Manufactured Home
- Rural (Large Lot Residential, > 5 acres)
- Commercial Retail (Stores, Banks, etc.)
- Commercial Office (Business, Service)
- Commercial Other
- Commercial - Industrial (Warehousing, etc.)
- Light Industrial
- Heavy Industrial
- Public Facilities (CON, NISD, Library)
- Semi-Public (Religious, Hospitals, etc.)
- Transportation
- Railroad
- Utilities
- Downtown
- Park
- Ball Fields
- Drainage
- Golf Course
- Agricultural
- Unimproved



Map 17.5:
Area 2
Planned Land Use

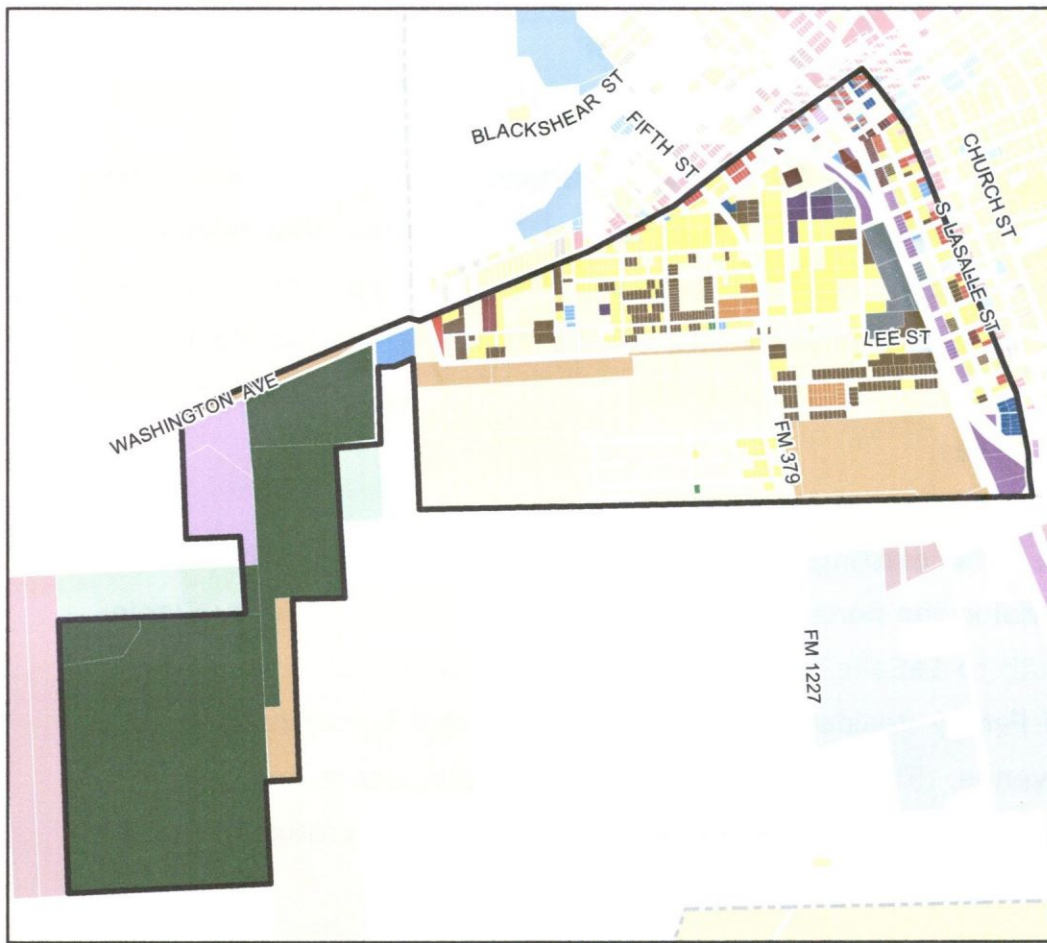
- Low Density Single-Family
- Medium Density Single-Family
- Neighborhood Density Single-Family
- Low Density Multi-Family
- Medium Density Multi-Family
- Commercial
- Neighborhood Retail
- Research and Development
- Warehousing
- Industrial
- Public Use
- Pedestrian Mixed Use
- Historic Mixed Use
- Corridor Mixed Use
- Central Business District
- Parkland
- Redevelopment



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Planning Area 3

Planning Area 3 is located in the southwestern part of Navasota as shown on Map 17.6 and 17.7. This planning area allows for a variety of uses, to offer both additional housing options for residents as well as opportunities for economic development and expansion. Planning Area 3 primarily comprises the Low Density Multi-Family Residential classification, spanning the south and west borders of the city limits to near LaSalle Street and Washington Avenue. In order to promote compatible land uses and possible economic opportunities, Industrial and Warehousing land uses are recommended in areas adjacent to the west and east side of the railroad, respectively. Finally, the lands running north-south along LaSalle Street have been designated as Pedestrian Mixed Use. In line with the Pedestrian Mixed Use classification, the goals of this area should be to serve both commercial, retail, and office uses with the opportunity to include loft-type residential uses located in the upper stories. The promotion of residential development along LaSalle Street in this planning area is intended to serve as a catalyst for redevelopment and new development within the area. Opportunities exist for infill development in this planning area.



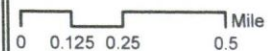
Map 17.6:
Area 3
Existing Land Use

- Single-Family
- Duplex
- Multi-Family (3 units or more)
- Group Quarters
- Mobile/Manufactured Home
- Rural (Large Lot Residential, > 5 acres)
- Commercial Retail (Stores, Banks, etc.)
- Commercial Office (Business, Service)
- Commercial Other
- Commercial - Industrial (Warehousing, etc.)
- Light Industrial
- Heavy Industrial
- Public Facilities (CON, NISD, Library)
- Semi-Public (Religious, Hospitals, etc.)
- Transportation
- Railroad
- Utilities
- Downtown
- Park
- Ball Fields
- Drainage
- Golf Course
- Agricultural
- Unimproved



Map 17.7:
Area 3
Planned Land Use

- Low Density Single-Family
- Medium Density Single-Family
- Neighborhood Density Single-Family
- Low Density Multi-Family
- Medium Density Multi-Family
- Commercial
- Neighborhood Retail
- Research and Development
- Warehousing
- Industrial
- Public Use
- Pedestrian Mixed Use
- Historic Mixed Use
- Corridor Mixed Use
- Central Business District
- Parkland
- Redevelopment



This comprehensive plan or future land use map does not constitute zoning regulation or district boundaries.

Planning Area 4

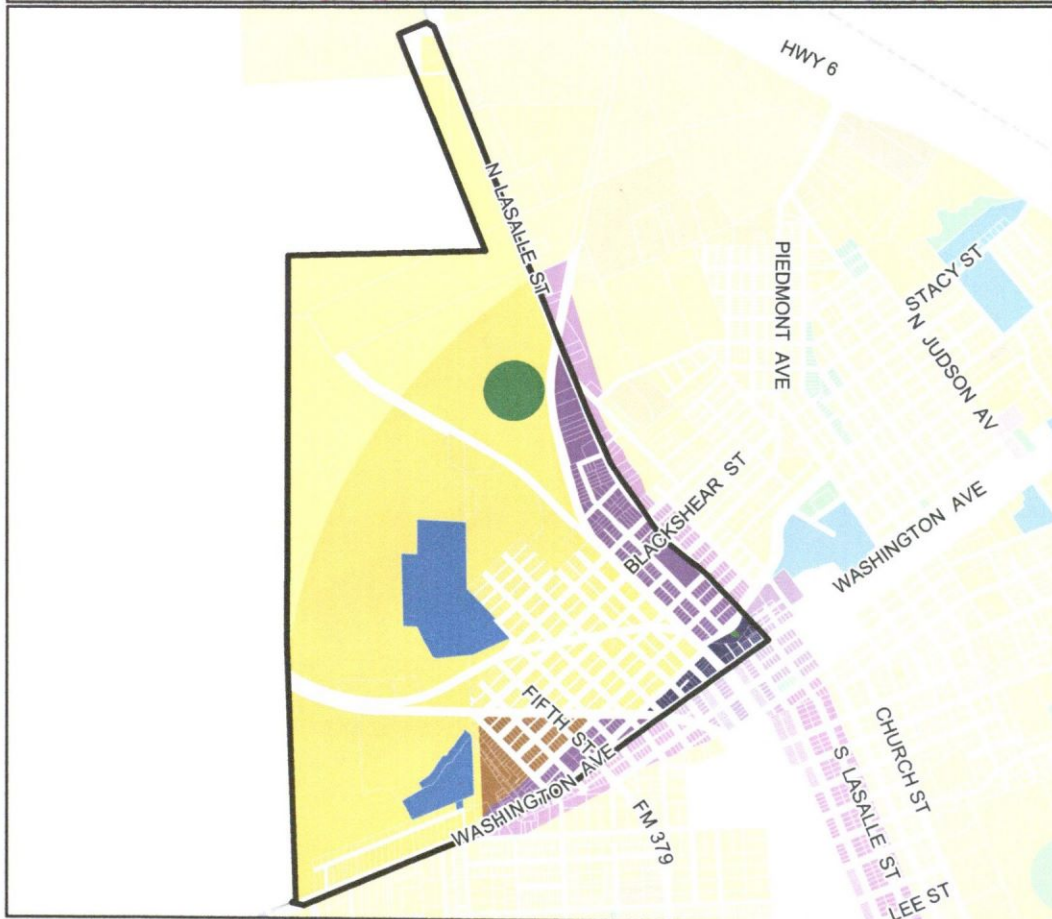
Planning Area 4 includes the area on the northwestern side of Navasota. This section's boundaries are displayed on Map 17.8 and 17.9. This area allows for Pedestrian Mixed Use development along LaSalle Street and Washington Avenue. Since this area is considered a gateway into the CBD, the Pedestrian Mixed Use development promotes a unique mixture of developments and will preclude many undesirable commercial uses.

The area also includes the existing residential classifications of Medium Density Single-Family Residential in the northwest corner and Neighborhood Density Single-Family Residential south to LaSalle Street and Washington Avenue. In addition, a Medium Density Multi-Family Residential is also recommended bordering the north side of Washington Avenue. This planning area includes land meant for residential infill development including areas of multi-family along existing and future arterials.



Map 17.8:
Area 4
Existing Land Use

- Single-Family
- Duplex
- Multi-Family (3 units or more)
- Group Quarters
- Mobile/Manufactured Home
- Rural (Large Lot Residential, > 5 acres)
- Commercial Retail (Stores, Banks, etc.)
- Commercial Office (Business, Service)
- Commercial Other
- Commercial - Industrial (Warehousing, etc.)
- Light Industrial
- Heavy Industrial
- Public Facilities (CON, NISD, Library)
- Semi-Public (Religious, Hospitals, etc.)
- Transportation
- Railroad
- Utilities
- Downtown
- Park
- Ball Fields
- Drainage
- Golf Course
- Agricultural
- Unimproved



Map 17.9:
Area 4
Planned Land Use

- Low Density Single-Family
- Medium Density Single-Family
- Neighborhood Density Single-Family
- Low Density Multi-Family
- Medium Density Multi-Family
- Commercial
- Neighborhood Retail
- Research and Development
- Warehousing
- Industrial
- Public Use
- Pedestrian Mixed Use
- Historic Mixed Use
- Corridor Mixed Use
- Central Business District
- Parkland
- Redevelopment



This comprehensive plan or future land use map does not constitute zoning regulation or district boundaries.

Planning Area 5/Extraterritorial Jurisdiction

In order to truly evaluate the future of Navasota's growth and land uses, it is necessary to consider areas outside of the current city limits. For the purposes of the Future Land Use Plan, areas outside of the city limits and within the allowable ETJ are addressed as Planning Area 5 (Map 17.10 and 17.11).

Industrial Park Addition

The Navasota Industrial Park is located south of the existing city limits. The current park does not connect with the airport property to the west. Extending the industrial land use to the airport property will increase connectivity with the existing industrial park and encourage additional development. Furthermore, the necessary infrastructure is already located in the southern portion of the City. The existing Industrial Park is located within the ETJ of Navasota. Currently, the park tenants have a contract with the City to prevent annexation. In exchange for this agreement, the city is permitted to charge a fee in lieu of taxes. Should a new agreement between all parties come to fruition, annexation of this area is recommended.



Map 17.10:
Area 5
Existing Land Use

- Single-Family
- Duplex
- Multi-Family (3 units or more)
- Group Quarters
- Mobile/Manufactured Home
- Rural (Large Lot Residential, > 5 acres)
- Commercial Retail (Stores, Banks, etc.)
- Commercial Office (Business, Service)
- Commercial Other
- Commercial - Industrial (Warehousing, etc.)
- Light Industrial
- Heavy Industrial
- Public Facilities (CON, NISD, Library)
- Semi-Public (Religious, Hospitals, etc.)
- Transportation
- Railroad
- Utilities
- Downtown
- Park
- Ball Fields
- Drainage
- Golf Course
- Agricultural
- Unimproved



Map 17.11:
Area 5
Planned Land Use

- Low Density Single-Family
- Medium Density Single-Family
- Neighborhood Density Single-Family
- Low Density Multi-Family
- Medium Density Multi-Family
- Commercial
- Neighborhood Retail
- Research and Development
- Warehousing
- Industrial
- Public Use
- Pedestrian Mixed Use
- Historic Mixed Use
- Corridor Mixed Use
- Central Business District
- Parkland
- Redevelopment

0 0.375 0.75 1.5 Mile



This comprehensive plan or future land use map does not constitute zoning regulation or district boundaries.

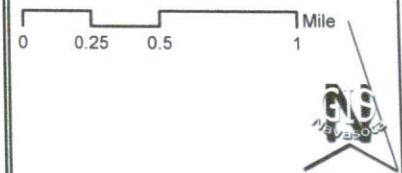
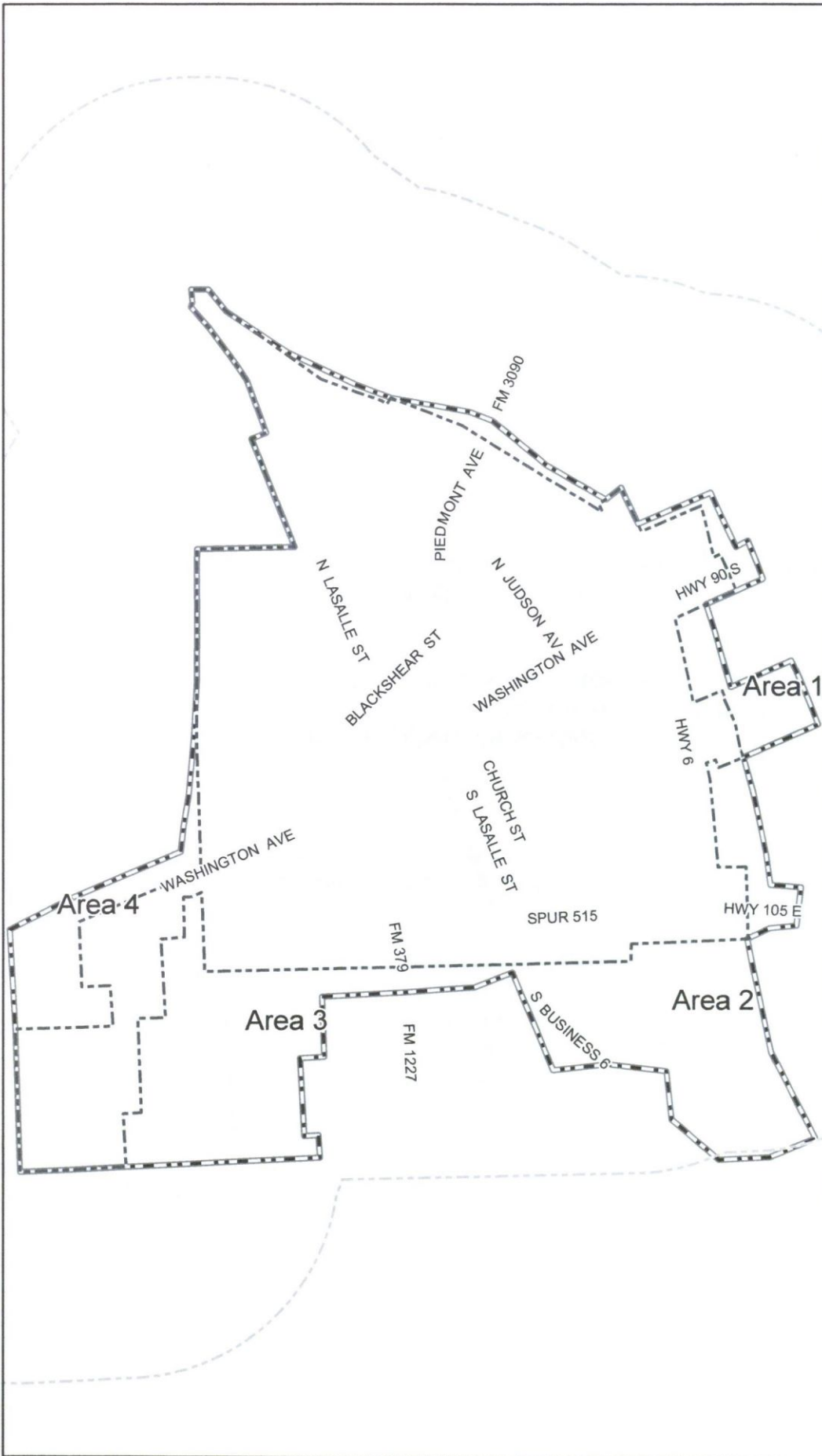
Annexation

The ability to annex lands into the city limits can be a proactive tool to aid in maintaining compatible and aesthetically pleasing land uses. Two areas of land around Navasota should be considered for future annexation. The lands in the ETJ east of Highway 6 have already been annexed to some degree. However this annexation is somewhat of a piecemeal approach. In order to create a more uniform area of land use regulation and to aid future growth patterns along Highway 6, the annexation of the area outlined in Map 17.1 is recommended.

The second area evaluated for annexation is located south of the current city limits, between the Industrial Park and Highway 6. This area has existing infrastructure which will reduce Navasota's costs. In addition, this area is a prime site for potential gateway uses. Similar to the previous annexation area above, the proximity to Highway 6 may be problematic with regard to incompatible land uses.

Map 17.12: Annexation

 Annexation Areas



The following 10 year action agenda is suggested for implementation of the Future Land Use section the Comprehensive Plan.

Action Agenda

Year 1:

- Adopt the Comprehensive Plan.
- Adopt a municipal ordinance requiring consistency between the zoning ordinance map and the Comprehensive Plan.
- Identify future land use classifications that need appropriate zoning classifications (such as mixed use, manufactured housing, etc.).
- Adopt zoning text amendments to create appropriate new zoning districts and amend existing districts as needed to permit consistency with the Comprehensive Plan.
- Identify necessary city initiated rezonings to make the zoning map consistent with the comprehensive plan, and adopt a feasible rezoning schedule.

Year 2:

- Begin city initiated rezonings as identified in year 1. Continue this process according to the schedule adopted in year 1.
- Expand on the existing clean up program by making it a week long "Navasota Pride Week."

Year 3:

- Zone undeveloped portions of the flood plain area as Agriculture/Residential.
- Begin a program to encourage the purchase of flood insurance.

Year 4:

- Condemn, demolish, or repair structures that pose a threat to the safety of the citizens.
- Create a portfolio of commercial site designs to encourage structures meeting the design standards of the community.
- Develop and adopt design and appearance standards for residential uses.
- Perform a general overview and update Future Land Use Plan.

