Community Visions 2034




A Comprehensive Plan for the City of Robinson, Texas

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"A Comprehensive Plan for the City of Robinson, Texas"

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Executive Summary

The executive summary is a brief overview of the City of Robinson's Comprehensive Plan entitled "Community Visions 2034" that speaks to the document's purpose, results, and recommendations and conclusions condensed for the quick reading of the public, elected officials, and city officials. It is placed at the beginning of the plan and summarizes specific aspects of its content. The reader of the executive summary is usually not interested in the technical details of a project but is instead interested in the major documents of the plan. These documents include background information, concise technical analysis, financial analysis costs, productivity, efficiency, strategy, and planning.

Introduction

The City of Robinson's Comprehensive Plan entitled "Community Visions 2034" is a working document that provides a flexible framework to be updated periodically, revised and improved in order to stay relevant both to the issues the City must confront as well as the ambitions the City decides to pursue over time. The plan contains a detailed vision, using illustrative master plans and visualizations created from direct input from its citizens to insure that as the plan evolves it stays true to the overall vision.

The plan can serve as a tool to evaluate new development projects, planned capital improvements, guide public policy, and ensure that the City of Robinson continues to be the community that its citizens desire. The plan identifies goals, objectives, and policies that will enhance the City's quality of life, respect its natural environs, and support complimentary economic growth and development. The following is a listing of selected statements which speaks to the need and strategy of the comprehensive plan:

1. Utilize the plan to ensure the community continues to develop in a manner which reflects the objectives and values of the community;

2. Promote expectations for quality development and amenities on a city-wide basis to foster creativity and teamwork;

3. Continue to utilize the efforts of the City Engineer in planning infrastructure improvements, and study the physical characteristics and their effect on development within the city utilizing surrounding colleges and universities;

4. Make necessary revisions to the subdivision and zoning ordinance regulations annually or as issues in implementation arise; and

5. Update in one to five year periods to address specific topics such as urban design or the coordination of strategic planning resulting in a new comprehensive plan for the city, including new identification of goals, objectives, and policies and implementation actions.

The following recommendations are intended to provide some direction to the citizens of Robinson and future leaders as to what should be accomplished in the future to maintain the direction of the Comprehensive Plan:

1. The Comprehensive Plan should be reviewed every two (2) years and include analysis of any land use changes that have taken place during that period of time;

2. Prepare urban design studies utilizing City staff or planning consultants;

3. Establish a partnership with the Baylor University Bureau of Business Research to study census information and formulate projections for the City;

4. Review the zoning ordinance annually to make sure that any corrections need to be made to the regulations and its process;

5. Prepare economic development strategies and studies in the City;

6. Annually review the incentives for developers to make sure the City is competitive in the market;

7. Monitor the urban, suburban, and rural areas of the city to ensure that the citizens in these areas in the future will have access to infrastructure such as streets, drainage, water, wastewater, and supporting utilities; and

8. Work with surrounding municipalities to establish continuity with engineering practices in the development process.

Public Participation

The Community Visions 2034 Comprehensive Plan serves several important roles in the community's decision-making process. Its primary purpose is to permit the City to consciously consider and shape its own future through public comment. Public comment is intended to be used to identify areas or features that need to be protected or preserved, and it establishes a framework for setting priorities. The following is a listing of selected statements which explains the structure of the comprehensive plan committee and citizen responses to the public workshops:

1. The Comprehensive Plan Advisory Committee (CPAC) held community participation workshops for public comment in the summer of 2012. The City was divided into 31 workshop areas based on population.

2. Issues posed to the public who attended these workshops included the best and worst physical features of the city, best or least attributes, concerns of refuse collection, public street improvements, and utility maintenance, police and fire protection, and city management.

City Visioning & Goals

The City of Robinson has taken an important step in guiding its future with the decision to undertake this comprehensive planning process. The purpose of City Visioning & Goals statements is to state clear goals for the City and to identify clear directions that should be taken to achieve such goals. Generally, the City of Robinson should be a community that is safe, friendly, and family-oriented where residents enjoy affordable homes, quiet, safe neighborhoods, and a positive community spirit. The City should attract and promote thriving businesses which provide goods and services for our community and the surrounding area. The following is a listing of selected statements that explain the advisory committee's process to develop general and specific goals for Comprehensive Plan:

1. The Advisory Committee met over a period of sixteen months to discuss all of the elements of the comprehensive plan. Discussions involved visioning, planning theory, land use data, environmental data, existing infrastructure, design guidelines, census information, police protection, fire services, emergency management, and transportation.

2. The committee developed a series of general and specific vision statements, goals and objectives for the City that include leadership and administration, community development, natural resources, infrastructure, historic and cultural preservation, agricultural and rural preservation, business and economic development, transportation, and emergency management.

Physical Characteristics

The methodology used in the development of the Comprehensive Plan considers the physical characteristics of the city. These physical characteristics provide the structural and environmental aspects of the City and its effect on development. All human activities are interrelated with the physical characteristics of geology, soils, vegetation, topography, and climate. The following is a listing of selected statements describing the physical characteristics of the Comprehensive Plan:

1. The geology of Robinson will include a discussion of slope movement and floodplains combined with a description of the rock types that lie immediately below the surface. Almost all construction and human activities are affected by geology. Knowledge of geology can save money and increase the quality of life by providing information to help us live in harmony with the earth beneath us and the processes around us.

2. Soil is the most important natural resource in the City of Robinson. Soils are used for a wide range of purposes, including food, feed, fiber, and forage crops; pasture and range grasses for livestock; and habitat for wildlife. Good soils are the stimulus for a healthy economy.

3. There are 35 soil associations within the City of Robinson that have been identified in the plan. This comprehensive soil survey provides a variety of information on each soil association. The soils discussed are further grouped into nine categories that include clays, silty clays, clay loams, sandy loams, loamy fine sands, gravelly clays, gravelly clay loam, complex soils, and gravel pits and mining excavations.

4. The vegetation in the City of Robinson is varied and may be found generally in floodplain and open land areas. Large deciduous trees such as pecan, cottonwood, willow, pine, and elm are found adjacent to channels in flood plain areas. Much of the terrace areas of the City of Robinson are cleared, and post oak and black jack oak are found as isolated patches protected by fences and sometimes immediately adjacent to mesquite or grassland. Open land areas include extensive agriculture practices that make it impractical to distinguish between the different types of grassland. The most extensive open space is found on the gently rolling prairies in the southern portions of the City.

5. Topography is the shape of the land, whether the land is flat, characterized by gently rolling hills, or composed of steep cliffs. The topography of the City of Robinson reflects elevations that range from high in the northwest to declining lower elevations to the southeast.

6. The climate affects everyone and is especially critical to the design of buildings, agricultural activities, and planning. The variables to be considered include wind speeds, wind directions, solar radiation, temperature, precipitation, evaporation, drought, and humidity.

Community Profile

In planning for its future, the City of Robinson faces the challenge of preserving and enhancing its existing character and environment while addressing the increasing demands of future growth and development. The community profile documents its existing conditions and characteristics, regional setting, local features, historical and current population, demographic characteristics, educational attributes, and healthcare services. The following is a listing of selected statements which illustrate the history, census information, and future projects contained in the Comprehensive Plan:

1. The City of Robinson is bounded by Interstate Highway (IH) 35 to the north, Rosenthal Parkway to the south, South 12th Street to the east, and Surrey Ridge Road to the west. Major thoroughfares through the City include U.S. Highway 77 and Moonlight Drive. Robinson adjoins the corporate limits of the City of Waco at IH 35 in central McLennan County. Neighboring cities include Waco to the north, Lorena to the south and Hewitt to the west.

2. The City of Robinson came into existence after brothers John and Levi Robinson established homesteads in the area in the early 1850s. In 1885 Robinson had a population of 600 that supported three cotton gins, two churches, three general stories, and a school. Robinson was incorporated in 1955. In 2010 the population reached 10,509 persons due to active growth over the preceding decade and 30 square miles in size.

3. As of 2010, the total Robinson population had grown 33.96 percent since 2000. The population growth rate is much higher than the state average rate of 20.59 percent and is much higher than the national average rate of 9.71 percent.

4. Robinson Independent School District partners with parents and community members to serve the students of Robinson. RISD's vision is to develop leaders and productive citizens by cultivating a passion for learning and a desire for excellence. By focusing on the needs of every student, every day, this vision will be realized.

5. The City of Robinson entered into a "Robinson Recreational Park Use Agreement" with the Robinson Independent School District on May 26, 2010. The agreement was for the construction of a city park on a tract of land comprised of 7.696 acres. This tract of land is located along Peplow Drive just east of U.S. Highway 77 in the City of Robinson. The term of the agreeement will be for twenty-five years and is renewable for sucessive terms.

6. The City's vision is to continue to develop and maintain a strong partnership with Baylor/Scott & White Hillcrest Medical Center, and Providence Healthcare Network. East Texas Medical Center (ETMC) Emergency Medical Services (EMS) is one of the nation's largest rural ambulance services, as well as one of its most progressive and fastest growing providers.

7. A multi-purpose facility is planned to be constructed along South 12th Street at Flat Creek in the next two years by the City of Robinson. This facility will include a rifle range, pistol range, archery range, and skeet/sporting clays course. An obstacle course, burn building, and classroom will also be constructed for Police and Fire training.

Economic Development

Economic development is a partnership between public and private interests to promote extensive and prolonged private investment. The available land area, customer base of the city, workforce of the area, financing options and supporting community incentives are factors necessary to take advantage of an expanding local and regional economy.

The City of Robinson has developed goals, objectives, and policies within the Comprehensive Plan that will attract and sustain desirable businesses and industries, thus increasing the overall tax base. Ancillary commercial establishments will, in turn, provide additional tax revenues to support the community's quality of life. The following are a selected listing of statements which describe the City of Robinson's efforts to attract businesses and economic development into the city:

1. Information to assist those who will be considering and evaluating the City of Robinson for economic development projects include the Economic Development Corporation, existing city regulatory codes, City tax abatement, McLennan County tax abatement, Freeport Property tax exemption, Pollution Control Equipment Property tax exemption, Sales Tax-Enterprise Zone project refund, Manufacturing Equipment exemption, Natural Gas and Electricity exemption, "Heart of Texas Workforce" recruitment and screening, Central Texas customized training, Waco-McLennan County Economic Development Corporation grants,

Texas Capital Fund Grants, State Infrastructure Bank Loans, Transportation Reinvestment Zones, and Chapter 380 Agreements.

2. The expected (stable to consistently increasing) population in Robinson, coupled with growth in the surrounding communities, show that the City is ideally located to attract new development that will provide goods and services. These include technology centers and warehouse, and distribution centers which in turn provide the customers with grocery stores, specialty shops, restaurants, or personal services such as dry cleaners and appropriately located fuel vendors. Professional offices and services are also included in the commercial mix. The City's geographic position, land and resources can attract businesses and industries to the City.

Water System

In 2012, the City completed the *City of Robinson Water System Master Plan.* This was the City's first comprehensive water master plan. The plan lays out a roadmap for the City to follow in order to address the current inadequacies within the existing water system and additionally provides for future growth and development. The Master Plan includes a 20-Year Capital Improvement Program (CIP) that lists the priorities, implementation timelines, and estimated costs for the identified system-wide improvements.

1. It is recommended to update the Water Master Plan in 2017. The 5-year update will reflect the projects proposed in this study that have been completed, and growth which has occurred or is planned to occur in the residential, commercial, and industrial sections of the City's system. By updating the Water Master Plan in five years, the priority list of projects can be revised, expanded, and updated to facilitate additional growth of the City's water system.

2. The recommendations of the Water Master Plan are based on the information gathered to date along with assumptions made about particular variables in the water system. The City should revisit these areas each year or a minimum of every five years to verify if the assumptions are holding true.

3. The two most important areas to follow are the growth rate of connections and the level of groundwater in the aquifer. The growth rate was based on a 2.6% annual growth rate, which can vary significantly based on the economy and other factors. The level of groundwater should be tracked and logged annually to verify that the projected life of each well in the report is being realized.

Wastewater System

In 2012, the City completed the *City of Robinson Wastewater System Master Plan.* This was the City's first comprehensive wastewater master plan. The plan lays out a roadmap for the City to follow in order to address the current inadequacies within the existing wastewater system and additionally provides for future growth and development. The Wastewater System Master Plan includes a 20-Year Capital Improvement Program (CIP) that lists the priorities, implementation timelines and estimated costs for the identified system-wide improvements.

1. The date presented within the Wastewater System Master Plan represents the system improvement recommended for the City of Robinson wastewater collection system from 2012 to 2031.

2. The recommended improvements are designed to reduce or eliminate existing sanitary sewer overflows from occurring during wet weather storm events while additionally providing future necessary collection system capacity.

3. The results of the Wastewater System Master Plan conclude that approximately 25% of the existing gravity collection system was constructed 50 years ago. This infrastructure currently has a number of deficiencies based upon the age, pipe material and current structural condition of these lines. A majority of the existing lift stations and force mains within the City's collection system face near term complications. It is understood that 10 of the existing 15 lift stations have either hydraulic capacity or structural challenges.

4. It is recognized that the magnitude and scope of the identified improvements that require attention over the next 20 years is substantial. However, it should be recognized that the longer it takes to address many of these identified deficiencies, the greater the risk of overflows and a heightened potential of TCEQ enforcement.

5. Within the 20-year Capital Improvement Plan, approximately 14 miles of wastewater lines will be replaced. Approximately 8 miles of new wastewater lines and interceptors are recommended to allow the City to develop in a more planned and logical fashion in the future.

6. The Master Plan recommends projects that allow for removing and abandoning of 11 of the City's 15 existing lift stations. Infrastructure requiring modification for use in the ultimate collection system includes the gravity interceptors upstream of the South Pond and Moonlight Lift Stations as well as the increased capacity of these two lift stations.

7. The date presented within the Wastewater System Master Plan represent the system improvement recommended for the City of Robinson wastewater collection system from 2012 to 2031.

8. It is recommended to update the Wastewater System Master Plan in 2017. The 5-year update will reflect the completed projects currently proposed in this study and the growth which has occurred or is planned in the residential, commercial, and industrial sections of the City's system. By updating the Master Plan in five years, the priority list of projects can be revised, expanded, and updated to facilitate additional growth of the City's wastewater collection system.

Stormwater Management

The City of Robinson has a significant amount of low lying areas associated with its streams and creeks which are prone to flooding problems of these types city-wide. The potential for development within these flood prone areas varies depending on whether the area is the more severely impacted floodway or the less impacted flood fringe. Development should be restricted within the floodway in order to conserve the flood protection provided by the natural stream course. Flood prone areas should also be conserved for wildlife and community recreation areas.

Unsound development activities can lead to soil erosion. This fact is compounded by the gently rolling to steep slopes found within creeks and streams within the City of Robinson. These slopes allow for water to build up velocity which correspondingly increases erosion. The use of underground storm sewers or concrete-lined channel side slopes, concrete lined base courses, or a combination of these treatments with grass side slopes is encouraged where feasible due to their limiting of soil erosion. These methods are widely preferred from an engineering standpoint, but are expensive. The following is a listing of selected statements which describe the stormwater management policy of the Comprehensive Plan:

1. The City of Robinson's (Stormwater Management Policy) shall govern all planning, design, construction, operation, and maintenance of all stormwater drainage facilities within the City of Robinson.

2. Land development shall be done in such a manner that there will be no adverse impacts downstream of the development. An adverse impact shall be any impact which causes an inundation, or an increased inundation, of any building structure, roadway, or improvement. An adverse impact shall also include downstream erosion and/or sedimentation, or an increase in erosion and/or sedimentation.

3. All new developments shall be constructed in accordance with the City of Robinson's Floodplain Ordinance such that the finish floor elevation(s) will be a minimum of 1 foot above the 100-year flood elevation(s).

4. All drainage improvement plans and floodplain delineations shall be based upon field survey (on-the-ground).

Human Resources

Human resource planning and development focuses on the hiring, training and retention of employees to achieve strategic objectives. This approach analyzes the competencies or abilities that exist within the current workforce. It then compares them to the competencies required in the future. The following is a listing of selected statements which explain the human resource approach to succession planning, policy, and future structure of the City organization:

1. A Comprehensive Human Resource Strategy plays a vital role in the achievement of an organization's overall strategic objectives and visibly illustrates that the human resources function fully understands and supports the direction in which the organization is moving.

2. Succession planning is the process whereby municipal professionals identify key positions within the company and develop plans to fill those positions either with internal or external staff.

3. The Human Resource office has completed a safety policy which includes accident prevention training and equipment training, job safety analysis, and accident investigation along with hazardous communication training.

4. The City of Robinson first incorporated in 1955 as a General Law City. Since that time, the City of Robinson adopted a charter in 1999 to form a Home Rule City operating with the Council-City Manager form of government. The seven-member elected City Council sets policy and appoints a City Manager who is responsible for the day-to day operations of the City.

5. The City is further organized into departments based on their specific functions. These include City Secretary, Municipal Judge, Juvenile Case Manager, Municipal Court, Finance, Water Utilities, Planning, Communications, Public Works, Police, Purchasing, and Human Resources.

6. The Robinson Volunteer Fire Department is currently organized and staffed with a Fire Chief, Deputy Chief, Safety Officer, Fire Marshal, two Suppression Captains, two Suppression Lieutenants, and two Rescue Captains. The Fire Department is volunteer and will be progressing toward a full-time department within the City organization over the next twenty years. The personnel descriptions that follow will be recommended at that time.

Police Services

The City of Robinson Police Department is a service and community oriented law enforcement agency that strives to protect and serve the community's pursuit for a peaceful and safe existence free from fear. The Department is responsible for enforcing City ordinances, State laws, and Federal regulations with democratic values applied equally and impartially while maintaining the highest degree of ethical behavior and professional conduct through the department's core values of valor, integrity, and initiative.

Until late 2013, the Robinson Police Department had never purposefully addressed its strengths, weaknesses, opportunities, and threats, defined its strategy, or direction, for making decisions regarding short and long range goals, or for planning the allocation of its resources. This all changed with the creation of its Strategic Planning Committee in December 2013.

The city is divided into two patrol districts. At any one period of the day there is a minimum staffing level requirement of two patrol officers, one for each district. However, districts often have more than one district officer assigned to them, depending upon the time of day and the day of the week.

Fire Services

The Robinson Volunteer Fire Department (RVFD) has been the backbone of the city's services because of its volunteer status for 59 years. The financial support of the city over the years has

elevated the department into one of the best volunteer departments in Central Texas. The contractual position of the city and department has provided funding for over twenty years that has allowed the department to build and acquire the necessary equipment to provide fire prevention and suppression as well as first responder medical for the citizens of Robinson, while remaining all volunteer.

1. The Department currently averages 30 members, with two part-time employees. These members protect a city that has grown to a population over 11,500 people. The fire protection area of the department is approximately 53 square miles with a 3A school in the central portion of the city, and an industrial park in the western portion of the city. The department also provides mutual aid assistance to several other surrounding communities.

2. The Robinson Volunteer Fire Department is currently organized and staffed with a Fire Chief, Deputy Chief, Safety Officer, Fire Marshal, two Suppression Captains, two Suppression Lieutenants, and two Rescue Captains. Apparatus currently in use consists of two fire engines with a full complement of hose and equipment to satisfy the ISO requirements. This includes extrication equipment, thermal cameras, gas monitors, generators and a multitude of hose and small tools.

3. The contractual position of the city and department has provided funding for over twenty years that has allowed the department to build and acquire the necessary equipment to provide fire prevention and suppression as well as first responder medical for the citizens of Robinson, while remaining all volunteer.

4. The Robinson City Council approved a construction contract for the new City of Robinson Fire Department Building on August 5, 2013.

Emergency Management

The City of Robinson is a member of the McLennan County Emergency Management system along with the participating cities within McLennan County. A McLennan County Hazard Mitigation Plan was developed in accordance with the provisions of the Disaster Mitigation Act of 2000 (Public Law 106-390), the Pre-Disaster Mitigation Grant Program, 44 Code of Federal Regulations Part 201.6 and 206, and the planning standards adopted by the Federal Emergency Management Agency (FEMA) and the Texas Division of Emergency Management (TDEM).

1. McLennan County and the City of Robinson face the potential impact of natural hazards that threaten human life and property at any time. The potential hazards include floods, droughts, wildfires, tornadoes, thunderstorms, winter storms, hail, and dam failure.

2. Quick and reliable communication is critical to the operations of any municipality. Whether related to criminal activities, severe weather or missing persons, the ability to quickly and reliably reach staff, emergency personnel, and citizens – over any voice or text device – can help protect life and property.

3. It is the intent over the next twenty years that, as the city grows, to research and develop an independent emergency management department within the city organization.

Land Use

The existing land use designations in the City of Robinson consists of agricultural, residential, commercial, industrial, floodplain/surface water, public/semi-public, parks and open space, and vacant land uses. The majority of the City consists of single-family residential uses in neighborhoods of varying density. The older neighborhoods are denser than the newer neighborhoods. These uses may be seen throughout the City to the north, west, and east as older and recent single-family subdivisions. Areas to the south indicate sporadic development of small to large farmstead and ranch homes. The comprehensive plan illustrates this continued pattern of development in the Future Land Use Plan Map and does not seek to make significant changes to that pattern of development within the city limits.

1. The area of the City of Robinson is comprised of 20,139.76 acres or 31.468 square miles of land. Land uses comprise 19,506.17 acres or 30.478 square miles of land.

2. The improvements that include residential, commercial, and industrial land comprise 22.85 percent of the City. This information reveals that less than 23 percent of the City of Robinson is developed.

3. Existing conditions and development patterns, community goals and objectives, and land development standards and policies serve as the basis for the Future Land Use Plan.

4. The Future Land Use Map does not constitute zoning, nor does it establish zoning district boundaries, nor is it appropriate for application on a parcel-by-parcel basis. The map reflects the Comprehensive Plan broad policy for future distribution of land uses to be achieved over a 20-year period.

5. Urban design is unique to each community whether the design is a result of deliberate planning or whether it is through development that happened naturally over time. It can enhance future development, make the community function more efficiently, and make a positive impact on the citizens of the community, as well as visitors.

Zoning

Zoning regulations and districts are established in accordance with a Comprehensive Plan for the purpose of promoting the health, safety, morals and general welfare of the citizens of the City. They are designed to lessen congestion in the streets; to secure safety from fire, panic and other dangers, to ensure adequate light and air, to prevent the overcrowding of land; to avoid undue concentration of population; to facilitate the adequate provision of transportation, water, sewerage, schools, parks and other public requirements. They have been established with

reasonable consideration for the character of each district and its peculiar suitability for the particular uses specified; and with a view to conserving the value of buildings and encouraging the most appropriate use of land throughout the City.

1. Zoning regulations and districts are established in accordance with a Comprehensive Plan for the purpose of promoting the health, safety, morals and general welfare of the citizens of the City.

2. The existing zoning in the City of Robinson may be described as a predominantly residential zoned community with strip commercial zoning along the collector streets, highways, and major thoroughfares that traverse the area.

3. It is recommended that the City begin to update the current zoning ordinance upon completion of the Comprehensive Plan. The existing zoning ordinance is constructed in a cumulative style that is no longer used by most cities in Texas. It is recommended to develop the new zoning ordinance in a non-cumulative style of zoning regulations.

Transportation System

The "Transportation System" Plan is extremely important to a City, and without a plan, the City would find itself in a situation of acquiring land only after problems may have surfaced. As development continues to occur and demands are made for additional travel lanes, right-of-way needs to be in place for the required street improvements. Building construction sites after the subdivision process is complete will be located at appropriate distances from the fully improved street system.

1. The Transportation System Plan establishes a long-range guide for the location of arterial, collector, and local streets.

2. The purpose of establishing a system of street classifications is to define a means for determining the most preferable locations for streets based on their specific functions within the City.

3. The basic criteria for the City of Robinson "Street Classification System" are function and movement, orderly spacing, and width criteria.

4. Traffic volumes in the City of Robinson were monitored by city staff from January 2011 through April 2012 utilizing traffic counting devices along various arterial, residential and neighborhood collectors, and local streets. The data produced by the traffic counts was comprised of low, high, and average counts based on 24-hour monitoring day, and 85th percentile speeds.

5. The City of Robinson transportation system is in need of maintenance and reconstruction. The base material consists of various thicknesses of gravel and sand that has been built-up over time.

6. The City may require a Traffic Impact Analysis (TIA) if it is determined that a proposed development will have a significant impact on the City's street transportation system.

7. Access management is important to street continuity. Many of the concerns related to access management are the same as those in relation to street intersections such as median openings, access, deceleration, and storage of vehicles.

8. The Waco Metropolitan Planning Organization (MPO) coordinates transportation planning activities for all of McLennan County. The MPO was established by the federal government to ensure that transportation decisions within the MPO area are performed in a continuing, comprehensive and cooperative process. The MPO provides a forum for local input into the expenditure of federal highway and transit dollars.

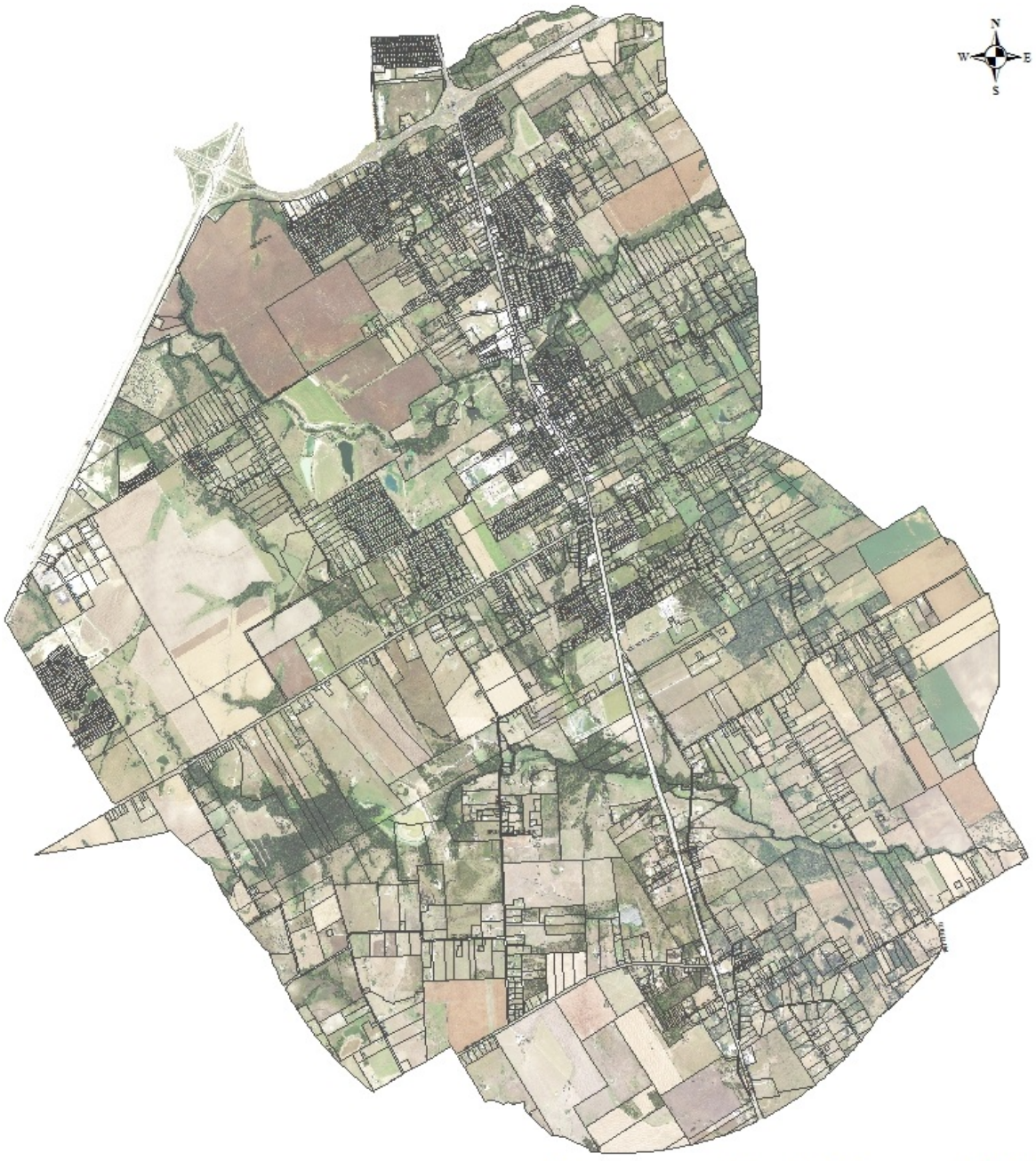
Chapter 1 Introduction

The City of Robinson's Comprehensive Plan entitled "Community Visions 2034" is a working document that provides a flexible framework to be updated periodically, revised and improved in order to stay relevant both to the issues the City must confront as well as the ambitions the City decides to pursue over time. The plan contains a detailed vision, using illustrative master plans and visualizations created from direct input from its citizens to insure that as the plan evolves it stays true to the overall vision. The plan can serve as a tool to evaluate new development projects, planned capital improvements, guide public policy, and ensure that the City of Robinson continues to be the community that its citizens desire. The plan identifies goals, objectives, and policies that will enhance the City's quality of life, respect its natural environs, and support complimentary economic growth and development.

Comprehensive planning helps to ensure that as size and population characteristics grow and change over time, the community continues to develop in a manner which reflects the objectives and values of the community. This Plan will function as a short and long-range guide for the future growth, development and redevelopment of the community. It accurately reflects what is in the best interest of the City of Robinson, as perceived by citizens and property owners within the community.

The Plan will be used by the City Council, Planning & Zoning Commission, all City Departments and the community, drawing on its vision and guiding principles to create a more efficient and responsive government. It will create a more collaborative relationship between the City, developer, and builder within the community. Expectations for quality development and amenities on a city-wide basis, and the new plan will seek to foster creativity and teamwork. This exciting new development vision will also protect the history and uniqueness of the City of Robinson.

The "Community Visions 2034" plan serves several important roles in the community's decision-making process. Its primary purpose is to permit the City to consciously consider and shape its own future. It serves as a response to existing problems that have been identified within the community, and as a means to address future issues in a more proactive way. It is intended to be used to identify areas or features that need to be protected or preserved, and it establishes a framework for setting priorities. The plan focuses primarily upon the community's physical form and environment, and is closely tied to its socioeconomic factors. In many ways, the physical layout and design of the community affects the daily lives of those who live, work, and play.



Data Source: The parcel boundaries were provided by the McLennan County Mapping Dept.

This product is for informational purposes only and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

Texas HB1147, Effective 9/1/2011

Date Produced: 4/2/14

Community Visions 2034

"A Comprehensive Plan for the City of Robinson, Texas"

Aerial Map

Feet
0 1,000 2,000 3,000 4,000

1519

7111 Bosque Blvd., Ste. 101
Waco, TX 76710 (254-751-1934)

General Methodology

The Comprehensive plan was prepared mainly by City staff and management, along with assistance from the City Engineer. The general methodology for the development of the Plan was to consider the physical characteristics of the city, infrastructure, planning philosophy, and planning design. The physical characteristics consisted of geology, soils, vegetation, and floodplain. Infrastructure considerations include existing water, wastewater, natural drainage, street conditions, and general utility data. Planning philosophy consisted of urban design, public participation, and visioning. Planning design consists of existing land use, zoning, subdivision regulations, transportation patterns, and census data. The general layout and development of the Plan was derived from a literature search of similar cities the size of the City of Robinson. Experience in preparing comprehensive planning documents was provided by management.

Purpose of Comprehensive Planning

Citizens of the City of Robinson value their community and its variety of uses, the character and diversity of their neighborhoods, and the quality of their natural environment. Yet, citizens express their concern about the impacts of new growth on traffic, the cost of public facilities, and community character.

Compact development could improve people's lives over placeless development. The effect would include less commuting times, less family expenses spent on transportation, and community character restored to areas once lost. Growth can improve the character and function of the City if properly directed. The City should accommodate growth within already developed areas to make more efficient use of existing infrastructure. This will lessen the amount of development that will occur in areas that lack facilities and services or contain vacant land.

Utilization of the Comprehensive Plan

The Comprehensive Plan provides a listing of priorities for public action and direction for private decisions. It can serve as guidance to the City Planner, Planning and Zoning Commission, Board of Adjustment, and City Council when evaluating development proposals and considering the rezoning or annexation of lands. The Plan also provides user-friendly information for use by its citizens and community groups. Clear goals strengthen the partnership between the public and private sectors and between citizens and the development community. Implementation of the Plan will necessitate revisions to the City's land development regulations such as subdivision and zoning. The Plan shall also guide capital improvement investments for the City's transportation systems, parks and open space planning, and water and wastewater systems. This document is intended to provide a common point of reference for everyone involved in shaping the City's future.