Year 5:

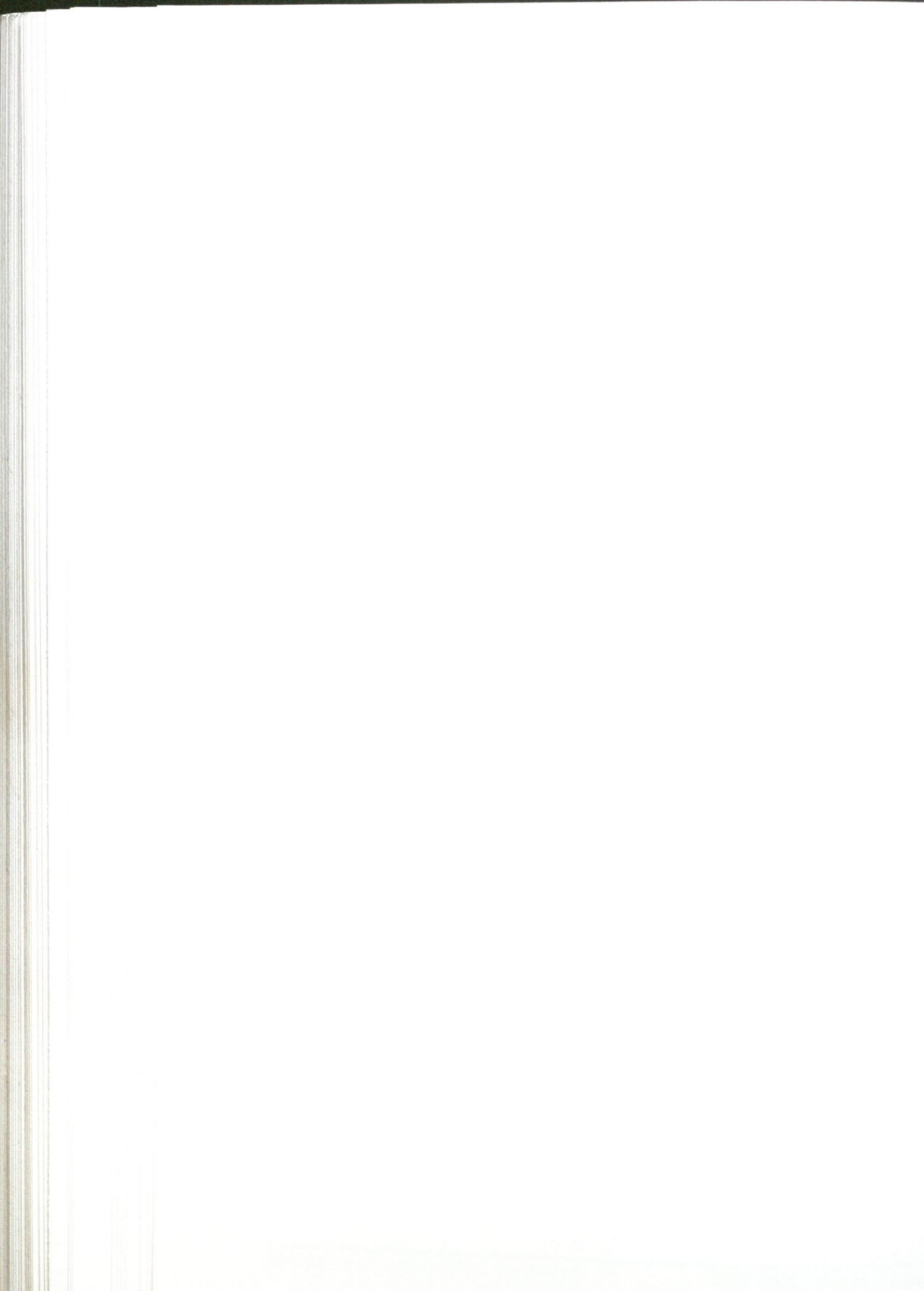
- Evaluate probable land uses and the costs of infrastructure associated with any anticipated annexation.

Year 10:

- Perform major revisions of the Future Land Use Plan.

Ongoing Activities:

- Review and update Comprehensive Plan
- Plan and zone land immediately upon annexation according to the adopted Future Land Use Plan.
- Write an annual report.
- Document and publicize available infill opportunities throughout the City.
- Reevaluate any rehabilitation projects conducted in Downtown over the past five years to gauge what has worked, and why others have failed.
- Annex the Industrial Park as agreements expire.



Future Transportation



SECTION 18 – FUTURE TRANSPORTATION

Purpose and Overview

The purpose of this section of the comprehensive plan for the City of Navasota is to provide for the future transportation needs of the City. This section of the document proposes short and long-term improvements to the road network to solve existing problems and to facilitate planned growth. To promote orderly development of the road network, a Thoroughfare Plan (Map 18.1) has been created. This plan considers existing land use conditions, proposed future land use, and projected population growth within the city to guide needed transportation system expansion. Some recommendations call for the construction of new streets while other underutilized streets could be reconfigured and converted to other roadway classifications. Safe and efficient mobility for the citizens of Navasota is the ultimate goal of this section.

Goals and Objectives

Goal #1: Maintain and upgrade the roadway infrastructure of the City of Navasota.

- Objective 1: The condition of the substandard roadways should be improved to have a minimum level of service "C".

Goal #2: Provide a safe route for heavy and hazardous vehicles passing through Navasota.

- Objective 1: Navasota should encourage the Texas Department of Transportation (TxDOT) to complete the proposed "South Loop" and "West Loop" as shown in the thoroughfare plan.
- Objective 2: The City should redesign the existing truck route from the residential areas of the City to the "South loop" and "West Loop" once they have been constructed.

Goal #3: Improve the traffic and parking conditions in and around Downtown Navasota.

- Objective 1: Navasota should coordinate the traffic signals on Washington Avenue.
- Objective 2: The City should coordinate with TxDOT to improve the conditions of state owned and maintained streets and intersections.
- Objective 3: The intersection of Washington Avenue and LaSalle Street should be redesigned to reduce congestion and provide for a safer intersection.
- Objective 4: The alleyways between Washington Avenue and the Cedar Creek parking lot should be designated as one way.

Goal #4: Incorporate the use of access management into future developments.

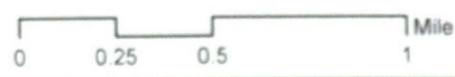
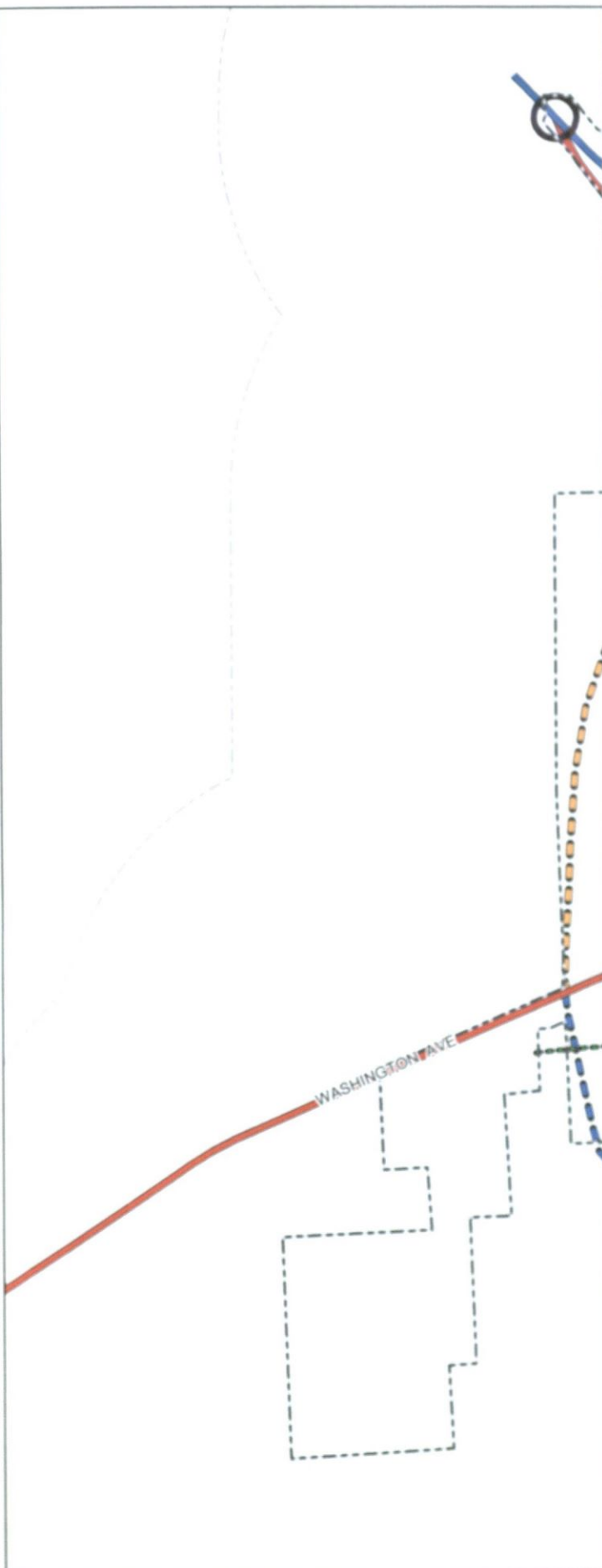
- Objective 1: Navasota should connect the feeder road along the east side of Highway 6 between Washington Avenue and FM 3090.
- Objective 2: The City should incorporate means of access management to new developments and redevelopments to address future transportation problems.

Goal #5: Provide a transportation system that embraces the use of bicycles and walking.

- Objective 1: Navasota should encourage pedestrian activity in Downtown by adding sidewalks for new developments.
- Objective 2: The City should connect newly developed residential areas to nearby schools, parks, and commercial areas through sidewalks and bike lanes.
- Objective 3: Existing hike and bike trails should be marked with adequate signs.
- Objective 4: All new residential developments should be required to have sidewalks.

Map 18.1: Thoroughfare Plan

- Existing Hike/Bike Trail
- - - Future Hike/Bike Trail
- Existing Freeway
- - - Future Freeway
- Existing Arterial
- - - Future Arterial
- Existing Collector
- - - Future Collector
- Grade Separation
- - - Future Grade Separation



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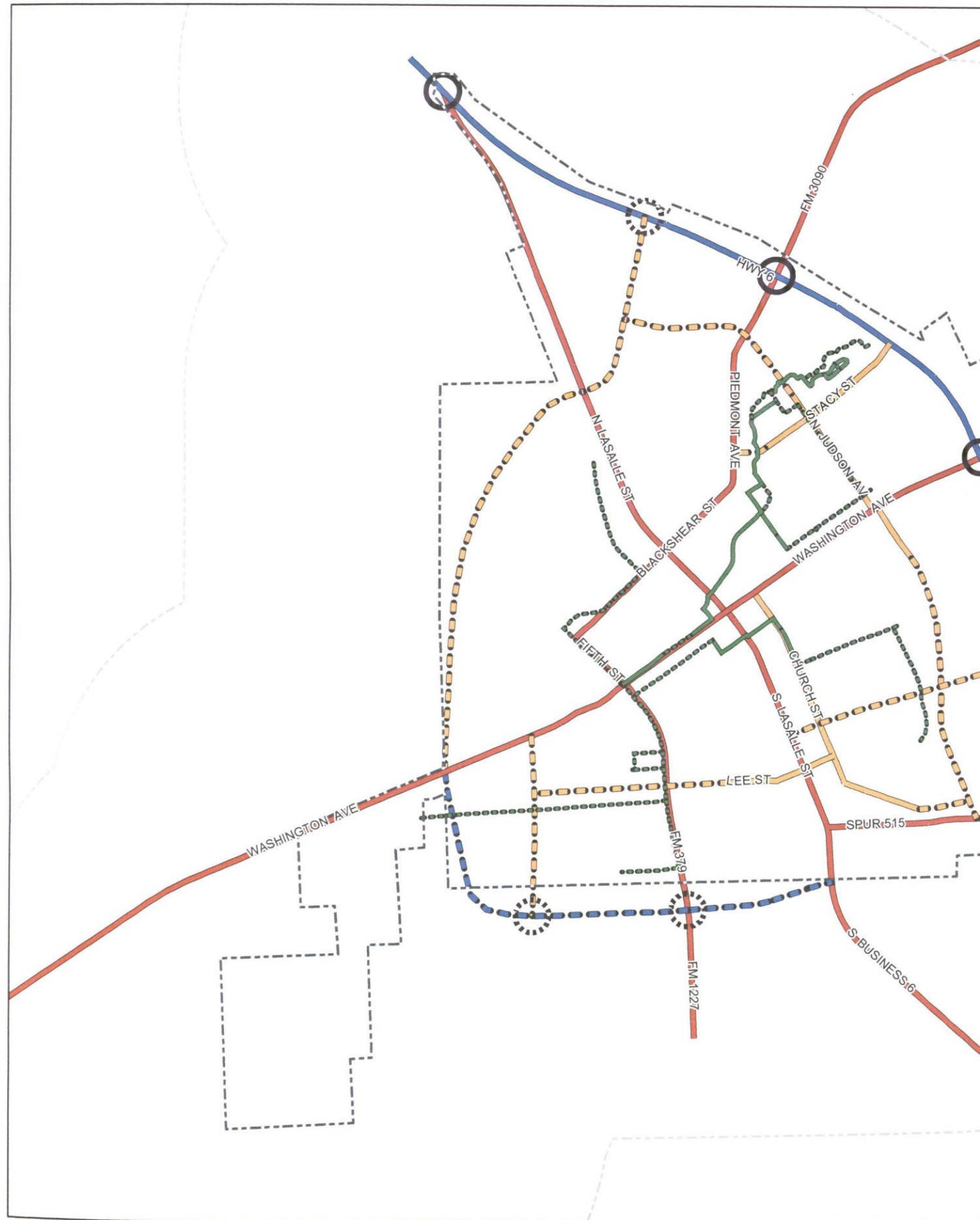
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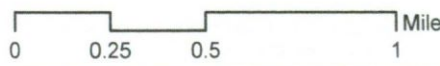
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tial developments should be required



Map 18.1: Thoroughfare Plan

- Existing Hike/Bike Trail
- Future Hike/Bike Trail
- Existing Freeway
- Future Freeway
- Existing Arterial
- Future Arterial
- Existing Collector
- Future Collector
- Grade Separation
- Future Grade Separation





Goal #6: Provide for a safe and adequate airport.

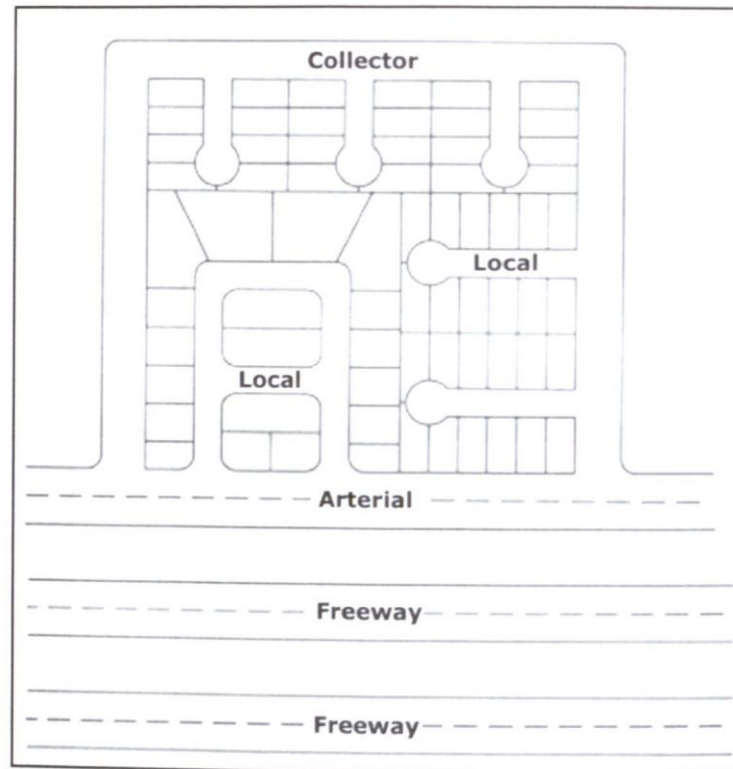
- Objective 1: Navasota should protect Federal Aviation Administration (FAA) -mandated safety areas, runway protection zones, and other clear areas to the maximum extent possible.
- Objective 2: Land uses should be restricted on lands adjacent to airport facilities through height restrictions, obstruction limits, and other zoning techniques.
- Objective 3: The City should ensure that Airport facilities meet all applicable standards.
- Objective 4: A meteorological facility should be constructed.
- Objective 5: Navasota should construct an airport terminal.
- Objective 6: The City should install sewer infrastructure to the airport in conjunction with future Industrial Park development.

- Objective 7: The Airport's Development Plan should be adopted.
- Objective 9: Navasota should attract a Fixed Based Operator (FBO).
- Objective 8: The adopted Airport Development Plan should be re-evaluated after 5 years.
- Objective 10: The City should ensure the Airport is reflected in local development and transportation plans.

Roadway Classifications

The transportation system for the City of Navasota has been divided into four separate categories: Freeways, Arterials, Collectors, and Local Streets, that form a hierarchy to provide for a safe, efficient and effective urban circulation system (Figure 18.1).

Figure 18.1: Functional Street Classification System

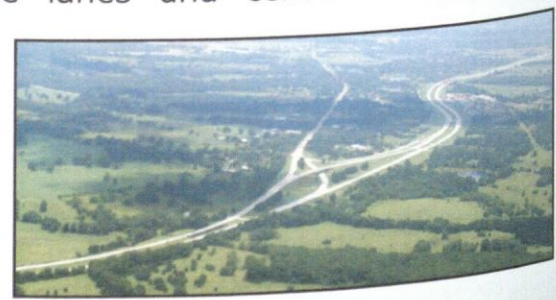


The Functional Street Classification System is used in urban planning to identify and analyze a city's street system on the basis of four street types. These include:

- Freeways
- Arterials
- Collector Streets
- Local Access Streets

Freeways

The intended purpose of Freeways is to move traffic efficiently and quickly. Freeways are grade-separated with multiple lanes and center lane divisions between oncoming traffic. They carry a large volume of non-local traffic to move people over long distances at high speeds. The typical speed range for Freeways is between 55 and 70 miles per hour. Access to and



Highway 6

from freeways is limited to major intersections.

Arterials

Arterials serve to provide movement between collector streets, freeways, and other arterials. They provide limited land access to minimize congestion while distributing traffic to collectors. Signalization should be provided at intersections with other arterials and collectors as warranted by traffic flows and safety concerns.

Collectors

The purpose of Collector Streets is to provide both access and efficient movement to move traffic between Local Streets and Arterials. Collectors provide access to adjacent uses at lower speeds than Arterials. Signalization should be provided at intersections with other Collectors and Arterials as warranted by traffic flows and safety concerns.

Local Streets

Local Streets provide direct access from adjacent land to Collector Streets. They provide the most access to residential and commercial uses for short distances at the lowest speeds. Local Streets should serve not only cars, but also make considerations for pedestrians and bicycles. In residential neighborhoods the provision for parked cars may provide slower traffic speeds and safer pedestrian access. Relatively narrow lanes can also be employed for traffic calming in residential developments. Through traffic should be discouraged, and heavy truck traffic should be directed away from these streets.

Functional Street Classification System for Navasota

The street system in Navasota was analyzed and classified as the following:

Freeway

- State Highway 6

Arterials

- Blackshear Street

- Farm to Market Road (FM) 1227
- Farm to Market Road (FM) 3090
- Fifth Street
- Highway 90 South
- North LaSalle Street
- South LaSalle Street
- Piedmont Avenue
- SPUR 515 (Highway 105 East)
- Washington Avenue (Highway 105 West)

Collectors

- Church Street
- Clayton Street
- Lee Street
- Montgomery Street
- North Judson Avenue
- South Judson Avenue
- Stacey Street

Local Street

- All other streets not mentioned are classified as Local Streets.

Recommended Roadway Design Standards

Roadway design standards are the principles and guidelines used to provide a basis for roadway construction. They are necessary to ensure that the network of streets will safely, efficiently and effectively serve the traveling public. Additionally, they allow for the orderly development of adjacent lands as well as the transportation network.



Navasota Streets

Level of Service "C"

The Highway Capacity Manual published by the Transportation Research Board (<http://www.trb.org>) categorizes roadway systems by their level of service. The level of service is based on maneuverability, delays, and speeds. As the volume and the number of signalized intersections increases, the level of service decreases. The City of Navasota should try to attain a level of service "C".

Alignment Characteristics

The safety and efficiency of a roadway system is highly affected by the road alignment characteristics. Some of these characteristics include speed, parking, curves or bends, and geometry. Some streets that require new alignment include the intersections of Montgomery Street and SPUR 515, and Washington Avenue and LaSalle Street.

Access Management

Access management provides for a means to manage, maintain, and transform access for land uses while simultaneously preserving traffic, safety, capacity, and speed on the road network now and in the years ahead. Access management also evaluates the suitability of a given site development from an access standpoint, while identifying the need to preserve through traffic. It addresses congestion, capacity loss, and accidents on roadways. Access management also helps to achieve a balance between traffic movement and access to land uses by carefully controlling the location, type, and design of access points and street intersections. The basic overall principles for access management are to minimize the access point conflicts and provide for a safer traveling environment.

Some alternative solutions for the City of Navasota to improve its access management would be to restrict the access regarding alleyways, and to connect the frontage roads along Highway 6. In addition, it is recommended that the City designate all alleyways between Washington Avenue and Cedar Creek be limited to one-way traffic. To facilitate future development and existing commercial uses, the incomplete frontage road of Highway 6 from Washington Avenue to FM 3090 should be constructed. This segment is the only access road within the city limits not yet

built. Communication between the City and TxDOT will be needed to address this problem to relieve the safety concerns of existing businesses using direct access to the Freeway.

Proposed Roadways and Extensions

Several new roadways and street extensions have been recommended for the City. These recommendations are displayed on the Thoroughfare Plan (Map 18.1). When development of these roadways cannot be accomplished through platting, the City should allocate resources for their timely construction. However, whenever development of land identified on the Thoroughfare Plan is proposed, the City should acquire as much land and/or fees as it may legally procure through the platting process.

The following are proposed roadways and extensions:

Stacey Street and Waco Street: The collectors identified would provide the City with an east/west collector north of Washington Avenue that connects Piedmont Avenue and Highway 6. The existing roadway travels west from Highway 6 frontage road ending just prior to intersecting with Piedmont Avenue. The proposal calls for extending Stacey Street across Cedar Creek to intersect with Piedmont Avenue. Existing educational facilities and residential uses will benefit from this extension.

Anderson Street Extension: Anderson Street currently runs from Farquhar Street to Church Street. The proposed extension is located eastward from Church Street in a direct line, just south of the residential area served by Gibbs Street, to Highway 6. The Anderson Street extension would provide the City with an east/west collector south of Washington Avenue. Future residential and mixed-uses will benefit greatly from this thoroughfare.

Clayton Street Extension: Clayton Street currently is located south from Highway 105 West to a dead end in a residential area on the west side of Navasota.

The proposed change would extend Clayton Street southward to intersect with the proposed South Loop, serving as a connection between future residential uses to employment centers in the south and throughout the City.

Lee Street Extension: The Lee Street Extension will provide the City with an east/west collector on the west side of South LaSalle Street. The roadway currently exists from Church Street to Malcolm Street. The Lee Street extension should be continued westward, utilizing the right-of-way just south of the residential area from Malcolm Street to Clayton Street. Future residential development will necessitate this access.

Montgomery Street Realignment: With projected increases in traffic, the existing intersection alignment of Montgomery Street and SPUR 515 causes safety concerns. The proposed realignment should have Montgomery Street veer east at any point past Baker Street and intersect with the proposed South Judson Avenue extension. The remaining pavement of the original alignment is to terminate prior to the existing intersection with SPUR 515.

Northern Collector: Another collector is proposed from North LaSalle east towards Highway 6. This proposed roadway would provide additional access and improve routing for emergency services between these two roadways. The proposed North LaSalle collector would begin at the proposed Western Collector / North LaSalle intersection and run east. If possible, it would then curve in a northeastern direction to utilize the existing unused right of way. The road would then follow along the right of way until it terminates at the frontage road of Highway 6. This expansion would require the construction of an overpass over Highway 6 to allow for maximum access to both Highway 6 and the North LaSalle collector. As discussed in the Navasota Economic Development Plan, portions of this road could be built in conjunction with redevelopment in the area. Several funding options for this road exist as discussed in that document.

North and South Judson Avenue Extension: The proposed roadway would extend Judson Avenue in northern and southern directions. The north and south extensions would act as collectors that parallel Highway 6 for local traffic. The northern extension would continue northward past Maple Drive and intersect with the proposed Northern Collector at its midpoint. The southern extension would extend south past Grimes Street and connect with SPUR 515 at the new Montgomery Street intersection.

South Loop: A southern loop is currently being proposed by the Texas Department of Transportation (TxDOT). The loop will begin at approximately Universal Street and South LaSalle Street (South Business 6). The southern loop will stretch westward outside the city limits, but within the ETJ, and will meet Highway 105 West at the right of way just west of Catherine Street. This expansion would require the construction of two overpasses for grade separation at: the southern loop and FM 379, and the intersection of the south loop and the proposed Clayton Street expansion.

Western Collector: Due to a lack of collector streets on the west side of Navasota, it is proposed that a new collector street be constructed. The western collector would extend north from the South Loop and Highway 105 West intersection until it meets North LaSalle Street just south of Wingard Road. The proposed roadway is within the city limits and would provide an alternative heavy truck route and provide access into proposed residential neighborhoods.

Additional Transportation

Transit Services

The City of Navasota currently is not at a level that requires a fixed route public transportation service. The current service provided by "The District" is sufficient for para-transit service. While current needs are being met, staff reevaluation and public involvement should be used to gauge demand and desire for a future increased level of service. The City should maintain current relations with "The District" to facilitate future services.

Rail Transportation

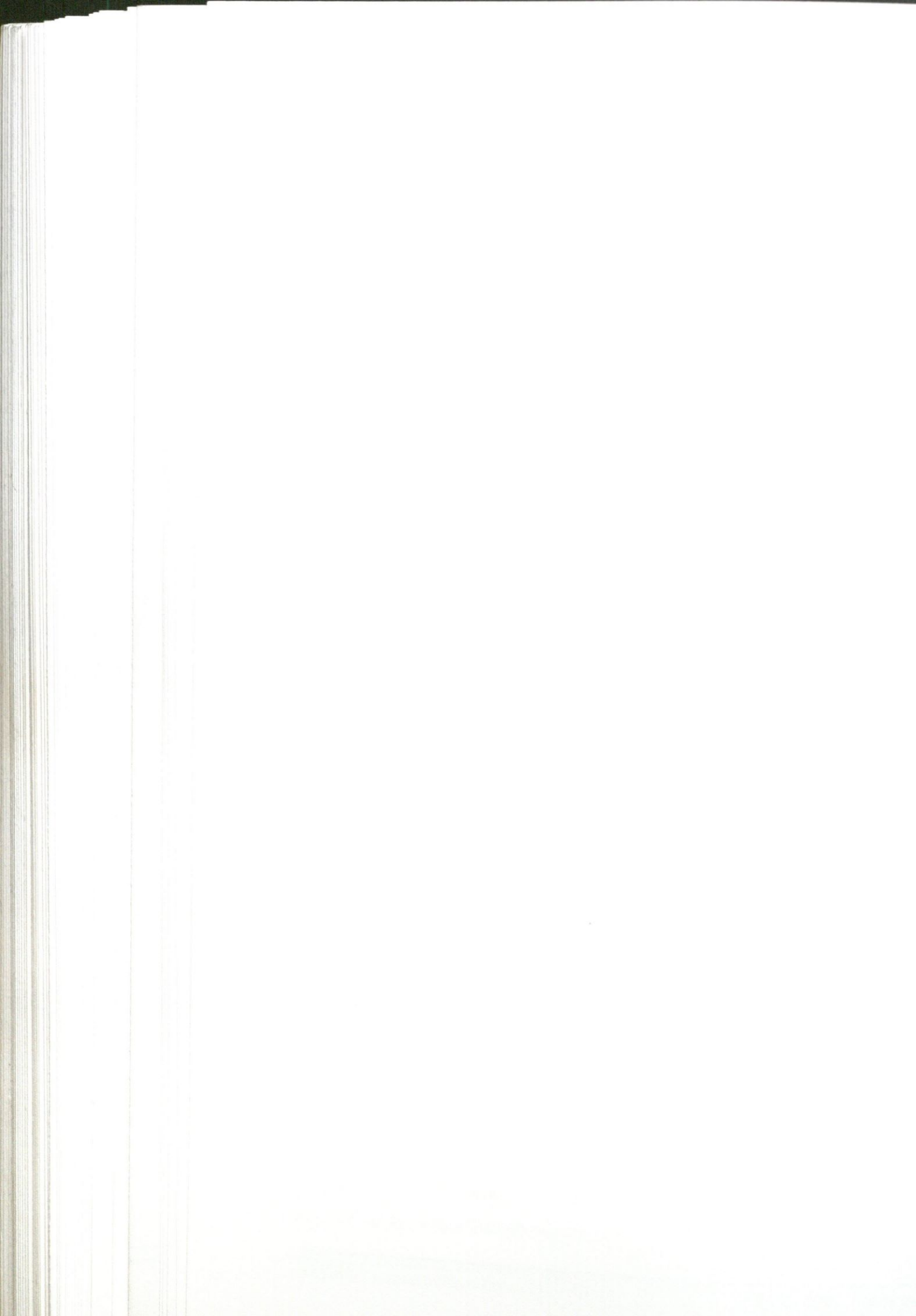
Recently, there has been interest in providing high-speed rail service as well as other services from the Houston area. It is suggested that the City remain involved and current with these proposals.

Air Transportation

With the City currently in the process of creating an Airport Development Plan, there are no additional plans presented here.



Navasota Airport



The following 10 year action agenda is suggested for implementation of this section of the Comprehensive Plan.

Action Agenda

Year 1

- Coordinate with TxDOT to time the traffic signals along Washington Avenue.
- Support TxDOT's proposal of the southern loop and communicate the recommended alignment as proposed in the City's Thoroughfare Plan.
- Identify the needs for curb and gutter installation on existing streets.

Year 3

- Improve the condition of substandard roadways to function at the minimum level of service "C".
- Coordinate with TxDOT in providing curbs and gutters on the remaining parts of Washington Avenue exiting Downtown towards the west.
- Begin construction on the Montgomery Street realignment and extension as development indicates.
- Begin to purchase right of way for the northern and southern Judson Avenue extensions.
- Begin working with TxDOT to connect the frontage road on the eastside of Highway 6 from Highway 90 to F.M. 3090.
- Begin installation of airport automated weather service.

Year 5

- Conduct public hearings with TxDOT on the proposed redesign of the Washington Avenue and LaSalle Street intersection.
- Begin to purchase the right of way for the North Collector as development indicates.
- Begin to purchase the right of way for Lee Street as development indicates.
- Conduct a new windshield transportation survey and update existing GIS data.

Year 7

- Begin work with TxDOT to initiate construction of the realignment of the Washington Avenue and LaSalle Street intersection.
- Begin to purchase the right of way for the Clayton Street extension as development indicates.
- Begin to purchase the right of way for the Anderson Street extension as development indicates.

Year 10

- Begin to purchase the right of way for the Western Collector as development indicates.
- Revise and update the Thoroughfare Plan in association with the revision of the Comprehensive Plan for Navasota.

Ongoing

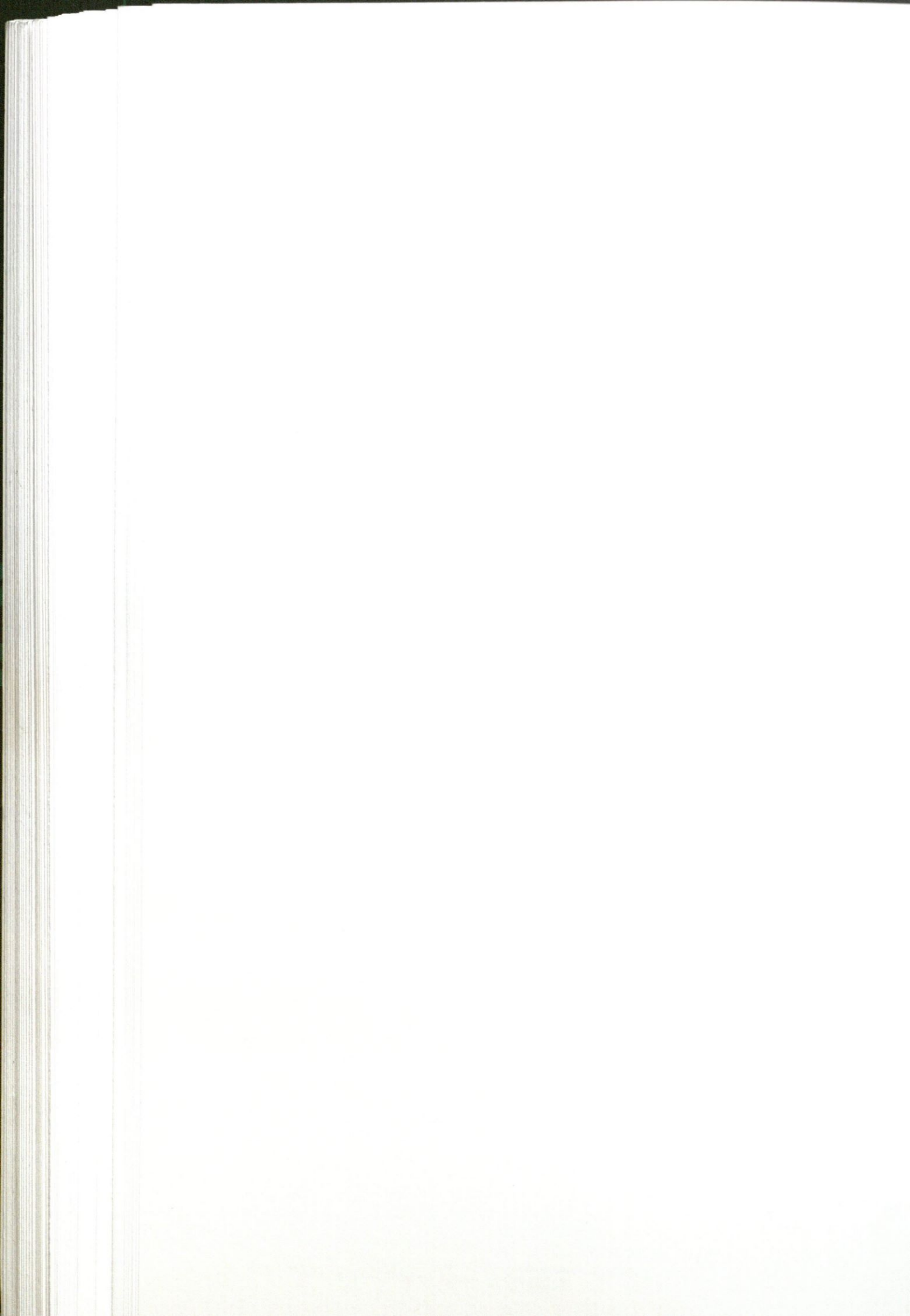
- For all new road expansions, construction should coincide with actual proposed development.
- Refer to Thoroughfare Plan for all new construction and expansion.
- Information regarding transportation reviews and updates should be provided in an annual report.

Sources:

Transit information came from Brazos Transit District.
Stover, Virgil G., Koepke, Frank J., Transportation & Land Development, 2nd Edition. Institute of Transportation Engineers. Printed in the U.S. 2002.
Transportation Research Board. (2000). Highway Capacity Manual. Transportation Research Board of the National Academies. Released December of 2000. National Academy of Sciences. Printed in the U.S. 2000.
Washington State Department of Transportation, Aviation Division (Revised 1999). "Airports and Compatible Land Use: Volume 1" Retrieved February 7, 2004 from Washington State Department of Transportation, Aviation Division website: <http://www.wsdot.wa.gov/Aviation/planning/AirportsLandUse.pdf>.
For further examples and guidelines, please refer to the *TxDOT Access Management Manual* Online at: <http://manuals.dot.state.tx.us/dynaweb/coldesig/acm>.

Future Urban Infrastructure





SECTION 19 – FUTURE URBAN INFRASTRUCTURE

Introduction

The future infrastructure section of the Comprehensive Plan addresses short-term and long-term improvements to the water, wastewater, storm water, natural gas, electrical, and cable utilities to provide improved services where needed and to extend services to the growing community. The identification of future infrastructure needs are stated in the goals and objectives. Proposed future infrastructure needs are shown on the Maps 19.1 and 19.2. Infrastructure recommendations are given to assist city employees and engineering consultants on the future development of the City. These recommendations may require the construction of new water, wastewater, and storm water lines as well as the creation of an additional wastewater treatment plant, additional water well locations, etc. The major goals of the infrastructure section of the Comprehensive Plan are to ensure the health, safety and welfare for the citizens of Navasota.

Goals and Objectives

Goal #1: Develop and maintain an adequate water supply, treatment, and distribution system which meets the existing and projected needs of the service area in an efficient, economical, and environmentally sensitive manner.

- Objective 1: Navasota should inventory all existing water lines and maintain an accurate digital and hard copy map of existing and proposed water lines.
- Objective 2: Water lines that are currently not up to design code or pose leakage problems should be upgraded.
- Objective 3: The City should assure adequate water supply and distribution flow for both fire fighting and consumer needs.
- Objective 4: Extensions of water mains and distribution lines should be provided to new developments in the City.

- Objective 5: Navasota should encourage infilling to fully utilize existing water mains and distribution lines in the city limits.
- Objective 6: The City should concentrate the extension of water mains and distribution lines in those areas identified as areas of greatest growth.
- Objective 7: Users outside the city limits should be required to pay appropriate fees for water use.

Goal #2: Protect water supply quality.

- Objective 1: Navasota should coordinate the location and expansion of the number of wells with local land use plans and necessary government organizations.
- Objective 2: The City should encourage the use of water reclamation and water reuse.
- Objective 3: Wastewater should be sampled and tested annually in the vicinity of potential industrial contamination to detect pollution.

Goal #3: Develop and maintain an adequate wastewater collection and treatment system, which meets existing and projected needs.

- Objective 1: Navasota should monitor and record daily average sanitary sewer wastewater flowage levels of service.
- Objective 2: The City should project future wastewater needs and provide necessary infrastructure based on population growth and industry demand.
- Objective 3: Compliance should be assured with the Texas Commission on Environmental Quality standards.
- Objective 4: All industrial users should be strongly encouraged to project annual demand for services based on their respective future land use plans and projects requiring additional use.
- Objective 5: New developments within the city limits should be required to tie onto existing sanitary sewer lines.

- Objective 6: The City should encourage development in areas of existing sanitary sewer lines.
- Objective 7: Navasota should encourage the use of alternative wastewater treatment in areas outside of the city limits.
- Objective 8: Accurate hard and digital copies of maps with both the existing and proposed sanitary sewer systems should be updated and maintained.
- Objective 9: The sanitary sewer system should be extended to all areas within the city limits.
- Objective 10: The City should require all areas on septic systems within the city limits to convert to the sanitary sewer system.
- Objective 11: Navasota should evaluate the need for additional wastewater facilities on an annual basis.
- Objective 12: All existing sanitary sewer lines should be maintained and monitored.

Goal #4: Ensure all areas of the City are reasonably protected from flooding.

- Objective 1: Navasota should update and maintain an accurate digital and hard copy map of the existing storm water sewers.
- Objective 2: A storm water management plan should be devised and implemented.
- Objective 3: Storm water sewer lines should be installed within the city limits along with appropriate curb and gutter improvements where currently none exist.
- Objective 4: The City should replace inadequate storm water sewer lines along with construction of curb and gutter improvements.
- Objective 5: All new roadway and building construction should be required to incorporate storm water management.
- Objective 6: Navasota should discourage development within the 100-year flood plain.

Goal #5: Continue to provide for a high quality of solid waste removal services for City residents and businesses.

- Objective 1: Navasota should maintain a relationship with outside entities to secure solid waste removal from the City.
- Objective 2: The City should initiate recycling through distribution of recycling bins to residences and businesses in addition to the promotion of a recycling program.
- Objective 3: A recycling pick up should be added to existing solid waste collection.
- Objective 4: Illegal disposal of garbage should be prevented through violation citations.

Goal #6: Continue maintaining the coordination between gas and electricity providers to meet existing and projected needs of Navasota citizens.

- Objective 1: Navasota should project future gas and electricity needs and provide necessary infrastructure based on population increase, industry demand, and impacts of growth.
- Objective 2: The City should update and maintain accurate hard and digital copies of maps with existing and proposed gas and electricity lines.
- Objective 3: Gas lines should be upgraded that are currently not code compliant or that pose leakage problems.
- Objective 4: A relationship should be maintained with outside providers to secure better service to the citizens.

Future Infrastructure Recommendations

The plan for the future growth of the City of Navasota is shown on the Navasota Future Land Use Map (Section 17, Map 17.1). Recommendations for infrastructure in Navasota are closely associated with the proposed future land use. As development occurs, additional infrastructure will be needed to serve commercial, residential, and/or industrial uses.