Landowners looking to rezone land should pay close attention to the existing land use and future land use plan. Rezoning property should be done in accordance with the future land use plan. Although there are more zoning categories than land use categories, the general uses of the zoning districts should reflect the land uses in the comprehensive plan. The future land use plan, once adopted, becomes a guide for the city in rezoning property. Zoning changes that are consistent with the future land use plan are justifiable; however those changes that are requested which are contrary to the future land use plan may be rejected. Amending the future land use plan should be done prior to rezoning decisions. The future land use plan serves as a comprehensive development guideline and should reflect land changes that are requested.

Changes and updates to the Plan should occur at regular intervals. Much of the time it is the policies such as the city code which are adapted to reflect the goals in the Comprehensive Plan. Codes and regulations must be adapted to fit the needs of the City for that period of time. Continued planning efforts such as public hearings or meetings that address specific topics such as urban design are helpful for coordinating strategic planning activities. The planning approach to addressing changes in the city requires gathering data, coordination among stakeholders and public involvement. Strategic plan updates in one to five year time periods are appropriate for accomplishing specific tasks. The policies that regulate development should be altered to reflect the desired outcomes of the Plan. Review of current policies should always be conducted keeping in mind the comprehensive plan goals.

Adoption of the Comprehensive Plan

Comprehensive plan regulations in Texas are found under the Texas Local Government Code, Section 213.001. The powers granted under this chapter of the Texas Statutes are for the purpose of promoting sound development of municipalities and promoting public health, safety, and welfare.

The governing body of a municipality may adopt a comprehensive plan for the long-range development of the community as stated in the Texas Local Government Code, Section 213.002. A municipality may define the content and design of a comprehensive plan. A comprehensive plan may:

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

A municipality may define, in its charter or by ordinance, the relationship between a comprehensive plan and development regulations and may provide standards for determining the consistency required between a plan and development regulations. Land use assumptions

adopted in a manner that complies with Subchapter C, Chapter 395, may be incorporated in a comprehensive plan.

In the Texas Local Government Code, Section 213.003, a comprehensive plan may be adopted or amended by ordinance following:

(1) A hearing at which the public is given the opportunity to give testimony and present written evidence; and
(2) Review by the municipality's planning commission or department, if one exists.

A municipality may establish, in its charter or by ordinance, procedures for adopting and amending a comprehensive plan. Texas Local Government Code, Section 213.004 states that this does not limit the ability of a municipality to prepare other plans, policies, or strategies as required. A map of a comprehensive plan illustrating future land use shall contain the following clearly visible statement: "A comprehensive plan shall not constitute zoning regulations or establish zoning district boundaries", as stated in the Texas Local Government Code, Section 213.005.

Implementation of the Comprehensive Plan

Planning is a continuous process. The completion of the Comprehensive Plan is by no means an end in itself, rather a new beginning of a city. Adoption of the Comprehensive Plan is the initial step in achieving the vision in the planning process. The Comprehensive Plan is the City's guide for governmental officials and citizens in making well informed decisions regarding land use, thoroughfare development, community facilities construction, and infrastructure improvements and extensions.

The zoning ordinance and subdivision regulations use the Future Land Use Plan as a general guide for decision-making in zoning cases and subdivision plat review approvals to ensure that development and redevelopment are consistent with the policies of the City's Comprehensive Plan. The Capital Improvement Plan addresses street, water and wastewater infrastructure and facility improvements. The Annual Budget looks at the general operations and maintenance of city facilities, and the repair of rights-of-way for street improvements. Special programs and new initiatives may be used to put recommendations into action.

The series of proposed implementation actions are specific steps that should be taken to implement the plan. Some actions may be simple and others will require substantial funding. Others may call for the formation of a new committee or identify the need for a specific study. The continuation of ongoing City policies and programs is recommended in many instances.

The most important method of implementing the Comprehensive Plan comes from the day-to-day commitment by elected and appointed officials, City staff members and citizens. The Comprehensive Plan must be understood as a useful and capable tool to direct the City's future.

The Future Land Use Plan and Transportation System Plan should be displayed and made available for easy reference by officials, staff, and citizens. The Comprehensive Plan should continually be referenced in planning studies and zoning case reports as well as informal discussion situations. High visibility will make the Plan successful, dynamic and a powerful tool for guiding future growth.

The Comprehensive Plan must be constantly scrutinized to ensure that its goals, objectives, policies, and recommended actions continue to reflect changing community needs and attitudes. Each new development, redevelopment, and even tax incentives, need to be considered with the intent of achieving the vision and goals set forth in the Plan.

Circumstances will continue to change in the future and the Comprehensive Plan will require modifications and refinements to be kept current. Some of its proposals will be found unworkable and new solutions will continue to emerge. Needed refinements and changes should be carefully noted and thoroughly considered as part of the Plan updates and 5-Year Plan Revision. As change occurs, however, the vision should remain the central theme and provide a unifying element. The Plan's importance lies in the commitment of citizens to agree on specific purposes for the future, and to apply that consensus to continuing efforts that focus on the betterment of their community.

Major updating of the Comprehensive Plan should ideally occur every five years. These updates will ensure renewal and continued utility of the Comprehensive Plan for use by the City officials and staff. Annual Plan amendments from the previous four years should be incorporated into the next major Plan update. The result of the major Plan updates will be a new Comprehensive Plan for the City, including new identification of goals, objectives, and policies and implementation actions.

Chapter 2 Public Participation

The Community Visions 2034 Comprehensive Plan serves several important roles in the community's decision-making process. Its primary purpose is to permit the City to consciously consider and shape its own future. It serves as a response to existing problems that have been identified within the community, and as a means to address future issues in a more proactive way. It is intended to be used to identify areas or features that need to be protected or preserved, and it establishes a framework for setting priorities. The Comprehensive Plan focuses primarily upon the community's physical form and environment, and is closely tied to socioeconomic factors. In many ways, the physical layout and design of the community affects the daily lives of those who live, work and play in Robinson.

The Comprehensive Plan Advisory Committee (CPAC) held community participation workshops during the months of April through July 2011. The City was divided into 31 workshop areas based on population. The City Manager conducted these weekly meeting workshops. Members of the Comprehensive Plan Advisory Committee (CPAC) were also in attendance. There were 150 citizens that attended these workshops from across the community. The following are a series of workshop questions and their responses that covered the visual appearance of the city, refuse collection, public street and utility maintenance, police and fire protection, and city management.

Visual Appearance of the City

Most citizens felt that the *best physical features* of the city were the low vehicular traffic, semi-rural look throughout the community, great schools, vast green space and open land throughout the city. Its small town feel with easy convenience to Waco, proximity to Interstate Highway 35 access, newer housing subdivisions, location in the Central Texas area, new commercial development activity, agricultural land area within the city limits, and variety of existing church buildings, residences and businesses that maintain their property. Additionally, citizens mentioned the quiet and nice neighborhoods, the physical size of the city, the natural topography and landscape of the city, the entrance signage along U.S. Highway 77, and the vast available land for development.

The *worst physical features* of the City include the need for more landscaping at commercial uses along U.S. Highway 77, poorly kept commercial buildings and vacant lots along U.S. Highway 77, poorly maintained roadways all over the City, residential property not maintained in areas of the City, existing old buildings and numerous signs, abundance of self-storage units, abandoned vehicles, and empty buildings in and around the City.

Citizens were asked one thing they would change to make the City look better. Most would clean-up, landscape, and further beautify U.S. Highway 77, not allow spontaneous mixed buildings along U.S. Highway 77, provide for better zoning and enforcement of city codes, enforce high weeds and grass regulations, demolish or refurbish old buildings, add the requirement for sidewalks in the subdivision ordinance, improve the overall street conditions, pick up trash throughout the community, clean up the strip center along Deanna Drive, and delineate a downtown area.

The *best attributes* about the neighborhoods' appearance were the low traffic volumes, wide streets, open space, good landscaping, new roads, well-maintained homes, large lot sizes, good property values, trees, spacious views, rural farm-like atmosphere, setbacks between residences, pride of ownership in the neighborhoods, quiet, friendly, clean, nice older homes, and architecture.

The things that were liked the *least* in neighborhoods include the poor street conditions, no sidewalks or curbs, no walking areas, traffic noise adjacent to U.S. Highway 77, no street lights, trash in the ditches, vehicles parked in the front yards, occasional wastewater smell, poor drainage problems, insufficient road access to various parts of the city, fence rows overgrown with trash, speeding vehicles, poorly maintained properties, fire protection, debris from crops, trash and dead animals dumped on the roadways, no visible downtown area, gravel roads intersecting paved roads, poorly maintained homes, trash cans left in front yards, drainage ditches, on-street parking outside commercial buildings, citizens running a commercial business in a residential area, high weeds and grass in bar ditches and vacant lots, and lack of parking.

Refuse Collection, Public Street & Utility Maintenance

Comments from most citizens concerning *refuse collection* rated this service as mainly good to excellent. Most stated that the employees were courteous, efficient, and consistent with the quality of service. The response to the question of *street repair* was varied with some residents stating the time of repair was poor to good. Most responders felt too much time had elapsed between the call for repair to the City and the actual completion of the work. The responses to *water line repairs* were varied from good to excellent. *Wastewater responses* varied from fair to excellent.

A majority of the citizen's comments rated the *condition of the streets* within the City as poor to good. The street condition varied from the location of the responder's residence or business. In the older areas of the City, the streets were poor. In the newer areas of the City where development was occurring, the streets were somewhat in better condition. The majority of the citizens polled rated the water system pressure as good to excellent in most parts of the City. The

Community Visions 2034

"A Comprehensive Plan for the City of Robinson, Texas"

Public Participation Workshop Areas

0 500 1,000 2,000 3,000 4,000 Feet

questions concerning drainage or wastewater odor issues within the City received mixed responses from no problems to some problems in various parts of the City. The City for the

most part exhibits rural bar ditch drainage along many of its streets. Wastewater odor mainly comes from older lift stations in need of repair and maintenance.

Police & Fire Protection

The citizens who responded felt the quality, timeliness and effort they received from the police department was good to excellent. Most citizens who responded to the survey did have a history of contacting the police department for their services. Police involvement in the community was good to excellent. The general attitude of the police department toward its citizens was good to excellent. The Robinson Volunteer Fire Department received a good to excellent rating for their services to the community. Fire Department involvement in the community was good to excellent. The general attitude of the volunteer fire department toward its citizens was good to excellent.

City Management

The content and user friendliness of the City's website was good to excellent. Staff had launched a new website design at the time of the citizen workshops. The attitude and timeliness of response from city management toward issues was good to excellent. Involvement of City management in community events was good to excellent. The facilities and process used for the annual election process was rated as good to excellent. Citizen attention given to their concerns and availability of information regarding the annual budget were good to excellent.

Most citizens felt that *City management* could provide its citizens more volunteerism opportunities, stricter ordinances to protect homeowners from consequences of commercial growth, limited but efficient government, a chipper truck to visit neighborhoods on a scheduled run, a library and other recreational facilities, a city newspaper, stress recycling and a separate site for disposal, additional advertisement of city issues, a better quality newsletter, television coverage, better standards for construction, recycling citywide, public work crews more willing to fix roadways, additional police on patrol, and provide for senior citizen activities.

The responders felt the *biggest issues* facing the citizens of Robinson were that the Police should monitor the kids more efficiently on weekends on country roads; the growth of our community and the ability to provide adequate city services, street maintenance and repair; water supply issues; spending the citizen's money wisely on city projects; maintaining the City's independence for water as much as possible and maintain and increase the permit with TCEQ from the Brazos River; and there are too few places to dine and shop. Additionally, citizens agreed some of the biggest issues are providing for new schools; having enough money to maintain the existing city infrastructure, flooding problems with Flat Creek, rough streets with no curb and gutter, electrical transmission and service issues, beautifying the City, having greater council member involvement in the community, the lack of hiking and walking trails to connect

neighborhoods, the lack of an environment that encourages healthy lifestyles, preparation for future growth, growth of government, and the lack of a post office.

Similar responders noted that *further issues* would be storm water management; commercial effects of noise abutting residential neighborhoods; outgrowing our present facilities and growing with new ideas; proper zoning that protects the citizens' rights; continuing to have a great school system; development of better street construction standards; encouraging growth and providing for safety and quality of life for all citizens; willingness of the citizens to pay additional taxes to improve our streets and image; keeping tax dollars in the City and saving citizens the inconvenience of travelling elsewhere; and addressing the needs of our senior citizens as they comprise an increasingly significant portion of our population.

Chapter 3 City Visioning & Goals

The City of Robinson has taken an important step in guiding its future with the decision to undertake this comprehensive planning process. The purpose of the *City Visioning & Goals* chapter of the Comprehensive Plan is to state clear goals for the City and to identify clear directions that should be taken to achieve such goals. It is the goals and objectives that are established within this document that will determine the focus of the Comprehensive Plan recommendations contained within subsequent chapters. Generally, the City of Robinson should be a community that is safe, friendly, and family-oriented where residents enjoy affordable homes, quiet, safe neighborhoods, and a positive community spirit. The City should attract and promote thriving businesses which provide goods and services for our community and the surrounding area.

Visioning Process

The visioning process was directed by a Comprehensive Plan Advisory Committee (CPAC) comprised of members from City of Robinson businesses, education, legal, and real estate communities. One member of this committee was appointed by the City Council as the Committee Chairman. Appointments were made with consideration toward ensuring that the committee will consist of geographically diverse and issue-diverse members.

This committee represented a cross-section of the community and strived to be representative of various views and interests of the citizens throughout the City of Robinson. City of Robinson elected officials, administration and staff actively pursued and facilitated an extensive public participation process for the development of the comprehensive plan that began in January of 2011.

The Advisory Committee met over the next sixteen months to discuss all of the elements of the Comprehensive Plan. Discussions involved visioning, planning theory, land use data, environmental data, existing infrastructure, design guidelines, census information, police protection, fire services, emergency management, and transportation. The following is the result of those discussions. The committee developed a series of general and specific vision statements for the City that include leadership and administration, community development, natural resources, infrastructure, historic and cultural preservation, agricultural and rural preservation, business and economic development, and transportation.

General Vision Statement

"Manage future growth in a manner that preserves its rural town character and natural resources while providing opportunities for continued public and private sector investment that increases the quality of life for all residents living and working in the community"

- *The City will remain a rural community with great scenic beauty, a healthy natural environment, and a high quality of life for its inhabitants.*

- *Large tracts of land, working farms, and carefully managed development will lead to a beautiful landscape that will maintain its historical character while protecting habitat for plants and animals and sustaining economically valuable natural resources such as clean water and timber.*
- *Vibrant and diverse local businesses will provide products, services, and jobs for residents, and support the tax base.*
- *Carefully managed development will be designed to stabilize taxes, provide a healthy diversity of housing and preserve the look and feel of the community.*
- *Buildings and institutions dating from the City's early days will provide links to the region's rich past, and new development will be designed to respect the City's visual and architectural character.*
- *Residents will be able to participate in a variety of cultural, educational, and recreational activities in the community.*
- *The City will have a strong and cooperative relationship with the surrounding communities which will be active, economically healthy and vibrant, serving as the business, commercial, and housing center for Central Texas.*

LEADERSHIP AND ADMINISTRATION

Vision Statement

Ensure that City operating budgets adequately support the specific objectives of the Comprehensive Plan, and develop short and long-range capital improvement plans to support the implementation of the goals and objectives.

Goal: Develop a quality of leadership and management within the community that promotes decisions consistent with the values, principles, welfare, and interests of all residents of the city.

Objective 1.1 Review and revise zoning regulations and development standards to implement the vision, goals, and objectives of the comprehensive plan. Develop policies and procedures to ensure strict adherence to adopted regulations and standards. Establish appropriate staffing levels and measures of accountability to support implementation of the plan.

Objective 1.2 Establish educational and professional standards for managerial and technical positions within City government and administration. Provide cost effective professional growth and educational opportunities within all areas of City government and administration. Establish a formal planning function within City administration.

Objective 1.3 Establish and maintain an environment that encourages sharing of ideas among various City departments and fosters open and effective public dialogue.

Objective 1.4 Encourage residents to seek public service opportunities within City government.

Objective 1.5 Establish an ongoing process from within City government that fosters public trust and community support.

Objective 1.6 Provide funding and staffing for local community events that support economic development goals and promote community spirit and involvement. Keep the public informed on the implementation of the plan, development issues, and community activities.

COMMUNITY DEVELOPMENT

Land use policies and development standards are consistent through the strong ties that exist between the City of Robinson and its established neighborhoods. Continued collaboration is a key ingredient to contribute to the success of the working land use plan and implementation measures taking place.

Vision Statement

Maintain and enhance our community as a great place to live through working collaboratively, cooperatively, and continuously for the purpose of improving the quality of life in this community and surrounding municipalities through effective and strategic land use planning and regulations.

Goal: Manage growth and design plans that ensure high-quality residential land uses that blend into Robinson's rural character, country flavor, and neighbor-friendly atmosphere.

Objective 1.1 Establish service boundaries aimed at accommodating an acceptable level of growth in the community. The service boundary may be tied to an annual growth rate and/or utility capacity.

Objective 1.2 Establish and strictly enforce subdivision regulations and zoning ordinances that blend new developments with existing neighborhoods.

Objective 1.3 Create development standards for residential areas that preserve the natural character and beautify the community. Neighborhood blending may be accomplished by not allowing dead-end developments, requiring connecting sidewalks, and gradually eliminating development names.

Objective 1.4 Require developers to provide green space/open space that meets the needs of the residents of proposed developments.

Objective 1.5 Require natural buffers between incompatible uses that protect the character of the community. Provide buffers for screening and transition between residential neighborhoods and roadways or commercial and industrial areas.

NATURAL RESOURCES

Residents enjoy unspoiled open spaces and enhanced quality of life because the City of Robinson actively participates in the resource protection programs designed to preserve prime farmland and woodland that are rich in rural character and environmental quality.

Vision Statement

Maintain and enhance the city as a faithful steward of its natural and cultural heritage and to be known as a good neighbor through resource conservation and environmental protection for the purpose of supporting the city's agricultural industries.

- *Support environmental regulations*
- *Promote environmental education for energy efficiency*
- *Promote clean air and water policies*
- *Reduce the impacts of development near critical resource areas*
- *Retain a rural landscape.*

Goal: Protect and preserve the natural resources for the health, safety, and enjoyment of the citizens and surrounding communities.

Objective 1.1 Support the preservation of farmland and the agricultural heritage of the region.

Objective 1.2 Implement and enforce regulations and maintain strict building practices for the protection of all natural resources.

INFRASTRUCTURE

The City of Robinson's infrastructure construction and enhancement programs are highly regarded across the state for the planning fortitude and implementation measures taken to ensure safer roadways, better quality of our streams and tributaries, access to safe drinking water, effective and efficient management of wastewater, and noticeable cost savings associated with storm-water related mitigation.

Vision Statement

Maintain and enhance the city as a great place to live through emphasis on infrastructure for the purpose of enhancing the function and scenic value of the existing transportation network; accurately placing new public facilities including storm water, water and wastewater facilities that are designed in a manner that protects our natural resources.

- *Enhance infrastructure systems in order to provide for diversity of opportunities for housing, employment, small businesses and high tech enterprises, recreation, education, and lifestyles for all ages and social status.*
- *Construct infrastructure consistent with the planned residential and commercial growth without impacting quality of life.*

- *Improve water quality through valued infrastructure improvements.*
- *Create safer mobility and accessibility for all modes of travel.*

Goal: Insure and maintain safe, reliable, and affordable services to all residents and visitors in the community.

Objective 1.1 Provide adequate and affordable water and sewer service to all residents and improve the quantity and cost of water.

Objective 1.2 Maintain a high level of health services to all residents and explore the need for various health care specialists.

Objective 1.3 Maintain and develop parks and recreational opportunities throughout the city.

HISTORIC & CULTURAL PRESERVATION

Historic and cultural features receive special attention and care in the City of Robinson as can be seen through a commitment to preservation measures, increased tourism, and an increased public awareness of historic and cultural resources and events throughout the City.

Vision Statement

Establish the City as a great place to live and visit with emphasis on maintaining and enhancing the city's heritage through preservation of historic and cultural resources.

- *Provide residents and visiting tourists with a truly positive experience of the city through the preservation and enhancement of the City's historic and cultural features.*
- *Preserve the City's charming town and rural identity albeit close proximity to larger municipalities.*
- *Preserve natural landscapes that are unique.*
- *Recognize the city's unique heritage and cultural resources and utilize them as a basis for future development decisions.*
- *Collaboratively work together to establish a process that ensures local and regional historic and cultural preservation goals.*

Goal: Create impressive image corridors, historic districts, arts and entertainment nodes to ensure a quality of life achieved through maintaining historic and cultural resources for residents and visitors.

Objective 1.1 Maintain heritage and cultural identity amidst the pressure of outside development.

Objective 1.2 Increase awareness through city/county supported tourism, and business and economic development opportunities associated with historic and cultural resources.

AGRICULTURAL & RURAL PRESERVATION

The landscape of the City of Robinson viewed from roadsides, and from its farm fields can be described as beautiful open spaces. A delicate balance of land use has created the desired level of local and regional sustainability.

Vision Statement

Maintain and enhance the city as a good place to work and a great place to live through agricultural and rural preservation for the purpose of gaining a larger market share for locally grown agricultural products.

Goal: Retain and protect productive farmlands, historic farmsteads, forested floodplain lands, and pristine landscapes throughout the city.

Objective 1.1 Create a greater awareness of the City's history through effective preservation policies and tourism education.

Objective 1.2 Advance specialty farming industries and markets.

BUSINESS & ECONOMIC DEVELOPMENT

Life in in the City of Robinson offers a variety of opportunities for business expansion, business location, new educational experiences, and holds intrinsic value to the Central Texas market place. High quality of life standards demanded by residents and businesses in the city need to be met through the creation of sustainable employment opportunities, and achieved balance between residential and nonresidential land use patterns.

Vision Statement

Maintain and enhance the city as a good place to live and work through business and economic development opportunities and encourage high quality education opportunities for the purpose of creating and promoting a thriving economic climate strategically located in the state.

- *Capitalize on the region's close proximity and high accessibility to other metropolitan areas and markets to retain and attract sustainable businesses and job opportunities.*
- *Attract development and businesses that strive to become sustainable retail destination places.*
- *Enhance or assist in the creation of thriving local economies that pay special attention to the tourism industry and the natural environment.*
- *Develop or enhance existing recreation opportunities for all ages.*
- *Reduce the number of resident commuters by recruiting companies that offer long-term sustainable jobs.*
- *Provide housing alternatives in areas adjacent to the city's core economic growth areas.*
- *Provide education and job retraining opportunities for resident workers.*

Goal: Strengthen the economic base of the community by supporting existing businesses and attracting new businesses with the size and character to meet the needs of the citizens of the city.

Objective 1.1 Insure that strict zoning regulations support existing businesses and community development strategies.

Objective 1.2 Create a new, highly visible center of commerce including a city hall complex, and a police, fire, school administration, and convention center facility.

Objective 1.3 Increase public support for local businesses.

Objective 1.4 Attract commercial, office, and professional businesses.

Objective 1.5 Encourage the Economic Development District's efforts toward economic development in the community.

Objective 1.6 Actively pursue grants and other funding alternatives for economic development activities.

Objective 1.7 Encourage activities for people of all ages in the community.

Objective 1.8 Develop a public relations base within the community and surrounding areas.

TRANSPORTATION

Vision Statement

Ensure that the transportation needs are maintained and enhanced to meet the community's present and future needs, coordinate transportation improvements with regional entities and adjacent communities, and provide transportation and pedestrian connections from neighborhoods and commercial areas to recreation facilities.

Goal: Provide a transportation system that facilitates the movement of people and goods in a safe, efficient, and well-designed manner.

Objective 1.1 Continue to work with Texas Department of Transportation officials to develop and implement access management standards.

Objective 1.2 Construct street access roads to commercial and industrial areas to eliminate heavy traffic on residential streets and add signalization at key intersections.

Objective 1.3 Enhance the mass transit system to include bus routes throughout the city and connecting areas.

Objective 1.4 Ensure both residential and non-residential streets are aesthetically pleasing and functional.

Objective 1.5 Ensure a pedestrian-friendly community through the provision of sidewalks, walkways, and bike paths.

EMERGENCY MANAGEMENT

Vision Statement

Reduce or eliminate the long-term risks to loss of life and property damage in McLennan County and the cities of Bellmead, Beverly Hills, Bruceville-Eddy, Crawford, Gholson, Golinda, Hallsburg, Hewitt, Lacy-Lakeview, Leroy, Lorena, Mart, McGregor, Moody, Robinson, Riesel, Ross, Waco, West, and Woodway from a range of natural hazard disasters.

Goal 1 **Increase public understanding, support and demand for hazard mitigation.**

Objective 1.1 Heighten public awareness of a range of natural and man-caused hazards.

Objective 1.2 Educate the public on actions they can take to prevent or reduce the loss of life or property from all hazards.

Objective 1.3 Publicize and encourage the adoption of appropriate hazard mitigation measures.

Goal 2 **Protect public health and safety.**

Objective 2.1 Advise the public about health and safety precautions to guard against injury and loss of life from hazards.

Objective 2.2 Maximize the utilization of the latest technology to provide adequate warning, communication, and mitigation of hazard events.

Objective 2.3 Reduce the danger to, and enhance protection of, dangerous areas during hazard events.

Objective 2.4 Protect critical facilities and services

Goal 3 **Protect existing and new properties.**

Objective 3.1 Reduce repetitive losses to the National Flood Insurance Program.

Objective 3.2 Use the most cost-effective approaches to protect existing buildings and public infrastructure from hazards.

Objective 3.3 Enact and enforce regulatory measures to ensure that development will not put people in harm's way or increase threats to existing properties.

Goal 4. **Build and support local capacity and commitment to continuously become less vulnerable to hazards.**

Objective 4.1 Build and support local partnerships to continuously become less vulnerable to hazards.

Objective 4.2 Build a cadre of committed volunteers to safeguard the community before, during, and after a disaster.

Objective 4.3 Build hazard mitigation concerns into planning and budgeting processes.

Goal 5 **Promote growth in a sustainable manner.**

Objective 5.1 Incorporate hazard mitigation into the long-range planning and development activities.

Objective 5.2 Promote beneficial uses of hazardous areas while expanding open space and recreational opportunities.

Objective 5.3 Utilize regulatory approaches to prevent creation of future hazards to life and property.

Goal 6 **Maximize the resources for investment in hazard mitigation.**

Objective 6.1 Maximize the use of outside sources of funding.

Objective 6.2 Maximize participation of property owners in protecting their properties.

Objective 6.3 Maximize insurance coverage to provide financial protection against hazard events.

Objective 6.4 Prioritize mitigation projects, based on cost effectiveness and starting with those sites facing the greatest threat to life, health, and property.

Chapter 4 Physical Characteristics

The methodology used in the development of the Comprehensive Plan considers the physical characteristics. These physical characteristics provide the structural and environmental aspects of the City and its effect on development. All human activities are interrelated with the physical characteristics of geology, soils, vegetation, topography, and climate.

Geology supports buildings so that knowledge of strong bedrock support will allow massive urban development while weak bedrock will necessitate expensive foundations even for small buildings. Soils affect the growth of plants and the construction of buildings. Vegetation affects the aesthetic qualities of home sites and parks. Topography produces aesthetic scenes and includes slopes which may be unstable. Climate affects the type of shelter needed and affects demands on energy. The following excerpts introducing these physical characteristics are taken from a document entitled: "Environmental Atlas of McLennan County, Joe C. Yelderman, Jr. and Robert E. Cervenka, Baylor Geological Studies Bulletins No. 13 & 14, Baylor University, Spring 1992".

Geology

Geology is the study of the earth. It is a study of processes and earth materials. The geology of Robinson will include a discussion of slope movement and floodplains combined with a description of the rock types that lie immediately below the surface. Almost all construction and human activities are affected by geology. Knowledge of geology can save money and increase the quality of life by providing information to help us live in harmony with the earth beneath us and the processes around us.

The geologic history of the City of Robinson must take into account a more regional explanation that includes McLennan County. The following explanation is modified from a section on "Surface Geology" by Joe C. Yelderman, Jr., geologist, within the "Soil Survey of McLennan County, Texas", United States Department of Agriculture, Natural Resources Conservation Service in cooperation with the Texas Agricultural Experiment Station, completed in 1992, p. 175). The geology map of the City of Robinson may be viewed on the website: https://www.1519gis.com/maps/Robinson.

The oldest rocks exposed in McLennan County were deposited during the Cretaceous Period, approximately 135 to 75 million years ago. At that time McLennan County was covered by a shallow sea that gradually deepened to the southeast. Sediments were deposited on the gently inclined sea bottom, resulting in layers of limestone and calcareous shale. As the sediments thickened, compaction occurred and eventually faulting took place along a hinge-line that

parallels the ancient buried Ouachita Mountains thousands of feet below. This faulting began in late Cretaceous to Miocene time (72 to 25 million years ago) and formed a northeast to southwest trend, known as the Balcones Fault Zone that dissects the county. About 60 million years ago, the seas receded and erosion began exposing the layers of shale and limestone in parallel bands aligned from northeast to southwest through the county.

The softer shales were more easily eroded than the harder limestones, and as major streams settled into their courses (about 500,000 years ago), the Bosque and Brazos River systems produced the major topographic features in the county…the Bosque Escarpment and Brazos River Valley. The City of Robinson lies southeast of the Balcones Escarpment and within the Brazos River Valley. The Brazos River eroded through the escarpment, producing a broad flood plain of alluvial pebbles, sands, silts, and clays bordered by older terrace deposits. The soils of the City of Robinson indicate this deposition. Most of the terraces are of Pleistocene age (2 million to 10,000 years ago), whereas the floodplain is of Holocene age (less than 10,000 years ago). The other major streams also produced terraces and flood plains during this time, but the Brazos River is unique in its size and its sand content.

The geologic formations within the City of Robinson are comprised of the Austin Chalk, Brazos Terrace, Ozan Formation, and Stream Alluvium. The Austin Chalk formation lies parallel to Interstate Highway 35 and extends from north Flat creek to Surrey Ridge Road. It lies inward at the intersection of Greig Drive in a westerly direction and encompasses most of the Surrey Ridge development. The Brazos Terrace deposits can be seen occupying most of the eastern one-half of the City adjacent to alluvial areas. The Ozan Formation encompasses the rest of the City to the west. Stream Alluvium is deposited along the existing creeks that traverse the City in a westerly to easterly direction.

Austin Chalk

The Austin Chalk formation is known as chalk, limestone, and white rock formed during the Cretaceous geologic period. The maximum thickness is 120 feet, average thickness is 100 feet, and the minimum thickness of the formation is 4 feet (see geology map). Its appearance consists of alternating beds of chalk and marl, weathered surfaces buff to white in color, but bluish gray on fresh exposure. It is regionally shown to be mainly along the top of the Bosque escarpment area as a linear band of chalk running northeast to southwest in direction through the City of Robinson. The topography consists of gently rolling hills with steep dissected areas. Soil associations with the Austin Chalk include Fairlie clay, Austin silty clay, Ovan silty clay, Tinn clay, Stephen-Eddy complex, Lott silty clay (1-5% slopes), and Eddy gravelly clay loam. The dominant vegetation species are open land with predominant grass, but dense trees and brush occur on sloping, dissected areas.

The engineering characteristics of the Austin Chalk exhibit a bearing capacity that is high with interbedded limestone support for heavy loads, but it may fail where chalk thins and overlies

shale. The shrink-swell potential of the chalk is moderate to low in chalk layers but moderate in marls and very high in Bentonite clay seams. Slope Stability is high since the chalk supports almost vertical slopes but marls or overlying shale may allow slumps. It is very difficult to excavate and may require heavy machinery or blasting, fractures transport energy along the formation area. Fill Suitability is moderate since the chalk is fairly good when protected from weathering, marls are expansive.

Permeability is moderate since the fractured chalks produce moderate permeability but marl layers may seal off when wet. Moderate amounts of groundwater may occur in fractured areas. It is susceptible to droughts and pollution. Drainage has moderate to gently rolling topography and moderate permeability producing moderate drainage. Erosion potential is very high to slightly susceptible since the chalk is resistant to erosion, and since the marl layers weather rapidly. Structural Features include faults and fractures that are inactive and are common. Fossil Occurrence is poor to moderately preserved marine fossils. Fish fossils are occasionally found in this formation.