Water Services

As shown by the growth on the Future Land Use Map, additional water mains, lines, hydrants, manholes, and other associated features will be required in growth areas. It is of utmost importance to ensure that all commercial, residential, and industrial customers within the city limits receive services. The Future Land Use Map indicates residential and public use growth in the northern portion of the city near the intersection of Highway 6 and LaSalle Street, near the southern portion of the City along the proposed Southern Loop, along all major corridors, and in the eastern portion of the city limits, just west of Highway 6. Extending water lines to these areas of the City is a priority, with residential and commercial areas being most important (Map 19.1).

Evaluation of well sites, storage facilities and the water treatment plant should be an ongoing priority for the City, as well as their compliance with TCEQ and EPA water standards. Additional evaluations should be conducted on the efficiency of the water system with regard to leaks, pressure, and usage.

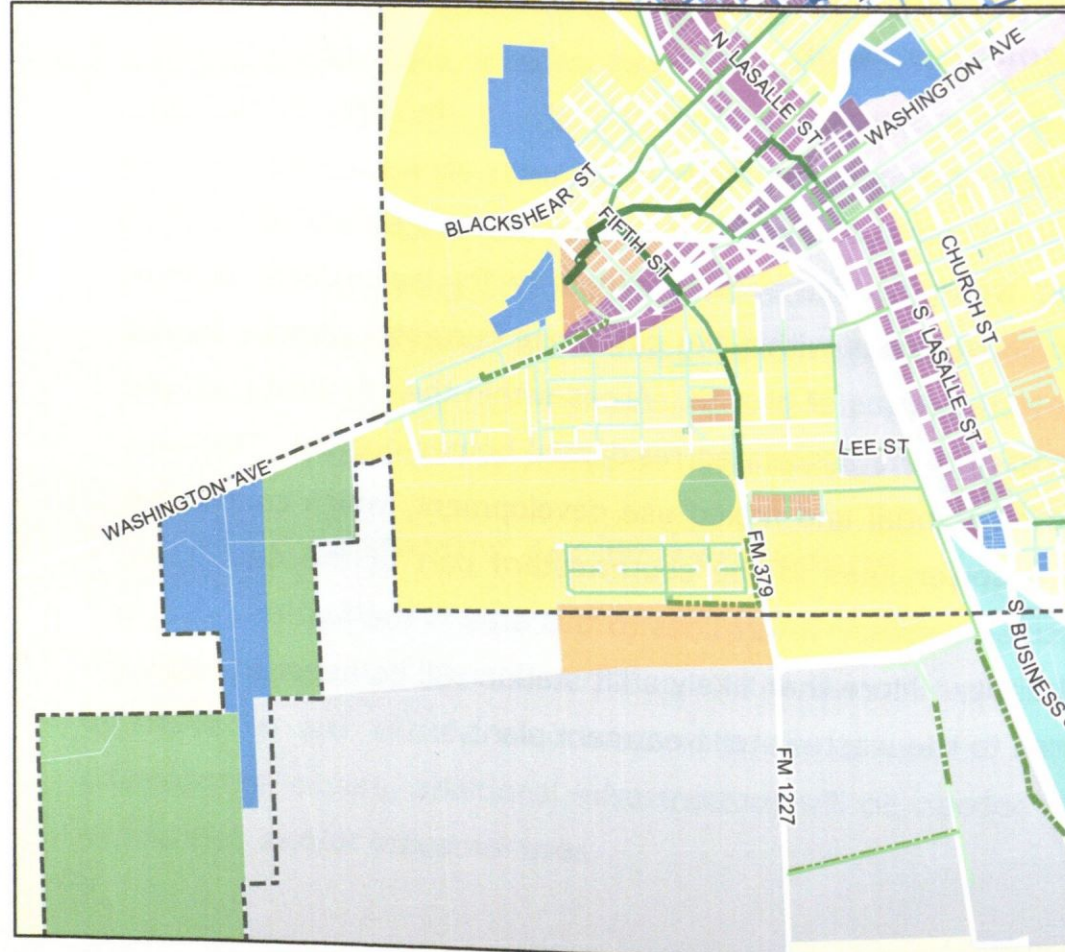
Wastewater System and Treatment

The wastewater lines and wastewater treatment plant in the City of Navasota currently meet the needs of the community. Extension of wastewater lines is needed within the city limits, particularly to those areas with projected growth (Map 19.2). Similarly to the water service area, the priority for wastewater services should first be given to those areas within the city limits currently without service and secondly to the projected areas of growth. Areas within the city limits without service include the airport and the associated residential homes nearby. This area is adjacent to proposed residential and mixed-use development, which contributes to the need for sanitary sewer lines in the southwestern part of the City. One major problem in connected sanitary sewer lines to this area is the fact that this is a low-lying section of the City. More than likely a lift station will be needed to carry wastewater from this area to the wastewater treatment plant.



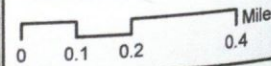
Map 19.1:
Water Needs

- Navasota Future Land Use**
- Low Density Single-Family
 - Medium Density Single-Family
 - Neighborhood Density Single-Family
 - Low Density Multi-Family
 - Medium Density Multi-Family
 - Commercial
 - Neighborhood Retail
 - Research and Development
 - Warehousing
 - Industrial
 - Public Use
 - Pedestrian Mixed Use
 - Historic Mixed Use
 - Corridor Mixed Use
 - Central Business District
 - Parkland
 - Redevelopment
- Existing Water Lines**
- Diameter**
- 14 inch
 - 12 inch
 - 10 inch
 - 8 inch
 - 6 inch
 - 4 inch



Map 19.2:
Wastewater Needs

- Navasota Future Land Use**
- Low Density Single-Family
 - Medium Density Single-Family
 - Neighborhood Density Single-Family
 - Low Density Multi-Family
 - Medium Density Multi-Family
 - Commercial
 - Neighborhood Retail
 - Research and Development
 - Warehousing
 - Industrial
 - Public Use
 - Pedestrian Mixed Use
 - Historic Mixed Use
 - Corridor Mixed Use
 - Central Business District
 - Parkland
 - Redevelopment
- Existing Sewer Lines**
- Diameter**
- 21 inch
 - 18 inch
 - 15 inch
 - 12 inch
 - 10 inch
 - 8 inch
 - 6 inch
 - Forced Main
 - Air Release Valve



Industrial land use is proposed near the Southern Loop, adjacent to the current Industrial Park. One major concern with extending sanitary sewer to industrial customers, in the southern portion of the city, is the type and quality of effluent from these businesses. In order to ensure the safety of Navasota residents, it is recommended that businesses within the industrial areas treat wastewater effluent at the primary level before discharging into the City's wastewater treatment system. Outside of the city limits, no additional wastewater lines are recommended. The proposed land use outside of the city limits is agriculture residential and planned unit development, which allow for onsite wastewater treatment.

With regard to wastewater treatment, currently the wastewater treatment plant is not operating at full capacity. Any additional wastewater demands should be reasonably serviced by the existing infrastructure. Considering areas outside of the city limits will use onsite wastewater treatment, the existing wastewater treatment plant will service the increased demand.

Storm Water System

It is recommended that storm water lines be built to service all existing land uses. This recommendation should be considered a top priority for the City. Additionally, all new developments indicated on the Future Land Use Map, within the city limits, should receive storm water sewers to prevent flooding and assist in storm water management. All new developments outside of the city limits, should take necessary precautions to limit storm water runoff through the use of ditches, channels, and culverts.

Natural Gas

It is recommended that coordination between Cleco and the City of Navasota occur to install natural gas lines for those areas of growth as indicated on the Future Land Use Map. As most areas in the City currently receive natural gas service, priority should be given to areas of growth.

Year 4:

- Search for appropriate funds for installation and upgrading of infrastructure services for the City of Navasota.
- Encourage the use of alternative wastewater treatment in areas outside of the City's limits but within its extraterritorial jurisdiction.
- Begin upgrading water lines that are currently not code compliant or that pose leakage problems.
- Encourage the use of existing water mains and distribution lines in the city limits.
- Construct storm water sewer lines within the developed areas of the city limits of Navasota where they are currently nonexistent.
- Require all new construction to incorporate storm water management systems.
- Upgrade gas lines that are currently not code compliant or that pose leakage problems.

Year 5:

- Evaluate the need for additional wastewater facilities.
- Encourage the use of water reclamation and water reuse.
- Conduct a five-year review and revise the City's infrastructure systems as necessary.

Year 6:

- Extend sanitary sewer system to all appropriate areas within the city limits.
- Provide extensions of potable water mains and distribution lines to new development in the City.

Year 7:

- Maintain and monitor all existing sanitary sewer lines.
- Require all appropriate areas within the city limits served by septic systems to convert to sanitary sewer.
- Concentrate the extension of water mains and distribution lines in those areas identified by the City as areas of growth.
- Implement the City's storm water management plan.

Year 8 onwards:

- Continue monitoring and recording daily average sanitary sewer wastewater service levels.
- Continue evaluating the need for additional wastewater facilities.
- Allow new developments to tie onto existing sanitary sewer lines.
- Maintain and monitor all existing sanitary sewer lines.
- Provide extensions of potable water mains and distribution lines to new development in the City.

- Maintain and monitor all existing water distribution lines.
- Continue updating and maintaining an accurate digital and hard copy map of existing storm water sewers.
- Maintain a good working relationship with outside entities to secure solid waste removal from the City.
- Continue updating and maintaining an accurate digital and hard copy map of existing gas and electricity lines.



Future Housing





SECTION 20 – FUTURE HOUSING

Introduction

The purpose of the housing section is to provide guidelines for the City to:

1. Enhance and revitalize its neighborhoods.
2. Improve the quality of the existing housing stock.
3. Provide safe and adequate housing for residents of all income levels.
4. Encourage housing development in the downtown urban core.
5. Identify existing or projected housing supply deficits.
6. Develop appropriate plans and programs to accomplish its housing goals.

Goals and Objectives

Goal #1: Preserve, enhance, and revitalize the City's existing neighborhoods.

- Objective 1: Revitalization and stabilization of deteriorating neighborhoods should be supported by reducing residential blight in areas of the City by providing residents with incentives such as home repair classes and free home improvement materials.
- Objective 2: Navasota should coordinate with businesses in the City to sponsor a neighborhood spruce-up weekend. Businesses could offer residents discounts on supplies such as paint and landscaping vegetation in exchange for positive publicity.
- Objective 3: Public notice and site plan approval should be required for all commercial development abutting residential property to ensure that appropriate buffering will be provided and neighborhood quality will not be negatively impacted.
- Objective 4: Setback requirements in the zoning ordinance should be modified to allow an option for residential cluster developments and to locate homes closer together to preserve a common open space for the residents.

- Objective 5: The City should encourage neighborhood revitalization through infill development in established residential areas.
- Objective 6: Important neighborhood gateways should be identified through the use of signage and landscaping.
- Objective 7: Navasota should support community police and community watch organizations to reduce opportunities for criminal activity by strengthening the social fabric of neighborhoods.
- Objective 8: Developers should be required to install sidewalks in all new residential subdivisions to provide a more pedestrian friendly neighborhood.

Goal #2: Improve housing stock through rehabilitation or demolition and reconstruction.

- Objective 1: The City should encourage the Navasota Housing Authority (NHA) to participate in the HOME program administered by the U.S. Department of Housing and Urban Development (HUD) to rehabilitate City housing.
- Objective 2: The U.S. Department of Agriculture (USDA) Rural Housing Service Housing Preservation Grant Program should be used to assist very low and low income homeowners to repair and rehabilitate their homes.
- Objective 3: The City should encourage support for programs to rehabilitate neighborhood housing such as Habitat for Humanity.
- Objective 4: Dilapidated units should be demolished and rebuilding should be encouraged in their place.
- Objective 5: Housing conditions should be surveyed and monitored to identify unsafe structures that should be demolished.
- Objective 6: Navasota should continue to work with the Brazos Valley Council of Governments (BVCOG) and the Brazos Valley Affordable Housing Corporation (BVAHC) to fund housing rehabilitation programs.

Goal #3: Meet the needs of low and moderate-income households by ensuring opportunities for affordable housing.

- Objective 1: Housing programs should be designed and administered citywide to promote affordable housing.
- Objective 2: The City should adopt developmental policies, such as bonus zoning, that encourage the development of low and moderate-income housing. .
- Objective 3: Navasota should coordinate regional affordable housing initiatives with the NHA and the BVAHC.
- Objective 4: The City should encourage developers to partner with non-profit organizations such as the BVAHC and NHA to allow for homeowners to purchase homes through sweat equity.
- Objective 5: Vacant and abandoned lots and property should be acquired to form a land bank used exclusively for the development of affordable homes.
- Objective 6: Navasota should partner with the NHA to provide assistance to renters through the form of Section 8 housing vouchers.
- Objective 7: The City should encourage developers through incentive programs to build multi-family units, particularly for the elderly.
- Objective 8: Navasota should encourage a partnership between financial institutions, developers, and non-profit organizations to assist with housing costs.
- Objective 9: The City should apply for the HUD Community Block Grant Program to invest in affordable housing developments.
- Objective 10: Navasota should participate in the programs sponsored by the Texas Department of Housing and Community Affairs such as weatherization assistance, multi-family housing preservation, and housing trust fund, etc.

Goal #4: Provide private sector incentives to stimulate real estate activity and specifically housing construction in Downtown.

- Objective 1: Navasota should revise the zoning ordinance to allow housing to be included as a mixed-use within Downtown Navasota.

Goal #5: Facilitate the development of projects that will help alleviate current residential housing supply deficits.

- Objective 1: Navasota should encourage the development of additional nursing homes within the City as well as additional housing opportunities for the elderly.
- Objective 2: The City should plan for the development of higher-end, single-family housing to draw in residents from nearby communities.
- Objective 3: Additional multi-family housing opportunities should be developed for higher, middle, and lower income residents.

Goal #7: Encourage the construction of energy efficient residential structures in Navasota.

- Objective 1: Navasota should promote the use of alternative construction methods that utilize energy efficiently.
- Objective 2: The use of alternative construction materials such as straw bale construction, adobe, panelized board, rammed earth, etc. should be encouraged.
- Objective 3: The City should encourage developers and builders to use green building techniques such as those outlined in the Leadership in Energy and Environmental Design (LEED) system.

Future Housing Recommendations

As the City of Navasota's population increases, the need for additional housing will arise. In order to meet this need and provide adequate housing for Navasota residents, it is recommended that additional housing types and areas be developed. Proposed residential land use is indicated on the Future Land Use Plan (Map 17.1).

For purpose of this document, the residential classifications for the City of Navasota include the following: Neighborhood Density Single-Family Residential, Medium Density Single-Family Residential, Agricultural/Residential, Low Density Multi-Family Residential, Medium Density Multi-Family Residential, and Mixed-Use. These classifications are discussed in the Future Land Use section (Section 17).

Manufactured Homes

While not shown on the Future Land Use Map, it is recognized that areas within the City will be used for manufactured housing. The recommendations contained in this section of the plan are associated with those manufactured home areas. These areas contain land that is located, designed, and operated as a site by manufactured homes. Manufactured home use should be subject to standards that promote a residential environment compatible with adjoining residential neighborhoods.

- All manufactured homes should be located within manufactured home parks or subdivisions with a minimum project site size of 3 acres. Individual manufactured home lots or pads should not be less than 6,000 square feet when served by municipal sanitary sewer systems.
- These parks or subdivisions can be placed in any residential designated area.
- All manufactured home parks or subdivisions should be subject to single-family residential regulations and standards to promote compatibility with the surrounding residential neighborhoods.
- Only manufactured homes should be located within designated manufactured home areas. .

Number of Homes Needed

The number of necessary residential dwelling units in Navasota will potentially increase with economic development activity and the projected population growth. Additionally, increases in population due to migration and birth rates will necessitate more homes. The type of dwelling units required will most likely depend upon the type of economic development taking place in the community.

However, based on public participation and community surveys there appears to be a need for more affordable housing units within the City.

If Navasota's growth rate remains consistent with the past, by the year 2020, an additional 265 single-family units, 6 duplex units, 56 multi-family units, 1 group home, 78 manufactured homes, and 13 large lot agricultural-residential units will need to be built (Table 20.1).

Table 20.1: Current and Future Residential Housing Unit Projections

Residential Type	Total Current Housing 2004 (by type)	Total Projected Housing for 2020 (by unit)	Total New Housing Needed (by unit)
Single-Family	2,002	2,267	265
Duplex	42	48	6
Multi-family	424	480	56
Group Quarters	125	142	17
Manufactured Home	586	664	78
Large Lot Ag-Residential	96	109	13
Total Housing Units	3,275	3,708	433

Texas Target Cities Team (This chart excludes current and future loft development in the CBD.)

Cost of Homes Needed

The affordability and cost of homeownership is a problem for some residents of Navasota. The average cost of a single-family dwelling unit is \$58,500, while the median household income level is \$26,990 (US Census). Changing the type of building materials will often lower the cost of a home. Modular homes, manufactured at another location and constructed on site, can also provide affordable housing while still giving the benefits of home ownership and community investment. Additionally, the City could relax density requirements for affordable housing neighborhoods.

Type of Housing Needed

It is recommended that the City work with the Navasota Housing Authority (NHA) or other organizations to assist in the building of affordable homes in Navasota. There is also a need for more multi-family dwelling units such as apartments, duplexes, triplexes, and four-plexes. Finally, additional elderly housing options such as nursing homes and assisted living facilities are in demand as the number of Navasota residents' age and desire to retire in Navasota.

Manufactured Home Parks and Subdivisions

Manufactured home subdivisions should become a viable housing option for residents of Navasota. All new manufactured homes should be restricted to manufactured home subdivisions to promote a residential environment compatible with surrounding land uses. Existing mobile homes should be permitted to remain on their current site or relocate to a manufactured home subdivision. New manufactured homes should be required to locate in a designated manufactured home subdivision.

Actions Needed to Arrest Residential Blight

To prevent residential blight, the City needs to work at preserving, enhancing, and revitalizing existing neighborhoods through the establishment of self-help programs, neighborhood cleanups, and by providing residents with incentives to fix up their property.

Blight can also be addressed through the revitalization of neighborhoods by rehabilitation or demolition where deemed appropriate along with proper infill development. There are many programs, which can provide revitalization assistance.

Finally, encouraging the formation of neighborhood or homeowner associations can be a method to prevent residential blight while increasing neighborhood pride and community involvement.

Public and Private Support Program

The state and federal governments as well as nonprofit and private organizations provide monies to communities to assist in residential activities. A list of available programs aimed at improving housing opportunities and conditions follows:

Programs sponsored by the Texas Department of Housing and Community Affairs include the following:

- “Bootstrap” Homebuilder Loan Program
- Community Services Block Grant Program (CSBG)
- Comprehensive Energy Assistance Program (CEAP)
- Down Payment Assistance Program (DPAP)
- HOME Investment Partnerships (HOME) Program
- Housing Tax Credit Program
- Housing Trust Fund Program
- Multifamily Housing Preservation Initiatives
- Multifamily Mortgage Revenue Bond Program
- Texas First-Time Homebuyer Program
- Weatherization Assistance Program (WAP)

The following are programs sponsored by the United States Department of Housing and Urban Development:

- State Administered Community Development Block Grant (CDBG)
- Rural Housing and Economic Development (RHED)
- Self-help Homeownership Opportunity Program (SHOP)
- Homeownership Zones (HOZ)
- Rural Housing Guaranteed Loan
- Rural Housing Direct Loan
- Housing Repair & Rehabilitation Loan
- Housing Repair & Rehabilitation Grant
- Self-Help Technical Assistance Grant
- Mutual Self-Help Loans
- Rural Housing Site Loan
- Housing Application Packaging Grants
- Rural Rental Housing
- Housing Preservation Grant
- Guaranteed Rental Housing

The following 10 year action agenda is suggested for implementation of this section of the Comprehensive Plan.

Action Agenda

Year 1:

- Begin applying for Federal and State housing grants and funds outlined in the Future Housing Section.
- Enact an exterior housing maintenance code requiring the general upkeep of residential structures within the city.
- Examine residential loft development in Downtown to determine if regulations need to be adapted to make Downtown residences a success.

Year 2:

- Hire an additional building inspector and/or community development employee.
- Revise the zoning ordinance to allow the residential land uses proposed in the Comprehensive Plan.
- Provide incentives to developers such as tax abatements or density bonuses to encourage them to invest in residential construction within the City.

Year 3:

- Revitalize neighborhoods by encouraging city clubs and organization's to work together on renewal projects.
- Coordinate with the Navasota Housing Authority, Brazos Valley Council of Governments, and the Brazos Valley Affordable Housing Corporation to fund housing rehabilitation programs.

Year 4:

- Review city regulatory systems to encourage the development of energy efficient and low cost housing.
- Encourage developers to utilize the voluntarily Leadership in Energy and Environmental Design (LEED) system in residential construction.

Year 5:

- Encourage the development of more nursing homes and assisted living facilities in Navasota.

Year 6:

- Conduct a Housing Conditions Survey, to be performed every 5 years.

Year 7:

- Identify and begin to condemn dilapidated housing structures found in the 2010 Housing Conditions Survey.

Year 8:

- Continue applying for and researching new sources of housing funds.
- Keep encouraging citizen participation in housing upkeep and development in Navasota.

Year 9 & 10:

- Identify and analyze the recurring problems in the city's housing patterns
- Conduct the Housing Condition Survey
- Identify infilling opportunities for current and future housing demands.
- Initiate the annexation process if housing demand necessitates it.

Sources:

City of Navasota, TX Staff
City of Bryan, TX Staff
Texas Department of Housing and Community Affairs
<http://www.tdhca.state.tx.us/overview.htm>
United States Department of Housing and Urban Development
<http://www.hud.gov>
<http://www.tdhca.state.tx.us/overview.htm>
http://www.usgbc.org/leed/leed_main.asp

Future Community Facilities





SECTION 21 – FUTURE COMMUNITY FACILITIES

Introduction

The Community Facilities section relies on factors such as the projected population growth and the future land use plan to draw conclusions about Navasota's future needs. Planning for community facilities must be coordinated with the various elements of the Comprehensive Plan, particularly with the Future Land Use Plan. The Future Land Use Plan reflects the desired growth pattern within the City and influences the allocation and placement of community facilities.

Goals & Objectives

Goal #1: Consolidate and centrally locate appropriate City municipal offices in one location.

- Objective 1: Navasota should raise funds within the next five years to install an elevator in City Hall to allow the third floor to be utilized for office space.
- Objective 2: The City should facilitate a redesign of the City Hall floor plan to provide office space for appropriate municipal departments.
- Objective 3: The City administrative offices should be relocated that do not reside in City Hall (including the Public Works offices).

Goal #2: Renovate existing Public Works Building.

- Objective 1: Upon completion of the redesign of City Hall, the Public Works Offices should be moved to it.
- Objective 2: Navasota should investigate and acquire funding for the redevelopment of the Public Works Building site.
- Objective 3: The Public Works Building site should be redeveloped for potential uses named in the Navasota Economic Development Plan.

Goal #3: Maintain the duties of the Police Department with appropriate provisions of personnel, police services, and facilities.

- Objective 1: The City should ensure that the Navasota Police Department has adequate personnel, equipment, and facilities to meet the current and future needs of the community.
- Objective 2: Navasota should provide a periodical review of the staffing needs of the Police Department and hire additional staff to accommodate growth and increased demands for service.
- Objective 3: The City should maintain an inventory of equipment and identify replacement and acquisition needs in advance to ensure appropriate budgeting.
- Objective 4: Regular software and equipment upgrades should be supported ensuring the department has state-of-the-art technology.
- Objective 5: Continuous training and education programs should be provided for department personnel.
- Objective 6: Navasota should encourage and utilize management and personnel training available through the National Emergency Training Center and FEMA.
- Objective 7: The City should consider the initiation of programs such as a ride along program, a community-policing program, and/or a Neighborhood Watch program.

Goal #4: Continue to maintain high quality fire services and facilities.

- Objective 1: The City should ensure the Fire Department has adequate resources and facilities to meet the needs of the growing population and expanding service area by reviewing staffing needs periodically and hire additional employees as needed.
- Objective 2: Service areas and response time should be regularly reviewed with regard to the location of future fire stations.
- Objective 3: Regular technology and equipment upgrades should be supported.

- Objective 4: Navasota should promote fire prevention and expand public outreach and education programs.
- Objective 5: Community programs should be continued and expanded such as CPR training, fire prevention week activities, school programs, and fire extinguisher classes.

Goal #5: Continue to maintain, expand, and upgrade existing parks under the care of the City of Navasota and promote the development of new parks and greenways.

- Objective 1: The City should improve the maintenance of all parks, recreation areas, and facilities.
- Objective 2: Navasota should prioritize improvements for current and future city parks through a parks and recreation improvement program.
- Objective 3: The City should identify methods of financing park facilities and other improvements, including grants, user fees, loans, bequests, parkland dedications, and local funding.

Goal #6: Conserve natural resources and open spaces for recreational use.

- Objective 1: Navasota should design and implement a parkland acquisition/dedication policy for new developments.
- Objective 2: Existing natural resources that warrant protection, conservation, and enhancement of the City should be identified and acquired.
- Objective 3: The City should encourage the preservation of open space by entities other than the City (e.g. private corporations, non-profits, individuals, and other public agencies).
- Objective 4: Tourism activities should be promoted through the use of natural amenities.
- Objective 5: Floodways and flood plain areas should be preserved for linear greenways and connections between parks.

- Objective 6: Navasota should encourage park development along Cedar Creek.
- Objective 7: The City should determine new park locations and amenities within the established park zones in order to spread amenities equitably throughout the City. New park locations should be based on the population growth and desire for recreational opportunities.

Goal #7: Improve and develop a pedestrian and bicycle network which connect parks, neighborhoods, schools, open spaces, and other destinations.

- Objective 1: Navasota should identify potential corridors and locations for trails that are safe and feasible.
- Objective 2: Easements, right of ways, and drainage areas should be identified that could potentially be utilized as a linkage between parks.
- Objective 3: The City should develop and implement policies to acquire or utilize easements during the early stages of corridor development.
- Objective 4: Navasota should improve and develop a trail system that connects the parks along Cedar Creek from the northeast side of the City to Downtown.

Goal #8: Provide quality indoor and outdoor recreational opportunities.

- Objective 1: Potential programs and activities should be identified that will take place in the new recreation center.
- Objective 2: Navasota should establish and facilitate recreational programs for all ages of community members.
- Objective 3: The City should adopt and implement an agreement with other entities such as the Navasota I.S.D. to share parks and other facilities.

Goal #10: Improve the quality of life for current and future Navasota residents through quality educational opportunities.

- Objective 1: Navasota should partner the high school cooperative program toward local businesses and industry.
- Objective 2: The City should inform the public of educational resources, new educational programs, and classes through City publications, brochures, and a web site.
- Objective 3: Night courses should be provided at the high school for programs including computer literacy, art, job skills, and English as a Second Language.
- Objective 4: Navasota should invite healthcare professionals to educate the public about and describe programs available and career opportunities.

Goal #11: Provide quality health services for Navasota residents, by providing for the specific health needs in the community.

- Objective 1: Navasota should educate residents about health programs and services available.
- Objective 2: The City should encourage Grimes St. Joseph Health Center to provide a location for geriatric care.
- Objective 3: As part of public outreach, the City should encourage health service staff to visit Navasota High School as mentioned above to educate students about health needs.
- Objective 4: The City should annually review population growth and determine health care programs/facilities needed in order to adequately serve Navasota residents.
- Objective 5: A community initiative program should be implemented to encourage a healthy diet, exercise, and lifestyle.

Municipal Government

The City of Navasota needs to consolidate as many municipal functions as is appropriate and feasible. City Hall has the potential to house all or many of Navasota's administrative offices, although some structural changes are needed to add the necessary office space. The upper space in City Hall is not fully utilized, and has the potential to provide room for growth within its excellent Downtown location. In order to fully use the top story of City Hall, an elevator and shaft must be installed to provide access for disabled employees and citizens. The top priority should be to identify funds for the project with construction on the elevator shaft. Elevator installation and floor plan redesign are the next steps to properly retrofit the building. Upon the completion of the elevator shaft and floor plan renovations, city administrative offices not already in City Hall can be relocated.

Upon consolidation of Navasota's municipal departments, the land where the existing Public Works Building stands would potentially be available for public/private redevelopment. This land as well as other city-owned property in Downtown could be leveraged as an incentive to carry out some of the revitalization and economic development projects outlined in the Navasota Economic Development Plan.

Administrative office consolidation may provide additional benefits to both employees and the public. Consolidation may also aid in a stronger community presence and infuse land capital for needed revitalization projects.

Police Services

As the City of Navasota grows, so should the services that protect the City. Over the next ten years, the Navasota Police Department must actively seek to serve citizens in an effective and efficient manner while maintaining the courteous, ethical, honest, progressive, and professional services currently offered by the Department.

According to the FBI Uniform Crime Reports, an average of 2.3 sworn officers should be available for every 1,000 residents. With a population of approximately 7,000 and 18 sworn officers, the current ratio for the City of Navasota is 2.57 officers per 1,000 residents. To continue to meet the required ratio, an additional officer should be hired when an increase of 435 residents occurs. For a higher standard, the average of 3.2 sworn officers per 1,000 residents should be followed for cities with a population less than 10,000. To meet this higher standard, 4 more sworn officers would need to be employed as soon as possible. After the addition of 4 officers, an additional officer should be hired when an increase of 313 residents occurs.

Currently, office space needs for the Navasota Police Department are being satisfied in the existing facility. Similarly, the equipment and number of patrol vehicles meet the needs of the community, but should continually be monitored to ensure that appropriate protection is maintained. Technological upgrades, such as implementation of camcorders or computers in patrol vehicles, should be made whenever financially feasible to increase the effectiveness of the Department.

To ensure adequate protection and cooperation of the residents of Navasota, the police department should increase community involvement. A number of programs are available and a comprehensive web link can be found at the end of this section.

Fire Services

Using projected growth for the City of Navasota, the city will remain in the population range of 5,000 to 9,999 for the foreseeable future. With this population, the standard of 2.4 full-time firefighters is required. Currently the city has 3 full-time firefighters and should maintain this level. As for equipment, an additional pumper truck will be needed once the population increases to 7,600. This is predicted to occur sometime after 2015. According to Municipal Benchmarks, one fire station will continue to meet the needs of Navasota, based on population projections through 2015, but the distance to outlying residences should be monitored to ensure that appropriate response times continue. When locating

future fire stations, consideration should also be given to travel impediments such as the railroad.

In addition, the Navasota Fire Department should seek to increase awareness of fire safety and protection throughout the City. This can be done by providing information to citizens on wildfires, planning fire escapes, and cooking safety. More information for the public can be found at the end of this section.

Park & Open Space Plan

As growth occurs, the City of Navasota will be challenged to provide superior parks and recreational opportunities. These parks must be readily available to the public, equitably located, and provide high quality. The recreational opportunities must serve the entire population and offer a diverse group of programs. Parks and recreational opportunities directly impact the future aesthetic values as well as quality of life within the City. This Park and Open Space Plan will identify the local park needs and provide recommendations for actions to be taken by the City to further develop a parks system, which will adequately serve future citizens.



Hillside Park & Cedar Creek

Proposed Parkland

According to the National Recreation & Park Association (NRPA) standards the City of Navasota needs to develop more parkland. The process of projecting future park and open space needs is driven by two key factors: city population and park location. The changes in population determine the appropriate size and number of future parks needed. The locations of the parks are based on security and accessibility. These locations should be identified prior to development and flexible enough to permit parkland acquisition as proposed later in this section. Sites along

creeks, such as Cedar Creek, are desirable for park locations. Furthermore, park sites must be located in a way that will not require pedestrians to cross major thoroughfares. Intersections with major thoroughfares will discourage bicycle and pedestrian use. In the event that major street crossings are necessary, some form of traffic calming should be employed to promote usage. For example, a median could be utilized in the center of a major road as a point for the pedestrian to pause during traffic.

In order to determine sites for future parks, the City was divided into four park zones. These zones followed the major crossroads of the City. The park zones are indicated on Map 21.1 and are numbered one through four. Their boundaries are LaSalle Street, Washington Avenue, and the city limits. Once the zones were identified, the amount of parkland within each zone was calculated. The NRPA standards were then applied to the City. These standards were applied based on the population that is served by each park. The service areas are displayed on Map 21.1. Once the service areas were determined, the parkland proposals were made based on the population that was not being served by a park (Map 21.2).

Overall, proposals were made based on the total amount of parkland, current park locations, and needed park types. Three larger neighborhood parks are recommended within park zone 2, 3, and 4. These parks should be roughly 10 to 15 acres in size and will support the use by the surrounding population. The neighborhood park locations were arbitrarily chosen based on the population needs. The shape of the site is strictly for the purpose of demonstrating general location needs. Miniparks were proposed in zone 1 and 4. The mini parks were determined based on assumed availability of property or potential partnership opportunities.

Neighborhood Parks:

- Proposed Neighborhood Park in Zone 2: This park should be roughly 15 acres in size and can potentially serve 1700 people within a half-mile radius. The park can include amenities such as picnic tables, ball fields, basketball courts, playground equipment, swing sets, and a jogging loop with exercise



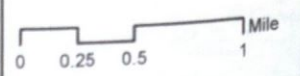
**Map 21.1:
Existing Park System**

- Existing Trail
- Existing Park Sites

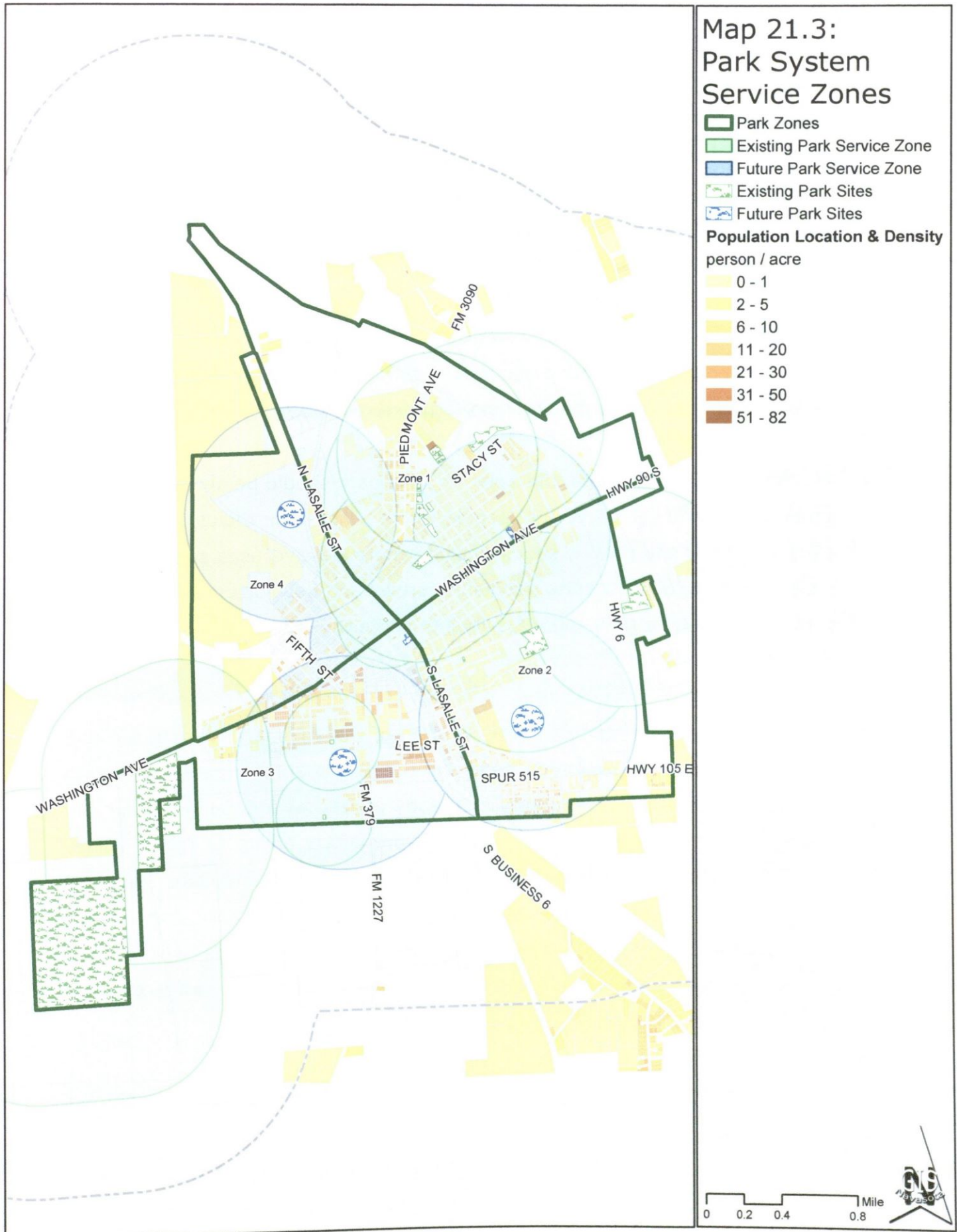


**Map 21.2:
Planned Park System**

- Park Zones
- Existing Park Sites
- Planned Park Sites
- Existing Trail
- Planned Trail



Planned park sites do not represent an exact location or shape of needed parks. Rather they are a rough indication of the needed size and general location to adequately serve the City's population.



- stations. The general location was established due to the vacant property close to the apartment complex. It also fits well with the planned residential development.
- Proposed Neighborhood Park in Zone 3: This park should be close to 10 acres in size and can serve an estimated 2800 people within a half mile radius. Due to the close proximity to higher density developments, this park should support more intense and family oriented outdoor recreational activities. Such amenities can include picnic tables, bar-b-que pits, basketball courts, playground equipment, tennis courts, volleyball courts, ball fields, swing sets, and a jogging loop with exercise stations.
- Proposed Neighborhood Park in Zone 4: This park should be an estimated 10 acres in size and can serve 900 people within a half-mile radius. During the early stages of the park it should include more passive uses such as picnic tables and ball fields. As the population grows and develops in this area, the park then should acquire more facilities to serve the public.

Miniparks:

- Proposed Minipark in Zone 1: The location of this minipark was chosen due to the position of the detention pond and the potential for a partnership with Harlan's Food Mart. The property is already utilized as a detention pond and adding park amenities will not affect the property's ability to retain water. The City could provide amenities to the site for lower intensity uses and Harlan's could allow the public to utilize the land. Furthermore, the location will potentially serve the neighboring retirement home as well as the neighborhood located behind Harlan's Food Mart. The park site would add aesthetic value to the store as well as the neighborhood.
- Proposed Minipark in Zone 4: The addition of a minipark in the Downtown area of the City would help enhance the connectivity between parks. A specific site has not been selected. The park should be roughly half an acre

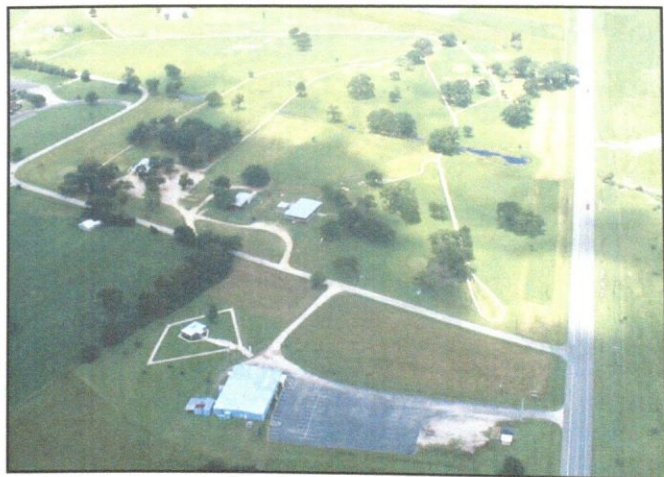
to one acre in size with low intensity uses such as picnic tables. The current Downtown park serves as the end of the nature trail. Adding another minipark roughly a fourth to a half a mile away will promote connectivity. This site could help create a linkage between the north and south sides of the City while promoting the unique natural atmosphere in Downtown.