Ozan Formation

The Ozan formation is known as blue shale formed during the Cretaceous geologic period. The maximum thickness is 250 feet, average thickness is 200 feet, and the minimum thickness of the formation is 0 feet. Its appearance is a yellow olive clay, sometimes white to buff, usually blue-gray and blocky on fresh exposure. The topography of the Ozan Formation consists of gently rolling hills that are almost flat near uplands and steeper near streams. The soil associations of the Ozan formation consist mainly of Houston black clay, Lott silty clay (1-5 % slopes), Ferris clay, Queeny clay loam, Heiden clay (5-8 % slopes), Wilson clay loam, pits and gravel, Heiden gravelly clay, Lamar clay loam, Heiden clay (3-5 % slopes), Fairlie clay, Austin silty clay, Lott silty clay (5-8 % slopes), Burleson clay, and Eddie gravelly clay loam. The dominant vegetation is considered open land with grass and scattered mesquite.

The engineering characteristics of the Ozan formation exhibit a bearing capacity from low to moderate in weathered shale but moderate where it is confirmed and unweathered. Shrink-swell potential is very high due to clay content, clay swells up to 20 percent when wet. Slope stability is low with slumping and landslides common on steep slopes and usually occur during wet conditions. Excavation difficulty is easy since the clay is soft using conventional light machinery methods for excavation purposes. Fill suitability is poor due to low bearing capacity of surface material and high shrink-swell properties.

Permeability is low to moderate due to fractures and increased permeability, slowly permeable when wet. Groundwater occurrence is found in small amounts in fractures that allow shallow groundwater. The Ozan formation is susceptible to droughts. Drainage is poor with low infiltration and permeability. Its flat topography makes drainage poor. Erosion potential is very susceptible as the weak shale erodes easily. If vegetation is removed, gullying is assured.

Structural features include faults and fractures, highly fractured near inactive faults, notable if chalk abuts shale. Fossil occurrence is good with vertebrate remains of scientific significance often found in good condition.

Brazos Terraces

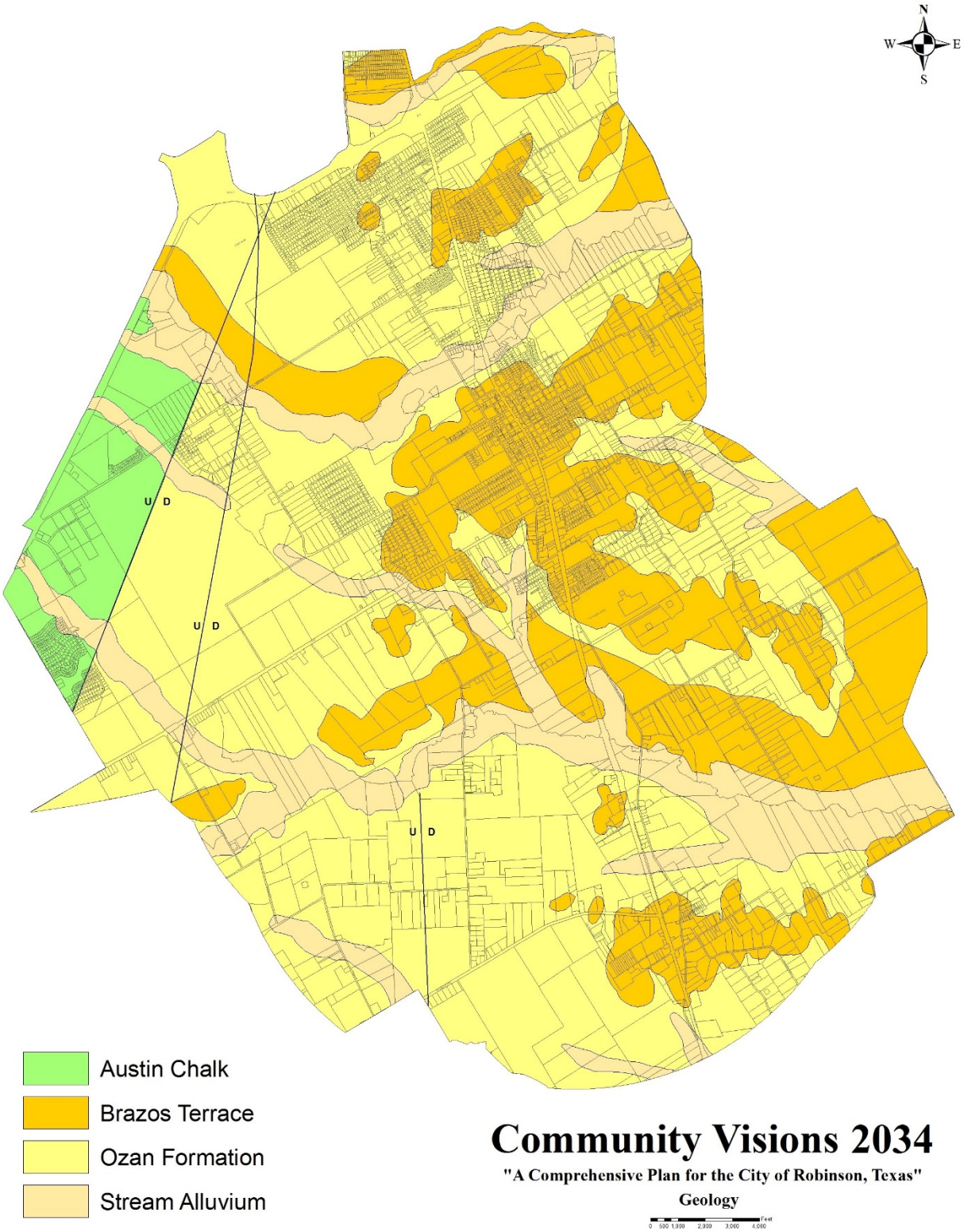
The Brazos Terrace formation is known as "benches" formed during the Pleistocene geologic period. The gravel deposits within this formation are of quaternary origin. The maximum thickness is 35 feet with an average thickness is 25 feet, and a minimum thickness of one foot. Its appearance occurs as reddish brown silts, sands and gravels, and dark brown clays. Gravels within this formation may be cemented. The topography is flat to very gentle hills, an old floodplains with very gentle hills that appear near adjacent prairies. The soil associations of the Brazos Terrace formation mainly include Axtell fine sandy loam, Ferris clay, Wilson clay loam, Branyon clay (0-1 % slopes), Chazos loamy fine sand, Branyon clay (0-1 % slopes), Reisel gravelly fine sandy loam, Minwells fine sandy loam (1-3 % slopes), Lewisville silty clay, Styx loamy fine sand, Burleson clay, and Sunev clay loam. The dominant vegetation is post oak with some live oak, mesquite and grass.

The engineering characteristics of the Brazos Terrace formation exhibit a bearing capacity of low to moderate that is unconsolidated, but in some areas the sands are compacted. Shrink-swell potential is low to high. It is low in sands and gravels but high in silts and clays. Slope stability is low to moderate that is unconsolidated but more stable where conglomerates are cemented. Excavation difficulty is moderate to easy. Cemented terraces may require ripping and shallow water tables exist. Fill suitability is poor to good, clays are expansive, sands are fairly good, and gravels compact poorly and may settle.

Permeability is high, but high water tables may retard infiltration. Groundwater occurrence is shallow and seasonal. Shallow water tables are highly susceptible to seasonal droughts and local pollution. Drainage is good along adjacent slopes. Erosion potential is moderately susceptible along steep slopes and unconsolidated sediments but exhibit high infiltration. Fossil occurrence is good with many Early American artifacts and vertebrate animal remains found. Other features of the Brazos Terrace formation indicate that the lower terraces are subject to flooding with abundant sand and gravel deposits.

Stream Alluvium

The Stream Alluvium formation is known as floodplain and bottomland areas deposited during the most recent geologic period. The maximum, average, and minimum thicknesses are variable, usually several feet. Its appearance is brown to black loose silts and clays with small amounts of sand or gravel. Exposure within the City of Robinson are mainly along streams and rivers, and thin linear bands that follow stream and river channels. The topography is flat. Flood waters leveled this area by eroding previous topography and deposited alluvial sediments. The soil associations in the Stream Alluvium formation mainly include Ovan silty clay, Houston black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Brazos Terrace
Ozan Formation
Stream Alluvium
Community Visions 2034
"A Comprehensive Plan for the City of Robinson, Texas"
Geology
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clay, McLennan clay loam, Lewisville silty clay, Tinn clay, and Branyon clay (0-1 % slopes). The dominant vegetation includes deciduous trees, cottonwood, willow, pecan, live oak, and elm.

The engineering characteristics of the Stream Alluvium formation exhibit a bearing capacity that is low and is unconsolidated and often saturated due to high water tables. The shrink-swell potential is very high to moderate. It is moderate in gravels and high in clays. Slope stability is very low, unconsolidated, and does not support gentle slopes. Excavation difficulty is easy, unconsolidated, and easily excavated with most machinery. Fill suitability is poor to good. Clays are expansive, sands are fairly good, and gravels compact poorly and may settle.

Permeability is low to high, sands and gravels are very permeable, and clays are almost impermeable when saturated. Groundwater occurrence consists of none to seasonal. There is little water in clays, seasonal water in sand and gravel, and is easily polluted. Drainage is poor and primarily located in a natural drainage way but ponding occurs in places and flooding is frequent. Erosion potential is very susceptible and unconsolidated sediments erode very easily. Fossil occurrence is poor with some small worm fossils that are usually of little significance because they have been transported. Other Features of the Stream Alluvial formation include floods which appear quickly and are of short duration.

Soils

Soils are derived from weathered bedrock with some additional organic matter and is the loose material on the surface which make plants grow. Soil is the result of climate, geology, and topography. Generally, thin soils are found in dry climates on hard rocks and steep topography while deep soils are found in moist climates on soft rocks and flat topography. The soil is an irreplaceable resource necessary for the production of food and most of man’s activities come in direct contact with the soil.

Soil is the most important natural resource in the City of Robinson. They are used for a wide range of purposes, including food, feed, fiber, and forage crops; pasture and range grasses for livestock; and habitat for wildlife. Good soils are the stimulus for a healthy economy. Soil forms through processes that act on geologic material. The description of factors that affect soil formation that follows is taken from modified narrative excerpts from the “Soil Survey of McLennan County, Texas”, United States Department of Agriculture, Natural Resources Conservation Service in cooperation with the Texas Agricultural Experiment Station, completed in 1992, p. 173). The soils map of the City of Robinson may be viewed on the website: https://www.1519gis.com/maps/Robinson.

The properties of the soil result from the kind of parent material and from additions, removals, transfers, and translocations caused by climate, plant and animal life, topography, and time. Also important are the cultural environment and patterns of land use. The characteristics of a soil at any given point are determined by the physical and mineral composition of the parent

material; the climate during and after accumulation of the parent material; the plant and animal life on and in the soil; relief, or lay of the land; and the length of time that the forces of soil formation have acted on the soil material. All five of these factors are important in the formation of any soil, but the influence of each varies from place to place.

Crops, livestock, and hay are the main agricultural products in McLennan County and the City of Robinson. Most crop production is concentrated in the deep, clayey soils. The major crops are corn, grain sorghum, cotton, wheat, and oats. Other crops include peanuts, wheat, and watermelons that are grown on the sandy and loamy soils. Hay is an important agricultural product. Forage sorghum is the major crop planted for hay, and many areas of coastal bermudagrass and kleingrass are harvested for hay. Other crops harvested for hay include johnsongrass, native grasses, oats, milo stalks, alfalfa, peanut vines, and cane. Corn and forage sorghum are sometimes harvested as silage for dairy feed.

Beef cattle, turkeys, dairy cattle, and hogs are the major livestock products in McLennan County and the City of Robinson. Beef operations are mainly cow-calf enterprises, but some producers run stocker cattle on small grain in the winter. Cattle graze native rangeland, improved pasture, and areas of crops planted for grazing, such as wheat, oats, rye, and forage sorghum. Cattle are provided hay and supplemental feed in the winter. Beef cattle, dairy cattle, turkeys, and hogs all consume some of the grain produced on the cropland.

There are 35 soil associations within the City of Robinson that have been identified from the “Soil Survey of McLennan County, Texas”, United States Department of Agriculture, Natural Resources Conservation Service in cooperation with the Texas Agricultural Experiment Station, completed in 1992 (i.e. see Soil Map). This comprehensive soil survey provides a variety of information on each soil association. The soils discussed are further grouped into nine categories that include clays, silty clays, clay loams, sandy loams, loamy fine sands, gravelly clays, gravelly clay loam, complex soils, and gravel pits and mining excavations.

The main information of the soils for use in the Comprehensive Plan will be its location, geologic age, soil properties, land uses, and limitations in regard to urban development. Additional information within the survey that will provide useful to the general public include chemical soil properties, engineering properties, ecological site data, and land management, etc. This information is not included in this section of the Comprehensive Plan but may be obtained in the “Soil Survey of McLennan County, Texas”.

Clays

The City of Robinson contains ten clay soil associations that include the following: 1) Branyon Clay (BnA) 0 to 1 % slopes, found at Meadowbrook Drive along north Flat Creek; 2) Branyon Clay (BnB), 1 to 3 % slopes, mainly found along Flat Creek; 3) Burleson Clay (BuA), 0 to 1 % slopes, found along Tinsley Drive at Christina Drive; 4) Fairlie Clay (FaB), 1 to 3% slopes, found mainly along Interstate Highway 35; 5) Ferris Clay (FeE2), 8 to 15 % slopes, found along

Old Robinson Road at U.S. Highway 77; 6) Heiden Clay (HeB), 1 to 3% slopes, U.S. Highway 77 north of Baker Lane; 7) Heiden Clay (HeC), 3 to 5 % slopes, found along the southern portion of Wildwood Trail; 8) Heiden Clay (HeD) 5 to 8% slopes, found along North Stovall Drive; 9) Houston Black Clay (HoB), found as the dominant soil in Robinson mainly along the north, central, and southern portions of the City; and 10) Tinn Clay (To), frequently flooded, found mainly along Flat Creek. Permeability of all of these clay soils is very slow, and shrink swell potential is high to very high. Soil reaction is neutral to slightly acidic, and moderately alkaline.

The major limitations of these soils when considering urban development suggest that shrinking and swelling of the soils can cause houses, roads, streets, and sidewalks to crack or buckle. The very slow permeability of the soils can cause septic systems to work improperly or fail in wet seasons. The establishment of lawns and landscaped plants is difficult on these clay soils, and shallow excavations may fail. Minor limitations suggest that the medium runoff and very slow permeability can cause water to accumulate for short periods of time. Flooding is a severe hazard on sites for streets, houses, or other urban structures. Excavation of the chalky bedrock is difficult.

The Branyon and Burleson clays may be found on terraces along local streams of Pleistocene age. These soils may be found on slopes and broad flats. Soil properties indicate a very deep and moderately well-drained soils. The major land uses are cropland, pasture, and rangeland. Fairlie Clay may be found along foot slopes and on the uplands of the Lower Cretaceous age. The soil properties of the Fairlie clay indicate a deep and moderately well-drained soil. The major land uses are cropland, pasture, rangeland, wildlife habitat, recreation, and urban development.

Ferris clay is mainly found on eroded hillsides with many small rills and gullies with 25-50 percent of the original topsoil that has been removed by water erosion in most areas of the Upper Cretaceous age. The soil properties of the Ferris clay indicate a deep to shale well-drained soil. The major land uses are rangeland, pasture and recreation.

Heiden, and Houston Black clays may be found on the uplands of the Upper Cretaceous age. The soil properties of the Heiden Clays indicate a deep to shale well-drained soil. The major land uses are cropland, pasture, rangeland, wildlife habitat, recreation, and urban development. The soil properties of the Houston Black Clay indicate a very deep moderately well-drained soil. The major land uses are cropland, pasture and rangeland. Tinn clay may be found in bottomland areas and flood plains of Holocene age. The major land uses are pasture, cropland, rangeland, and recreation.

Silty Clays

The City of Robinson contains five silty clay soil associations that include the following: 1) Austin Silty Clay (AsB), 1 to 3 % slopes, found along Interstate Highway 35 at North Flat Creek; 2) Lewisville Silty Clay (LeB), 1 to 3% slopes, found in the Peevey Lane area; 3) Lott Silty Clay (LoB), 1 to 5% slopes, found along Hoffmeyer Lane; 4) Lott Silty Clay (LoD), 5 to 8 % slopes,

found along areas of Flat Creek; and 5) Ovan Silty Clay (Ov), frequently flooded, found along Castleman Creek. Austin Silty Clay is found on the uplands of the lower Cretaceous age. Landscape features of this soil suggest a rolling to slightly concave appearance on foot slopes and broad ridgetops. The soil properties of the Austin Silty Clay are primarily alkaline, and shrink-swell potential is moderate or high. Permeability is moderately slow. Soil reaction is moderate and effluent filtration is poor with ground-water contamination is possible in areas used for septic system absorption fields. Excavation of the chalky bedrock is difficult during the construction of foundations.

Lewisville Silty Clay may be found on stream terraces and foot slopes of Pleistocene age. Permeability is moderate, and shrink-swell potential is high. Soil reaction is moderately alkaline. The Lott Silty Clays may be found on the uplands of Upper Cretaceous age. Permeability is moderately slow, and shrink-swell potential is moderate. Soil reaction is moderately alkaline. Ovan Silty Clay may be found along local streams and bottomland of the Holocene age. Permeability is very slow, and shrink-swell potential is high. Soil reaction is moderately alkaline.

Limitations of these soils when considering urban development suggest that the shrinking and swelling of the soil can cause houses, roads, streets, and sidewalks to crack or buckle. The major land use is cropland, pasture, rangeland, wildlife habitat, recreation, and urban development. The soil properties of these silty clays consist of moderately to very deep, well-drained soils. Limitations of these soils when considering urban development suggest that the very slow to moderately slow permeability and the slope can cause septic systems to fail. The establishment and maintenance of lawns and grasses is difficult on these clayey gently sloping soils. Shallow excavations may fail. Flooding is a severe hazard on sites for streets, houses, or other urban structures.

Clay Loams

The City of Robinson contains six clay loam soil associations that include the following: 1) Sunev Clay Loam (SzB), 1 to 3% slopes, found along Castleman Creek at Hillside Drive and U. S. Highway 77; 2) Wilson Clay Loam (WnA), 0 to 2% slopes, found along Tate Drive at U.S. Highway 77; 3) Queeny Clay Loam (QuC), 1 to 5% slopes, found east of Hillside Drive at Castleman Creek; 4) McLennan Clay Loam (McE), 8 to 15% slopes, found along Hoffmeyer Lane at Tate Drive; 5) Payne Clay Loam (PcB), 1 to 3% slopes, found along Old Robinson Road; and 6) Lamar Clay Loam (LaD), 3 to 8% slopes, found along Ward Avenue at U.S. Highway 77. The soil properties indicate shallow to very deep well-drained soils.

The major land uses in these types of soils is pasture, cropland, rangeland, recreation, and urban development. Limitations when considering urban development suggest that the very slow to moderately slow permeability and slow runoff, poor effluent filtration, and groundwater contamination may cause septic system absorption fields to fail. There is a severe potential hazard of water erosion on these soils. The establishment of lawns and landscape plants is

expensive. The shrinking and swelling of the soil can cause houses, roads, streets and sidewalks to crack or buckle.

The slow runoff and very slow permeability of the soil can cause water to accumulate on yards or streets for short periods of time. Excavation is difficult because of the gravelly cemented layer of the soil. The maintenance of lawns and grasses is difficult on these clayey, strongly sloping or moderately steep soils because of the low available water capacity.

Sunev Clay Loam is found on foot slopes and flats on terraces of the Pleistocene age. Permeability is moderate, and shrink-swell potential is low. Soil reaction is moderately alkaline. Wilson Clay Loam is found on broad flats along stream terraces of the Pleistocene age. Permeability is very slow, and shrink-swell potential is high. Soil reaction is moderately acidic to neutral. Queeny Clay Loam is found on the uplands on high terraces of Pleistocene age and on gravelly hilltops and hillslopes. Permeability is slow, and shrink-swell potential is moderate. Soil reaction is moderately alkaline.

McLennan Clay Loam is found on the uplands and hillsides of the Upper Cretaceous age. Permeability is moderately slow, and shrink-swell potential is high. Soil reaction is moderately alkaline. Payne Clay Loam is found on stream terraces of Pleistocene age on broad flats and side slopes. Permeability is very slow, and shrink-swell potential is moderate. Soil reaction is slightly acidic or neutral. Lamar Clay Loam is found on stream terraces and hillsides of Pleistocene age. Permeability is moderate, and shrink-swell potential is moderate. Soil reaction is moderately alkaline.

Sandy Loams

The City of Robinson contains five sandy loam soil associations that include the following: 1) Axtell Fine Sandy Loam (AxB), 1 to 3 % slopes, found along Juniper Road at Downsville Road; 2) Bastsil Fine Sandy Loam (BaA), 0 to 2 % slopes, found along Loop 340 at Cottonwood Creek; 3) Minwells Fine Sandy Loam (MnB) 1 to 3% slopes, found along Lux Drive at Linnet Drive; 4) Minwells Fine Sandy Loam (MnC2) 3 to 5% slopes, eroded, found along Oakwood Terrace at U.S. Highway 77; and 5) Riesel Gravelly Fine Sandy Loam (RgB), 1 to 3% slopes, found along Connie Drive south of Lux Drive. The soil properties indicate a very deep moderately to well-drained soil. The major land uses are pasture, rangeland, cropland, wildlife habitat, recreation, and urban development.

Limitations of these soils when considering urban development suggest that the very slow permeability in the subsoil is a severe limitation when a septic system is installed. Seepage of effluent into ground water is possible in areas used for septic system absorption fields. Many areas are underlain by beds of sand and gravel. Shrinking and swelling of the soil can cause buildings and roads to crack. Proper design and installation can overcome these limitations. The maintenance of lawns and landscape plants can be expensive because of the moderate available water capacity.

Axtell Fine Sandy Loam is found on terraces of the Cretaceous Age. This soil may be found alongside slopes and ridges above drainage ways. Permeability is very slow, and shrink-swell potential is high. Soil reaction is strongly to slightly acidic. Bastsil Fine Sandy Loam is found on terraces of Pleistocene age. This soil may be found on nearly level to slightly rolling areas and on broad flats. Permeability is moderate, and shrink-swell potential is low. Soil reaction is slightly acidic.

Minwells Fine Sandy Loam may be found on the terraces of Pleistocene age on the side slopes and ridges above drainageways, and on areas where the topsoil has eroded and shallow gullies are formed. Permeability is slow, and shrink-swell potential is moderate. Soil reaction is slightly acidic to slightly alkaline. Riesel Gravelly Fine Sandy Loam is found on sideslopes and ridges above drainageways on ancient terraces of Pleistocene age. Permeability is moderate, and shrink-swell potential is low. Soil reaction is strongly acidic to neutral.

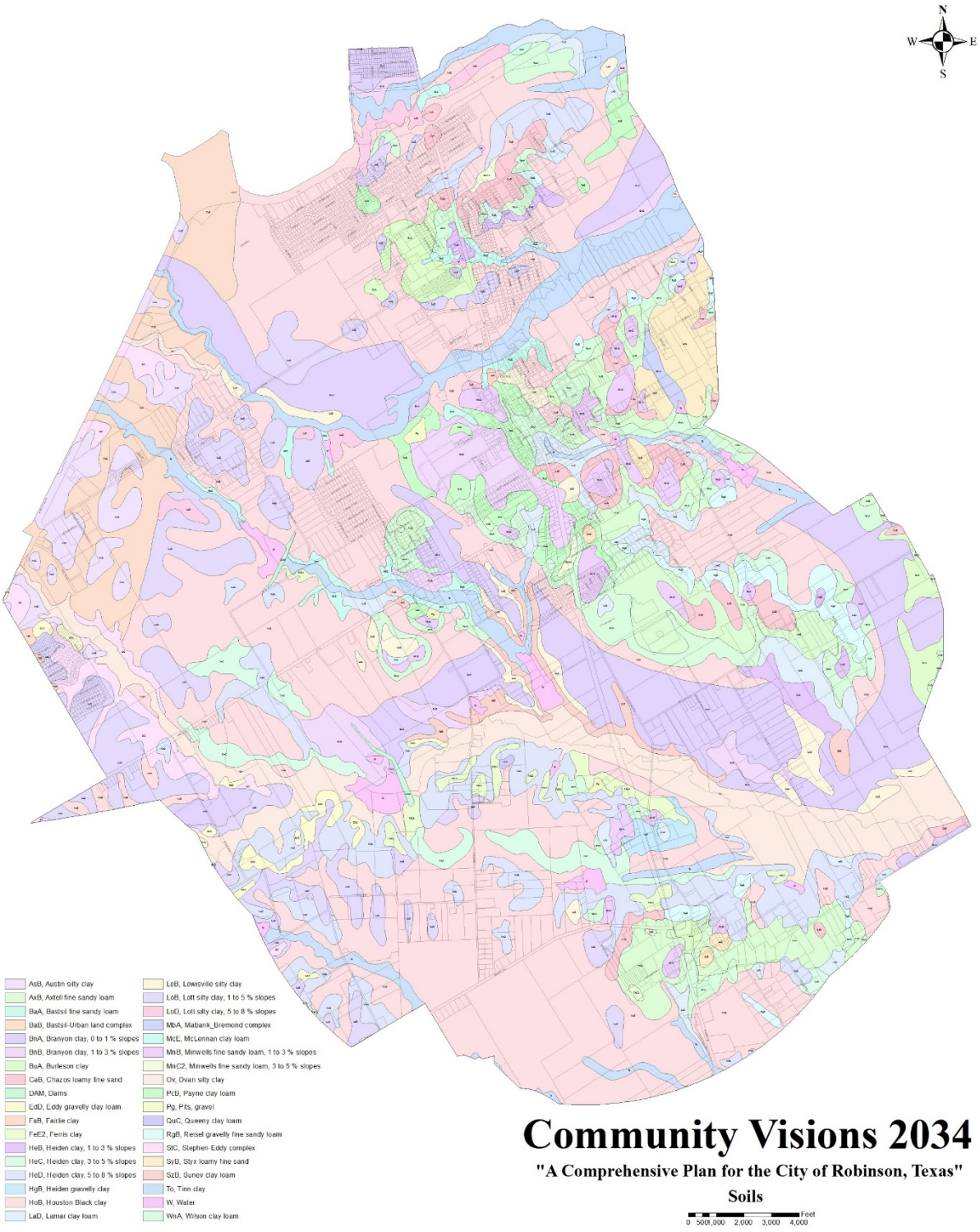
Loamy Fine Sands

The City of Robinson contains two loamy fine sand soil associations that include the following: 1) Styx Loamy Fine Sand (SyB), 1 to 3% slopes, found along Stegall Drive at Wigley Drive, and 2) Chazos Loamy Fine Sand (CaB), 0 to 1 % slopes, found along U.S. Highway 77 south of Ward Street. These soils are found on side slopes and ridges above drainageways, hillsides, and foot slopes along terraces of Pleistocene age. The soil properties indicate very deep and well-drained soils. Permeability of the Styx Loamy Fine Sand is moderate, and shrink-swell potential is low. Soil reaction is strongly acidic to neutral. Permeability of the Chazos Loamy Fine Sand is slow, and shrink-swell potential is moderate. Soil reaction is moderately acidic. The major land uses of these soils are pasture, cropland, and rangeland, wildlife habitat, recreation, and urban development.

Limitations when considering urban development suggest that seepage of effluent through the moderately permeable subsoil and into groundwater is possible in areas used for septic system absorption fields. The permeability in the subsoil can cause septic systems to fail in wet years. The maintenance of lawns and landscape plants can be expensive because of the moderate available water capacity. Shrinking and swelling of the soil can cause buildings and roads to crack. Proper engineering design and installation can overcome these limitations.

Gravelly Clays

The City of Robinson contains one gravelly clay soil association. Heiden Gravelly Clay (Hgb), 1 to 3% slopes, found along U.S. Highway 77 at Anderson Lane. This soil association may be found in the City of Robinson on uplands of Upper Cretaceous age. The soil properties of the Heiden Gravelly Clay indicate a deep to shale well-drained soil. Permeability is very slow, and shrink-swell potential is very high. Soil reaction is moderately alkaline. The major land uses are rangeland cropland, pasture. Limitations of this soil when considering urban development suggest that the shrinking and swelling of the soil can cause houses, sidewalks, roads, and streets


N
W
E
S
AsB, Austin silty clay
AxB, Axtell fine sandy loam
BaA, Bastsil fine sandy loam
BaB, Bastsil-Urban land complex
BnA, Branyon clay, 0 to 1 % slopes
BnB, Branyon clay, 1 to 3 % slopes
BuA, Burleson clay
CaB, Chazos loamy fine sand
DAM, Dams
EdD, Eddy gravelly clay loam
FaB, Fairlie clay
FeE2, Ferris clay
HeB, Heiden clay, 1 to 3 % slopes
HeC, Heiden clay, 3 to 5 % slopes
HeD, Heiden clay, 5 to 8 % slopes
HgB, Heiden gravelly clay
HoB, Houston Black clay
LaD, Lamar clay loam
LeB, Lewisville silty clay
LoB, Lott silty clay, 1 to 5 % slopes
LoD, Lott silty clay, 5 to 8 % slopes
MbA, Mabank_Bremond complex
McL, McLennan clay loam
MnB, Minwells fine sandy loam, 1 to 3 % slopes
MnC2, Minwells fine sandy loam, 3 to 5 % slopes
Ov, Ovan silty clay
PcB, Payne clay loam
Pg, Pits, gravel
QuC, Queeny clay loam
RgB, Reisel gravelly fine sandy loam
SlC, Stephen-Eddy complex
SyB, Styx loamy fine sand
SzB, Sunev clay loam
To, Tinn clay
W, Water
WnA, Wilson clay loam
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Soils
0 500 1,000 2,000 3,000 4,000
Feet

to crack or buckle. The very slow permeability may cause septic systems to work improperly. The establishment and maintenance of lawns and landscape plants can be difficult on this clayey soil.

Gravelly Clay Loams

The City of Robinson contains one gravelly clay loam soil association. Eddy Gravelly Clay Loam (EdD), 3 to 15 % slopes, found along Paso Fino Drive at Quarterhorse Drive. This soil association is found in the City of Robinson on uplands of Upper Cretaceous age. This soil is mainly found along chalky hillsides and ridges. The soil properties indicate a shallow or very shallow well drained soil. Permeability is moderately slow, and shrink-swell potential is low. Soil reaction is moderately alkaline. The major land uses are rangeland, pasture and recreation. Limitations of this soil when considering urban development suggest that septic systems are difficult to install in the chalky bedrock. Establishment of lawn, road construction, and excavations are difficult because of the chalky bedrock. The very low available water capacity makes maintenance of yards and plants expensive. Road and street excavations are difficult because of the chalky bedrock. Construction is difficult on the moderately steep slopes.

Complex Soils

The City of Robinson contains three complex soil associations that include the following: 1) Mabank-Bremond Complex (MbA), 0 to 1% slopes, found at the end of East Ward Street; 2) Stephen-Eddy Complex (StC), 2 to 5% slopes, found along Interstate Highway 35 at Surrey Ridge Road; and 3) Bastsil-Urban Land Complex (BaB) 0 to 2 % slopes, found along Kettler Drive east of Cathy Drive. The Mabank-Bremond Complex and Bastsil-Urban Land Complex soil associations may be found in the City of Robinson on stream terraces, slight depressions, and broad flats of Pleistocene age. The Stephen-Eddy Complex soil association may be found on convex hilltops and ridges on the uplands of the Upper Cretaceous age.

The soil properties of the Mabank-Bremond Complex indicate a very deep and moderately well-drained soil. Permeability is very slow and shrink-swell potential is high. Soil reaction is slightly acidic. The soil properties of the Stephen-Eddy Complex indicate a very shallow or shallow and well-drained soil. Permeability is moderately slow, and shrink-swell potential is moderate. Soil reaction is moderately alkaline. The soil properties of the Bastsil-Urban Land Complex indicate a very deep, well-drained soil. Permeability is moderate, and shrink-swell potential is low. Soil reaction is slightly acidic. The major land uses are pasture, rangeland, cropland, and urban development. The urban land is covered by dwellings, small buildings, streets, roads, driveways, parking lots, and other structures. Some areas have been cut and shaped for building sites.

Limitations of this soil when considering urban development suggest that the very slow permeability of the soil can cause septic systems to fail in wet seasons. Septic systems are difficult to install in the chalky bedrock and the seepage of effluent into ground water is possible in areas used for septic system absorption fields. Many areas are underlain by beds of sand and

gravel. Shrinking and swelling of the soil can cause buildings, roads, and streets to crack or buckle. The maintenance of lawns and landscape plants can be expensive because of the moderate available water capacity on these shallow soils. Excavations for roads and streets are difficult because of the chalky bedrock.