Parkland Dedication Program

A Parkland Dedication Program would be beneficial to the City of Navasota. The adoption of an ordinance implementing this program will require new residential developments to set aside property for a park or pay a fee in lieu of parkland dedication. Fees collected would be placed in a city administered account and could only be used for park development and maintenance within the zone of the original dedication. The City Council, Planning and Zoning Commission, or Parks Board should be responsible for establishing a per-unit standard of both land and fee dedication fund. Parks Board approval of dedicated land or fees should be a mandated part of the platting process for all new residential subdivision development. This program would help to guarantee the availability of parkland to the residents of the City. Furthermore, a separate program could be created to accept property donations from individuals. The opportunity to leave property to the City of Navasota would also provide potential parkland.

Community Athletic Complex

The existing 9-hole golf course should be converted into a community athletic complex. The City of Navasota already has solicited plans for an athletic complex from an architect. Creating the complex would accommodate the growing little league population as well as the potential for Navasota to host athletic tournaments. The facility would be able to serve a large amount of the



Current Municipal Golf Course & Facilities

population, as it is a multi-use complex. Primarily, facilities for youth activities as well as fields for adult events could be provided. The addition of ball fields, playground equipment, and basketball courts could be beneficial outcomes for the citizens of the proposed athletic complex.

Hike & Bike Trail

The existing pedestrian and bicycle trail travels along Cedar Creek connecting several parks and potentially Downtown. It is recommended that the existing trail be renovated as well as expanded in order to promote connectivity between the different parks and pedestrian destinations. Map 18.1 in the Future Transportation section (section 18) demonstrates a hike and bike trail proposal. The proposed trail connects the Cedar Creek Corridor to the proposed parks within other sections of the City. Linkages between the downtown park and the Cedar Creek park system as well as to the proposed athletic complex are essential.

Adoption of a proposed trail system into the overall Thoroughfare Plan would aid in implementation by utilizing the same acquisition policies for trails that are currently used for streets. In order to promote usage, these valuable linkages should be made. One of the main issues with the trail connecting to Downtown is the intersection with LaSalle Street. This intersection is difficult for the pedestrians to cross due to the traffic and lack of traffic calming. The implementation of a median would offer the pedestrian/bicyclist the opportunity to pause in the middle of the street when crossing. Another method of safe passage could be rerouting the trail underneath LaSalle Street. Connecting the proposed athletic complex on the edge of town with the rest of the community would promote usage as well as offer the children an alternative means of transportation to the park.

Recreational Programs

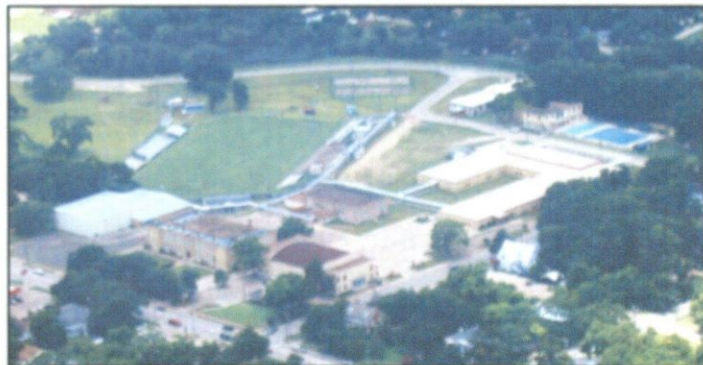
The City of Navasota could benefit from additional recreational programs. With the future completion of the recreation center, there would be space available for new programs. Proposed programs include:

- Boys & Girls Club
- Big Brothers/Big Sisters

- Girl Scouts & Boy Scouts
- Arts & Crafts Classes (knitting, crochet, needlework, wood working)
- Senior Citizen Programs (club, computer classes)
- After School Programs (Kids Klub, tutorials, latch key kids programs)
- Music Classes
- Dance Lessons
- Dog Obedience
- Aerobics
- Youth Programs

Educational Facilities

The existing educational facilities of Navasota adequately provide for the population. Navasota’s student teacher ratio is within the recommended standards and exceeds both the state and national averages. Thus meaning that the ratio between the number of students to teachers is ideal. Future population growth will determine the need for additional facilities and teachers. Based on maximum build-out calculations, the future population of students will increase and may require new facilities or expansions of current facilities. The increase in age ranges is shown in Table 21.1.



Swimming Pool, Stadium, & NISD Administration Building

Table 21.1: Students by Age Groups

Age Range	Current Number of Students	Current School Facilities	Projected Number of Students
Age 4-6	273	Navasota Primary	554
Age 7-8	291	John C. Webb Elementary	446
Age 9-10	347	Navasota Intermediate	465
Age 11-13	401	Navasota Junior High	668
Age 14-18	401	Navasota High school	837

The figures are based on the maximum build-out capacity for single-family residential, medium density residential, and agricultural/residential density residential neighborhoods. If these numbers are reached, additional facilities may be needed. The addition of educational facilities would reduce class sizes and could be very beneficial to students. Smaller schools could foster a close sense of community, promote healthier student teacher interactions, and provide a better learning environment for Navasota youth. As Navasota grows it is recommended that the high school cooperative program be partnered toward local businesses and industry. Navasota's community would benefit from programs such as night courses teaching computer literacy, art, job skill training, etc. Along with these programs, public outreach should be initiated to inform the public of educational resources and programs available in Navasota.

Health Services

The existing Health services and facilities are adequate for the current population of Navasota and will be able to support Navasota residents based on the projected population. Future population growth may require additional health professionals and or facilities. Based on the 2000 census data for Navasota, the future population in 2020 will be 7687. Table 21.2 indicates the number of recommended health professionals per 1,000 people, the current population's comparison, and the projected population recommendations.

Table 21.2: Recommended Health Professionals per 1,000 People

	Health Professionals per 1000 People	Current Number of Health Professionals	Projected Number of Health Professionals
Physicians	1.50	7.00	10.00
Dentists	0.53	3.00	3.50
Hospital beds	4.00	25.00	27.00

Canter, L.W., Atkinson, S., & Leisritz, F., (1985). *Impact of Growth*. Chelsea, WI: Lewis Publishers.

Based on the projected needs and the proximity of College Station/Bryan, Navasota should have adequate healthcare well into the future. To further promote a healthy community, public outreach should be initiated. An outreach program that informs and educates residents of the health programs and services available in Navasota would be very beneficial. Another approach to foster a healthier community would be to initiate a Healthy Community initiative program similar to the Walk El Paso program. The primary objective of this program is to provide information, motivation, and opportunities for people to exercise.

Other Community Facilities

In addition to the previously listed community facilities, the City of Navasota should establish other organizations and amenities to enhance the community's quality of life.

Skate Park

A community skate park would offer the youth of Navasota a facility for skateboarding, inline skating, and biking. Providing a park for this use will prevent damage to other paved areas, which youth may currently be utilizing. More information can be found at the end of this section.

Convention & Visitor's Bureau

The organization of a Convention & Visitor's Bureau (CVB) would help bring tourism to the City of Navasota. The City is encouraged to develop a CVB as soon as it can reasonable do so. Once the City as a whole becomes more of a heritage tourism destination, the need for this facility will increase. The creation of a convention center can follow the establishment of the CVB. A convention center can be utilized to draw visitors to the area.

The following 10 year action agenda is suggested for implementation of this section of the Comprehensive Plan.

Action Agenda

Year 1:

- Estimate future costs of City Hall and Public Works building renovations/redevelopment
- Acquire funding gradually over five year period
- Adopt Parks Plan
- Prioritize improvements of current and future parks
- Develop parkland acquisition program (through parkland dedication ordinance or donation program)
- Repair and add signage along existing hike/bike trail
- Secure funding to complete the interior of the Community Recreation Center
- Determine uses/programs for Community Recreation Center facilities
- Provide adequate personnel and equipment for police and fire services as specified in the Comprehensive Plan.
- Create a citizen task force to implement desired community policing programs as identified in the Comprehensive Plan.

Year 2:

- Locate and apply for funding to support the community athletic complex.
- Investigate the addition of bike lanes and sidewalks to support connectivity between parks.
- Establish and facilitate recreational programs for community.

Year 3:

- Investigate programs to promote public participation in maintenance of parks.

Year 4:

- Begin construction of athletic complex.

Year 5:

- Evaluate progress and effects of community policing programs on crime within Navasota.

Year 6:

- After adequate funding for the renovations/redevelopment of City Hall have been acquired begin construction on the elevator.

- Once City Hall's elevator has been installed centralize targeted municipal departments in the building.
- Investigate the feasibility of a Convention & Visitors Bureau (CVB).
- Promote tourism activities through natural amenities and historic resources.
- Market Navasota resources (athletic complex, swimming pool) to other cities in the county for tournament use.
- Begin land acquisition in order to develop a trail system linking the park system.

Year 7-9:

- Begin redevelopment of the existing Public Works building.
- Redevelop Public Works building site.
- Collaborate with other entities such as Navasota ISD to share parks or facilities.
- Develop trail system to connect Cedar Creek to northeast side of the City.

Year 10:

- Meet national standards concerning total acreage of parkland within the City.
- Evaluate progress and effects of community policing programs on crime within Navasota.

Ongoing Activities:

- Annual evaluations of all municipal facilities should be completed in order to fully utilize facilities.
- Update parks plan.
- Search for funding through grants, users fees, and donations for parkland acquisition.
- Solicit public input concerning new park development.
- Select new park locations based on population density.
- Preserve floodways and floodplains for linear greenways.
- Identify easements and right-of-ways that could be used as park linkages.
- Continue to provide adequate personnel and equipment for police and fire services as specified in the Comprehensive Plan.
- Continue community policing programs as advised by the citizen task force formed in Year 1.

Sources:

Ammons, D. N. Municipal Benchmarks. (2001). Second Edition. Thousand Oaks, CA, Sage Publishing.
City of Navasota Comprehensive Parks Plan (1999).
Federal Bureau of Investigation (FBI). (2002). Uniform Crime Reports: Crime in the United States – 2002.
Retrieved February 3, 2004 from the FBI websites: <http://www.fbi.gov>
O'Connor, T.R. Mega-list of Community Policing and Problem Solving (COPPS) Programs. (2004). Retrieved
April 8, 2004 from the NC Wesleyan College website: <http://faculty.ncwc.edu/toconnor/comlist.htm>.
U.S. Fire Administration and National Fire Protection Association (NFPA). (2002). A Needs Assessment of the
U.S. Fire Service. Retrieved February 3, 2004 from the NFPA website:
<http://www.nfpa.org/PDF/needsassessment.pdf?src=nfpa>
<http://faculty.ncwc.edu/toconnor/comlist.htm>
<http://www.firesafety.gov/directory/public/>
<http://planner.eskal8.org/skateparkfaq.asp>



Future Historic Resources



SECTION 22 – FUTURE HISTORIC RESOURCES

Introduction

The purpose of this section is to provide the City of Navasota with policies and procedures for the protection of its historic properties. The current regulatory system for historic preservation has not been implemented successfully; therefore a plan focusing on implementation is desirable. Legal justification for historic preservation is provided in Chapter 212 of the Texas Local Government Code.

Goals and Objectives

Goal #1: Maintain public and governmental interest in Navasota's historic structures.

- Objective 1: An educational framework should be created for owners of historic structures to explain both the benefits of preserving a structure.
- Objective 2: The City should make historic preservation information available through public facilities such as the Navasota Library and the Horlock Center.
- Objective 3: Navasota should utilize new technologies such as a multi-media Internet website to publish the historic resources inventory (including historic photographs, documentation and oral histories of each building/site).
- Objective 4: A welcome center should be established, staffed by volunteers, to provide information to visitors about Navasota's historic resources (historic walking tours, etc.).

Goal #2: Provide incentives wherever possible to protect, preserve and maintain the City's heritage.

- Objective 1: Navasota should provide information on loans and grants for façade upgrades and exterior maintenance.

- Objective2: The City should investigate programs such as Tax Increment Financing (TIF) and Enterprise Zones as tools to aid in the preservation and redevelopment of Downtown.

Goal #3: Preserve and maintain sites and structures that serve as significant visible reminders of the city’s social and architectural history.

- Objective1: Navasota should identify multiple historic districts, which represent unique development styles within the City (e.g. Downtown Navasota).
- Objective 2: A regulatory system should be created to implement this historic preservation plan, including historic districts, a citizen committee, and zoning enforcement.
- Objective 3: Voluntary regulations should be created for structures outside of denoted historic districts.
- Objective 4: Navasota should update city codes, including building and zoning, to facilitate the rehabilitation of historic buildings (i.e. “smart codes”), while still protecting the safety of their users.
- Objective 5: A schedule of updates to historic resources inventory should be created to ensure all potential historic structures will eventually be considered for designation.
- Objective 6: The City should prepare a maintenance program for city-owned historic properties following the guidelines established by the Historic Landmark Commission (HLC).

Goal #4: Develop practical regulation that can be utilized by the City.

- Objective 1: Navasota should establish an HLC to guide the City Council with specific recommendations pertaining to historic preservation. Additionally, this commission will provide high levels of public involvement.

- Objective 2: The current zoning ordinance should be revised concerning historic preservation.
- Objective 3: The City should maintain a historic resources inventory.
- Objective 4: Navasota should create historic preservation districts
- Objective 5: Approval for demolition, modification, or new construction should be required within historic districts.
- Objective 6: The City should maintain awareness and promote education of the historic resources inventory.

Implementation

Public Sector Responsibilities

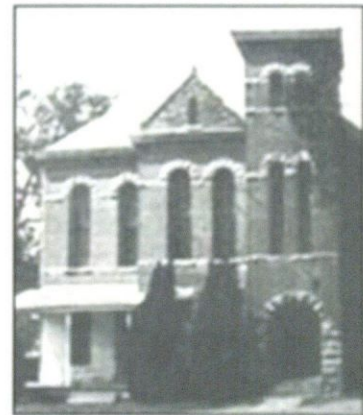
Decisions regarding the maintenance and character of municipally owned historic properties might have substantial impacts on how local historic resources are maintained by the private sector. The City of Navasota



Razed: Navasota
City Hall - 1958

should act as a steward of its historic resources through the preservation of municipally owned property. Such recognition is necessary to add legitimacy to this preservation effort.

The municipality will have only limited success in the implementation of the preservation plan if it does not take the responsibility for the City owned historic resources – city hall, libraries, museums, and parks.



Razed: First Jail of Navasota

Municipal Policies

The City zoning regulations and building codes should be revised and enforced to promote the preservation of historic buildings. The codes affecting historic properties should be flexible in order to promote rehabilitation. Such building code amendments are often referred to as “smart codes”. For example, the International

Building Code (IBC) often acts as a significant deterrent to the conservation of older buildings. The IBC is primarily aimed at new construction, thus making it more difficult and expensive to bring existing buildings up to modern standards. The City of Navasota should amend these codes such that adopted regulatory policies are conducive to historic preservation. All City departments should consider the potential impacts of preservation in the development and enforcement of land use, building code, fire code, environmental review, and other city regulations.

Zoning and Land Use

The zoning ordinance should be compatible with and promote the protection of historic resources, and be consistent with the objectives and policies of the preservation plan. The ordinance should not allow incompatible uses and densities that conflict with the existing resources in an historic district. Particular attention should be paid to the CBD zoning classification and the land uses within the Old Town neighborhood.

Historic Landmark Commission (HLC)

An HLC should be established to make recommendations to the City Council regarding historic preservation regulations. Specifically, its duties would include recommendations on the establishment of districts, granting permission for development in historic districts, property maintenance and design guidelines, landmark designation, and other duties as necessary.

Historic Districts

In order to facilitate the implementation of the historic preservation plan, historic districts should be identified by the HLC. A historic district is an area that includes a collection of structures of a similar location and land use. Historic districts may also include similarities among design, workmanship, and material. However, due to Navasota's varied and eclectic development history, drawing districts along these lines would be difficult. The districts are most effective when integrated through a zoning ordinance.

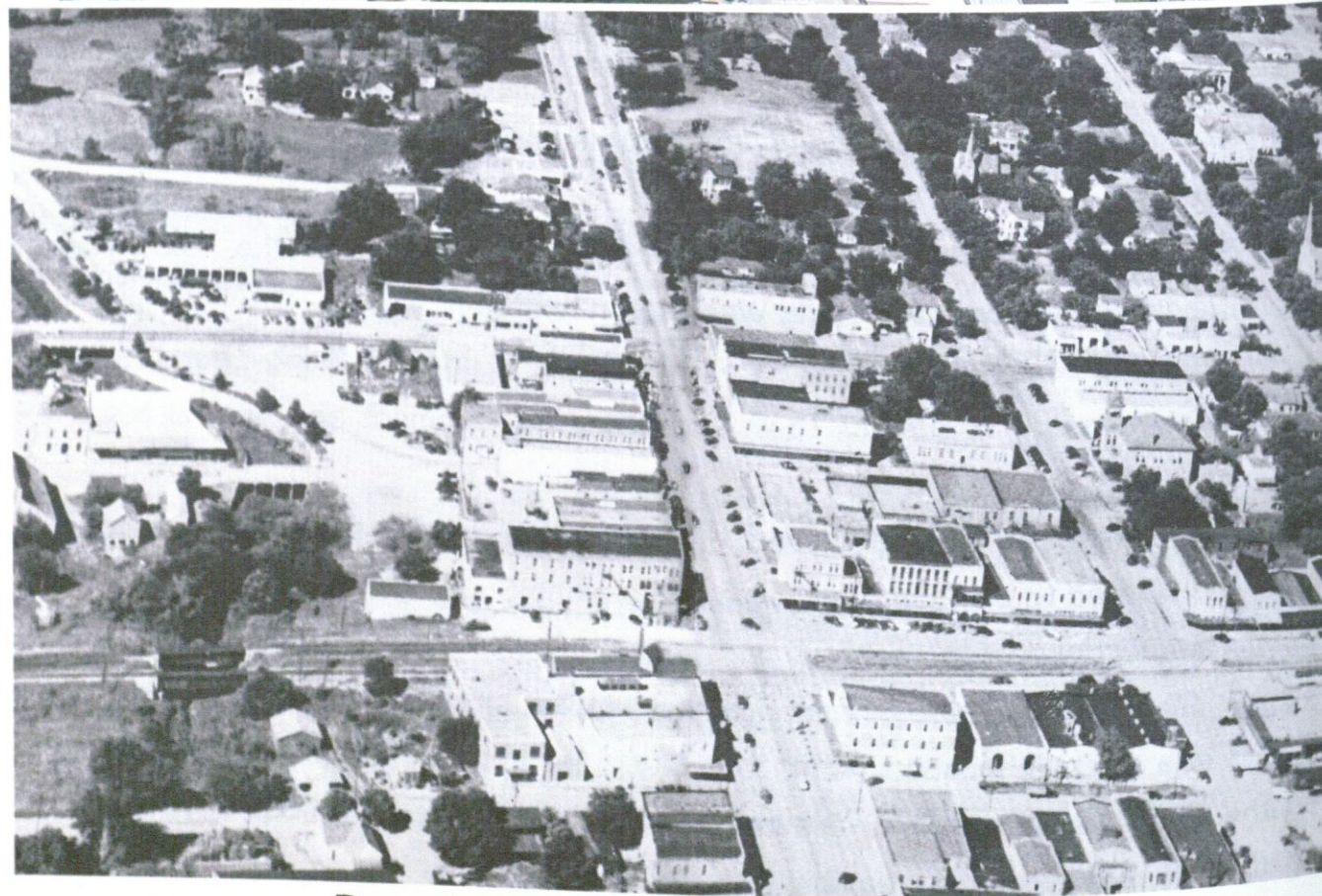
Boundaries of historic districts should be determined in accordance with Article II, Section II of the Navasota Zoning Ordinance. It may be necessary to create several different historic districts in order to accommodate the land use and development patterns within the City of Navasota. Similar uses should be grouped such as primarily residential neighborhoods, integrated churches and homes, as well as the Central Business District (CBD). The HLC should adopt design guidelines for each district, after soliciting public participation of both property owners and the citizens at large. These guidelines would allow for the control of appearance and preservation of historic buildings. In addition, these guidelines would provide for historic neighborhood integrity by regulating to a lesser degree other non-historic buildings in a district. Image 22.1 demonstrates fifty years of development within Downtown Navasota. The first photograph was taken in 2004, with the second taken in 1950. Development patterns in Downtown have resulted in the razing of several blocks including the southwest corner of LaSalle Street and McAlpine Street, Farquar Street and McAlpine Street, as well as the block presently occupied by the First National Bank of Navasota. Rather than replacing demolished structures, vacant lots or parking lots have become more common.