Gravel Pits & Mining Excavations

The gravel pits (Pg) and mining excavations soil association may be found in the City of Robinson on terraces of man-made borrow pits and mining excavations of Pleistocene age. More specifically along Flat Creek west of Robinson Drive. This association consists of areas from which soil and the underlying gravel or sand have been mined for topsoil or for sand and gravel purposes. The walls of the pits are mostly vertical. The depth of the pits ranges from approximately 10 to 50 feet in the City of Robinson. In most areas, the water levels are maintained due to shallow water tables and constant movement of alluvial water. In many areas the original loamy and clayey soil was mixed during excavation of sand and gravel and was left in piles in the pits or along the perimeter of the pit.

Most of the pits are in areas of gravelly sediments or in areas of ancient high terrace deposits associated with minor streams (North Flat Creek) in the area of the Brazos River. The soil properties of the gravel pits and mining excavation soil association indicate a very deep and poorly drained soil. Permeability is variable, and shrink-swell potential is low. Soil reaction is moderately alkaline. The major land uses are recreation, pasture, and rangeland. Limitations when considering urban development suggest that this soil association is poorly suited to urban development because of flooding, depth, and insufficient soil material to reclaim for urban uses.

Vegetation

Vegetation is simply the type of plants and trees found in any one area. The vegetation areas in the City of Robinson were mapped by City staff using aerial photography. Vegetation was mapped as associations or groups of trees and plants. Vegetation is affected by soil, climate, and topography. Knowledge of vegetation is useful in determining soil moisture and can be helpful to anyone interested in aesthetics.

The vegetation in the City of Robinson is varied and may be found generally in floodplain and open land areas. Large deciduous trees such as pecan, cottonwood, willow, pine, and elm are found adjacent to channels in flood plain areas. Grassland areas may appear between these large deciduous trees. Other flood plain trees include bur oak, pin oak, live oak, hackberry, eastern red cedar, and sycamore. The deep alluvial soils and the abundance of water allow these trees to

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"A Comprehensive Plan for the City of Robinson, Texas"

Vegetation Map

0 500 1,000 2,000 3,000 4,000 Feet

become very large over time. These types of vegetation are commonly found along Flat Creek, Castleman Creek, and minor drainageways throughout the City of Robinson. The vegetation map of the City of Robinson may be viewed at https://www.1519gis.com/maps/Robinson.

Much of the terrace areas of the City of Robinson are cleared and post oak and black jack oak are found as isolated patches protected by fences and sometimes immediately adjacent to mesquite or grassland. Where cattle are allowed to graze, the trees are in savannah and where the trees are protected from grazing they are in thicket. Hackberry trees are commonly found along interior property fence lines and right-of-ways throughout the City of Robinson. The types of common grasses include annual forbs, panicum, perennial grasses, dropseed, purpletop tridens, eastern gramagrass, shrubs, and sideoats grama.

The openland areas include extensive agriculture practices that make it impractical to distinguish between the different types of grassland. Big bluestem, little bluestem, silver bluestem, yellow indiangrass, switchgrass, Texas wintergrass, buffalograss, annual grasses, Virginia wildrye, Canada wildrye, and perennial forbs are commonly found in soils of the City of Robinson. Farm and ranch land, and agricultural land are designated simply as open space. The most extensive open space is found on the gently rolling prairies in the southern portions of the City.

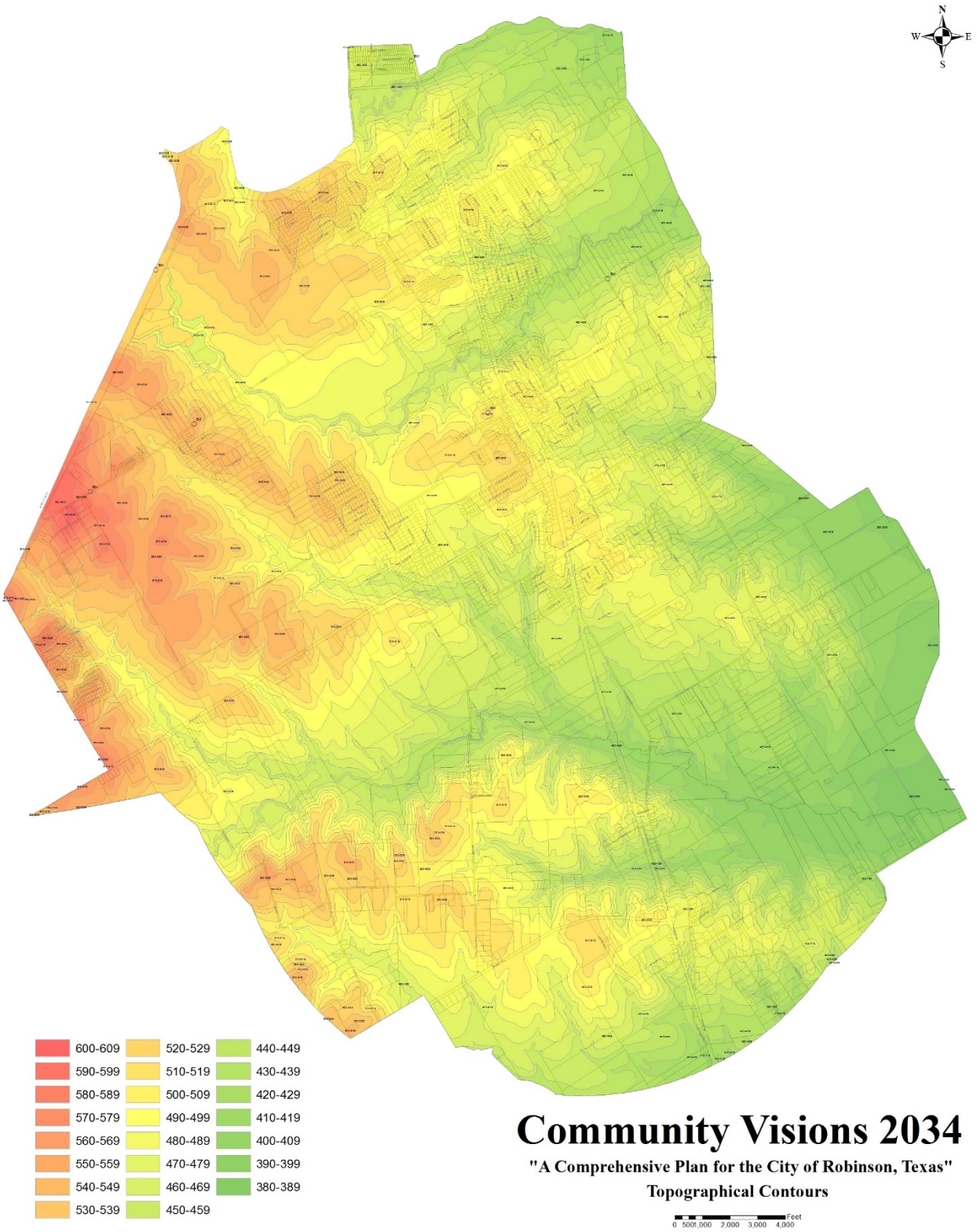
Topography

Topography is the shape of the land, whether the land is flat, characterized by gently rolling hills, or composed of steep cliffs. The effects of the climate reacting with the bedrock geology produces topography. Rainfall collects and forms streams and rivers which erode the land and produce floodplains. Hard rocks can resist the weather better than soft rocks and consequently hard rocks are often found on tops of hills and soft rocks in valleys.

The topography of the City of Robinson reflects elevations that range from high in the northwest to declining lower elevations to the southeast. The City is dissected by Flat Creek, Castleman Creek, and other minor drainageways in this same general downward trend creating large drainage basins. The highest elevation (609 feet) in the City of Robinson may be found along Greig Drive at Interstate Highway 35.

A topographic high ranging in elevation from 529 to 510 feet is noticed along Tate Street from just east of Sunland Park to U.S. Highway 77. This is the general location of the Robinson Independent School District Administration building, high school, elementary school, and developing subdivisions.

An elevation of 609 to 539 lies between Flat Creek and Castleman Creek and extends from Interstate Highway 35 to Moonlight Drive. The Surrey Ridge Road area exhibits a topographic range from 589 to 579. The southern portion of Robinson along Berry Street, Cooksey Lane, and Hillside Drive show a range from 559 to 509. The topographical contours map of the City of Robinson may be viewed on the website: www.1519gis.com/maps/Robinson.


N
W
E
S
600-609
590-599
580-589
570-579
560-569
550-559
540-549
530-539
520-529
510-519
500-509
490-499
480-489
470-479
460-469
450-459
440-449
430-439
420-429
410-419
400-409
390-399
380-389
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Topographical Contours
Feet
0 500 1,000 2,000 3,000 4,000

Climate

Climate is the prevailing condition of the weather. The climate affects everyone and is especially critical to the design of buildings, agricultural activities, and planning. The variables to be considered include wind speeds, wind directions, solar radiation, temperature, precipitation, evaporation, drought, and humidity. The climate interacts with the geology and influences topography.

The City of Robinson has a subhumid, warm, and temperate climate. The description of climatic conditions in relation to soil development that follows is taken from modified narrative excerpts from the "Soil Survey of McLennan County, Texas", United States Department of Agriculture, Natural Resources Conservation Service in cooperation with the Texas Agricultural Experiment Station, completed in 1992, p. 173).

Winters are usually cool and short, but occasional surges of cold air can cause a sharp drop in temperatures. Summers are long and have hot days and warm nights. The climate contributes to the formation of soils in several ways. In winter, cool temperatures, fog, drizzles, and light showers contribute to low soil temperatures, poor soil aeration, and a reduction in plant and animal activity in clayey, moderately well-drained soils. In spring, rains of short duration and high intensity retard soil formation because they result in erosion of the surface layer.

Decomposition of organic matter continues most of the year, and much of the plant residue is decomposed each year. As a result, the dark surface layer of the soils is thinner than that of soils in cooler climate. During hot, dry summers the clay-textured soils, such as Houston Black, Heiden, Branyon, and Burleson soils, dry and then develop deep cracks. Shrinking and swelling churn the soils and prevent the development of the upper horizon.

The amount of rainfall in the City is enough to leach calcium carbonate from the upper horizons of some soils, but it is not enough to leach out the carbonate entirely. Most of the soils in the City have films, threads, and nodules of calcium carbonate throughout the profile. When calcium carbonate is leached in a soil, water moving through the soil can carry clay particles downward from the surface layer and deposit them where water movement is slowed. As clay accumulates, the water moves at an even slower rate and the accumulation of clay accelerates. Axtell, Chazos, and Minwells are examples of soils in the City of Robinson in which calcium carbonate is leached and clay has accumulated in the subsoil.

Temperature is controlled by a number of variables: solar radiation, cloud cover, wind, altitude, length of day, and proximity to water. The following climatic information is taken from a modified version under the "Climate" section as stated in the "Environmental Atlas of McLennan County, Joe C. Yelderman, Jr. and Robert E. Cervenka, Baylor Geological Studies Bulletins No. 13 & 14, Baylor University, Spring 1992". In McLennan County, air from the south usually raises the temperature during the summer while cold continental air lowers daily

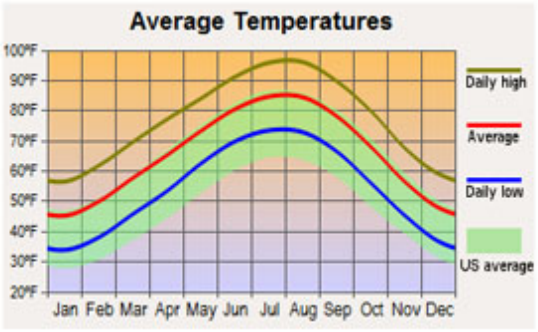
temperatures during the winter. Although temperature drops of 20 degrees or more in one hour may occur, cold weather usually persists for only one to three days following a “cold front” or “norther”. The long frost-free season is important to agriculture and a great asset to McLennan County and City of Robinson crop yields.

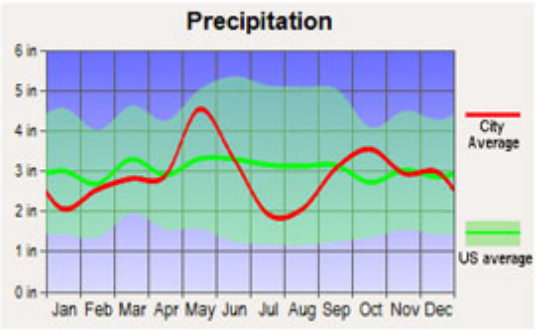
The Gulf of Mexico is the primary source of moisture for McLennan County and the City of Robinson. The major topographic high, the Bosque Escarpment, trends in a northeast to southwest direction through the County and influences local climate by forcing warm, moist air to rise and cool, thus producing precipitation. The City of Robinson is located on the eastern side of the Bosque Escarpment. The average rainfall patterns show light rainfall during the winter months with minimum amounts in late summer and a maximum in April and May. A large percentage of the total precipitation in the area is caused by thunderstorms and frontal storm passages. Area thunderstorms are usually accompanied by excessive amounts of precipitation. Snow and sleet normally occur predominantly in January.

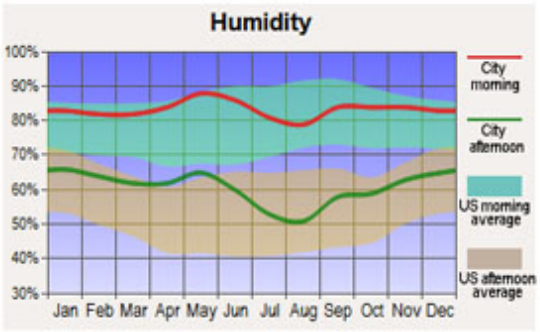
Solar radiation, more than any other factor, determines the seasonal variations of climatic condition, solar energy is measured in Langley’s (calories per square centimeter per minute) and it takes about 140 Langley’s to evaporate 1 inch of water. The period from June to August has an average of 12 hours of sunshine per day and the period from November to February has an average of only 5 hours of sunshine per day.

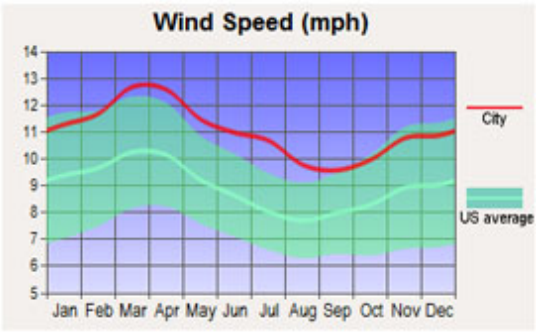
Wind speed and direction are important in planning. While wind directions play an integral part in planning industrial development with respect to air and odor pollution, wind speed is also important in its effect on vegetation, evaporation, erosion, building design, and human comfort. Mean annual wind speeds average 11.5 miles per hour (mph) but may be higher or lower in different parts of McLennan County and the City of Robinson. The dominant wind direction is south. The south and southwest winds reach a maximum during warmer seasons while north winds reach a maximum in winter due to intrusions of polar air. The north and northeast winds are often accompanied by rain. Maximum wind speeds occur in March while lowest wind speeds occur most often during summer. Generally, wind speeds are lowest near sunrise when the temperature is also the lowest, and strongest near noon.

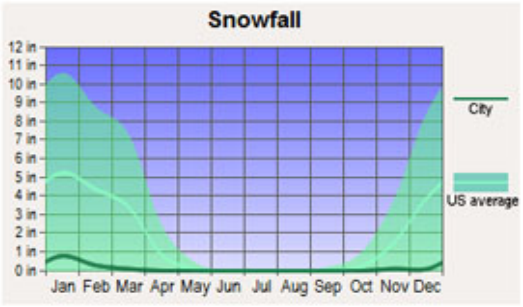
Tornado activity in the Robinson area is above the Texas state average. It is 168% greater than the overall U.S. average. On 5/11/1953, a category F5 (max. wind speeds 261-318 mph) tornado 5.8 miles away from the Robinson city center killed 114 people and injured 597 people.

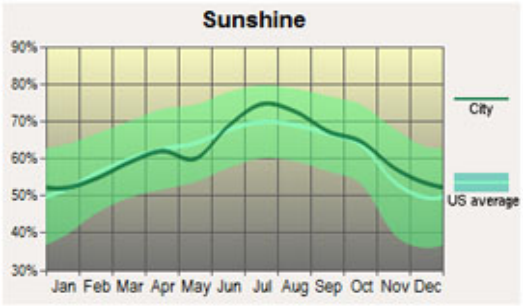

Average Temperatures
100°F
90°F
80°F
70°F
60°F
50°F
40°F
30°F
20°F
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Daily high
Average
Daily low
US average

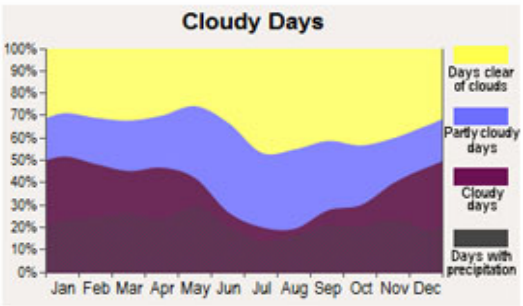

Precipitation
6 in
5 in
4 in
3 in
2 in
1 in
0 in
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
City
Average
US average


Humidity
100%
90%
80%
70%
60%
50%
40%
30%
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
City
morning
City
afternoon
US morning
average
US afternoon
average


Wind Speed (mph)
14
13
12
11
10
9
8
7
6
5
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
City
US average


Snowfall
12 in
11 in
10 in
9 in
8 in
7 in
6 in
5 in
4 in
3 in
2 in
1 in
0 in
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
City
US average


Sunshine
90%
80%
70%
60%
50%
40%
30%
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
City
US average


Cloudy Days
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Days clear
of clouds
Partly cloudy
days
Cloudy
days
Days with
precipitation

Chapter 5 Community Profile

In planning for its future, the City of Robinson faces the challenge of preserving and enhancing its existing character and environment while addressing the increasing demands of future growth and development. Before looking at Robinson's future, consideration must be given to its past and where it is today.

The Community Profile chapter of the Comprehensive Plan serves as an introduction to the City and documents its existing conditions and characteristics, regional setting, local features, historical and current population, demographic characteristics, educational attributes, and healthcare services.

An understanding of existing population characteristics and future population demands is essential in determining the anticipated growth and the resulting demands on community services in terms of future land use, transportation, and park and recreation needs.

REGIONAL SETTING

The City of Robinson is bounded by Interstate Highway (IH) 35 to the north, Rosenthal Parkway to the south, South 12th Street to the east, and Surrey Ridge Road to the west. Major thoroughfares through the City include U.S. Highway 77 and Moonlight Drive. Robinson adjoins the corporate limits of the City of Waco at IH 35 in central McLennan County. Neighboring cities include Waco to the north, Lorena to the south and Hewitt to the west.

HISTORY

The City of Robinson came into existence after brothers John and Levi Robinson established homesteads in the area in the early 1850s. The original Robinson home was built on land that later became the J.W. Mann farm. To encourage the growth of the village in 1856, the brothers surveyed 171 acres of land and marked off forty-two, four-acre lots for other homesteaders. The Robinsons sponsored the settlement's first school in 1860, when they hired a private tutor for their children. The teacher, Mr. Moore, lived with the Robinson families.

Known originally as Robinsonville, the city was incorporated in 1955 under the name of Robinson and adopted the present Home Rule form of government in 1999. Although many Robinson residents have lived in the City for decades, history reveals that we are all merely newcomers. The Central Texas region, including Robinson and McLennan County, has supported human habitation for several thousand years.

Archeological evidence suggests that hunting and gathering peoples established themselves in the area as early as 11,000 years ago. Some of these may have been ancestors of the Tonkawa Indians, who appear to have been native to the region. The Wichita groups moved south from

Oklahoma around 1700 and by the early 1800s, some Caddo and Delaware Indians were in the area as well.

CITY OF ROBINSON DEMOGRAPHICS

Historical Data

In 1885 Robinson had a population of 600 that supported three cotton gins, two churches, three general stories, and a school. J.W. McKee and Sons, a broom factory, was also in operation. In 1888, Rev. John Strauss founded the Robinson Academy. By the late 1890s, the population had dropped to 300 despite the continued operation of the broom factory.

Robinson was incorporated in 1955. In 1958 its site comprised of twelve square miles adjacent to Waco. Business owners organized the Chamber of Commerce in 1957. By 1960, the population had grown to 2,110. Residents numbered close to 7,000 in 1980. In 1982, the town had its own water system fed by seven artesian wells, as well as its own sewer system.

The same year, Robinson had evolved to include a volunteer fire department, a police department, and a unit of the Texas Department of Public Safety. In 1990, the city was primarily residential. It had a population of 7,111 residents and numerous small businesses. In 2000, the populations reached 7,845 (Robinson Chamber of Commerce, *Robinson, Texas: A Natural for Residential, Business and Small Industry* (1959). In 2010 the population reached 10,509 persons due to active growth over the preceding decade.

Historical Growth

Early statistical records from the McLennan County Appraisal District of development within the City of Robinson date back to the 1890s. Development during that time period began along South Old Robinson Road and West Moonlight Drive and was primarily residential. After the turn of the century, around 1910, development was limited to agricultural use in the southeastern portion of the city at that time. The early development of the Rosenthal community began around the 1920s. Development was predominantly for agricultural and farmstead use. This trend of development continued in the southern portions of the city through the 1930s.

The early World War II years of the 1930s to early 1940s experienced development beginning to increase with the primary use being agriculture. Residential uses are now beginning to develop in the central city and to the north. Initial commercial development also began during this time period. Growth increased during the 1940s and the first residential subdivision began developing in the central portion of the city. Commercial uses increased along U.S. Highway 77.

During the 1950s, Robinson experienced continued residential development within the central and northern areas of the city. Agricultural uses still dominate the areas to the south at this time. The 1960s noticed residential development still on the rise with new residential subdivisions along Old Robinson Road, Loop 340, and Newland Drive in the northern portions of the city.


N
W
E
S
1890-1900
1901-1910
1911-1920
1921-1930
1931-1940
1941-1950
1951-1960
1961-1970
1971-1980
1981-1990
1991-2000
2001-2010
2011-Present
Community Visions 2034
"A Comprehensive Plan for the City of Robinson, Texas"
Historical Growth
0 500 1,000 2,000 3,000 4,000
Feet

The central area of residential uses began to expand to the west beyond Old Robinson Road. This decade noticed the first significant residential subdivision developments south of Moonlight Drive. Agricultural uses experienced smaller size lots, however, there were some large tracts to the south and west portions of the city that were experiencing growth.

Residential subdivisions in the northern portion of the city in the 1970s continued to increase as well as areas to the south and east. Commercial development is sporadic from the central portion of the city to the northern city limits. Agricultural uses are still dominant in the south and western portions of the city. In the 1980s, new residential subdivisions began to develop around the central portion of the city expanding outwards. Large residential tracts of land are developing in the south and eastern areas of the city. Residential infill development is still occurring in existing subdivisions. Some commercial development is seen along U. S. Highway 77.

The 1990s experienced larger residential subdivisions west of U.S. Highway 77 along Moonlight Drive. Smaller phases were being added to existing subdivisions throughout the city. Commercial development was beginning along Interstate Highway 35 and Greig Drive. The initial phase of the industrial park began during this time period. Commercial infill development continued to occur along U.S. Highway 77. The southern portion of the city still exhibited sporadic agricultural growth. These were mainly residential farmsteads on varying acreages.

The largest growth activity for the City of Robinson has occurred since 2000 to present day throughout the City. Residential subdivision development was experienced to the west along Surrey Ridge Road, south along Newland Drive, sporadic activity to the east, and north expansion of existing subdivisions along Moonlight Drive. Large residential acreage lots continue to develop in the southern portions of the City. Commercial and industrial development was strong during this time period with construction in the new industrial park to the west of the City near Interstate Highway 35. Some commercial infill development is still occurring along U.S. Highway 77.

Population

As of 2010, the total Robinson population was 10,509, which has grown 33.96 percent since 2000. The population growth rate is much higher than the state average rate of 20.59 percent and is much higher than the national average rate of 9.71 percent.

Robinson median household income is $69,099 in 2008-2012 and has grown by 39.87 percent since 2000. The income growth rate is higher than the state average rate of 29.14 percent and is much higher than the national average rate of 26.32 percent. Robinson median house value was $149,100 in 2008-2012 and has grown by 90.18 percent since 2000. The house value growth rate is much higher than the state average rate of 55.15 percent and is higher than the national average rate of 51.67 percent. As a reference, the national Consumer Price Index (CPI) inflation rate for the same period is 26.63 percent (www.usa.com/robinson-tx.htm).

The tables below show population statistics for 2010 and an estimated projection for 2015, as well as sex, age and race distribution; total households, household number and size of housing; income distribution, labor force statistics, and education.

STATISTICAL INFORMATION

Population 2010		
	Total	%
2010 Population	10,395	
Sex 2010		
	Total	%
Male	5,120	49.3%
Female	5,275	50.7%
Age Distribution 2010		
	Total	%
0-4	660	6.3%
5-9	753	7.2%
10-19	1,570	15.1%
20-29	1,113	10.7%
30-39	1,422	13.7%
40-49	1,424	13.7%
50-59	1,558	15.0%
60-64	615	5.9%
65+	1,279	12.3%
Race Distribution 2010		
	Total	%
White	9,910	95.3%
Black	295	2.8%
American Indian	42	0.4%
Asian	62	0.6%
Pacific Islander	5	0.0%
Other	68	0.7%
Multirace	12	0.1%
Hispanic	1,550	14.9%
Total Households 2010		
	Total	%
Households	3582	
Families	2922	81.6%
Total Number of Housing 2010		
	Total	%
Total Dwellings	3,894	
Owner-occupied	2,956	82.5%
Renter-occupied	625	17.4%

Population 2015		
	Total	%
2015 Population	13,288	
Sex 2015		
	Total	%
Male	6,607	49.7%
Female	6,681	50.3%
Age Distribution 2015		
	Total	%
0-4	912	6.9%
5-9	981	7.4%
10-19	1,868	14.1%
20-29	1,380	10.4%
30-39	2,135	16.1%
40-49	1,629	12.3%
50-59	1,931	14.5%
60-64	863	6.5%
65+	1,585	11.9%
Race Distribution 2015		
	Total	%
White	12,696	95.5%
Black	336	2.5%
American Indian	51	0.4%
Asian	76	0.6%
Pacific Islander	10	0.1%
Other	106	0.8%
Multirace	14	0.1%
Hispanic	2,385	17.9%
Total Households 2015		
	Total	%
Households	4550	
Families	3696	
Total Number of Housing 2015		
	Total	%
Total Dwellings	4,953	
Owner-occupied	3,720	81.8%
Renter-occupied	829	18.2%

Housing units occupied	3,582	92.0%
Size of Household 2010		
	Total	**%**
1 Person	590	16.5%
2 Person	1,116	31.2%
3 Person	617	17.2%
4 Person	767	21.4%
5 Person	343	9.6%
6+ Person	105	2.9%
Household Income Distribution 2010		
	Total	**%**
Under $10K	100	2.8%
$10-$20K	224	6.3%
$20-$30K	306	8.5%
$30-$40K	432	12.1%
$40-$50K	422	11.8%
$50-$60K	436	12.2%
$60-$75K	628	17.5%
$75-$100K	424	11.8%
>$100K	611	17.1%
Labor Force Status 2010		
	Total	**%**
Labor Force	5,510	
Employed	5,398	98.0%
Unemployed	99	1.8%
In Armed Forces	13	0.0%
Not in Labor Force	2,455	
Education Attainment 2010		
	Total	**%**
Population age 25+	6,984	
< Gr 9	261	3.7%
Gr 9-12	640	9.2%
High School	2,432	34.8%
Some College	1,699	24.3%
Associate Degree	673	9.6%
Bachelor's Degree	962	13.8%
Graduate Degree	317	4.5%

Housing units occupied	4,550	91.9%
Size of Household 2015		
	Total	**%**
1 Person	774	17.0%
2 Person	1,358	29.8%
3 Person	760	16.7%
4 Person	996	21.9%
5 Person	461	10.1%
6+ Person	138	3.0%
Household Income Distribution 2015		
	Total	**%**
Under $10K	93	2.0%
$10-$20K	228	5.0%
$20-$30K	319	7.0%
$30-$40K	518	11.4%
$40-$50K	516	11.3%
$40-$50K	529	11.6%
$60-$75K	846	18.6%
$75-$100K	586	12.9%
>$100K	916	20.1%
Labor Force Status 2015		
	Total	**%**
Labor Force	6,973	
Employed	6,822	97.8%
Unemployed	138	2.0%
In Armed Forces	13	0.0%
Not in Labor Force	3,144	
Education Attainment 2015		
	Total	**%**
Population age 25+	9,078	
< Gr 9	272	3.0%
Gr 9-12	739	8.1%
High School	3,135	34.5%
Some College	2,152	23.7%
Associate Degree	970	10.7%
Bachelor's Degree	1,381	15.2%
Graduate Degree	429	4.7%

The tables below show consumer expenditure statistics for 2010 and an estimated projection for 2015. The major items include apparel, personal care, education, reading, entertainment, tobacco,

transportation, food and beverage, health care, utilities, shelter, gifts, household operations, and personal insurance.

CONSUMER EXPENDITURES

Consumer Expenditures 2010		
	$ Per Household	Total $000s
Apparel	**2,691**	**9,640**
Men's Apparel	510	1,828
Boys' Apparel	134	480
Women's Apparel	891	3,192
Girls' Apparel	185	664
Infants Apparel	124	443
Footwear	437	1,565
Apparel Services and Accessories	410	1,468
Education	**1,250**	**4,478**
Books and Supplies	176	631
Tuition	1,074	3,847
Entertainment	**3,158**	**11,312**
Fees and Admission	793	2,839
Video and Audio Equipment	1,099	3,935
Recreational Equipment and Supplies	1,267	4,538
Food and Beverages	**8,717**	**31,225**
Food at Home	4,575	16,388
Food Away from Home	3,498	12,530
Alcoholic Beverages	644	2,308
Health Care	**3,469**	**12,427**
Health Care Insurance	1,675	5,999
Health Care Services	837	2,998
Health Care Supplies and Equipment	958	3,430
Household Furnishings and Equipment	2,467	8,836
Household Textiles	177	632
Furniture	673	2,412
Floor Coverings	80	287

	$ Per Household	Total $000s
Personal Care	**815**	**2,921**
Hair Care	63	226
Electric Personal Care Appliances	16	58
Personal Care Services	546	1,995
Personal Care Products	190	682
Reading	**183**	**655**
Newspapers	78	281
Magazines	37	134
Books	67	240
Tobacco	**378**	**1,354**
Cigarettes	340	1,219
Other Tobacco Products	38	136
Transportation	**11,578**	**41,471**
New Vehicle Purchase	2,949	10,564
Used Vehicle Purchase	1,915	6,860
Motorcycle (New and Used)	81	290
Vehicle Finance Charge	558	1,999
Gasoline and Oil	2,613	9,360
Vehicle Repair and Maintenance	892	3,194
Vehicle Insurance	1,310	4,691
Public Transportation	620	2,221
Other Transportation Costs	640	2,291
Utilities	**3,972**	**14,226**
Natural Gas	554	1,984
Electricity	1,451	5,198
Fuel Oil and Other Fuels	150	536
Telephone Service	1,355	4,853

Major Appliances	287	1,030
Housewares and Small Appliances	1,249	4,475
Shelter	**10840**	**38828**
Mortgage Interest	4430	15868
Property Taxes	1904	6820
Miscellaneous Owned Dwelling Costs	1458	5223
Rental Costs	2452	8783
Other Lodging	596	2134
Household Operations	**1975**	**7075**
Babysitting and Elderly Care	465	1665
Household Services	354	1269
Alimony and Child Support	282	1012
Household Supplies	874	3129
Miscellaneous Expenses	947	3392
Legal and Accounting	115	411
Funeral and Cemetery	105	378
Finance Charges Excluding Mortgage and Vehicle	609	2183
Other Miscellaneous Expenses	117	420

Other Utilities	462	4,655
Gifts	**1,433**	**5,134**
Gifts of Apparel	286	1,024
Gifts of Apparel Accessories	35	127
Gifts of Education	288	1,033
Gifts of Recreation	97	349
Gifts of Food and Beverages	134	480
Gifts of Household Furnishings and Equipment	234	840
Gifts of Household	61	218
Gifts of Transportation	78	279
Gifts of Elsewhere Unspecified	219	786
Personal Insurance	**560**	**2,007**
Contributions	1,981	7,095

CITY SERVICES

Water and Sanitary Sewer Utilities

The City of Robinson's main water storage facility is located just south of Interstate Highway 35 at Greig Drive. This storage facility provides water service to the western portion of the City and along IH 35. Water main size reflects a 10-inch diameter connection to service. The construction of the WMRSS sanitary sewer system is nearing completion along Flat Creek, which runs from west to east through the City of Robinson. The completion of this system will eliminate several lift stations and provide increased capacity for development along IH 35 and the remaining areas of the City.

Solid Waste Collection

Solid waste collection including residential and commercial dumpster service, is provided by Progressive Waste Solutions. The City renewed a contract with this contractor that will be effective until June 30, 2018.

Electricity and Natural Gas

ONCOR provides electric delivery to the site. A Retail Electric Provider (REP) may be chosen from among any number of qualified companies to provide power and energy. Atmos Energy is the natural gas provider for the surrounding area.

Telecommunications

Telephone service is provided by AT&T with digital and 5E Lucent Technology. Fiber optics at 56KBPS, T-1 and digital service is also available to the area. 911 Emergency Assistance District service is provided via fully enhanced, Robinson Police Department, PSAP to all residents and businesses of the City of Robinson. Cable television service is provided by Time Warner Cable with 750 MHZ fiber-to-the-node architecture coaxial cable.

EDUCATION

Baylor University

Baylor University is located in the City of Waco, bordering the City of Robinson. Baylor is a fully accredited university offering twelve programs of study with various degree plan options under each major. Graduate programs are offered to continue education for all four-year degree programs in addition to programs for a Doctorate of Philosophy, Education or Psychology. Baylor University has a theological seminary and law school on its Waco campus. There were 15,616 students enrolled in fall of 2013. Degree areas include: art, business, communication, education, engineering and computer science, foreign language and linguistics, humanities and religion, mathematics and science, music, social sciences and history, and pre-professional programs.

McLennan Community College

McLennan Community College (MCC) has partnerships between its junior college and four-year institutions that agree to offer bachelor's or graduate degrees on the MCC campus. Due to these partnerships, MCC is able to offer 447 degree programs ranging from associates to master's degrees. There were 9,913 students enrolled in fall of 2013, with an average enrollment of 9,500.

Texas State Technical College

TSTC is the only state-supported technical college system in Texas. TSTC has campuses in Harlingen, Marshall, Waco and West Texas. TSTC provides associate degrees and certificate

paths. Nearly 30,000 students are served each year through traditional degree programs, short-term continuing education and corporate training programs. In the fall of 2012, 6,105 undergraduate students were enrolled at the TSTC Waco campus. TSTC offers a variety of programs in areas of agriculture, food and natural resources, health sciences, hospitality and tourism, information technology, manufacturing, transportation, distribution and logistics, and more. The additional colleges and universities with over 2,000 students near Robinson include 1) Temple College (31 miles, Temple, TX, full-time enrollment, 2,250), 2) University of Mary Hardin-Baylor (35 miles; Belton, TX, full-time enrollment, 2,379), 3) Central Texas College (47 miles, Killeen, TX, full-time enrollment, 4,130), 4) Navarro College (56 miles, Corsicana, TX, full-time enrollment, 4,283).

Public Schools

Robinson Independent School District partners with parents and community members to serve the students of Robinson. RISD's vision is to develop leaders and productive citizens by cultivating a passion for learning and a desire for excellence. By focusing on the needs of every student, every day, this vision will be realized.

Robinson ISD is comprised of 5 campuses: Robinson Primary (Students: 303; Grades: PK-1) Robinson Elementary (Students: 343; Grades: 2-3), Robinson Intermediate (Students: 332; Grades: 4-5), Robinson Junior High School (Students: 533; Grades: 6-8), and Robinson High School (Students: 733; Grades: 9-12). *(TEA Texas Academic Performance Report 2012-13)* In 2013-14, Robinson High School celebrated its 50th year anniversary.

Students in Robinson have access to the latest in technology along with many areas of study. At the high school level, students have the opportunity to earn college credit and certifications through Dual Credit, Advanced Placement, and several Career and Technology programs.

Information provided in the Texas Education Agency's Snapshot 2013 indicates Robinson students are African American (3.6%), Hispanic (21.3%), White (71.0%), American Indian (0.8%), Asian (0.4%), and Two or More Races (2.8%). Almost thirty-four percent of students were economically disadvantaged.

School District	Enrollment	Attendance Rate	Graduation Rate	Number of Graduates	SAT Mean Total Score	ACT Composite Score	% Passing STAAR
Robinson	2,244	96.7	96.9	158	1530	22.1	80

HEALTH CARE SERVICES

City Vision

The City's vision is to continue to develop and maintain a strong partnership with Scott & White, Providence Healthcare Network, and Hillcrest Hospitals. The closest hospital to Robinson is Scott & White-Hillcrest Medical Center, which is located on the northwest side of Interstate Highway (IH) 35 across from the western side of the City's boundary.

One goal of the local medical community is to promote a trauma center within the Robinson City limits for the convenience of the Robinson residents as well as other communities further east of the City. Healthcare is a major determinant of quality of life and the ability to participate fully in the community. The City of Robinson recognizes the importance of healthcare for all its residents. Its medical health community consists of the following: 1) Robinson Family Health Care, 2) Dr. Michael Stones, 3) Ratcliff Family Chiropractic Clinic, 4) Fitness Centers – 3D and Fit for Life, and 5) Dentists–Stonewood Dental Clinic and Dr. Robert Graf.

The City of Robinson encourages healthy and active lifestyles by increasing access to recreational facilities and open space. To continue encouraging City residents to adopt healthy and active lifestyles to improve their general health and well-being and increase their number of healthy years lived, the City seeks to improve the access, availability, and quality of the recreational facilities, programs, and activities to meet the needs of the citizens of Robinson.

The following narratives about the City's partnership with East Texas Medical Center, as well as the McLennan County Public Health District, Scott & White Healthcare, and the Providence Healthcare Network give a full picture of the quality of healthcare provided to Robinson and its surrounding areas.

East Texas Medical Center

East Texas Medical Center (ETMC) Emergency Medical Services (EMS) is one of the nation's largest rural ambulance services, as well as one of its most progressive and fastest growing providers. ETMC EMS team members respond to emergencies large and small every day. Based in Tyler, Texas, with locations throughout the region, ETMC EMS serves more than 15 counties and close to 15,000 square miles. ETMC EMS operates a fleet of 107 ambulances and three helicopters. The organization has established and operates one of the most sophisticated emergency communication systems using global positioning satellite technology.

The City of Robinson has an agreement with ETMC EMS to provide ambulance services to the City's residents. Seven cities – Bellmead, Beverly Hills, Hewitt, Lacy-Lakeview, Robinson, Waco and Woodway – originally entered into an InterLocal Agreement establishing a regional EMS system for the provision of emergency and non-emergency ambulance service in April 1984. Each city also established ordinances creating the regional EMS system with oversight from an EMS Review Committee with representatives from each of the cities. In March 1991, the InterLocal Agreement was amended to provide the Advanced Life Support (ALS) paramedic ambulance service.

Since 1984, the EMS system has been served by a single ambulance service provider as an exclusive operating service area. However, the EMS system could be served by multiple providers being permitted to operate. To date, the cities preferred to have a single, exclusive provider.

Baylor/Scott & White Hillcrest Medical Center

Baylor/Scott & White Hillcrest Medical Center has been synonymous for more than 100 years with excellence in diagnosis, care and treatment. As Baylor/Scott & White continues to transform itself, keeping pace with the fast-changing world of healthcare and medical technology, the institution's mission and vision reflect a continuing commitment to comprehensive and trusted healthcare. The mission is to provide the most personalized, comprehensive, and highest quality healthcare, enhanced by medical education and research. The vision for Baylor/Scott & White will be the most trusted and the most valued name in American Health Care.

Developed from this vision, is a fully integrated, non-profit collaborative health system. Scott & White's 12 hospitals and hospital partners, numerous facilities, and more than 60 clinics spanning across 29,000 square miles of Central Texas all work under the trusted name of Baylor/Scott & White. Baylor/Scott & White employs more than 13,000 employees, 900 physicians and scientists, and is the primary clinical teaching facility to approximately 400 medical residents and fellows in training at the Texas A&M Health Science Center College of Medicine. All understand that Scott & White Healthcare holds a high level of quality and service to patients.

Providence Healthcare Network

The Providence Healthcare Network was born and built on compassion. Founded in 1905 by the Daughters of Charity as a ministry to the suffering, compassion has remained Providence's driving mission over decades of growth and development. The Providence Healthcare Network proudly serves as a member of Ascension Health, the nation's largest Catholic and largest nonprofit health system. Providence commits itself to serving all persons with special attention to those who are poor and vulnerable.

Providence is a comprehensive healthcare network that provides the best physicians and staff with leading edge equipment and facilities. It's this commitment to the best care that drives its vision and results in Providence consistently being recognized and certified for excellence in healthcare. The catholic health ministry is dedicated to spiritually centered, holistic care which sustains and improves the health of individuals and communities. Providence Healthcare Network strongly believes in community involvement and building long-lasting relationships with other non-profit organizations and local businesses.

CITY PARK AND MULTI-PURPOSE FACILITY

Peplow Park

The City of Robinson entered into a "Robinson Recreational Park Use Agreement" with the Robinson Independent School District on May 26, 2010. The agreement was for the construction of a city park on a tract of land comprised of 7.696 acres. This tract of land is located along Peplow Drive just east of U.S. Highway 77 in the City of Robinson. The term of the agreeement will be for twenty-five years and is renewable for sucessive terms.

The park development plan exhibits a pavillion, restrooms, water park, playground areas for children, sand volleyball, basketball court, gazebo, amphitheatre, exercise equipment, horseshoe pits, off-street parking, and a walking/jogging trail. Strategically placed live oak and red oak trees will be dotted throughout the park with associated lighting for night festivities. (Robinson Recreational Park rendering).

The overall project scope for the development of the park initially began with a Texas Parks & Wildlife matching grant award of $75,000 that was secured in 2009, with the City of Robinson providing the additional $75,000, a total of $150,000 in funds were available to build the park. The playground equipment for the park was purchased from existing park funds in late 2009 from Gametime, "A Playcore Company". The grant funds have been expended and Texas Parks & Wildlife will be inspecting the park in the near future to complete the grant process.

The initial work on the park began in late 2010 with the installation of utilities such as electricity, water, and wastewater service along the perimeter and central portions of the park. The erection of the playground equipment was the next phase of development in early 2011. The trail system, basketball court, horse shoe pit, gazebo, amphitheatre berm and concrete slab, picnic tables, water and electricity hook-ups, and drainage work followed throughout the remainder of 2011 into early 2012. The remaining work to present day includes the construction of a pavillion with restrooms, water park, and baseball field.

Multi-Purpose Facility

A multi-purpose facility is planned to be constructed along South 12th Street at Flat Creek in the immediate future by the City of Robinson. This facility will include a rifle range, pistol range, archery range, and skeet/sporting clays course. An obstacle course, burn building, and classroom will also be constructed for Police and Fire training. The facility will be open to the public, and construction is planned to commence in 2014. City of Robinson personnel and existing materials will be utilized to construct a main portion of the facility. The facility will be landscaped with native trees of the area along South 12th Street, the entrance area, and the main road and parking lots. The treeline along the back portion of the facility will be maintained as further support or baffling of the rifle, pistol, archery and skeet/sporting clays ranges. (See Multi-Purpose Facility rendering).


Pond
Future Water Park
PEPLOW LANE
N83°58'41"E (Reference)
681.32'
Rock Sign/Flagpoles
Parking (22 Spaces)
Parking (14 Spaces)
Pavilion & Restrooms
Toddler
Future Amphitheater
Skate Park
Playground
Gazebo
N59°10'50"W
125.95'
Fitness
Jogging Track
Basketball
Sand Volleyball
S13°17'09"E
617.06'
Horseshoe Pits
Open Field
N30°20'26"W
373.49'
Nature Landscape
Jogging Track
S59°39'34"W
63.52'
S58°58'27"W
222.04'
KEY PLAN
SITE PLAN
Robinson Recreational Park
rbdr PLLC · Architects


WALKING TRACK AND POND
CAR BURN
BURN BUILDING
FUTURE EXPANSION
SKEET / TRAP SHOOTING
OBSTACLE COURSE
CLASSROOM/ PATIO
PISTOL RANGE
RIFLE RANGE
ARCHERY RANGE
ENTRY
12th St.
PATIO
OFFICE
CLASSROOM
ARMORY
STRG
MECH
ELEC
STRG
FLOOR PLAN
MULTI-PURPOSE FACILTY
MASTER SITE PLAN
CITY OF ROBINSON
ROBINSON, TEXAS
rbdr PLLC · Architects

Chapter 6 Economic Development

Economic development is a partnership between public and private interests to promote extensive and prolonged private investment. The available land area, customer base of the city, workforce of the area, financing options and supporting community incentives are factors necessary to take advantage of an expanding local and regional economy. The City of Robinson has developed perspective goals, objectives, and policies that will attract and sustain desirable businesses and industries, thus increasing the overall tax base. Ancillary commercial establishments will, in turn, provide additional tax revenues to support the community's quality of life.

It is a generally accepted attitude that a city cannot sustain and expand its key services relying on property taxes, development fees, and building permits. The City must partner with its commercial property owners to attract businesses that will provide the goods and services for its citizens. Development areas should be of sufficient size as to attract industries and retail establishments. This partnership involves the appropriate zoning designation, utility extensions, and incentives.

Economic development is a significant component of the City of Robinson's future. Business and industrial location and relocation initiatives should reflect the City's vision to have balanced commercial development that supports the City's vision. New business and industries need to have adequate and appropriately zoned areas that are in accordance with the "Future Land Use Plan". The vitality and fiscal stability of the City of Robinson economy is a key contributor to the continuing quality of life for its citizens. When new businesses locate in the City of Robinson, they will contribute to a thriving economy and expanding tax base. Funds generated by sales tax and property tax revenues will then provide the City of Robinson with the resources to achieve the goals of the "Community Visions 2034" comprehensive plan.

The expected stable to consistently increasing population in Robinson, coupled with growth in the surrounding communities, show that the City is ideally located to attract new development that will provide goods and services. These include technology centers, warehouse, and distribution centers which in turn provide the customers grocery stores, specialty shops, restaurants, or personal services such as dry cleaners and appropriately located fuel vendors. Professional offices and services are also included in the commercial mix. The City's geographic position, land and resources can attract businesses and industries to the City.

In promoting economic development, the City of Robinson should continue to be mindful of what initially attracted residents to the community - its quality of life. Commercial development should not be allowed to infringe upon existing neighborhoods and new residential development should be buffered from businesses. In successful economic development situations, consideration should be given to the costs of providing and maintaining public services

associated with new development so that it does not exceed anticipated revenues of the City. Although sales and commercial property tax revenues generally more than offset the costs of providing public safety and even underwrite the services provided to residences, the City of Robinson should not extend services beyond what can be fiscally handled.

The information that follows is designed to assist those who will be considering and evaluating the City of Robinson for economic development projects. It consists of the existence of the Economic Development Corporation, existing city regulatory codes, City tax abatement, McLennan County tax abatement, Freeport Property tax exemption, Pollution Control Equipment Property tax exemption, Sales Tax-Enterprise Zone project refund, Manufacturing Equipment exemption, Natural Gas and Electricity exemption, "Heart of Texas Workforce" recruitment and screening, Central Texas customized training, Waco-McLennan County Economic Development Corporation grants, Texas Capital Fund Grants, State Infrastructure Bank Loans, Transportation Reinvestment Zones, and Chapter 380 Agreements.

Economic Development Corporation

A method of directing the City's economic growth is the use of an Economic Development Corporation. State Statutes provide that a city may create entities that can dedicate a portion of sales tax to attract new business and industries. However, the City of Robinson's current sales tax is used to its maximum. The Secretary of State approved the "Robinson Economic Development Corporation" under Charter Number 1560401-01 on December 6, 1999. This is a Type A Corporation and was primarily intended for manufacturing and industrial development.

City Regulatory Codes

The existing city codes involved in the development process would include 2012 National Electrical Code, 2012 International Building Code, 2012 International Energy Conservation Code, 2012 International Existing Building Code, 2012 International Fire Code, 2012 International Fuel Gas Code, 2012 International Mechanical Code, 2012 International Plumbing Code, and the 2012 International Residential Code. The applicable regulatory ordinance for development include the subdivision and zoning regulations.

City Tax Abatement

The State of Texas provides a means for local governments to encourage the creation and/or detention of job opportunities and additional business investment. Texas Tax Law permits an eligible taxing jurisdiction to designate an area as a reinvestment zone and to establish guidelines and criteria concerning tax abatement agreements within that zone. The City of Robinson knows that new jobs and investments will benefit the economy, provide needed opportunities, strengthen the real estate market, generate tax revenue to support local services, all of which will contribute to the economic development of the city.

McLennan County Tax Abatement

As a partner in economic development, McLennan County participates in real and personal property tax abatement for industrial development projects. Historically, the County will follow the recommendations of the municipality in establishing the length and percentage of the abatement but by statute, can provide up to 10 years of real property abatement and up to 7 years of abatement on personal property.

The final tax abatement contract will be executed once the reinvestment zone is completed and the document is recorded in the Official Public Records of McLennan County. The tax abatement application is submitted to the City of Robinson with complete documentation. The Robinson City Council and McLennan County Commissioners Court must approve the agreement.

Freeport Property Tax Exemption

The City of Robinson and McLennan County provide an exemption of ad valorem taxes due for Freeport property, which includes goods, wares, merchandise, ores, and certain aircraft and aircraft parts that have been detained in the state for 175 days or less for the purpose of assembly, storage, manufacturing, processing and fabricating. Robinson Independent School District Board of Trustees has expressed its intent to also grant Freeport exemption status if the project is built in the Robinson School District.

Pollution Control Equipment Property Tax Exemption

The State of Texas will provide the client with property tax exemption on pollution control equipment. The Texas Commission on Environmental Quality (TCEQ) must approve the exemption. The client must file an annual exemption form with the Texas Comptroller of Public Accounts by April 30 of each taxing year.

Tax Enterprise Zone Project Designation

The City of Robinson will utilize one of its designations to nominate the client for Enterprise Zone status with the State of Texas. Once the nomination is received, the client will be eligible for a full refund of the State sales and use tax paid between a specified period of time for building materials, consumables, and electricity and natural gas purchased and consumed in the normal course of business. Employment and capital investment commitments must be incurred and met within this timeframe. The client must commit that at least 35% of their new employees will meet economically disadvantaged or enterprise zone residency requirements.

Manufacturing Equipment Exemption

Texas offers a State and Local sales and use tax exemption. The exemption applies to lease or purchased machinery, equipment, replacement parts, and accessories that have a useful life of

more than six months, and that are used or consumed in the manufacturing, processing, fabricating, or repairing of tangible personal property for ultimate sale. Texas businesses are also exempt from paying state sales and use tax on labor for constructing new facilities.

Natural Gas and Electricity Exemption

Texas offers a State sales and use tax exemption paid for electricity and natural gas that is used in manufacturing, processing or fabricating. The company must complete a "predominant use study" that shows that at least 50% of the electricity or natural gas consumed by the business directly causes a physical change to a product.

Heart of Texas Workforce Solutions Recruitment and Screening Services

The Heart of Texas Workforce Solutions, the local service provider for the Texas Workforce Commission, provides comprehensive recruitment and screening services at no cost to business clients. Workforce can host job fairs at its facility or off-site to recruit employees for the business. Workforce will accept applications, or a generic equivalent, at its facility on behalf of the client and provide initial screening based on mutually established criteria and provide interview space within its state-of-the-art workforce center. Staff can provide technical assistance to the client in utilizing WorkInTexas.com, the largest database of job seekers in the State of Texas.

Central Texas Customized Training

Home to three excellent institutions of higher education - Baylor University, Texas State Technical College (TSTC), and McLennan Community College (MCC) – that are training the workforce of tomorrow. Headquartered in Waco, TSTC is training the workforce of today and tomorrow. Year after year, the college is recognized as a top performing institute and leads the nation in many of its two-year programs. In addition to a pipeline of trained employees, TSTC can customize training courses for businesses, or provide instructors to teach existing curriculum to both new and incumbent employees.

Baylor University, recognized across the globe for its high quality graduates, boasts top performing programs, including the No. 2 Entrepreneurship Program in the United States and provides bachelor, graduate, and post graduate degrees in a range of related fields. The Baylor Research and Innovation Collaboration is a 21-acre, 330,000 square foot total conversion of the former General Tire Manufacturing Plant, bringing together faculty, graduate students, engineers, and scientists to provide a durable facility that houses research, private industry, and workforce development.

MCC offers Associate in Arts and Associate in Science degrees in multiple disciplines, including business, marketing/sales, public relations, biomedical studies (4-year), engineering, clinical

laboratory sciences and more. Through the University Center at MCC, students can obtain bachelors, masters, and doctoral degrees in collaboration with its university partners.

Waco-McLennan County Economic Development Corporation Grants

The Waco-McLennan County Economic Development Corporation is a regional grant program jointly funded by the City of Waco and McLennan County that provides incentives for primary job creation and capital investment in McLennan County. These funds are typically awarded as a per job grant based on the amount of investment and the number of qualifying new jobs created at a wage of $12.00 per hour or more. Average awards range from $3,000 to $5,000 per qualifying new job created. An analysis of the project impact to the community is conducted to determine the level of support. Approval is based on a unanimous support of the three-member Waco-McLennan County Economic Development Corporation Board which includes the Waco City Manager, McLennan County Judge, and a representative from the Waco Industrial Foundation. A formal program project agreement must be approved in public session by the City of Waco and McLennan County.

Texas Capital Fund Grants

The Texas Capital Fund Real Estate Development Program is designed to provide financial resources to non-entitlement communities. Funds must be used for real estate development (acquisitions, construction, and/or renovation) to assist a business which commits to create and/or retain permanent jobs, primarily for low and moderate-income persons. The minimum award is $50,000 and the maximum is $1,500,000. No interest is charged on the loan amount. The program is only available to non-entitlement city or county governments. Projects are evaluated by using a scoring system based on community need, jobs, and economic impact. There is an open application process through the Texas Department of Agriculture. The Texas Capital Fund Real Estate Development Program is administered through the Texas Department of Agriculture.

Also available through the Texas Department of Agriculture is the Texas Capital Fund Infrastructure Development Program. This is an economic development tool designed to provide financial resources to non-entitlement communities. Funds from this program can be utilized for public infrastructure (water, wastewater, roads, etc.) needed to assist a business which commits to create and/or retain permanent jobs, primarily for low and moderate income persons. Like the Real Estate Development Program, applications for the Infrastructure Program are evaluated using a scoring system.

State Infrastructure Bank Loans

The State Infrastructure Bank Loan program, facilitated by the Texas Department of Transportation, provides low-cost funds for highway construction. TXDOT requires a tax pledge to secure the loan, similar to a Certificate of Obligation or General Obligation bond. Loan

proceeds cannot be used to pay costs of issuance, bond counsel or a financial advisor. This program requires an ad valorem pledge for repayment, similar to a Certificate of Obligation. As a result, utilization does not impact the City's credit rating if favorable terms can be negotiated.

Transportation Reinvestment Zones

Transportation reinvestment zones provide a value capture method for funding transportation projects. A transportation reinvestment zone is a specific continuous zone around a planned transportation project that is established as a method to facilitate capture of the property tax increment arising from the planned project. A transportation reinvestment zone can be used in conjunction with other financing mechanisms to fund a transportation project. It allows a community to capture both existing economic growth as well as expected growth generated from the transportation project.

Chapter 380 Agreements

The improvement and diversification of the economy in the Robinson area is a goal that should be pursued for both the current and future welfare of the citizens of the City of Robinson. Economic development and diversification, the elimination of unemployment or underemployment, and the development of transportation and commerce in the State of Texas are public purposes pursuant to Article III, §52-a of the Texas Constitution. Chapter 380 of the *Local Government Code* authorizes the City Council to establish a program for economic development, and to stimulate, encourage and develop business location and commercial activity in the City. This program applies to businesses to be engaged or engaging in manufacturing, assembly, warehousing/distribution, and/or other commercial enterprises, including enterprises which create or facilitate tourism, and professional and technical support businesses.

Chapter 7-Water System

The City of Robinson is authorized by the Texas Commission on Environmental Quality (TCEQ) to operate a public water system to provide potable water to the citizens of the City. The City currently provides potable water to approximately 4400 individual connections and is also contracted to provide wholesale treated water to the City of Lorena.

In 2012, the City completed the *City of Robinson Water System Master Plan.* This was the City's first comprehensive water master plan. The plan lays out a roadmap for the City to follow in order to address the current inadequacies within the existing water system and additionally provides for future growth and development. The Master Plan includes a 20-Year Capital Improvement Program (CIP) that lists the priorities, implementation timelines, and estimated costs for the identified system wide improvements.

The Texas Commission on Environmental Quality (TCEQ) promulgates rules and regulations applicable to the design and operation of drinking water systems. The TCEQ guidelines are set forth in the Texas Administrative Code, *Chapter 290 Public Drinking Water*. The water system must also meet the requirements of the Southern Trinity Underground Water District due to the use of groundwater in McLennan County.

TCEQ requires the City to meet minimum standards and it is the City's responsibility to complete necessary improvements regarding the operation of the existing system such that it adheres to those minimum standards. Additionally, the TCEQ holds enforcement authority against entities who are not meeting the regulatory obligation to provide continuous and adequate service.

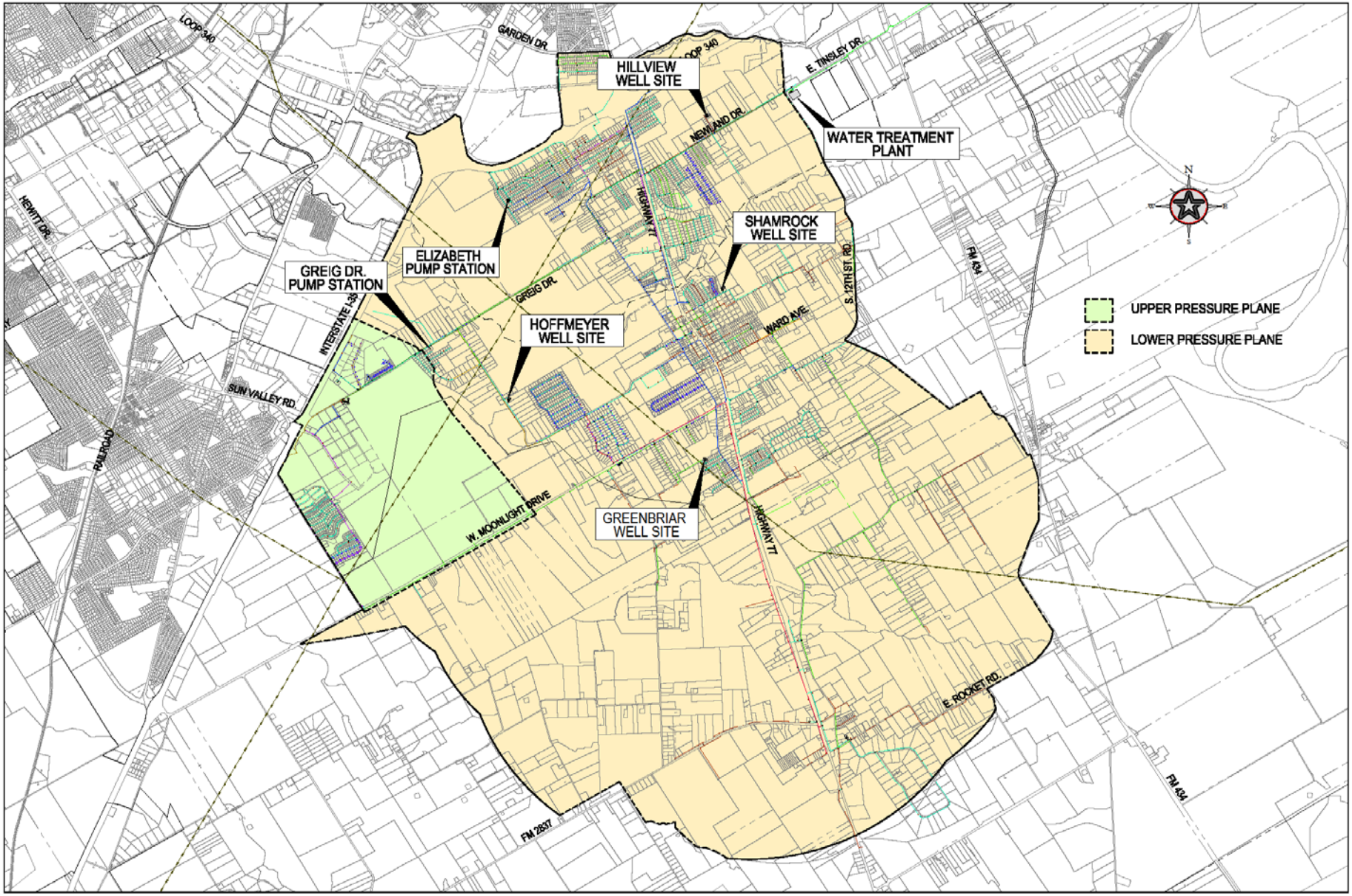
The City of Robinson's water system began as a groundwater system by the interconnection of water wells that were drilled into the Trinity Aquifer. The city has a total of ten independent well sites with only five of them currently in service. All of the wells that were drilled in the 1950's have been abandoned. With the growing demand for treated water and a declining water level in the aquifer, the City constructed a surface water treatment plant in the 1990's to supplement the existing groundwater system. In the late 1990's the city added an upper pressure plane to the system along with providing the City of Lorena with treated water. The well sites, water treatment plant, Greig Drive pump station and the two pressure planes are shown in the illustration below known as "Pressure Plane Boundaries".

Currently there are approximately 4,400 (2011) connections served by the City's water system. The areas served include the lower and upper pressure planes. Along with providing water for the citizens of the City of Robinson, the City supplies 500,000 gallons per day of treated water to the City of Lorena.