The following districts (Map 22.1) are recommended for the HLC's approval or modification:

- Old Town District – This district primarily includes the Old Town Neighborhood oriented along Washington Avenue.
- Church Street Corridor District – This district is oriented along Church Street encompassing some Old Town residential development and several historic churches.
- Downtown Commercial District – This district includes the area traditionally considered to be Downtown, extending along South LaSalle to include similar commercial development.

Some individual and clustered historically significant structures are not included in a district due to their location within the City. For example some structures along South LaSalle and homes in or around the Cemetery Hill Neighborhood have historic significance, but cannot be feasibly included in a district.

Downtown Navasota in 2004



Downtown Navasota in 1950

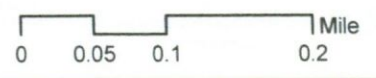
in 2004





Map 22.1:
Historic Districts

- Candidate for Further Study
- THC or NRHP Listed Structure/Site
- Historic Districts





Historic Resources Survey

Ongoing maintenance of the historic resources survey, identified in the Existing City Section, is key to this preservation strategy. In addition to the obvious aid in locating the structures most in need of preservation, the survey can further serve to mobilize the public and act as a benchmark for the future.

While the exact implementation methods suggested here may change, the structures listed in the survey should serve as the basis for all preservation education and regulation efforts. Examples might include the formation of historic districts, demolition delays within established historic preservation districts, and public-private preservation projects (e.g. paint program).

One failing of Navasota's current preservation effort is a lack of recognition of what resources exist within the City. In Article XIII, the zoning ordinance provides for preservation and landmark status for historic structures. However, no structures within the City currently have a historic landmark designation. A comprehensive survey would give staff and the possible appointed commission a benchmark to gauge preservation progress.

A historic resources survey may also be employed as a tool to involve the public in historic preservation. This participation is key to a successful preservation effort, particularly if heritage tourism is desired. Facilities such as the Horlock Center, the Navasota Public Library, and other municipally funded agencies could distribute reference brochures with a historic resources map and listing of significant structures.

Another tool to involve and educate the public is an Internet website. A potential website might be utilized to distribute the survey in a more complete manner as compared to the previously mentioned brochure. The focal point could be a city map marking each identified building. The map could be set up to allow visitors to click on a property and view a complete historic record. Examples of this

information could be modern and historic photos, historic documentation (such as building date, architect, modification history, etc), and possibly oral histories. These oral histories could be recorded memories about buildings and events from Navasota's citizens. If successful, the program could be expanded to serve as an online museum of Navasota's people, places, and events. Most citizens would be likely to contribute their photographs to be scanned. The city staff could host "Scan and Visit Days" to scan photos and record oral histories.

This survey should be considered a working document. It identified approximately 70 structures with documented historic significance, including sites identified by the National Register of Historic Places and the Texas Historical Commission. This classification also includes other non-listed but well preserved structures.

Currently there are almost 200 other potential sites that have yet to be documented in Navasota. The documentation of these sites is an example of potential updates by the proposed HLC of this survey. In order to keep the document current, the HLC should keep a regular schedule of maintenance. This maintenance includes information concerning the structures currently included in the inventory in addition to the coordination of the effort to add other justifiable structures. The HLC should regularly monitor the historic properties list to ensure that properties are being maintained.

Financial Incentives

The municipality should consider providing incentives to offset additional expenditures that may be necessary to comply with this preservation effort. Incentives could encourage otherwise skeptical property owners to participate in historic preservation and be more receptive to regulation. The City should provide flexible and diverse incentive programs to accommodate the eclectic nature of the community's resources.

Façade loan/grant program - If implemented, property owners can apply for low-interest loans and grants to be used for exterior rehabilitation, preservation, and the restoration of historic properties. Additionally, grant

programs are available for façade improvements to buildings within the CBD that are consistent with the Secretary of Interior's Standards for Rehabilitation. The City of Navasota can provide for these programs through other city revenue sources in addition to applying for financial assistance from the U.S. Department of Housing and Urban Development for a Community Development Block Grant. Emphasis should be placed on commercial structures, for economic development reasons.

TIFs – Tax Increment Financing permits taxing agencies (e.g. NISD, City of Navasota, Grimes County) to apply potential increases in taxes as a result of redevelopment toward public improvements such as infrastructure. Therefore, the property owner can utilize this revenue to pay off bonds that have been issued for capital improvements. Such capital improvements can also include Downtown streetscape enhancements, parking, street furniture, lighting, and other redevelopment projects deemed appropriate by the affected taxing agencies.

Property tax abatements – An alternative to TIF is to combat the perception that improvements will needlessly raise ad valorem property taxes, an abatement program may be desirable. A time limited program of this type can drastically reduce property taxes paid by income-producing buildings and owner-occupied homes.

Property tax deferrals – Under this program, the taxes resulting from an increase in assessed value from the rehabilitation of a historic structure are deferred for a period of years or until sale of the property. The deferral allows for the recapture of the property taxed due over the period of the deferral. The deferral functions as a no-interest loan to the property owner in the amount of the property taxes resulting from the improvement of the historic property.

Continued evaluation of the incentive programs would assure effective use of funds. Other grant and loan programs are identified in Appendix 22-A.

Education

The City of Navasota should outline a plan for community-wide education on preservation issues and policies. Preservation groups and the HLC should recognize the opportunity to bring preservation values and policies into the public schools, educating students about and creating an appreciation for their historic resources. Annual awards programs could be created to provide recognition to individual preservation efforts, gather good press, and provide opportunities to educate residents about the benefits of preservation.

The following 5 year action agenda is suggested for implementation of this section of the Comprehensive Plan.

Action Agenda

Year 1:

- Create a Historic Landmark Commission (HLC)
- Draw proposed historic districts with the assistance of the HLC
- Create a shared or part time staff position for historic preservation duties.

Year 2-3:

- Adopt by ordinance historic preservation districts and district design guidelines as proposed in year 1.
- Organize the HLC to comprise the following sub-committees
 - Naming Sub-Committee: Several structures in the resources survey have multiple names. For example, the Hill-Cochran House is also known as the Steele-Cochran House. To eliminate this confusion, a subcommittee should be created to determine official names for all structures by seeking citizen suggestions and researching historic documents.
 - Nomination Sub-Committee: As many structures remain to be documented for inclusion in the historic resources survey, a sub-committee should be formed. This committee can act proactively and take suggestions from the public to investigate historic structures for inclusion in the survey.
 - Maintenance Aid Sub-Committee: A staff or citizen group should be charged with coordinating public-private projects to maintain and beautify historic structures. These projects may include efforts like a free or at cost paint program. Such a program could allow a local hardware store to receive publicity through sponsorship in exchange for providing low cost paint or other materials to the owners of historic structures.
- Identify grant/loan programs through the U.S. Department of Housing and Urban Development for a Community Development Block Grant
- Implement property tax abatement/deferral programs

Year 4:

- Investigate the feasibility of establishing a Texas Enterprise Zone in conjunction with a Tax Increment Financing Zone.

Year 5:

- Determine the need for updates to the Historic Preservation Plan and Ordinance.
- Hire a full time staff position for historic preservation, heritage tourism, and/or Main Street program.

Ongoing Activities:

- Complete and maintain historic structure survey.
- Develop a website.
- Develop and distribute historic preservation literature.
- Pursue preservation related conferences such as the Texas Downtown Association or the Texas Historical Commission.

Sources:

Garnham, Harry Launce. 1985. Maintaining the Spirit of Place: A process for the Preservation of Town Character. PDA Publishers Corporation: Mesa, Arizona.

History of Grimes County: Land of Heritage and Progress. 1982. *Grimes County Historical Commission*. Taylor Publishing Co: Dallas, TX

The Navasota Bluebonnet: Commemorating 100 years of City Growth and Development. 1954. *Grimes County Chamber of Commerce*. Taylor Publishing Co: Dallas, TX

Phone interview with Boggess Lovett T, current Chair of the *Grimes County Historical Commission* April 19, 2004

APPENDIX 22-A

Historic Preservation Grant Opportunities

1. **Historic Preservation Grant Fund – NPS:** provides matching grant funding to encourage historic preservation efforts.

For more information contact:

Historic Preservation Fund
Heritage Preservation Services
National Park Service
1201 Eye St., NW 2255
Washington, D.C. 20005
Fax: 202-371-1791
Email: nps_hps-info@nps.gov
Website: <http://www2.cr.nps.gov/hpf/>

2. **Federal Historic Preservation Tax Incentives – NPS:**

For more information contact:

Federal Historic Preservation Tax Incentives
Heritage Preservation Services
National Park Service
1201 Eye St., NW 2255
Washington, D.C. 20005
Phone: Michael Auer at 202-354-2031
Fax: 202-371-1616
Email: nps_hps-info@nps.gov
Website: http://www2.cr.nps.gov/tps/tax/tax_p.htm

3. **Certified Local Government Grants – Texas Historic Commission:** grant money can be used for training of local preservation commissions, completing or updating surveys of historic resources, producing brochures, preparing preservation plans, and preparing National Register of Historic Places nominations.

For more information contact:

Texas Historic Commission
Email: bratten.thomason@thc.state.tx.us (grant coordinator)
Phone: 512-463-5997
Website: <http://www.thc.state.tx.us/grantsincent/gracig.html>

4. **Heritage Tourism Grants – Texas Historic Commission:** Offers matching grant funding for heritage tourism oriented projects such as interpretation, signage, publications, websites, or education. Grants are one-to-one with in-kind and/or cash matches. Counties in the Lakes and Brazos Regions will be eligible for the next round of grants. Grimes County is included in the Brazos Region.

For more information or an application contact:

Texas Historic Commission
Email: amber.nunez@thc.state.tx.us (grant coordinator)
Phone: 512-463-1236
Website: <http://www.thc.state.tx.us/grantsincent/graht.html>

Other Financial Sources:

State Resources

1. **Texas Preservation Trust Fund:** A grant program administered by the Texas Historical Commission (THC). Funds can be applied to preservation planning activities, like Historic Resource Surveys or Historic Structures Reports, as well as "bricks-and-mortar" projects for physical work on historic properties.

Public, nonprofit and private entities are all eligible to apply, but most funded projects have a clear public benefit. <http://www.thc.state.tx.us/grantsincent/gratptf.html>

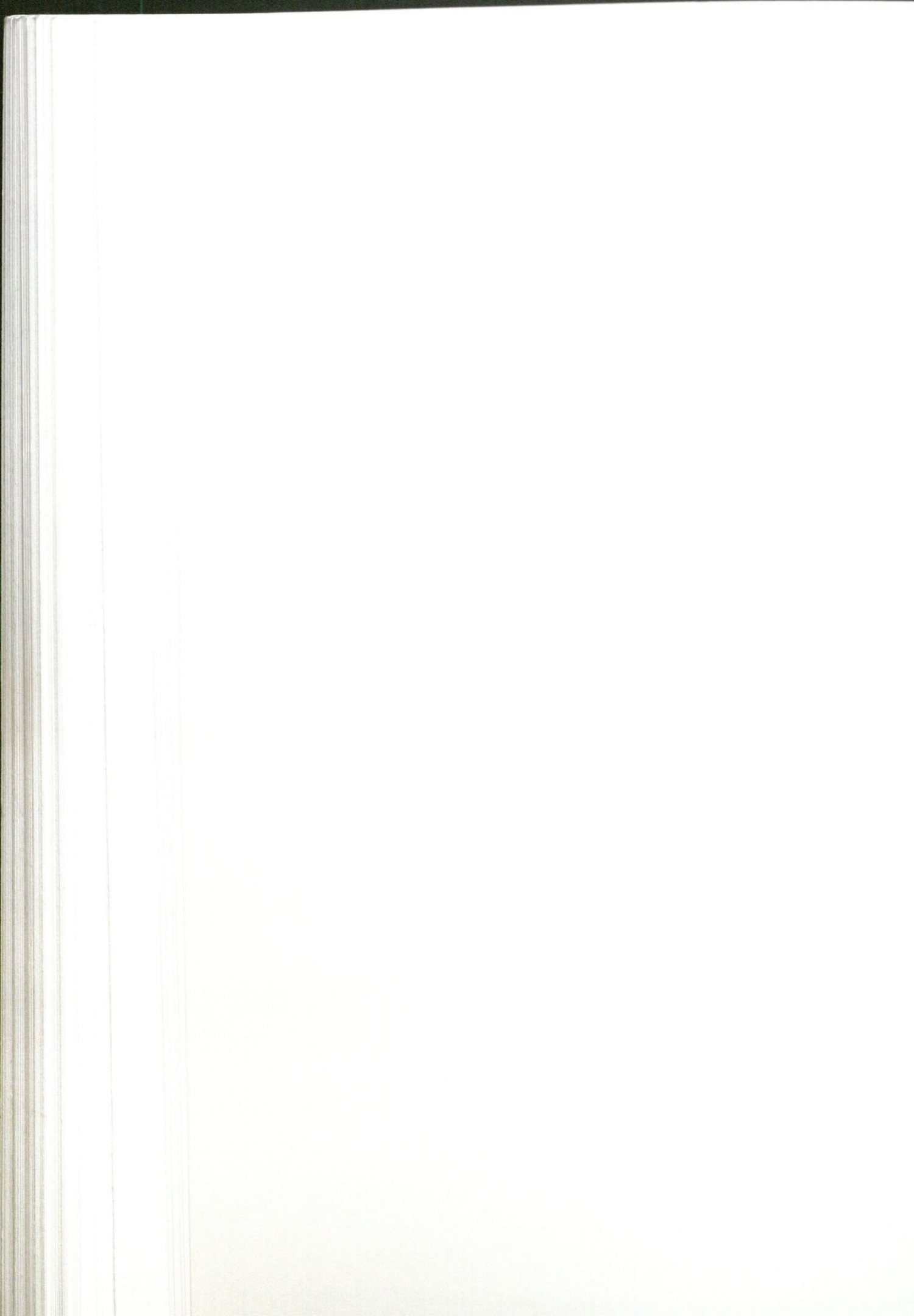
2. **History Museum Grants:** THC awards small grants to qualified history museums for conservation and preservation projects. Although these grants do not address the buildings themselves, collections of historical materials are also important resources that face a variety of threats. <http://www.thc.state.tx.us/grantsincent/gramus.html> or call 512-463-5853 or fax 512-475-3122.
3. **State Sales Tax Exemption:** Repair and rehabilitation work on Texas properties listed in the National Register of Historic Places qualifies for a state sales tax exemption on all labor (not materials) for the project http://www.window.state.tx.us/taxinfo/taxpubs/tx94_116.html

Federal Resources

1. **Federal Historic Preservation Tax Incentives:** Property owners who undertake a substantial rehabilitation of a qualified historic building for income-producing use can qualify for an income tax credit equal to 20 percent of the amount invested in the rehabilitation. A 10 percent tax credit is also available for properties built before 1935 that do not meet the criteria for historical designation. <http://www.thc.state.tx.us/historicprop/hpcredits.html>
2. **Save America's Treasures Grants:** Administered by the NPS, this is the primary federal grant program for historic properties. A competitive application process is open to properties with national significance, with a percentage of funds earmarked for projects selected by members of Congress. <http://www2.cr.nps.gov/treasures/>
3. **National Trust for Historic Preservation:** The National Trust offers several grant and loan programs to assist with a variety of preservation projects including planning, education, professional services and certain rehabilitation projects. Most grants are reserved for non-profits and public agencies, but some private owners may qualify. <http://www.nationaltrust.org/help/grants.html>
4. **Preservation Texas:** Preserves the historic resources of Texas by direct action and by empowering individuals and local and state organizations through education, communication, advocacy and collaboration <http://www.preservationtexas.org/>
5. **National Endowment for the Humanities (NEH):** The NEH has a number of grants such as the Preservation Assistance grant. <http://www.neh.fed.us/>
6. **Private Entities:** Funding can also be available from charitable foundations, private donors, banks, corporations, etc. Many preservation projects involve collaborative and creative funding arrangements that can utilize public and private resources.

Future Hazards





SECTION 23 – FUTURE HAZARDS

Introduction

The primary purpose of the Hazard Mitigation Plan is to promote a community that is safe from both natural and technological hazards. Fortunately, the City of Navasota is situated in an area that does not face a wide range of threats. Nonetheless, there are certainly risks that need to be addressed that could reduce the loss of life and property during a hazardous event. This section addresses the two primary threats outlined in the Existing Hazards section (Section 13), flooding and hazardous material spills. In addition, opportunities to confront deficiencies in warning systems for tornados, severe weather, and hazardous chemical spills are discussed.

Goals and Objectives

Goal #1: Promote a community that is safe from hazards.

- Objective 1: Navasota should research options for installing sirens or other forms of community warning systems for severe weather events.
- Objective 2: The City should investigate the feasibility of a warning siren system to serve citizens along the railroad and in the Central Business District (CBD) during a hazardous cargo spill.
- Objective 3: The use of National Oceanic and Atmospheric Administration (NOAA) "All Hazards" radios should be promoted for early warning.
- Objective 4: "Safe places" should be designated in public buildings to serve as shelter from severe storms and tornados.
- Objective 5: Navasota should continue its participation in the National Flood Insurance Program (NFIP) and encourage citizens to purchase flood insurance.
- Objective 6: The City should utilize zoning as directed by the future land use plan to manage floodplain development.

Hazardous Materials Assistance Program

The Hazardous Materials Assistance Program (HMAP) is available to “provide technical and financial assistance” through the states to support state and local governments in “oil and hazardous materials emergency planning and exercising.” The funding offered through this program must be utilized for projects that will further develop emergency management capabilities for the City to deal with potential oil and other hazardous materials as well as releases (CFDA, 2004).

Grants obtained from this program may be used for the development of emergency planning activities related to protection of the community from hazardous materials release along the city’s railroads and highways. At least some portion of any awarded grant should be used to hire a qualified temporary staff member or consultant in the emergency management or hazards management field. More information on HMAP can be found at the end of this section.

Pre-Disaster Mitigation Program

The Pre-Disaster Mitigation Program was created in accordance with the Stafford Disaster Assistance and Emergency Relief Act to assist states and local governments in implementing cost-effective hazard mitigation activities that complement a comprehensive mitigation program. All applicants to this program must be National Flood Insurance Program (NFIP) participants, and must not be suspended or on probation from the NFIP.



Navasota River Flooding

Funds from this program may be used in Navasota for mitigation projects and planning aimed at making the city less vulnerable to the hazards it faces. Like the HMAP, a portion of any funds received should be allocated for the hiring of a

temporary staff member or consultant to aid in the proposed planning activity. Unlike the HMAP, this grant is available for all types of hazards planning with the following exceptions:

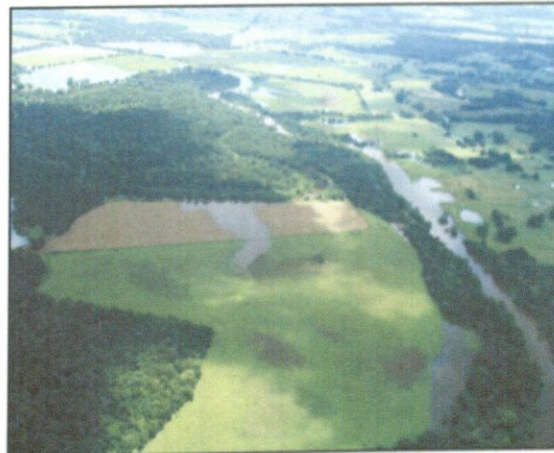
- Major flood control projects
- Warning Systems
- Engineering designs, feasibility studies and drainage studies not integral to proposed project
- Generators not integral to a proposed project
- Phased or partial projects
- Flood studies or mapping
- Response and communication equipment

More information for this program may be found at the end of this section.

Community Rating System

The Community Rating System (CRS) is a voluntary incentive program administered through the NFIP. The goal of this program is to recognize and encourage floodplain management activities that exceed the minimum NFIP requirements. Communities that are active participants in the CRS receive discounted flood insurance premium rates that reflect the reduced flood risk. For CRS participating communities, flood insurance premium rates are discounted in increments of 5% by the rating class that the community has obtained. The CRS classes are based on 18 creditable activities, organized under four categories:

- Public Information
- Mapping and Regulations
- Flood Damage Reduction
- Flood Preparedness



Navasota River Flooding

More information for this program may be found at the end of this section.