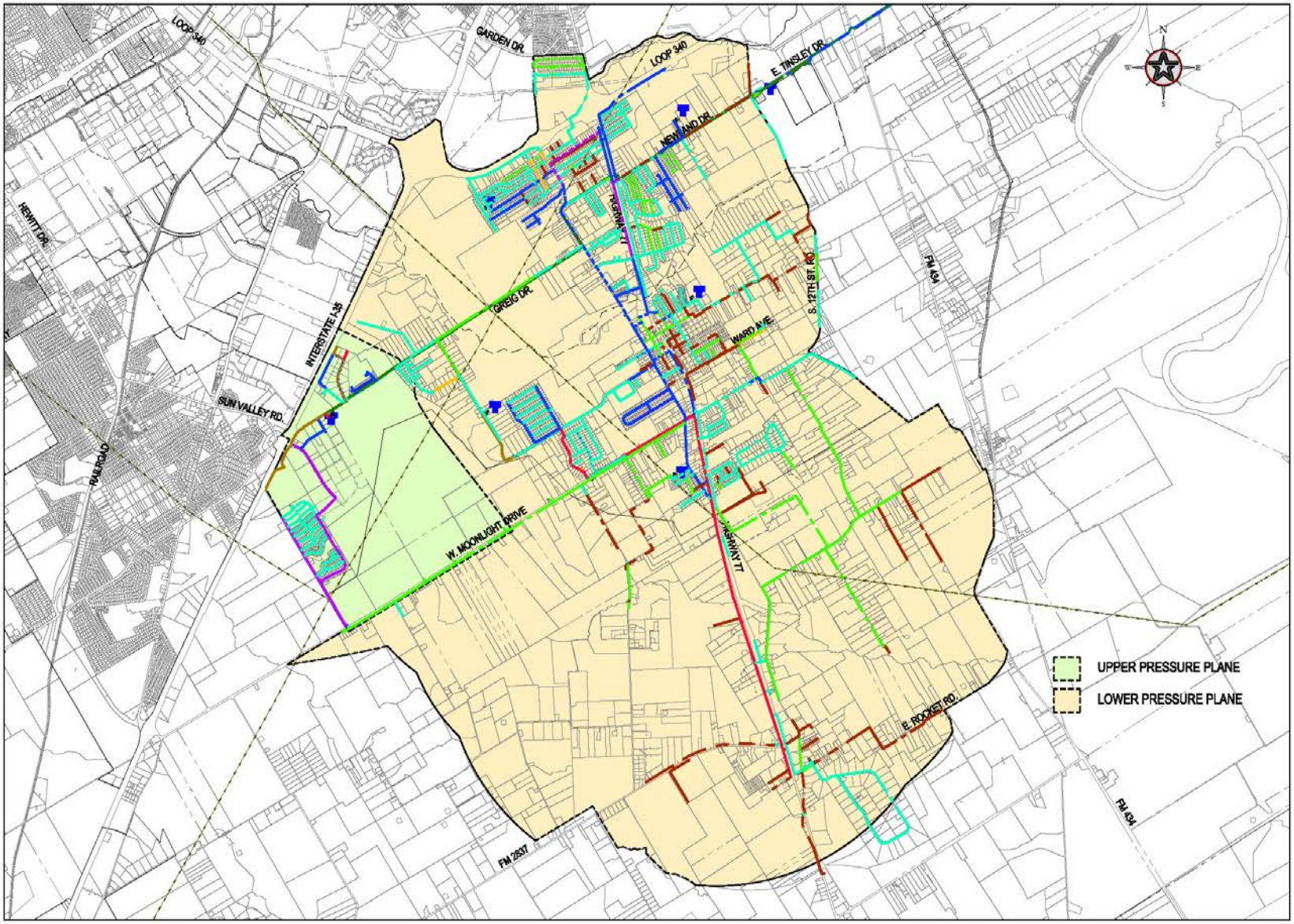
Water System Components

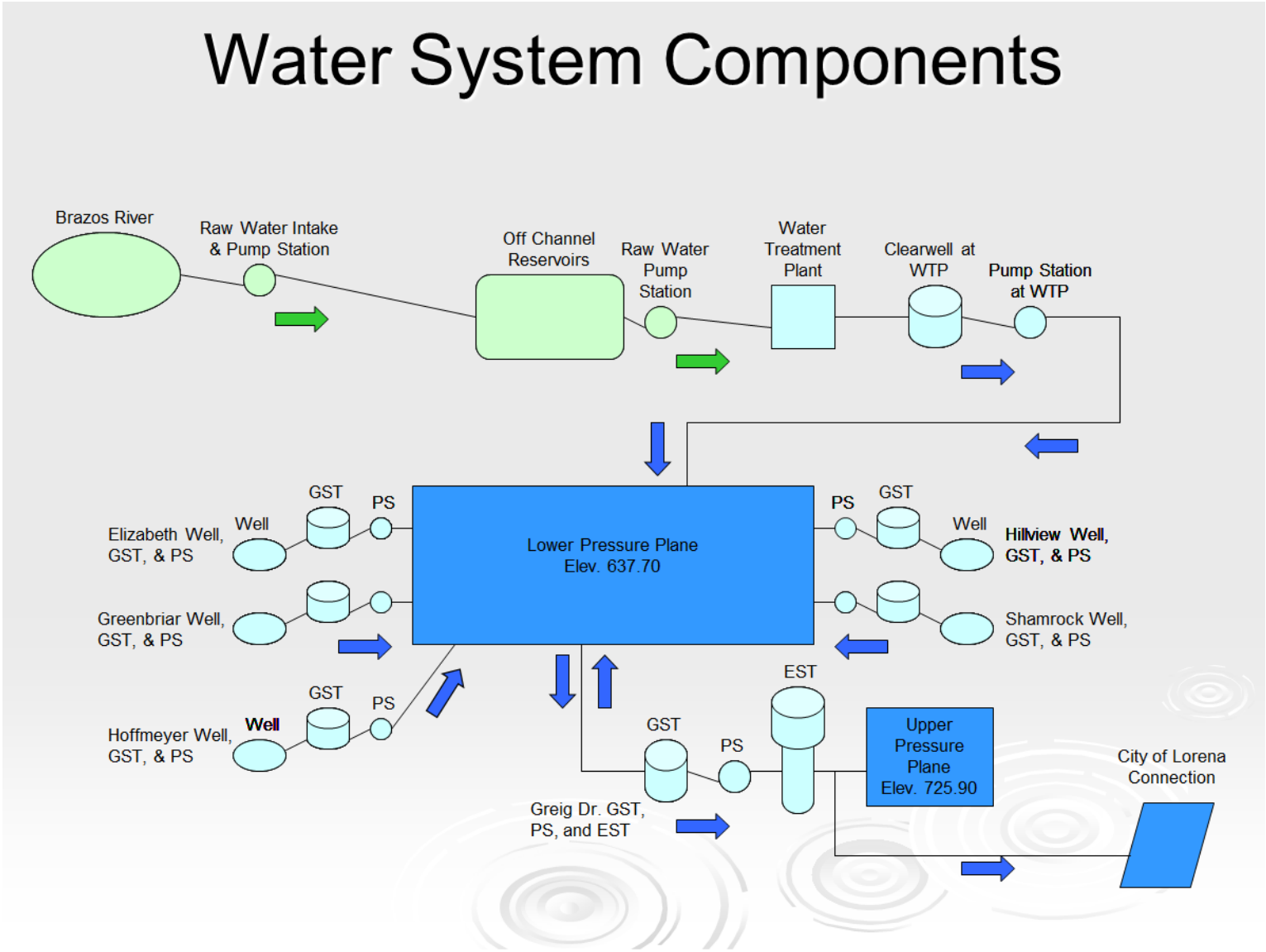
A water system is comprised of the following components: water supply, water treatment, water storage, water pumping, and water distribution. Water supply for the City's water system is provided by two sources which include groundwater and treated surface water. This section of the Comprehensive Plan will include a summary of the inventory, analysis, and proposed capital improvements of the water system.

Pressure Plane Boundaries



City of Robinson Water Distribution System




Water System Components
Brazos River
Raw Water Intake & Pump Station
Off Channel Reservoirs
Raw Water Pump Station
Water Treatment Plant
Clearwell at WTP
Pump Station at WTP
Lower Pressure Plane Elev. 637.70
Elizabeth Well, GST, & PS
Well
GST
PS
Greenbriar Well, GST, & PS
Hoffmeyer Well, GST, & PS
Well
Hillview Well, GST, & PS
Shamrock Well, GST, & PS
EST
Upper Pressure Plane Elev. 725.90
Greig Dr. GST, PS, and EST
City of Lorena Connection

Ground Water System

Groundwater systems located in McLennan County are regulated by the Southern Trinity Groundwater Conservation District. Beginning in 2010, each entity pumping groundwater in McLennan County was required to submit an application to the District for issuance of a Historical Use Production Permit to utilize groundwater resources from the Trinity Aquifer. Any additional groundwater capacity beyond the permitted amount will have to be approved through the Groundwater District and most likely will only be available if another entity relinquishes their existing permitted rights.

The City of Robinson currently owns and operates five wells while five of the original wells that were drilled in the 1950's have been abandoned (see the table below). The wells are located throughout the water system and are interconnected by the distribution system piping. The capacity of each well along with year it was drilled is also included in the table below. The City currently has an existing well capacity of 2.10 million gallons per day.

Well Sites

Well No.	City Name	Year Drilled	TCEQ Rated Capacity (GPM)
1	O'Dowd	1951	Abandoned
2	Denison	1955	Abandoned
3	Greenbriar	1961	185
4	Rosenthal	1956	Abandoned
5	Ward	1950	Abandoned
6	Chapel Hill	1957	Abandoned
7	Elizabeth	1985	209
8	Hoffmeyer	1982	375
9	Hillview	1984	350
10	Shamrock	1987	350

Surface Water Treatment

In the 1990's the City constructed a surface water treatment plant with a capacity of 2.08 million gallons per day to supplement the existing groundwater system. The surface water treatment system includes a raw water intake structure located at the Brazos River, raw water transmission line, an off channel reservoir to store raw water, conventional treatment plant, and reverse osmosis treatment system. A permit provided by TCEQ allows the City to divert raw water from the Brazos River to an off channel reservoir complex for impoundment. This complex is projected to include four reservoirs with the ability to impound up to 13,100 feet at build out of the reservoir system. To date, Reservoir No. 1 has been constructed, therefore the City is permitted to divert 3290 acre-ft from the Brazos River, impound 1569 acre-ft, and utilize 1789 acre-ft per year for municipal use.

Alternate Treated Water Supply Source

Currently the City of Robinson does not have an alternate treated water supply source provided by another entity. The City of Robinson currently provides all of its potable water by utilizing groundwater and treated surface water from the Brazos River.

Water Storage Tanks

Storage tanks located at the well sites and the water treatment plant provide water storage for ease of operation of the pumps and also provides a buffer storage between the distributions system and water production. Water stored within the City's water system has one of two different designations, either ground storage or elevated storage. TCEQ requires the system to have at least 200 gallons per connection of total storage which includes ground storage plus elevated storage. The system must also maintain a minimum of 100 gallons per connection of elevated storage, but is required to have 200 gallons per connections if the pumping capacity of the system is not at least 2.0 gallons per connection or have at least 1000 gallons per minute and able to meet the maximum day demand. The system has to meet these capacity requirements for both the lower and upper pressure plane. The table below provides a list of storage locations within the City's water system along with the capacity, type of tank, and storage classification.

Water Storage Tanks

Storage Location	Capacity (gallons)	Type of Tank	Storage Classification
Well # 3 Greenbriar	250,000	GST	Ground Storage
Well #7 Elizabeth	500,000	GST	Ground Storage
Well #8 Hoffmeyer	250,000	GST	Ground Storage
Well #9 Hillview	250,000	GST	Ground Storage
Well #10 Shamrock	340,000	GST	Ground Storage
Clearwell at WTP	500,000	GST	Ground Storage
Greig Drive PS	800,000	GST	Elevated Storage LPP
Greig Drive PS	200,000	EST	Elevated Storage UPP
Total Storage	**3,090,000**		

GST – Ground Storage Tank, EST – Elevated Storage Tank
LPP – Lower Pressure Plane, UPP – Upper Pressure Plane

Pump Stations

Pump Stations are utilized in water systems to distribute the treated water throughout the distribution system. Included in in the table below is a list of well pump stations that the City currently operates to deliver treated water to the distribution system.

Well Pump Stations

Pump Station Location	Firm Capacity (gpm)	Firm Capacity (MGD)
Well # 3 Greenbriar	130	0.19
Well #7 Elizabeth	130	0.19
Well #8 Hoffmeyer	290	0.42
Well #9 Hillview	160	0.23
Well #10 Shamrock	255	0.37
High Service PS	2,250	3.24
Total LLP	3,215	4.63
Greig Drive PS (UPP)	900	1.30

Distribution System Water Lines

Once the water is treated and stored for delivery, the pumps distribute the treated water throughout the system though pipelines. An inventory of the system's existing water lines in the distribution system is provided in the table below. The pipelines range from as small as 2-inch up to 24-inch with an approximate total length of almost 123 miles. Over 30% of the distribution system is less than 6" diameter which does not allow for fire flow in these areas.

Water Distribution System–Water Lines

Diameter (inches)	Total Length (ft)	Total Length (Miles)	Percent of Total Length of System
2 in	99,041	18.76	15.3
3 in	5,815	1.10	0.9
4 in	101,850	19.29	15.7
6 in	238,758	45.22	36.9
8 in	90,301	17.10	14.0
10 in	21,848	4.14	3.4
12 in	27,007	5.12	4.2
16 in	18,309	3.47	2.8
18 in	30,131	5.71	4.7
24 in	13,920	2.64	2.1
Total Line Length	**646,980**	**122.53**	**100%**

Water System Analysis-Ground Water System

The City currently operates five Trinity Aquifer Wells. Any additional groundwater supply from this aquifer must be permitted through the STGC District and will most likely be due to an entity abandoning their existing rights which is a very small probability. With this understanding, it is assumed that the City will not be able to increase their existing permitted amount. Another consideration for the groundwater supply is the current decline in the aquifer level each year. Based on analysis of the data provided by the Texas Water Development Board Ground Water Database Reports Water Publication Report for McLennan County, the drop in the level of the Fosston Formation of the Trinity Aquifer is approximately eight to ten feet annually.

Each of the existing wells that are currently in service was analyzed based on the present day level of aquifer, annual level of the aquifer, elevation of existing pump, and ability to lower pumps based on casing size. Based on these parameters it was determined that the Greenbriar and Elizabeth wells would be abandoned once the aquifer level drops below the pump level of the existing well.

Wells located at the Hoffmeyer, Hillview, and Shamrock sites, based on the casing size and estimated aquifer levels have the ability to place larger pumps at lower levels for continuing to utilize these sites for an extended period of time past the existing pump level year. It only prolongs the life of these water supplies for a few years but based on costs, this appears to be feasible alternative compared to other treated water costs. Included in the table below is a list of proposed improvements at each well.

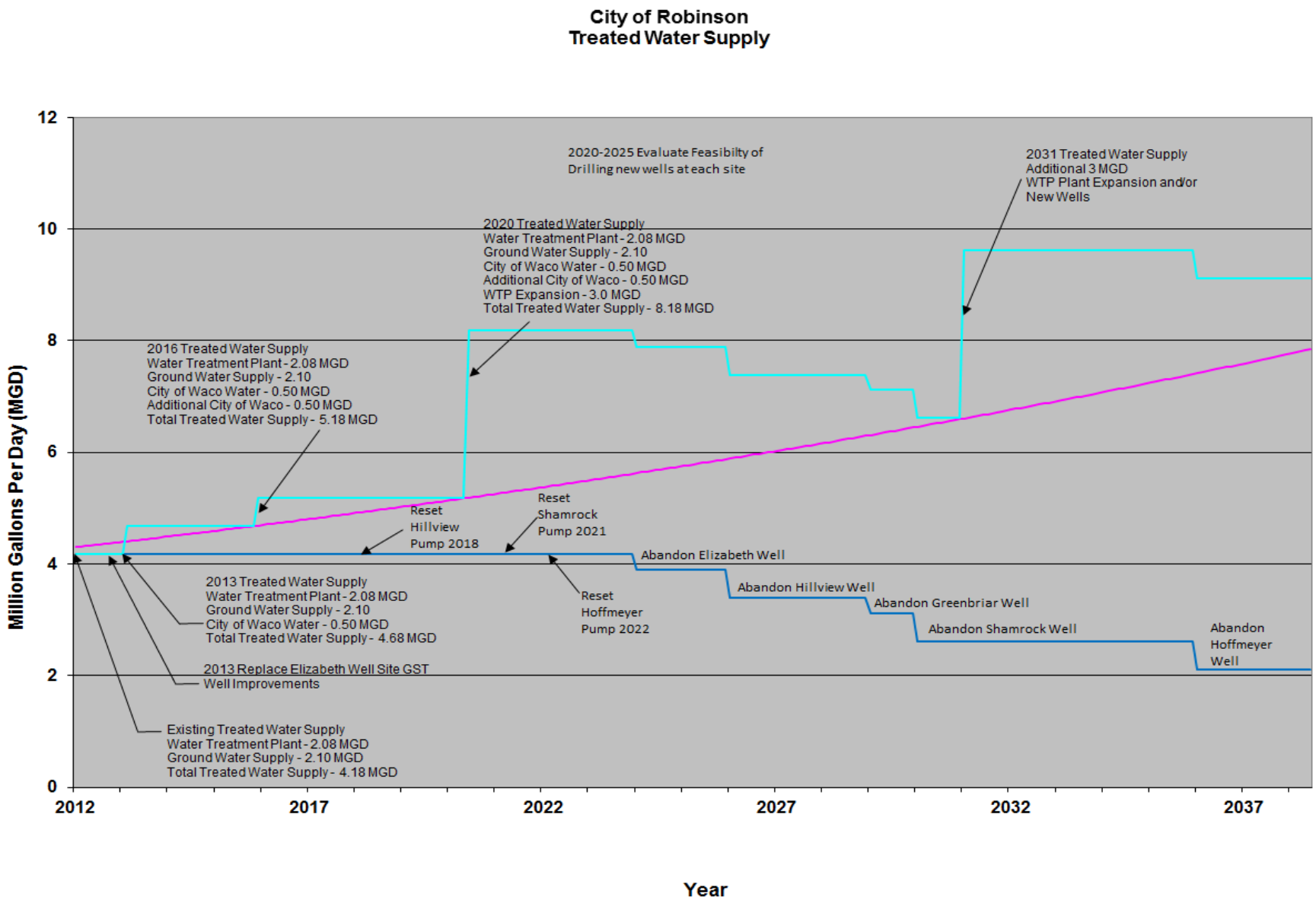
Well Site Proposed Improvements

Well No.	City Name	Proposed Improvements
3	Greenbriar	None
7	Elizabeth	Well Improvements, Replace Existing GST
8	Hoffmeyer	Reset Well Pump, Rehabilitate Existing GST
9	Hillview	Reset Well Pump, Rehabilitate Existing GST
10	Shamrock	Reset Well Pump, Rehabilitate Existing GST

GST – Ground Storage Tank

Surface Water Supply

Based upon the assumption that no additional treated water capacity can be acquired by increasing well production, expansion of the existing water treatment plant is proposed for additional treated water supply. Expanding the existing water treatment plant will require improvements in the raw water components along with improvements at the existing water treatment plant.


City of Robinson
Treated Water Supply
Million Gallons Per Day (MGD)
Year
0
2
4
6
8
10
12
2012
2017
2022
2027
2032
2037
2020-2025 Evaluate Feasibilty of
Drilling new wells at each site
2031 Treated Water Supply
Additional 3 MGD
WTP Plant Expansion and/or
New Wells
2020 Treated Water Supply
Water Treatment Plant - 2.08 MGD
Ground Water Supply - 2.10
City of Waco Water - 0.50 MGD
Additional City of Waco - 0.50 MGD
WTP Expansion - 3.0 MGD
Total Treated Water Supply - 8.18 MGD
2016 Treated Water Supply
Water Treatment Plant - 2.08 MGD
Ground Water Supply - 2.10
City of Waco Water - 0.50 MGD
Additional City of Waco - 0.50 MGD
Total Treated Water Supply - 5.18 MGD
Reset
Hillview
Pump 2018
Reset
Shamrock
Pump 2021
Abandon Elizabeth Well
Abandon Hillview Well
Abandon Greenbriar Well
Abandon Shamrock Well
Abandon
Hoffmeyer
Well
Reset
Hoffmeyer
Pump 2022
2013 Treated Water Supply
Water Treatment Plant - 2.08 MGD
Ground Water Supply - 2.10
City of Waco Water - 0.50 MGD
Total Treated Water Supply - 4.68 MGD
2013 Replace Elizabeth Well Site GST
Well Improvements
Existing Treated Water Supply
Water Treatment Plant - 2.08 MGD
Ground Water Supply - 2.10 MGD
Total Treated Water Supply - 4.18 MGD

Treated Surface Water System Improvements

Component	Proposed Improvements
Raw Water Intake	Increase Pumping Capacity
Off Channel Reservoir System	Obtain Approval from TCEQ, Construct Pond No. 2
Raw Water Pump System	Construct Additional Raw Water Pump Station and Transmission Line
Conventional Treatment Plant	Construct Additional Conventional Treatment Plant
Reverse Osmosis System	Construct Additional Reverse Osmosis Treatment System
Clearwell	Construct Additional Clearwell Storage Tank
High Service Pumps	Relocate Existing Pump Station and Add Additional Pumping Capacity

Alternate Treated Water Supply Source

The City of Robinson currently provides all of the treated water supplied to the system by either groundwater or treated surface water. With the declining aquifer levels, it is a high probability that this source for potable water will diminish over time. A plant expansion requires time for planning, design, and construction of the water plant which can take up to five years. There is a need for additional treated water existing today. Considering the groundwater issues listed above and the timing of the expansion of the existing treatment plant, an additional source of treated water was explored.

Based on the need for an alternative water source to meet the current demand, the City of Robinson is currently negotiating a contract with the City of Waco to provide 0.5 million gallons per day of treated water to the City of Robinson. The plan is for the City of Robinson to start receiving the alternate treated water source by May 2013 with a take point located at the intersection of Corporation Parkway and the South Bound I-35 Access Road. An additional 0.5 million gallons per day of treated water from the City of Waco may be necessary at a future date based upon projected growth.

Water Storage Tank

Water storage can be designated by different categories based on its use and location. The system must meet the overall storage requirements based on the number of connections along with elevated storage requirements being met for each pressure plane. Utilizing the inventory of storage tanks, the existing storage system was analyzed based on these required parameters. The analysis for total storage is summarized in the table shown below.

The lower pressure plane and upper pressure plane elevated storage was analyzed based on the number of connections for the respective pressure planes. There is an existing elevated storage deficit for the lower pressure plane while the upper pressure plane has a small surplus.

One of the recommendations of the Master Plan is to create a middle pressure plane by constructing a new elevated tank adjacent to the I-35 northbound access road. Once this new pressure plane is in operation, the area between Dayton Drive and N. Old Robinson Road would be connected to the new

pressure plane. This will reduce the number of connections in the lower pressure plane creating a surplus in elevated storage for the pressure plane. Initially the elevated tank will be supplied with treated water through the City of Waco connection. Future supply to the tank could include additional treated water from the City of Waco and/or treated water from the City's lower pressure plane. This tank will serve the middle pressure plane along with providing an additional supply to the lower pressure plane through a control valve.

Total Storage Required Existing Water System

Description	Connections	TCEQ Required Storage (gallons)
Lower Pressure Plane	3,590	718,000
Upper Pressure Plane	810	162,000
City of Lorena Connection	579*	115,800
Total TCEQ Required Storage		995,800
Existing Storage		3,090,000
Total Storage Surplus		2,094,200

* Equivalent water connections based on 347 gpm (0.5 MGD) divided by 0.6 gpm/connection

Elevated Storage Analysis

Description	Capacity (gallons)	TCEQ Required Storage (gallons)	Surplus/Deficit (gallons)
LLP Existing Conditions	352,651	359,000	-6,349
LLP with MPP	419,183	316,500	102,683
UPP Existing Conditions	200,000	162,000	38,000

Water Pump Stations

Pumping capacity of the system must meet TCEQ regulations of 0.6 gallons per minute per connection. The lower pressure plane has a current pumping capacity of 3,215 gallons per minute while the upper pressure plane's current pumping capacity is 900 gallons per minute. The tables which follow summarize the analysis for the existing pump stations with respect to the TCEQ rules for pumping.

There is a current surplus in the existing pumping system. There is not an abundant amount of available capacity to absorb future growth; consequently the system will require additional pumping capacity for future connections. Additional pumping capacity is proposed as part of the water treatment plant expansion. These improvements will add to the available pumping capacity for the lower pressure plane and potentially the middle pressure plane if required.

Additional pumping capacity is also proposed as part of the improvements for the Greig Drive Pump Station. These improvements will allow for future growth and also meet the 1000 gallon per minute threshold by TCEQ for reducing the required elevated storage from 200 gallons per connection to 100 gallons per connection.

Pumping Analysis–Lower Pressure Plane

Description	Connections	TCEQ Required Pumping (gpm)
Lower Pressure Plane	3,590	2,154
Upper Pressure Plane	810	486
City of Lorena Connection	579	347
TCEQ Required Pumping Capacity		2,987
Ex. Pumping Capacity		3,215
Total Pumping Surplus		228

Pumping Analysis–Upper Pressure Plane

Description	Connections	TCEQ Required Pumping (gpm)
Upper Pressure Plane	810	486
City of Lorena Connection	579	347
TCEQ Required Pumping Capacity		833
Ex. Pumping Capacity		900
Total Pumping Surplus		67

Distribution System

The existing distribution system waterlines are used to distribute potable water to the service connections throughout this system while meeting the requirements of TCEQ for the system. A water distribution system must maintain a minimum pressure of 35 psi during the peak demand period. The peak demand period is defined by applying a peaking factor at each service connection based on the historical peak demand for the City. A water model was completed to analyze the City's existing water distribution system. As shown in the "Existing Water System Model" below, the red dots identify areas in which the system pressures fall below 35 psi during the peak demand period.

The low pressure issues in the area between Dayton Drive and N. Old Robinson Road will be resolved by moving these connections to the proposed middle pressure plane. Other low pressure issues will be resolved by replacing the existing small diameter lines with 8-inch lines along with providing a future 16-inch loop line along 12th Street.

WATER SYSTEM IMPROVEMENTS PLAN

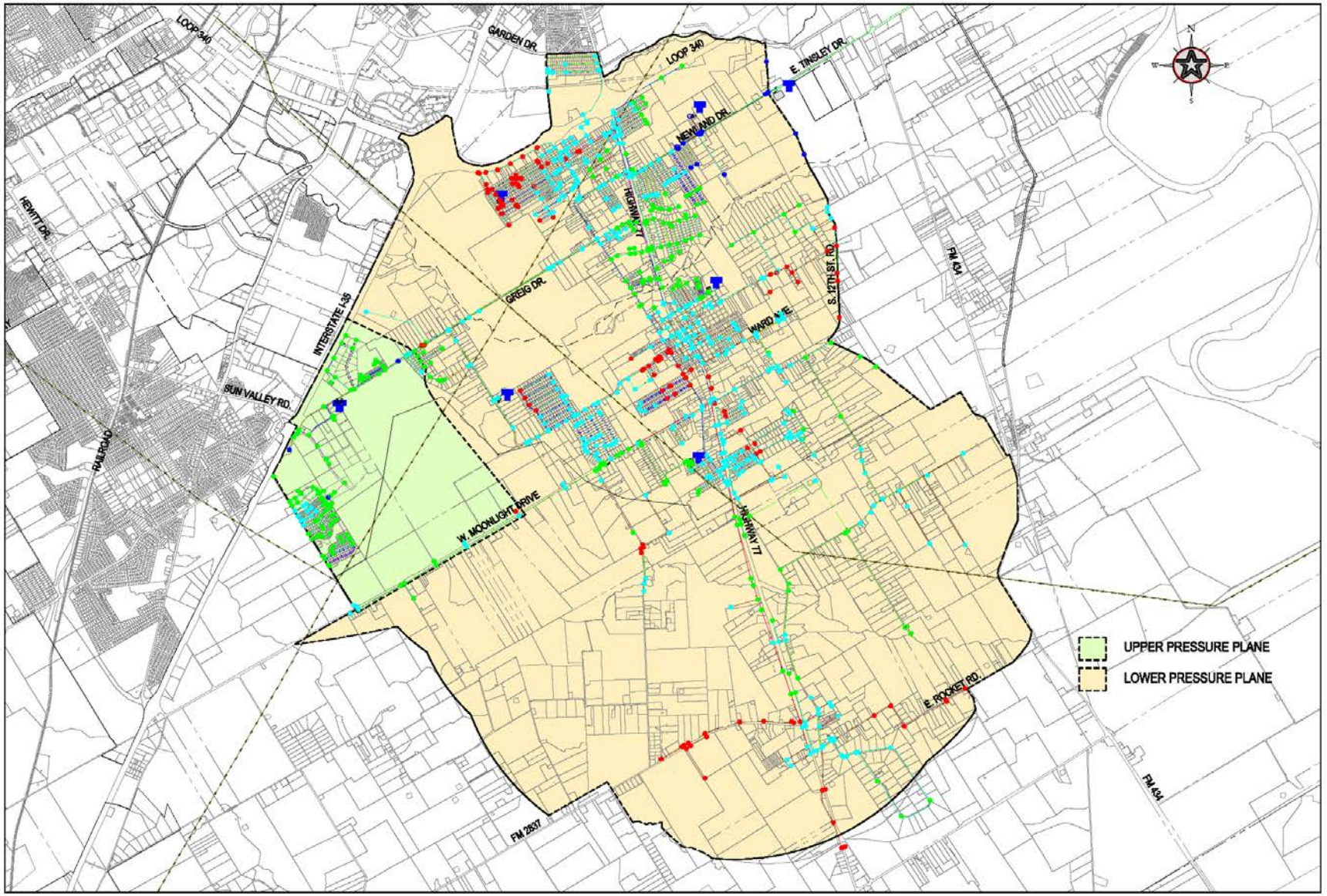
Capital Improvement Program

The *City of Robinson Water System Master Plan* completed this year includes a 20-Year Capital Improvement Program. The magnitude of the proposed improvements is rather substantial. However, if these improvements are not methodically undertaken, Robinson will increase their risk opportunity that the TCEQ will enforce penalties against the City for not meeting their regulatory obligation to provide continuous and adequate service and growth opportunities for the City. The Master Plan includes an implementation schedule that shows the City how they should execute the various improvements that are identified within the CIP.

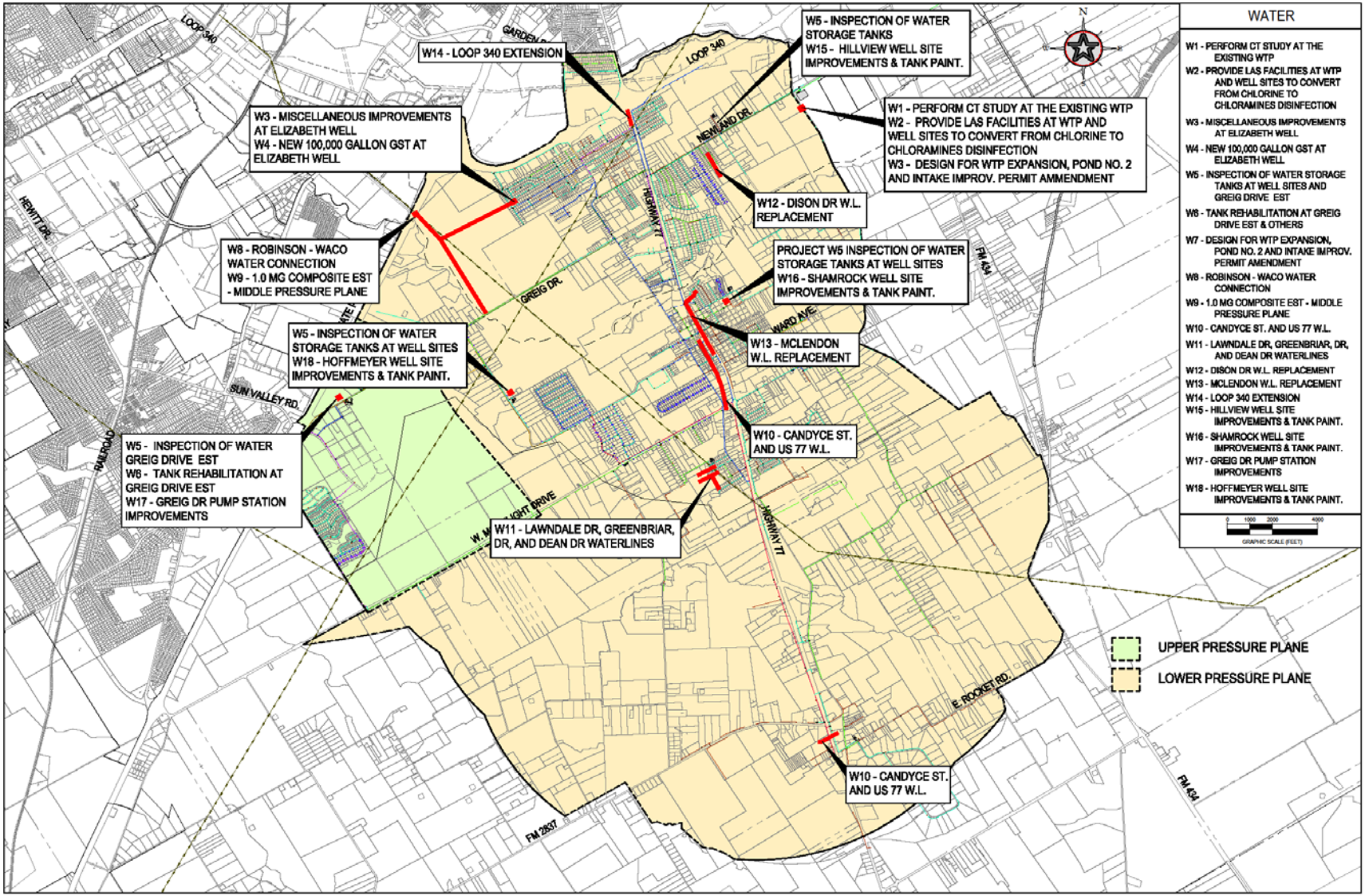
Water Conservation Plan and Drought Contingency Plan

Water utilities in Texas serving 3,300 connections or more are required by TCEQ to prepare and adopt a Drought Contingency Plan and to make it available upon request. Title 30, Texas Administrative Code, Chapter 288 requires these entities to submit a Drought Contingency Plan by May 1, 2009 and every five years thereafter to coincide with the regional water planning group process. The City of Robinson recently amended and adopted Ordinance No. 2012-015 Drought Contingency Plan, Article IV, “Water Conservation”, Chapter 8, “Environment”, of the Code of Ordinances on October 2, 2012.

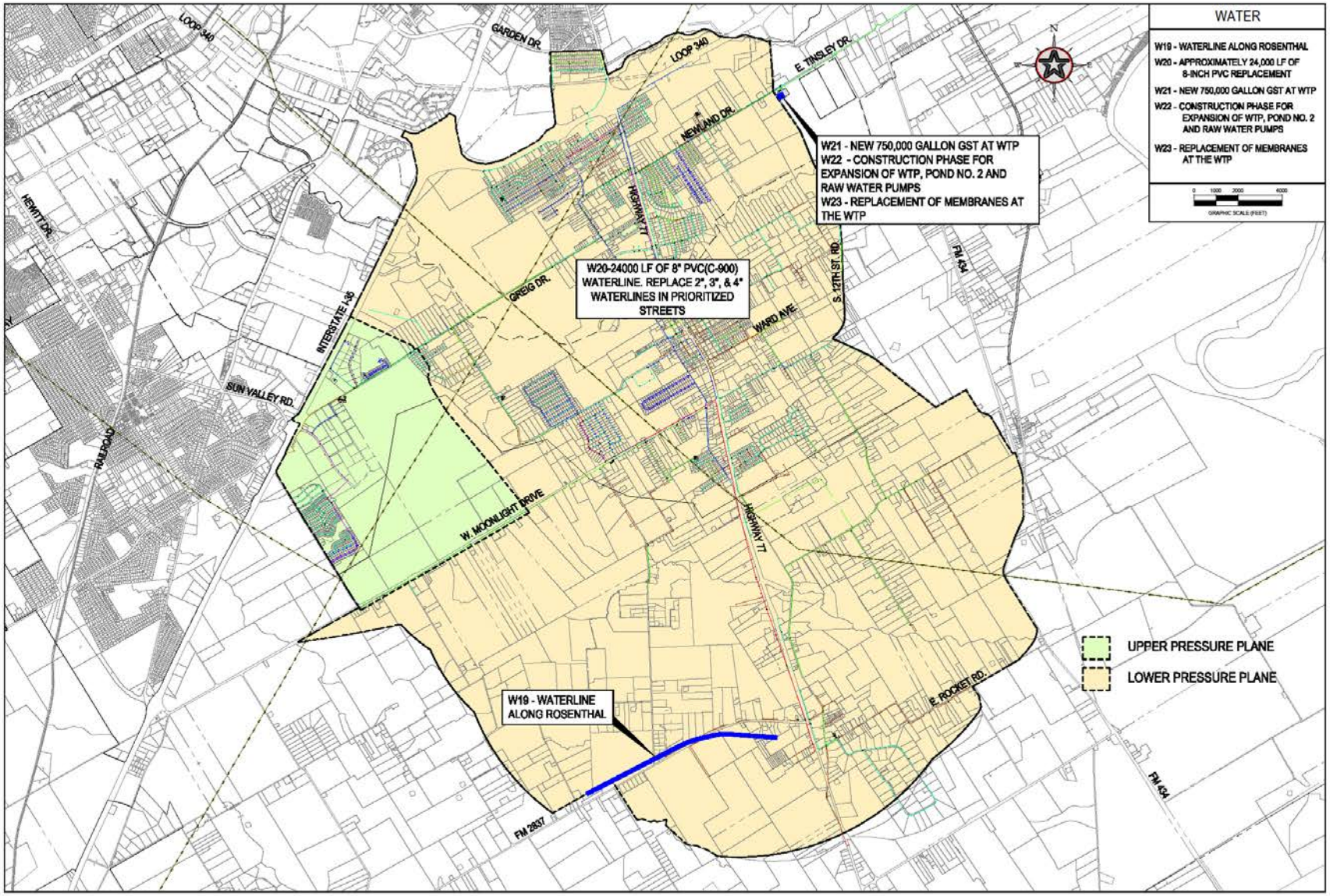
Existing Water System Model



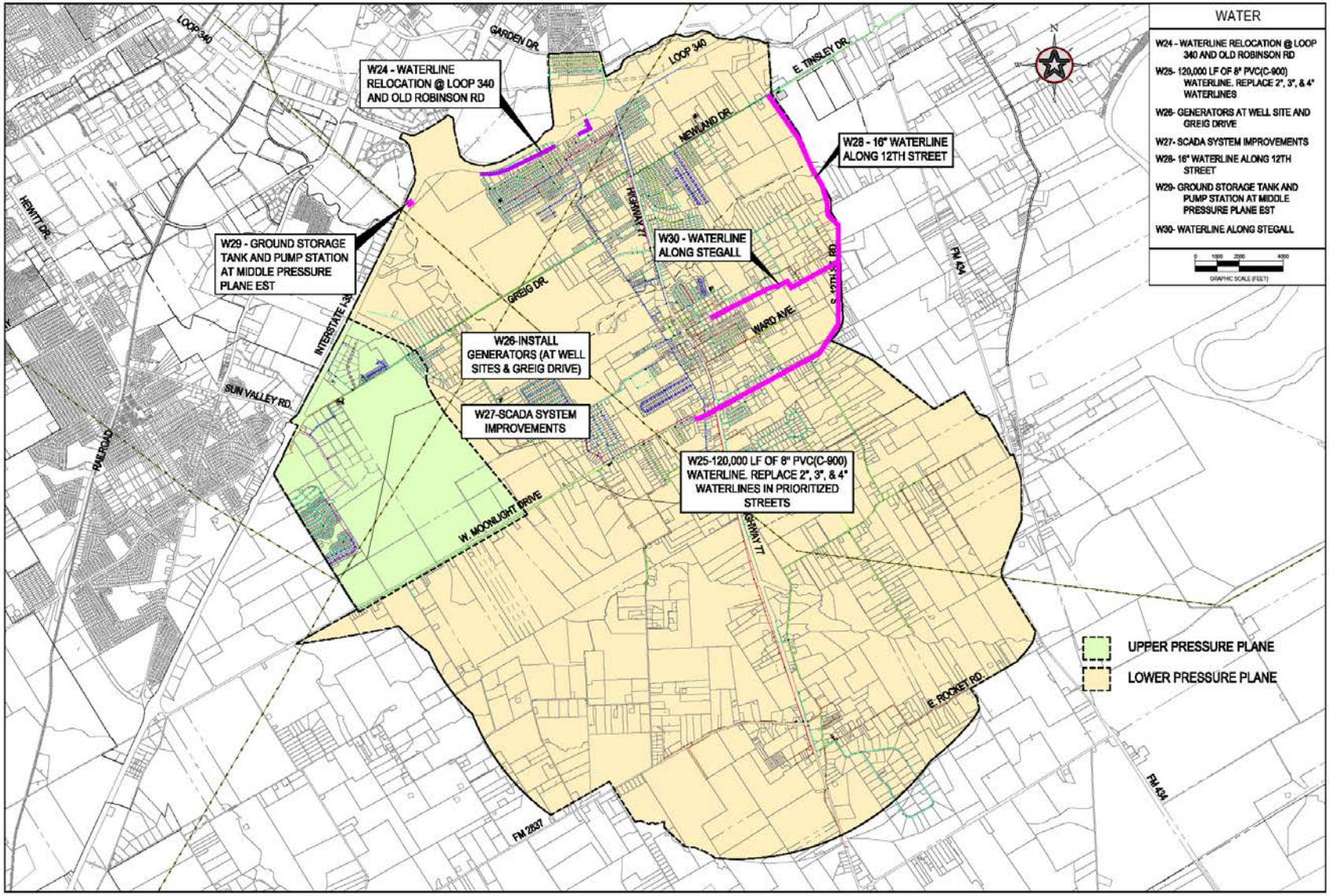
Capital Improvement Program-Priority 1 Improvements



Capital Improvement Program–Priority 2 Improvements



Capital Improvement Program–Priority 3 Improvements



Chapter 8-Wastewater System

The City of Robinson is permitted and authorized to provide customers with safe and sanitary wastewater disposal. The City's corporate limits cover approximately 30.9 square miles which is a very large area as compared to others cities of comparable population. The area within the City limits includes portions of five major watershed basins. The City's existing wastewater collection system is broken into nine wastewater sub-basins that correspond to the five major watershed basins (Figure 1). Each existing wastewater basin generally drains in a southeasterly direction.

In 2012, the City completed the *City of Robinson Wastewater System Master Plan.* This was the City's first comprehensive wastewater master plan. The plan lays out a roadmap for the City to follow in order to address the current inadequacies within the existing wastewater system and additionally provides for future growth and development. The Master Plan includes a 20-Year Capital Improvement Program (CIP) that lists the priorities, implementation timelines and estimated costs for the identified system wide improvements.

The Texas Commission on Environmental Quality (TCEQ) promulgates rules and regulations applicable to the design and operation of municipal wastewater systems. The TCEQ guidelines are set forth in the Texas Administrative Code, *Chapter 217 Design Criteria for Domestic Wastewater Systems*.

The TCEQ requires the City to meet minimum standards / requirements and it is the City's responsibility to complete necessary improvements regarding the operation of the existing system such that it adheres to those minimum standards. Additionally, the TCEQ holds enforcement authority against permittee's who are not meeting there regulatory obligation to provide continuous and adequate service.

History of the System

The original foundation of the collection system was installed as part of a 1964 gravity sewer project. The project consisted of the installation of approximately 52,000 LF of 6-inch vitrified clay pipe, 35,000 LF of 8-inch vitrified clay pipe (VCP) as well as the Ward, Lyndale and US-77 (now abandoned) lift stations. The original Ward and Lyndale lift stations are still currently in operation. This one project installed approximately 27% of the total current gravity collection system. The sewer lines installed as part of the original gravity sewer project are now approximately 50 years old and were placed within the following Additions: Meadowbrook, Weibush, Liberty, Denison, Greenland Hills, Fain Estates, Tinsley, Robindale, Town Area, Ponderosa, Lux, Conner and Cain/Donlo. A large percentage of these lines were installed at the rear of lots and not located within either an alley or an easement.

During this same timeframe (in the early 1960's), the City also constructed and began operating three independent wastewater treatment plants within its corporate limits. Prior to this time, municipal wastewater service and treatment was not provided to City of Robinson residents. The three original wastewater treatment plants were called the South Plant, the Town Plant and North Plant.

The North Wastewater Treatment Plant was located near 12th Street and Loop 340 near Cottonwood Creek and was abandoned sometime in the mid 1980's. The Town Wastewater Treatment Plant was located north of East Shamrock Drive near Flat Creek and was abandoned sometime in the early 1990's. The South Wastewater Treatment Plant was located south of Caron Street and West Roy Drive near the lower limits of Crow Creek and was abandoned sometime around 1997. Therefore, from the mid

1980's to around 1997, the City abandoned one treatment plant at a time and purchased equity into the Waco Metropolitan Area Regional Sewerage System (WMARSS) in three intervals. The WMARSS is a joint wastewater treatment effort by the Cities of Bellmead, Hewitt, Lacy Lakeview, Lorena, Robinson, Waco and Woodway.

Knowledge of this fact is a critical piece of information to understand since portions of the City's current collection system are still configured based upon the locations of these three original circa early 1960 wastewater treatment plant locations.

There are presently a total of 3,383 (2011) connections to the City wastewater system, none of which lay outside the city limits. Over 95% of the City's wastewater service connections are residential. There is a sizable portion of the corporate limits that currently is un-served by municipal wastewater service (City collection service). Approximately 53% of the area within southern city limits is served by septic systems. (Figure 2)

Because the topography of the area demands the use of lift stations, providing, operating and maintaining this type of service is expensive. This contributes to the reason why wastewater service has not been extended to all parts of the City (especially the southern portions).

The City of Robinson owns and operates the wastewater collection system within the City. This system is comprised of gravity wastewater collection lines as well as lift stations & force mains. Gravity wastewater collection lines are generally constructed approximately parallel to the ground surface and at a sufficient depth to serve the adjoining properties. By using gravity, the use of and expense associated with lift stations can be avoided. The gravity collection system should be sized to carry the wastewater flow originating in the area served by each main, plus infiltration and inflow.

Wastewater Treatment

All wastewater generated by the City is sent to the WMARSS for treatment. By sharing centralized regional service facilities, the individual member cities of the WMARSS are not required to operate independent wastewater treatment plants. The City of Robinson obtained the full ownership equity that it currently has in the WMARSS around 1997. Therefore, since the City is a current equity owner of the WMARRS, the City is not required to operate or maintain an independent wastewater treatment facility and the City's entire collection system flows are conveyed to the WMARSS for treatment purposes. An inventory of the system's existing gravity lines and wastewater manholes is provided below.

GRAVITY WASTEWATER COLLECTION SYSTEM

Diameter (inches)	Total Length (ft)	Total Length (Miles)	Percent of Total Length of System
6 in	188,277	35.66	58.4
8 in	97,735	18.51	30.3
10 in	19,098	3.62	5.9
12 in	4,418	0.84	1.4
15 in	11,096	2.10	3.5
18 in	1,401	0.27	0.4
21 in	321	0.06	0.1
Total Line Length	***322,346***	***61.06***	***100%***

The gravity system is composed of approximately 322,346 LF (61 miles) of pipe that ranges from 6-inch to 21-inch in diameter. The existing wastewater collection system also has approximately 738 manholes.

It is estimated that 75% of the gravity lines are constructed of vitrified clay pipe, are between 40 to 50 years old, and are considered to be in poor condition and/or an existing source of significant infiltration/inflow. These lines not only contribute to infiltration/inflow, but they also frequently break and exacerbate maintenance problems of debris and grease buildup that requires City crews to have to clean the lines on a more frequent basis. 6-inch and 8-inch service lines account for approximately 89% of the total gravity system.

Lift Stations/Force Mains

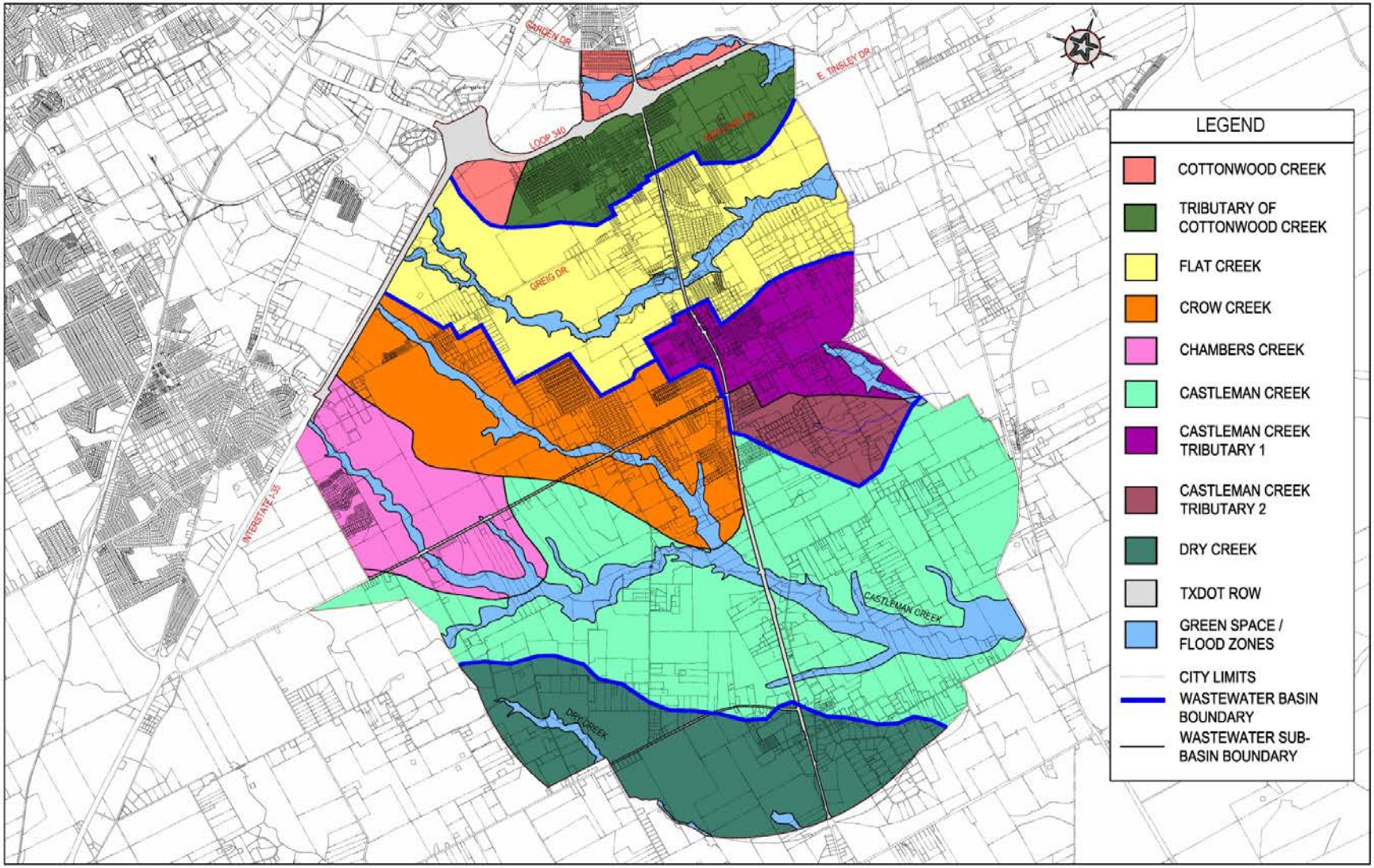
The wastewater collection system is supplemented with 15 lift stations and their supporting force mains. Many of the older stations are poorly equipped with equipment that is currently considered necessary for proper operation. Of the 15 total lift stations, 8 are greater than 30 years old and the City believes that 8 have firm pumping capacities that are either inadequate or close to being inadequate to meeting peak flow demands during wet weather events. The inadequate pumping capacity can partially be attributable to the fact of the severe infiltration/inflow problems within the collection system.

Wastewater Lift Stations

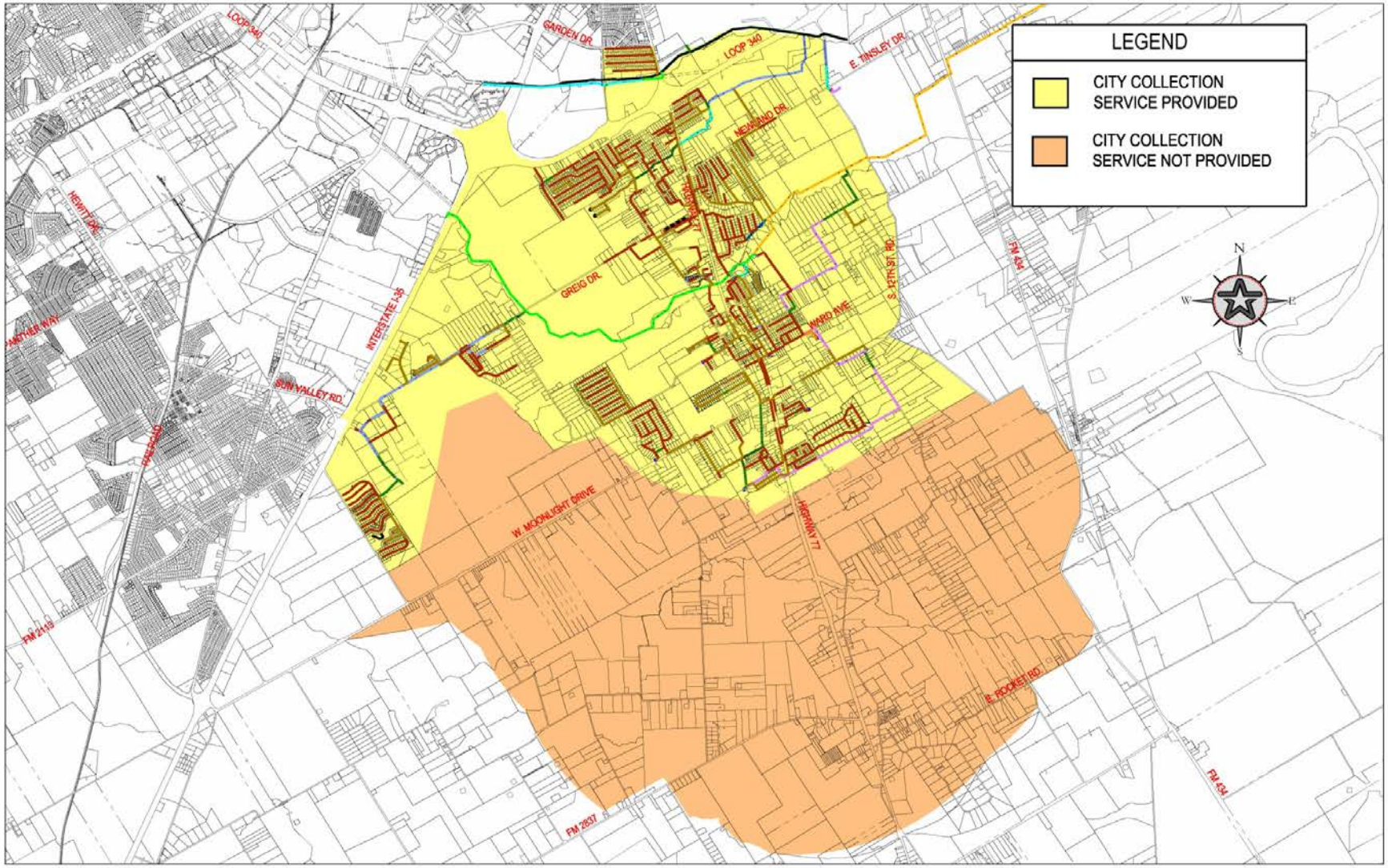
Lift Station	Year Constructed[(1)]	Estimated Remaining LS Expectancy[(2)]
Lyndale	1964	~ 0 years
Ward	1964	~ 0 years
Lux	1971	~ 0 years
Kettler	1972	~ 0 years
Dayton	1972	~ 0 years
Sturgis	1980	~ 0 years
Ivan	1982	~ 0 years
Tony	1983	~ 5 years
South Pond	1998	~ 15 years
Moonlight	1998	~ 15 years
Industrial	1999	~ 15 years
Scholastic	2001	~ 20 years
Chapman	2005	~ 20 years
Harris Village	2005	~ 20 years
Cedar Ridge	2006	~ 20 years

(1) Per City of Robinson Staff or record drawings
(2) Based upon an anticipated 30-year lift station life expectancy

Wastewater Boundaries



Existing Wastewater Collection System Service Areas



Wastewater Force Mains

Diameter (inches)	Total Length (ft)	Total Length (Miles)	Percent of Total Length of System
2 in (FM)	1,575	0.30	3.0
3 in (FM)	2,318	0.44	4.4
4 in (FM)	8,693	1.65	16.5
6 in (FM)	15,762	2.99	30.0
8 in (FM)	23,041	4.36	43.8
12 in (FM)	1,194	0.23	2.3
Total Line Length	***52,583***	***9.96***	***100%***

The force main system is composed of approximately 52,583 LF (10 miles) of force mains that range from 2-inch to 12-inch in diameter. Over 20% of the existing force mains are less than 6-inchs in diameter. Additionally, approximately 20% of the existing force mains are greater than 30 years old.

Wastewater Collection System Problems

The existing system problems within the collection lines are attributable to the age, the materials and the structural condition of the existing pipes. Available data indicates that the wastewater collection system has a serious problem of infiltration and inflow. Analysis of recorded WMARSS system flows have shown significant flow increases during or immediately following moderate to heavy precipitation, causing overflow at some lift stations, as well as unauthorized discharges through manholes. The City is currently participating in the TCEQ Sanitary Sewer Overflow Initiative (SSOI) Outreach program. The program required the City to develop a plan for system improvements while providing a somewhat relaxed enforcement environment.

Overall the City's plan is based on a commitment to providing collection system improvements. A cursory review of the City's SSOI plan has identified elimination or reduction of SSO events as a top priority. While elimination or reduction of SSO events should be a top priority, this goal does not necessarily result in a corresponding reduction in peak wet weather wastewater flow. In fact, since wastewater is being contained in the collection system where it was previously leaving the collection system via an SSO event, increases in peak wet weather flows could be observed. This series of related events does not serve to improve the capacity issues that face the City's interceptor system. An elimination of SSO events that ultimately result in increased demand for interceptor capacity must correspond with an appropriate capacity improvement program for the interceptor system.

It is understood that a major source of infiltration/inflow into the system occurs as a result of decayed clay-tile lines and brick or mortar manholes which comprise a large percentage of the system. Most of these lines were constructed close to 50 years ago and as a result these sections of line have become deteriorated, allowing storm water infiltration. It is believed that that the second major source of infiltration/inflow into the system occurs as a result of aged/decayed private service lines or uncapped cleanouts on private service lines.

A Sanitary Sewer Evaluation Study is recommended to be performed to identify the existing collections lines that are currently allowing large volumes of infiltration/inflow into the system and are "robbing" the system of any available hydraulic capacity. A successful capacity improvement program for an interceptor system results in a decreased demand for available interceptor hydraulic capacity.

Lift Stations/Force Mains

The existing system problems within the lift station / force mains component of the wastewater collection system are attributable to the age, hydraulic capacity, structural condition and total number of lift stations currently within the collection system.

The Lyndale, Ward, Lux, Kettler, Dayton, Sturgis, Ivan and Tony lift stations are in or are close to being in "critical" condition. Each of these stations are in need of either being rehabilitated (at a minimum) or being abandoned and replaced with gravity interceptors that convey the associated wastewater flows to more robust stations. The City should recognize that several of the existing lift station sites will likely require intermittent maintenance and pump replacements prior to the abandonment, replacement or additional capacity projects that have been identified within the CIP.

The City plans to closely evaluate approving any future additional connections within the areas shown in Figure 3 based upon the current calculated peak wet weather flow and current firm pumping capacities of the lift stations in these areas.

WASTEWATER COLLECTION SYSTEM PLAN

Capital Improvement Program

The *City of Robinson Wastewater System Master Plan* completed this year includes a 20-Year Capital Improvement Program. The magnitude of the proposed improvements is rather substantial. However, if these improvements are not methodically undertaken, Robinson will increase their risk opportunity that the TCEQ will enforce penalties against the City for not meeting their regulatory obligation to provide continuous and adequate service.

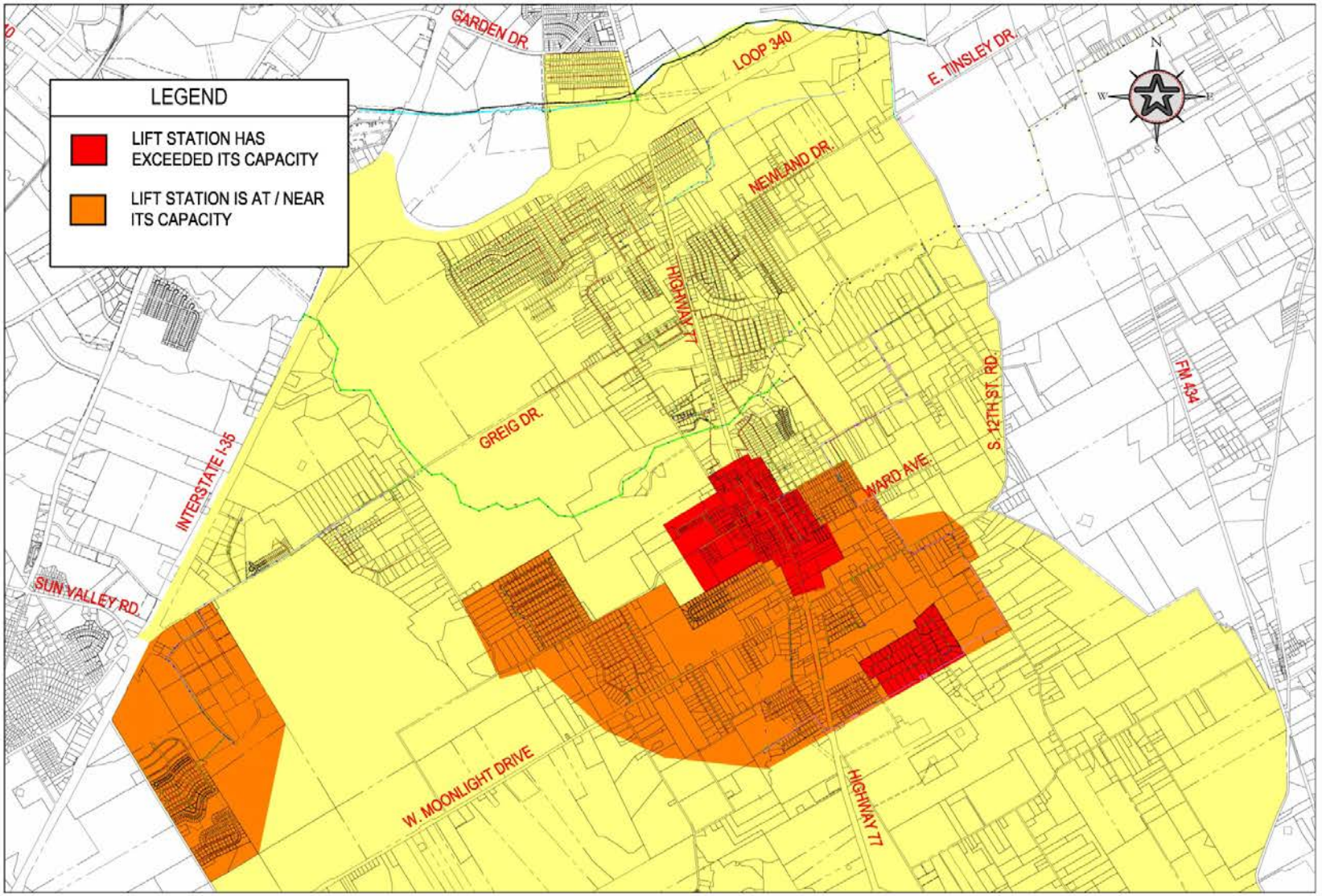
The Master Plan includes an implementation schedule that shows the City how they should execute the various improvements that are identified within the CIP so that the needed wastewater capacity and rehabilitation measures on its aging assets are provided for.

Priority One–Critical Improvements: 2013 – 2017
These improvements are primarily aimed at addressing pressing operation and maintenance deficiencies within the existing system.

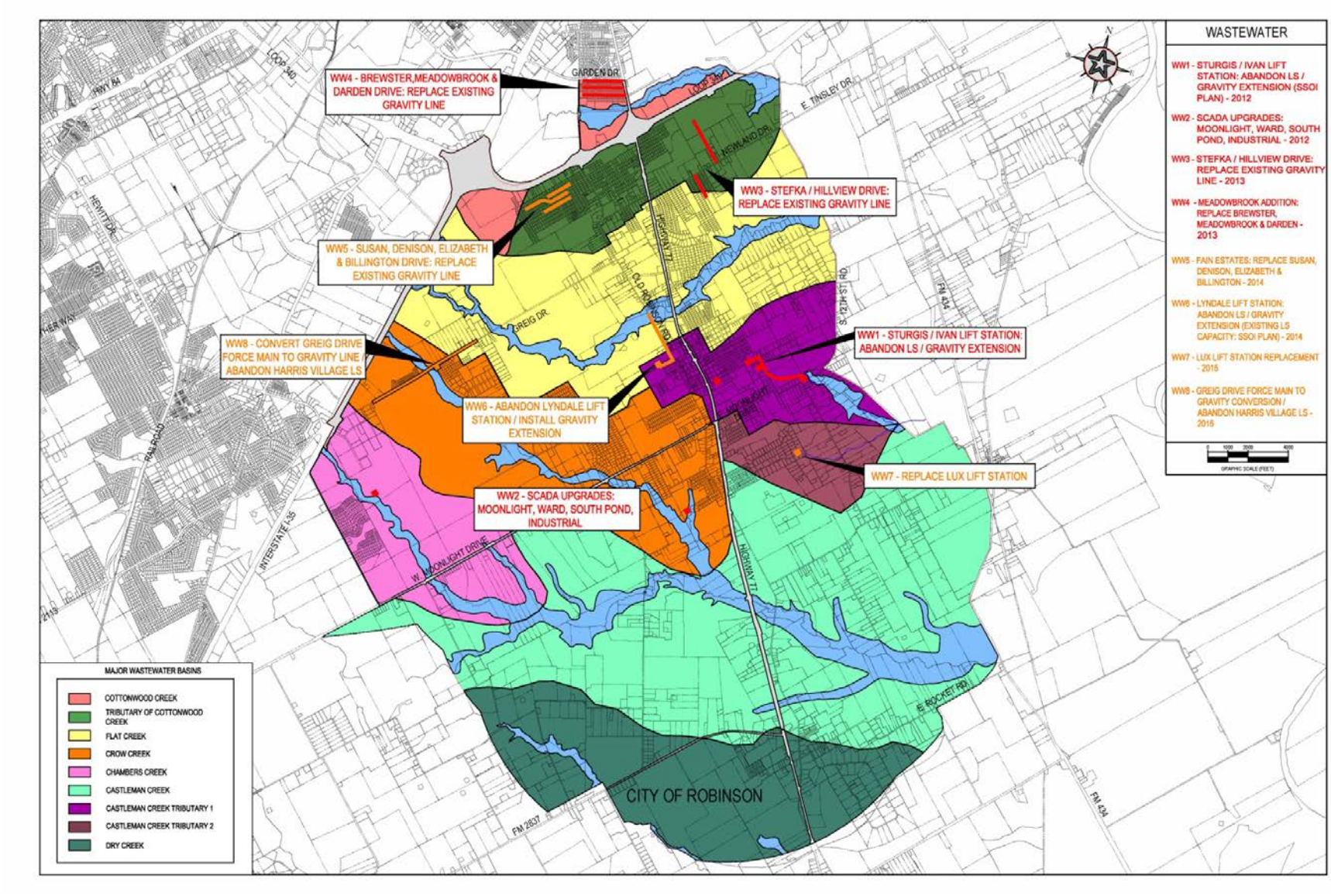
Priority Two–Additional Necessary System Improvements: 2018 – 2022
As with the Priority One improvements, these improvements are also primarily aimed at addressing pressing operation and maintenance deficiencies with the existing system.