General Guidance

The Federal Emergency Management Agency has made seven guidebooks available called the Mitigation "How-To" Series. These books are available on the internet for download in Microsoft Word or PDF format, more information is available at the end of this document.

Conclusion

Overall, the City of Navasota is a fairly safe city, although there is potential for a hazardous materials spill along the railroad as it runs through the heart of the community. The City needs to prepare and organize its staff to be ready to serve the citizens before, during, and after a hazardous event.

In order to make the City safer, Navasota's leaders should exhaust every opportunity within their grasp to make the City a safer place to live. Building an emergency preparedness system through the use of grant programs, outreach programs, and warning systems described throughout this section is the first step in achieving this goal.

Sources:

- April 13, 2004. <http://www.ci.nacogdoches.tx.us/PublicSafety/WarningSiren.htm>.
- April 13, 2004. <http://www.ci.longview.tx.us/CityServ/PSCComm/PSCSirens.html>.
- April 13, 2004. <http://www.ci.desoto.tx.us/siren.htm>.
- April 13, 2004. <http://www.cfda.gov/static/97021.htm>.
- April 13, 2004. <http://www.fema.gov/fima/pdm.shtm>.
- April 13, 2004. <http://www.fema.gov/nfip/crs.shtm>.
- April 13, 2004. <http://www.fema.gov/fima/planhowto.shtm>.
- April 13, 2004. <http://www.fema.gov/nfip/crs.shtm>.
- April 13, 2004. Nacogdoches: <http://www.ci.nacogdoches.tx.us/PublicSafety/WarningSiren.htm>
- April 13, 2004. Longview: <http://www.ci.longview.tx.us/CityServ/PSCComm/PSCSirens.html>
- April 13, 2004. Desoto: <http://www.ci.desoto.tx.us/siren.htm>
- April 13, 2004. <http://www.cfda.gov/static/97021.htm>
- April 13, 2004: <http://www.fema.gov/fima/pdm.shtm>.
- April 13, 2004: <http://www.fema.gov/fima/planhowto.shtm>

The following 5 year action agenda is suggested for implementation of this section of the Comprehensive Plan.

Action Agenda

Year 1:

- Promote the use of alert capable weather or “All Hazards” radios for early warning.
- Designate “safe places” in public buildings to serve as shelter.
- Continue participation in the National Flood Insurance Program (NFIP) and encourage citizens to purchase flood insurance.
- Begin researching options for installing sirens or other forms of community warning systems for severe weather events.

Year 2:

- Research the feasibility of a warning siren system to serve citizens along the railroad and in the CBD in the event of a hazardous cargo spill.
- Hire qualified temporary or permanent staff to help with the emergency management planning process.

Year 3:

- Apply for grants to be used in the development of a warning siren system.
- Apply for grant and aid programs for the development of detailed emergency management plans.

Year 4:

- Begin crafting evacuation and management plans for hazardous spills along the railroad and in the CBD.
- Coordinate with the school system to create an emergency management plan for schools and public facilities.
- Coordinate with police and fire departments in the creation of plans to inform and direct the public on what do in the event of an emergency.
- Begin participation in the FEMA Community Rating System Program.

Year 5:

- Complete a hazard identification analysis.
- Update the Hazard Mitigation Plan.

Ongoing Activities:

- Make city employees and elected officials aware of their roles and responsibilities before, during and after a hazardous event.
- Practice each segment of the emergency management plan.

- Keep up to date on new grant programs and opportunities for help from other state and federal agencies.
- Keep up to date on any emerging technologies that could aid in the emergency warning, management or planning process.

Future Urban Image



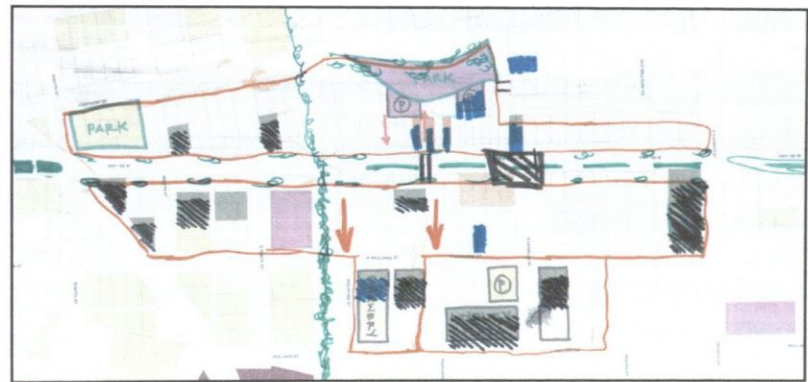
SECTION 24 – FUTURE URBAN IMAGE

Introduction

The following section is a plan for the improvement of the visual image of the City of Navasota. Many of the recommendations contained within this plan are based on the input received from citizens of Navasota during the public design workshop and citizen participation process. The plan specifically addresses the areas identified as needing attention in Navasota, including gateways, general streetscape appearance, parking demand, and signage.

Public Design Workshop

A public design workshop was held on March 9, 2004 in Navasota to obtain citizen's ideas and feedback. Fifteen participants including members from the Navasota City Council, Keep Navasota Beautiful, the Navasota Merchants Association, as



Public Design Workshop Participant Sketch

well as master gardeners and concerned citizens attended the design workshop. The participants were divided into three teams of approximately four to five



Public Design Workshop Participant Sketch

individuals, and placed at tables outfitted with various materials including City maps, tracing paper, markers, and a flip chart for notes. Students were assigned to each group to serve as facilitators and to answer questions. The

groups worked for roughly an hour and a half, brainstorming, and drawing their plans for how to make Navasota a better place to live, work, and play. Each team was then asked to present their plans to the group.

After the team presentations, common ideas were identified between the three plans. The urban design team then looked at ways to combine and expand upon the ideas generated at the workshop. Several more site visits were made to brainstorm additional ideas for developing the Concept Plan.



Public Design Workshop Participant Sketch

Concept Plan

Several key ideas were compiled from the plans produced by the participants in the design workshop. Such ideas include the identification of primary and secondary gateways leading into the City of Navasota as a whole, and gateways into



Downtown, streetscape and landscaping recommendations, pedestrian crosswalk and safety improvements, traffic calming, parking management, and identification of infill opportunities.

Goals and Objectives

Goal #1: Identify and enhance the gateways to define entrances to the City of Navasota.

- Objective 1: The City should prepare specific primary and Downtown gateway and corridor plans for landscaping and entrance signage.
- Objective 2: Appropriate monument signs should be designed that are visually appealing and installed at identified gateways.
- Objective 3: Landscape with suitable plants, natural to the climate, so as to minimize maintenance costs.
- Objective 4: Navasota should incorporate the land acquisition and gateway installation costs into the Capital Improvements Program and Annual Budget.
- Objective 5: Development should be regulated to prevent incompatible and unattractive land uses (i.e. open automotive storage, strip commercial zoning) along identified gateways.
- Objective 6: The City should regulate the location, heights, size, number, and type of signage along identified gateways.
- Objective 7: Navasota should establish overlay districts, either the length of an entire corridor or the width of a large intersection, to gain greater aesthetic control of signage, landscaping, building materials, and screening requirements within such overlay districts.

Goal #2: Identify and enhance the gateways to define Downtown Navasota.

- Objective 1: The City should enhance Downtown gateways through the use of “hardscape” materials (i.e. statues, monument signs, and concrete/brick pavers) and plant materials.
- Objective 2: Navasota should devise a directional signage program to lead visitors from the bypass into Downtown Navasota.
- Objective 3: Thematic gateways should be established, each tying into the history of Navasota and the region with the

commemoration of a statue (e.g. Mance Lipscomb, Native Americans, Washington-on-the-Brazos).

Goal #3: Downtown Navasota should provide effective pedestrian circulation.

- Objective 1: The pedestrian environment in Downtown should be improved by creating an organized and efficient network of sidewalks..
- Objective 2: A comprehensive street lighting program should be developed throughout Downtown Navasota.
- Objective 3: Navasota should initiate a street lamp program that replaces existing streetlights with antique theme light poles. Navasota may want to explore the possibility of installing gas-lamps.
- Objective 4: Landscaped central medians should be established for the purpose of traffic calming and pedestrian comfort along Washington Avenue. The medians should be landscaped with trees that provide shade in the summer. The medians will serve as a safety measure for pedestrians crossing Washington Avenue.
- Objective 5: Where central medians are not easily facilitated, the City should consider paving turning lanes with cobblestone or other rough aggregate pavers to discourage continuous traffic and to protect pedestrians.
- Objective 6: The City should establish a central median where the hike/bike trail crosses LaSalle Street, in order to slow traffic and provide pedestrian safety.
- Objective 7: Navasota should coordinate with the utility providers to relocate lines underground in order to improve the safety and aesthetic quality of Downtown.

Goal #4: Establish Downtown Navasota as a destination, where people feel comfortable sitting, resting, talking, and shopping.

- Objective 1: The City should provide appropriate street furniture along Washington Avenue and within downtown parks. Existing street furniture should be replaced with antique themed benches, trash receptacles, street planters, etc.

Goal #5: Downtown Navasota should incorporate landscaping elements within an urban context to enhance the aesthetic value of the pedestrian experience.

- Objective 1: The City should enhance the appearance of off-street parking areas. Include requirements in a landscape ordinance and parking policies to assure appropriate perimeter screening and interior landscaping of off-street parking.
- Objective 2: Navasota should improve the appearance of the railroad right-of-way along Railroad Avenue by planting low-maintenance plant material.
- Objective 3: Cedar Creek should be cleaned up and maintained. Replace existing street furniture with antique themed benches, trash receptacles, street planters, etc.
- Objective 4: Navasota should encourage storefronts to open their businesses to the rear, towards the Creek, to provide a more attractive and dynamic mixture of uses along the creek.

Goal #6: Create an aesthetic and physically appealing character in Downtown Navasota that creates a unique destination for visitors.

- Objective 1: The city should utilize urban design guidelines consistent with Downtown's existing mixture of architectural styles to create a strong and cohesive sense of place. These guidelines should be based on the Secretary of Interior's Standards for new construction within a historic context (i.e. building scale, building materials, etc.)

- Objective 2: Navasota should begin contracting Texas A&M University architecture and landscape architecture students for additional design work, including possible façade recommendations and gateway designs for Downtown Navasota.
- Objective 3: The use of sidewalk canopies on storefronts should be promoted to create a comfortable and attractive pedestrian environment. Incentives should be provided to encourage property and business owners to install canopies to provide shade and shelter as well as an attractive cohesive appearance in Downtown Navasota.
- Objective 4: The City should offer a rebate for canopy installation/replacement to owners of targeted properties.
- Objective 5: Navasota should institute guidelines for pedestrian-scaled signage in Downtown with coherent material, size, color, and fonts to achieve consistency within the street façade over Washington Avenue.

Goal #7: Establish better utilization of existing parking within Downtown Navasota.

- Objective 1: The City should encourage Downtown merchants to require employees to park to the rear of their businesses. This policy will enable more customer parking along Washington Avenue.
- Objective 3: Navasota should improve lighting in off-street parking areas to the rear of businesses. In order to make patrons more comfortable in night time shopping more police should be assigned to the Downtown and a “Cop on the Beat” program should be established, where police officers walk a beat around town at the beginning of each shift.

Goal #8: Encourage infill opportunities within Downtown Navasota, to increase density, creating a more diverse, 24-hour destination.

- Objective 1: Navasota should create a bandstand and farmers' market as a multifunctional public space to provide for better public interaction and community involvement.
- Objective 2: The City should create community parks to provide more open green space to the citizens of Navasota.
- Objective 3: Navasota should utilize an existing city block and vacant historical structures for the development of a bar and grill/microbrewery.
- Objective 4: An "Artisan's Row" should be created in the Downtown area to both encourage small business and to utilize stores that are currently empty.

Gateway Recommendations

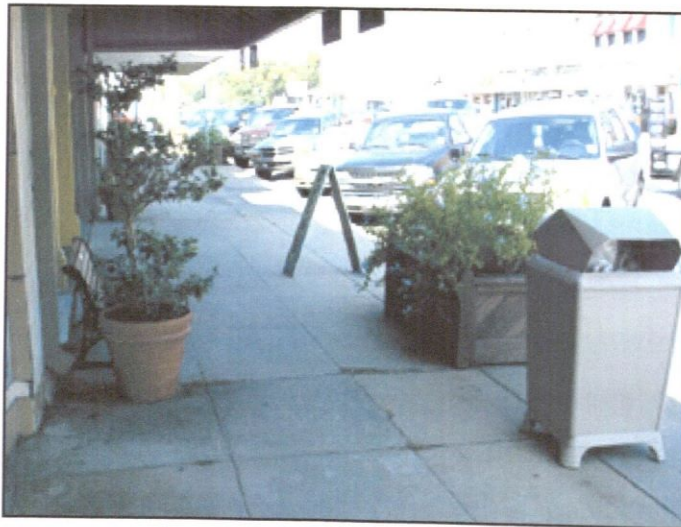
An enhancement of the gateways is necessary in order to define entrances into the City of Navasota. These gateways are identified in the Urban Image section (Section 14) on Maps 14.1 and 14.2. Gateway enhancements can be achieved in a number of ways, including the use of landscaping, monumental signage, landmarks, and paving materials. The City should regulate land use along identified gateways to prevent incompatible and unattractive uses, such as commercial strip zoning and open automotive storage. The City might also consider establishing overlay districts, either the length of an entire corridor or the width of a large intersection, to gain greater aesthetic control in these areas. Navasota should consider more vigorous control of signage, landscaping, building materials, and screening requirements within such overlay districts.

Citizens identified four gateways leading into Downtown Navasota, and suggested enhancing these gateways through the use of "hardscape" materials, such as statues and brick or concrete pavers, as well as with additional landscaping. The use of historically and culturally themed gateways utilizing appropriate commemorative statues and plaques should be considered.

Streetscape Recommendations

In order to improve the pedestrian environment in Downtown Navasota, an organized and efficient network of sidewalks must be implemented. This will make all areas of Downtown accessible, promote public health, and encourage a sense of connection. Crosswalks should be improved in order to provide pedestrian safety.

Adequately illuminated areas provide a sense of comfort and attraction to pedestrians. The Comprehensive Plan recommends providing a street lighting program, which will extend the hours available for use and activity and provide a



Downtown Navasota Streetscape

sense of security for patrons. Historic lighting will help to create a sense of place in Navasota and tie together Navasota's rich historic presence. Replacing existing street furniture along Washington Avenue and within downtown parks with antique themed benches, trash receptacles, and street planters will also create a cohesive Downtown fabric.

Citizens identified a need for more landscaping within Downtown. The Comprehensive Plan identifies areas where landscaped medians should be installed to calm vehicular traffic, promote pedestrian safety, and enhance the aesthetic value of Navasota's streets. Trees are a very important element not only in the natural areas, but in the urban ones as well. Trees provide shade and barriers from traffic as well as traffic noise. Street trees encourage pedestrian activity, promote safety, and add an improved aesthetic quality. Table 24.1 lists suggested trees for use in Navasota.

Table 24.1: Suggested Tree Species

Large Tree Species		Large to Medium Tree Species	
<u>Scientific Name</u>	Common Name	<u>Scientific Name</u>	Common Name
<i>Platanus occidentalis</i>	Sycamore	<i>Gleditsia tricanthos</i>	Common Honeylocust
<i>Platanus x acerifolia</i>	London Planetree	<i>Ginko biloba</i>	Ginko, male only
<i>Quercus macrocarpa</i>	Bur Oak	<i>Koelreuteria paniculata</i>	Panicled Goldenraintree
<i>Quercus nigra</i>	Water Oak	<i>Ulmus Crassifolia</i>	Cedar Elm
<i>Quercus phellos</i>	Willow Oak	<i>Ulmus parvifolia</i>	Lacebark Elm
<i>Quercus shumardii</i>	Shumard Oak		

Planting of the street trees should be avoided under utility lines, at traffic intersections, or in front of traffic signs. Phasing utility lines underground will allow for urban planting in more areas of Downtown. Local foresters or horticulturists should be consulted for proper planting instructions. Urban Forestry Partnership Grants are available from the Texas Forest Service and may help in initiating an urban forest program in Navasota. General information and information on grants can be found at the end of this section.

Parking Recommendations

Currently Navasota has a more than adequate amount of parking available, but it remains underutilized for a variety of reasons. A number of parking spaces exist in the parking lots that exist adjacent to Cedar Creek. Citizens expressed safety concerns for the utilization of these areas after dark. For this reason, all alleys and off-street parking lots should be well lighted for the comfort of their users. To better facilitate traffic flow this plan recommends that the two alleys that connect Washington Avenue to the Cedar Creek parking lots be converted to one-way access. Downtown business owners and their employees should be encouraged to use these parking spaces and reserve the on-street parking for customers and

visitors. To satisfy the parking demands of future development, two parcels of unimproved property have been proposed as future off-street parking sites. These sites are located adjacent to a proposed microbrewery and another adjacent to the police department and proposed bandstand/farmers' market site.

Signage Recommendations

Citizens in attendance at the public meetings expressed an interest in regulating signage within Downtown. In order to present a more cohesive visual image and to enhance the physical appearance of Downtown Navasota's street facade, it is recommended that the City institute guidelines for pedestrian-scaled signage with coherent material, size, color, and fonts. Uncontrolled placement and unlimited numbers of signs degrade the aesthetic attractiveness of the natural and manmade attributes of the City thereby undermining the economic value of tourism, visitation, and permanent economic growth.



Sidewalk canopies, or awnings, have been traditionally used to protect the pedestrian from the climate and compliment the architecture of buildings. More recently, sidewalk canopies have also been used as a type of signage. In order to provide an attractive and unified appearance in Downtown, sidewalk canopies should be regulated for coherence in material, color, type, size, and location on the building.

Concept Sketches

A separate document has been prepared in conjunction with this plan. The document entitled "Navasota Conceptual Designs" contains a series of illustrations for projects that have been discussed in several sections of this document. It is hoped that these designs will serve as an inspiration to civic leaders and interested citizens.

The following 10-year action agenda is suggested for implementation of this section of the Comprehensive Plan.

Action Agenda (2005-2015)

Year 1:

- Create a commission and charge it with the task of implementation and the procurement of funds for all Downtown improvements.
- Revise the zoning ordinance to regulate land use and signage along all identified gateways.
- Establish a committee for developing urban design guidelines for Downtown Navasota.

Year 2:

- Implement a rear-parking policy in Downtown Navasota.
- Improve lighting in rear-parking lots.
- Establish a greater police presence throughout Downtown and rear-parking lots.
- Begin developing urban design guidelines.

Year 3:

- Clean up and maintain Cedar Creek.
- Begin preparation of design documents for Downtown streetscape improvements.
- Begin contracting with Texas A&M architecture and landscape architecture students for additional design proposals, including possible gateway designs and façade recommendations for Downtown Navasota.
- Establish overlay districts within Downtown Navasota and along identified gateways for greater aesthetic control.

Year 4:

- Procure vacant and undeveloped property in the effort to utilize those sites in conjunction with public-private sector partnership agreements.
- Begin the recruitment of businesses to locate desired in-fill projects, such as a bar-and-grill/microbrewery.
- Improve alley access to rear parking lots from Washington Avenue by implementing one-way circulation policies.

Year 5:

- Begin placement of directional signage aimed at drawing people into Downtown Navasota.

- Erect kiosks or staffed informational booths to assist tourists.

Year 6:

- Promote the establishment and maintenance of sidewalk canopies.
- Explore the possibilities of providing financial assistance for façade improvements of Downtown properties.

Year 7:

- Begin contracting with Texas A&M landscape architecture students for design proposals for the extension of the existing hike/bike trail along Cedar Creek, connecting to Downtown Navasota.

Year 8:

- Begin construction of hike/bike trail expansion along Cedar Creek.
- Improve the railroad right-of-way with low maintenance landscaping.

Year 9:

- Begin construction of a complete sidewalk system throughout Downtown Navasota.
- Create community pocket parks to provide more open green space to the citizens of Navasota.
- Incorporate gateway acquisition costs into the Capital Improvements Program and Annual Budget.

Year 10:

- Begin contracting with Texas A&M landscape architecture students for additional design proposals for city gateways.
- Begin construction of city gateways.
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- Coordinate with the utility providers to relocate the utility lines underground, where currently located within alleys, in order to improve aesthetics and the safety of Downtown Navasota residents.