Priority 3-Future Capacity Improvements: 2023 – 2032
These improvements are aimed at accommodating development with capacity to serve additional customers.

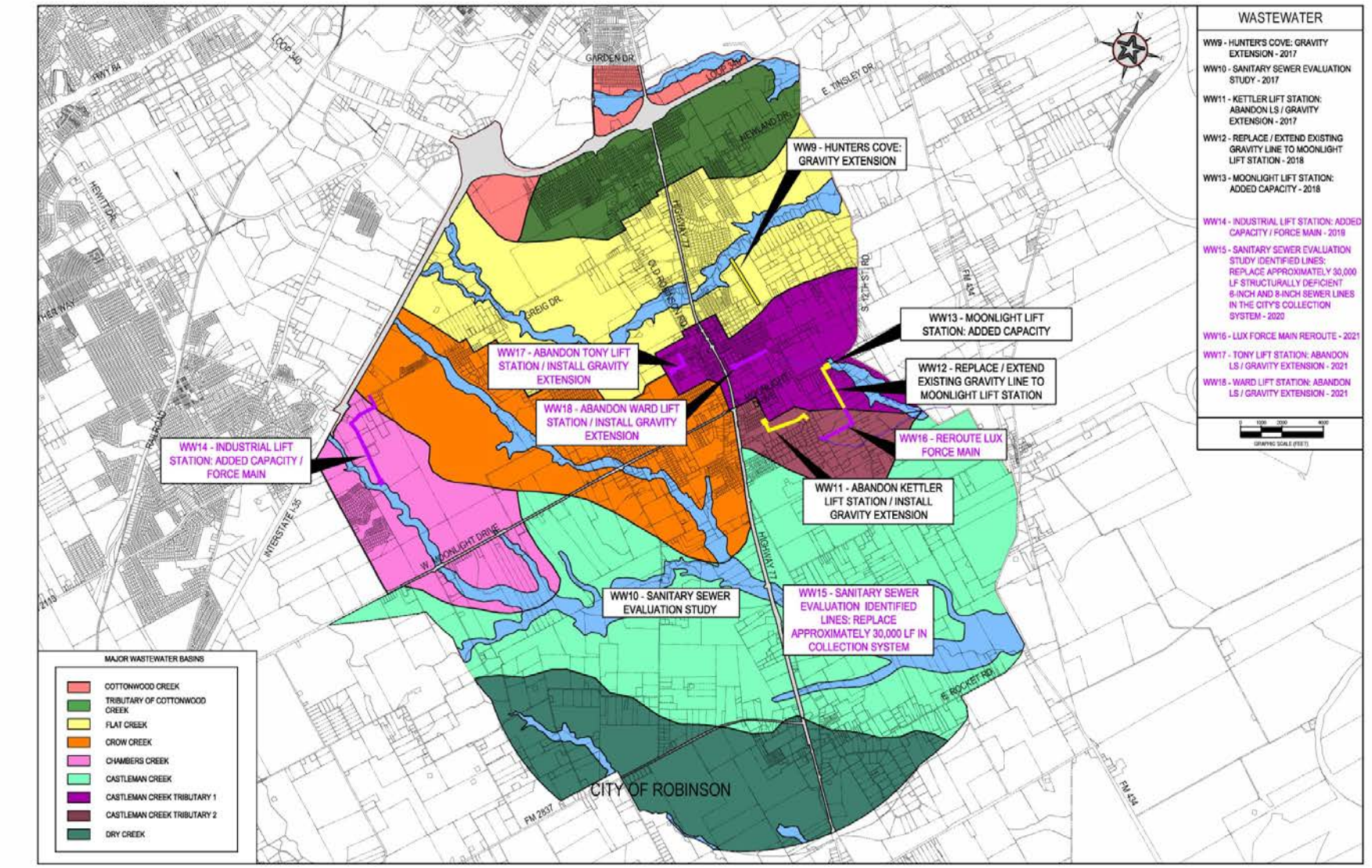
Areas to Evaluate Approving Future Additional Connections



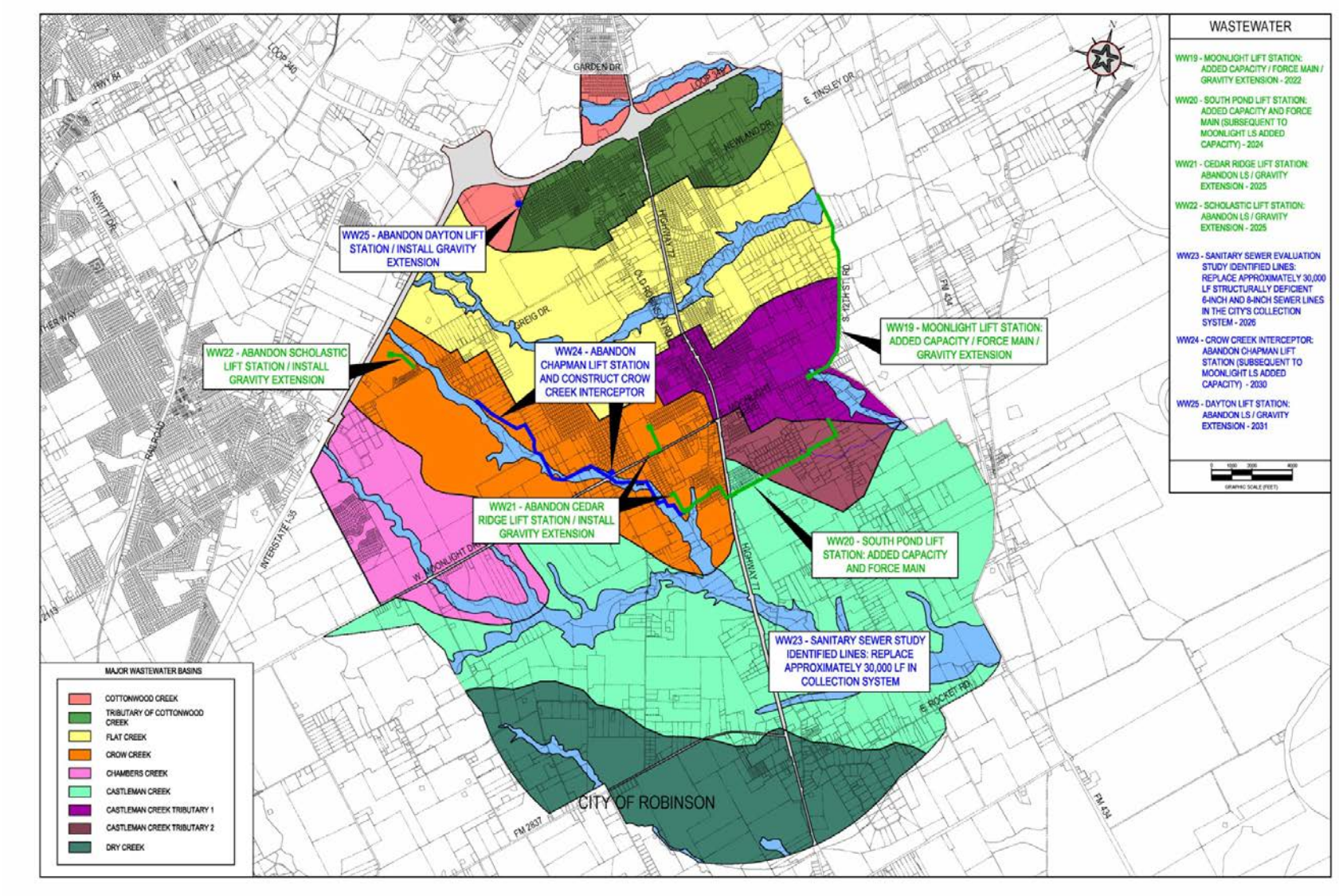
Priority 1–Critical Improvements: Years 2013 – 2017



Priority 2–Additional Necessary System Improvements: Years 2018 – 2022



Priority 3-Future Capacity Improvements: Years 2023 – 2032



Chapter 9 Stormwater Management

Flooding problems in all municipalities are generally of two types. The first type is the flooding of homes build in areas now identified as being in the 100-year floodplain. The areas negatively impacted by the 100-year floodplain were developed prior to any identification as a flood prone area. The second type of flooding is lot-to-lot flooding where lot grading, poor building design, fencing, poor street design, lack of appropriate drainage systems, and settlement due to expansive soils are generally the primary causes.

The City of Robinson has a significant amount of low lying areas associated with its streams and creeks which are prone to flooding problems of these types citywide. The potential for development within these flood prone areas varies depending on whether the area is the more severely impacted floodway or the less impacted flood fringe. Development should be restricted within the floodway in order to conserve the flood protection provided by the natural stream course. Flood prone areas should also be conserved for wildlife and community recreation areas.

Flood Damage Prevention

The City of Robinson's "Flood Damage Prevention Ordinance", No. 2008-022, adopted on October 14, 2008, was a great step toward the prevention of flooding in the community. The following methods were initiated to accomplish the purpose of the ordinance: 1) Restrict or prohibit uses that are dangerous to health, safety, or property in times of flood, or cause excessive increases in flood heights or velocities, 2) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction, 3) Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of flood waters, 4) Control filling, grading, dredging and other development which may increase flood damage, and 5) Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

The areas of special flood hazard identified by the Federal Emergency Management Agency in the current scientific and engineering report entitled, " The Flood Insurance Study (FIS) for McLennan County and incorporated areas," dated September 26, 2008, with accompanying Flood Insurance Rate Maps (FIRM) dated September 26, 2008 and any revisions were adopted as part of the "Flood Damage Prevention Ordinance.

Soil Erosion

Unsound development activities can lead to soil erosion. This fact is compounded by the gently rolling to steep slopes found within creeks and streams within the City of Robinson. These slopes allow for water to build up velocity which correspondingly increases erosion. The use of underground storm sewers or concrete lined channel side slopes, concrete lined base courses, or a combination of these treatments with grass side slopes is encouraged where feasible due to their limiting of soil erosion. These methods are widely preferred from an engineering standpoint, but are expensive.

Earthen channels may be used given the fact that they meet engineering specifications for the load they are required to handle and are designed to limit erosion. Rip-rap rock is utilized in the earthen channels to help hold the soil during heavy flow events. The Flood Damage Prevention Ordinance gives the City the right to require sedimentation control measures on sites which have been graded for construction or other purposes. Rapid restoration of vegetation on graded sites should be an important component of any sediment control plan.

Stormwater Management Policy

The City of Robinson's Stormwater Management Policy shall govern all planning, design, construction, operation, and maintenance of all stormwater drainage facilities within the City of Robinson. The regulatory environment related to drainage design is ever-changing and continues to grow in complexity. Therefore, engineers must be familiar with federal, state, and local regulations, laws, and ordinances which may affect the design of stormwater drainage systems.

The City of Robinson (City) has the authority to pass ordinances regulating stormwater runoff through the subdivision process. These authorizations are provided in Texas Statutes which include the following:

- Home Rule Act: Article 1175
- Water Pollution Control and Abatement: Texas Water Code, Chapters 50 and 54
- Subdivision: Local Government Code 212; Property Code, Section 12.002, Article 974a, Sections 1B, 4A, 9A, and 10 as added by Senate Bill 408, Section 1, Acts of the 70th Legislature.

Texas Drainage Laws

Historically, Texas drainage law is derived from both common and statutory law. Common law is founded on the principles that have developed from usage and customs that received judicial

recognition and sanction through repeated application. These principals were developed without legislative action and are embodied in the decisions of the courts. Statutory laws are drainage laws enacted by the legislature to enlarge, modify, clarify, or change the common law to particular drainage conditions. By case law, Texas has used two different approaches to liability between landowners for capturing diffused surface waters: the Civil Law Rule and the Common Enemy Doctrine.

The Civil Law Rule is based upon the perpetuation of natural drainage. Texas Water Law, Vol. 1 (1988) states the following:

> "*CIVIL LAW RULE*
>
> The civil law rule applied in Texas because of derivation of land titles from Mexican and Spanish sovereigns. The Republic of Texas had maintained the application of civil law for the period from 1836 to 1840. In addition, the Texas courts have consistently held that the law applicable at the time of a land grant would govern the rights of the owner. Therefore, for lands granted before 1840, the civil law is the applicable "rule of decision."
>
> The civil law rule regarding diffused surface waters was basically one of mutual servitude. Under it, the lower estate would be servient to the upper adjacent one with respect to natural drainage. The lower estate would be subject to a burden or easement of flow to have the surface waters run and drain as they naturally would onto the property from the upper estate, which would be the dominant one. Hence, the lower landowner could not take any action to divert or prevent the natural drainage from coming onto the lower property. Ordinary farming practices on the dominant land, including cultivation and irrigation for crop production, were exceptions to the civil law rule.
>
> The reciprocal side of the civil law rule was that upper property was subject to a burden of natural flow or easement to allow the runoff water to pass to the lower estate. The upper estate could not impede or take any action with respect to the detriment of the lower estate. Under civil law; however, a landowner would be entitled to capture or collect any rainwater "as it is wont to fall" on the land. As long as the water was captured without any detriment to the lower estate, the upper landowner would be entitled to it.
>
> Thus, the civil law rule is one of easement and mutual servitude. In effect the rule discourages development in that it prevents either landowner from acting to affect the natural drainage of the water over the surface of the land..."

SURFACE WATER ACT OF 1915

In 1915 the Texas legislature enacted the Surface Water Act. That statute provided in part:

> "That it shall hereafter be unlawful for any person, firm, or private corporation to divert the natural flow of the surface waters in this State or to permit the diversion thereof caused by him to continue after the passage of this Act, or to impound such waters, or to permit the impounding thereof caused by him to continue after the passage of this Act, in such a manner as to damage the property of another, by the overflow of said waters so diverted or impounded…."

That statute imposed liability on a landowner who impounded or diverted or continued to impound or divert the natural flow of surface water in such a manner as to cause injury to an adjacent landowner. Under the statute the adjacent landowner had available all remedies in law and equity, including damages or injunctive relief.

The 1915 statute was effectively repealed in 1925, when it was not reenacted by the Texas legislature. However, it was reenacted in 1927 and has remained in effect in modified form since then. The codification in 1927 was Article 7589a. The statute was modified again in 1947 to eliminate the language "firm or private corporation" so that liability was imposed on merely "any person." The current version of the statute is found in section 11.086 of the Texas Water Code."

In 1955 Victor Bouldin concisely stated the rights in diffused surface waters in a speech at a Texas water law conference. His summary remains accurate today:

1. As between the owners of higher and lower ground, the upper proprietor has the right to have diffused surface waters flow naturally from his land onto the land of the lower proprietor, which is subject to a corresponding servitude, and therefore the lower owner has no right to obstruct the flow and cast water back upon the land above.
2. The foregoing rule does not apply to unnatural flow, that is, flow which has been artificially changed by the hand of man so as to accelerate it or concentrate it in particular places.

3. Normal plowing and cultivation of the land for agricultural purposes does not constitute a prohibited changed of the natural flow even though it may result in some change in the flow and quantity of surface water which the lower land was due to receive.
4. The owner of the lower estate, while required to receive the natural flow, is not required to receive artificial flow even though it is occasioned by third parties without the participation of the owner of land from which it flows upon the lower land and the owner of the lower land may, in such cases, construct reasonable barriers to repel the artificial flow.
5. The foregoing principles do not prohibit a landowner from artificially concentrating surface waters into a natural water course on his own land which runs across a neighbor's land and which constitutes a natural outlet for both tracts, provided the total discharge is not beyond the natural capacity of the water course.

The City's Stormwater Management Policy shall be based upon the above five points of State Law which are not new; rather, their origins can be traced to the Republic of Texas. In addition, the City's Policy shall be consistent with federal regulations.

Design Storm Frequency

A) All developments shall have a storm drainage system consisting of curbs, gutters, channels, inlets, storm sewers, culverts, waterways, etc., and shall be designed to intercept and convey stormwater runoff from a 10-year frequency storm from fully developed (ultimate), upstream, watershed conditions. This storm drainage system shall be referred to as the "minor" drainage system.

B) In addition to (A), above, the major drainage system (i.e. overland flow "relief" pathways for stormwater flows exceeding the capacity of the minor system for runoff to be conveyed to receiving channels, creeks, rivers, or lakes) shall be designed to convey those flows greater than a 10-year frequency up to, and including a 100-year storm event (assuming fully developed watershed conditions) within dedicated easements or rights-of-way.

C) Stormwater flow in streets shall be designed as follows:

1) Residential Streets: stormwater flow in a residential street shall be limited to a depth of 6 inches, or to the top-of-curb, for the 10-year frequency design storm. For the peak runoff

from the 100-year storm event, the stormwater flow in a residential street shall be contained

within the street right-of-way, but in no case shall the depth of flow exceed 1.0 feet (12 inches) above the gutter flowline.

2) Collector Streets: stormwater flow in a collector street shall be limited such that one standard lane width will remain clear during the peak runoff from the 10-year frequency design storm. For the peak runoff from the 100-year storm event, the stormwater flow in a collector street shall be contained within the street right-of-way, but in no case shall the depth of flow exceed 0.7 feet (8 inches) above the gutter flowline.

3) Arterial Streets: stormwater flow in an arterial street shall be limited such that one standard lane width will remain clear in each direction during the peak runoff from the 10-year frequency design storm. For the peak runoff from the 100-year storm event, the stormwater flow in an arterial street shall be such that the depth of flow shall not exceed 0.5 feet (6 inches) above the gutter flowline.

4) The maximum velocity of stormwater flow in streets shall be 10 feet per second for the 10-year frequency design storm.

D) Headwater elevations for bridges and culverts shall be governed as follows:

1) In residential streets, the runoff from the 100-year frequency storm event (with fully developed upstream watershed conditions) shall not produce a headwater elevation greater than 0.5 foot above the top of curb or crown of the roadway, whichever is lower.

2) In non-residential streets, the runoff from the 100-year frequency storm event (with fully developed upstream watershed conditions) shall not produce a headwater elevation greater than 0.2 foot above the top of curb or crown of the roadway, whichever is lower.

In either case (1) or (2), above, all land inundated by headwater at a culvert shall be contained in right-of-way or easement.

E) The determination of the design peak discharges for drainage areas less than 100 acres may be computed using the Rational Method or by the procedure described in “F,” below.

F) The determination of the design peak discharges for drainage areas of 100 acres or greater shall be computed using the U.S. Army Corps of Engineers computer model HEC-HMS. The unit hydrograph used in determining the design runoff hydrographs shall be the synthetic unit hydrograph developed by the Natural Resource Conservation Service (NRCS – formerly SCS, Soil Conservation Service) for a Type III rainfall distribution. The guidelines and procedures for the hydrograph development shall be in accordance with NRCS’s Technical Release No. 20, latest edition.

G) Land development shall be done in such a manner that there will be no adverse impacts downstream of the development. (An adverse impact shall be any impact which causes an inundation, or an increased inundation, of any building structure, roadway, or improvement. An adverse impact shall also include downstream erosion and/or sedimentation, or an increase in erosion and/or sedimentation.) No adverse impact shall be accomplished by one of two methods:

1) Downstream conveyance of the runoff from the 100-year storm (under fully developed watershed conditions) downstream to a creek, river, or lake with adequate capacity to accept such flows. A development is a candidate for downstream conveyance if it meets one or more of the following criteria:

a) The development is immediately adjacent to a drainageway which has the hydraulic capacity to convey the 100-year flood event under fully developed watershed conditions.

b) The development is in the middle third or lower third of the watershed and the drainageway to the receiving body of water has adequate capacity to convey said flows without affecting any downstream property; and the City has the ability to acquire downstream easements (to contain the flow) through the planning and subdivision process.

2) Stormwater Detention. Peak flow rates at any point downstream of the development (to the receiving body of water) shall not be increased for the 2-year, 10-year, and 100-year storm frequencies. The conditions for which a development is required to provide on-site stormwater detention are outlined below:

a) The development is in the upper one-third of the watershed.

b) The development is in the middle third of the watershed and the developer's engineer can prove that an on-site facility will improve, or not have an adverse impact on, the downstream watershed conditions.

H) In lieu of F(1) and F(2), above, the development may participate financially in an approved Regional Stormwater Management Program either for downstream conveyance or a regional detention facility provided that peak flow rates generated from the development do not create any adverse, downstream flooding conditions during that interim period before the "regional" improvements are completed.

I) All stormwater detention facilities, both on-site and regional, shall be designed to enhance stormwater quality in addition to reducing peak flows.

Floodplain Management

A) All new developments shall be constructed in accordance with the City of Robinson's Floodplain Ordinance such that the finish floor elevation(s) will be a minimum of 1 foot above the 100-year flood elevation(s) as determined above.

B) City of Robinson floodplain delineation shall be based upon the following:

1) For the purposes of this Policy, any concentrated flow within a watershed which has a drainage area greater than, or equal to, one-half square mile (320 acres) shall constitute a floodplain.

2) It shall be the responsibility of the developer and his engineer to delineate the 100-year floodplain.

3) All floodplains shall be based upon the projected, fully-developed, land use upstream of the design point (i.e. a point along the drainageway at, or near, the most downstream property boundary of the development).

4) All floodplains shall be computed utilizing the computer software and applicable criteria outlined in subsequent sections of this Policy.

5) All floodplain delineations shall be modeled utilizing FIELD SURVEYED CROSS-SECTIONS, performed with the practices and procedures outlined in this Policy.

6) All floodplain delineations shall be computed utilizing the U.S Army Corps of Engineers Hydrologic Engineering Centers River Analysis System (HEC-RAS).

7) All floodplain delineations shall be prepared in such a manner that once the floodplain delineation is approved and accepted by the City, it can be readily inserted into the City of Robinson's Geographical Information System (GIS) maps.

C) Federal Emergency Management Agency (FEMA) Requirements

1. FEMA publishes a Flood Hazard Boundary Map (FHBM) and Flood Insurance Rate Maps (FIRM) showing communities flood hazard areas and the degree of risk in those areas. An FHBM is based on approximate data and identifies, in general, the Special Flood Hazard Areas within a community. FHBM's are used for floodplain management and insurance purposes. When a detailed Flood Insurance Study (FIS) has been conducted the FIRM will show base flood elevations, insurance risk zones, and floodplain boundaries and may show the floodway delineated.
2. If a flood map is believed to be incorrect, three procedures have been established to change or correct a flood map. They include: 1) Letter of Map Amendment (LOMA); 2) Letter of Map Revision (LOMR), and 3) physical map revision. A LOMA results from a technical data or scientific data review submitted by the owner who believes his/her property has been incorrectly included in a designated Special Flood Hazard Area. A

LOMR is used to change flood zones, flood delineations, flood elevations, and planimetric features. A LOMR is a revision to the effective FEMA map and is usually followed by physical map revision. A physical map revision is an official republication of a map to effect changes to flood insurance zones, floodplain delineations, flood elevations, floodways, and planimetric features.

3. If land development activities are proposed which will result in flood hazard boundary delineations different from those depicted on the current FIRM issued by FEMA, the applicant for a development permit shall provide to the City all information, calculations, and maps as needed to satisfy all current FEMA FIRM revision procedures. The following is excerpted from the FEMA "Conditions and Criteria for Map Revision" and will serve as the guidelines for map revisions for the City of Robinson:

   i. A copy of the printout for the original hydraulic computer model representing the 100-year flood profile run for conditions existing at the time the currently effective hydraulic analysis was developed. The printout must include full input and output listings.

   ii. A copy of the printout from the hydraulic computer model representing the new 10-, 50-, 100- and 500-year profiles. The model should be the same as that used in the preceding item, but modified to include any channel modification, fill or other encroachment that may have occurred in the floodplain since the original floodplain was delineated.

   iii. Delineation of the 100- and 500-year flood boundaries and the location and alignment of cross sections and flow line used in the hydraulic model. This information should be shown on a map of suitable scale and topographic definition to provide reasonable accuracy.

   iv. A copy of the currently effective flood profiles showing the existing and the revised flood elevations.

   v. Certification from a registered professional engineer that the physical parameters used in the proposed flood boundary delineation represent actual conditions and that the standards contained in these "Conditions and Criteria" are met.

Survey Control

A) All drainage improvement plans and floodplain delineations shall be based upon field survey (on-the-ground). The bearings and/or coordinates shall be based upon the Texas State Plane Coordinate System, NAD 83, Texas Central Zone and the elevations shall be based upon NAVD 88 acquired from Global Positioning System observations.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Zone AE
Zone X
Community Visions 2034
"A Comprehensive Plan for the City of Robinson, Texas"
Flood Plain

Chapter 10 Human Resources

Human resource planning and development focuses on the hiring, training and retention of employees to achieve strategic objectives. This includes analyzing the current workforce and comparing it to future employment needs. By planning for the future, human resources can prepare action plans to satisfy organizational goals. This approach analyzes the competencies or abilities that exist within the current workforce. It then compares them to the competencies required in the future.

Planning and Development

Human resources planning and development strives to achieve future demands through workforce adjustments aimed at attracting, training and retaining employees. Human resource planning and development uses several initiatives to satisfy future workforce demands.

1) Recruiting describes how the organization plans to attract quality workers and add them to its employee base. Job fairs, seminars, and other social events are ways that employers advertise and promote themselves to potential job candidates.

2) Training and development describes how the organization plans to maintain and improve its workforce. New workers may be assimilated into the culture through orientations and specific training classes designed to educate and develop. Existing employees can be introduced to retraining programs that ensure their skills are up to-date.

3) Employee retention programs are designed to keep quality employees from leaving the organization. They focus on employee compensation, benefits, rewards, a work-life balance, advancement or growth and recognition. By planning ways to keep its future workforce from leaving, the organization has less turnover expense (hiring and training costs) and does not have any related productivity losses.

Workforce Evaluation

Human resource planning and development should include a future workforce evaluation. This evaluation, performed in the future, will review how the workforce compares to current city requirements. Changes may need to be made to the work model to better achieve strategic objectives. To prepare for a future workforce evaluation, human resources need to review the city's strategic objectives and make sure they have not changed. They also need to analyze the competencies of the workforce and compare them to what was originally forecasted. Deficits and surpluses will need to be adjusted by re-implementing hiring, training and retaining initiatives.

To reduce future employee jeopardy, human resource planning and development focuses on safety programs and protocols. These measures help to ensure worker safety and can reduce job-related costs due to absenteeism, worker's compensation claims and lawsuits. They can also prevent losses in productivity. Safety programs should focus on workplace hazards, safety practices and procedures.

Human Resource Strategy

A Comprehensive Human Resource Strategy plays a vital role in the achievement of an organization's overall strategic objectives and visibly illustrates that the human resources function fully understands and supports the direction in which the organization is moving. In essence, a Human Resource strategy should aim to capture "the people element" of what an organization is hoping to achieve in the medium to long term, ensuring that:

- it has the right people in place
- it has the right mix of skills
- employees display the right attitudes and behaviors
- employees are developed in the right way
- articulates more clearly some of the common themes which lie behind the achievement of other plans and strategies, which have not been fully identified before; and
- identifies fundamental underlying issues which must be addressed by any organization or business if its people are to be motivated, committed and operate effectively.

The development of a workforce plan is a critical component of any human resource strategy and one of the expected outcomes of human resource practitioner’s activities. Despite this, workforce planning, as well as succession planning, has only recently enjoyed a resurgence in popularity. To some extent this has been prompted by the need to develop employment equity and workplace skills plans and set numerical employment equity targets. The failure of many organizations to develop and implement workforce planning is rather indicative of the lack of strategic planning itself.

Workforce planning is a systematic process of identifying the workforce competencies required to meet the company's strategic goals and for developing the strategies to meet these requirements. It is a methodical process that provides managers with a framework for making human resource decisions based on the organization’s mission, strategic plan, budgetary resources, and a set of desired workforce competencies. Workforce planning is a *systematic process* that is integrated, methodical, and ongoing. It identifies *the human capital required to meet organizational goals*, which consists of determining the number and skills of the workers required and where and when they will be needed. Finally workforce planning entails d*eveloping the strategies to meet these requirements*, which involves identifying actions that must be taken to attract (and retain) the number and types of workers the organization needs.

A workforce plan can be as simple or as complex as the organizational requires. Workforce planning can be conducted for a department, division or for the organization as a whole. Whatever the level or approach being adopted, it must nevertheless be integrated with broad-based management strategies.

Human resource planning is the process whereby organizations determine the staffing support they will need to meet business needs and customer demands. There are a variety of considerations that impact this planning, including impending retirements and transitions, the availability of employees with certain skills sets and changes in the environment that may require training for existing employees.

Human resource planning is important and ongoing because of both internal and external environmental changes. Internally, businesses are impacted by turnover and retirements. Externally, they are impacted by changes in technology, changes in the economy, and changes in the industry and consumer demand that may require skills that do not currently exist within the company. All of these impacts have an effect on the type and numbers of employees that are needed for the business to remain successful.

There are four broad phases involved in planning for human resource needs. First, gathering and analyzing information about expected demand based on the City's future plans and the supply and availability of staff, internally and externally, to meet these demands. Second, the City must identify their specific human resource objectives, which can involve decisions related to whether candidates will be promoted from within or hired externally, whether work will be outsourced or done by employees on staff, and whether the city prefers to staff for excess capacity or take a streamlined approach to staffing. The third phase of planning involves designing and implementing programs that are aligned with the city's objectives. These programs will include benefit programs to satisfy employee needs and impact the ability to retain staff, as well as training programs to ensure that staff are prepared to meet current and future demands. Finally, the fourth phase of planning will involve monitoring and evaluating the effectiveness of the human resource plan and making changes as appropriate.

Succession Planning

Succession planning is the process whereby municipal professionals identify key positions within the company and develop plans to fill those positions either with internal or external staff. Succession planning is closely tied to leadership development, which is the process position’s that may become vacant. Succession planning is a key element of human resource planning.

New Safety Policy

The Human Resource office has completed a safety policy which includes accident prevention training and equipment training, job safety analysis, and accident investigation along with

hazardous communication training. Management is responsible for providing a place of employment that is free from recognized hazards that could result in injuries or accidents. Since it is impossible for managers to personally observe all employee activities, management must assure that all supervisors are trained and are aware of their safety responsibilities. Other safety responsibilities for managers include:

1. Provide leadership and direction concerning safety activities
2. Participate actively in the continuous evaluation of the safety program
3. Set goals concerning safety performance within each department
4. Review losses for potential trends on a regular basis
5. Enforced all safety rules
6. Participate in facility and work site audits.
7. Participate and support all accident investigation activities
8. Review accident reports and recommend corrective actions

CITY ORGANIZATION

The City of Robinson first incorporated in 1955 as a General Law City. Since that time, the City of Robinson adopted a charter in 1999 to form a Home Rule City operating with the Council-City Manager form of government. The seven-member elected City Council sets policy and appoints a City Manager who is responsible for the day-to day operations of the City.

The City is further organized into departments based on their specific functions. These include City Secretary, Municipal Judge, Juvenile Case Manager Municipal Court, Finance, Water Utilities, Planning, Communications, Finance, Public Works (i.e. streets, water, and wastewater), Police, Purchasing, Traffic Operations, and Human Resources. These departments are operating well at the present time based on the current population needs and maintenance levels.

Future increases in city personnel are considered here as part of the Comprehensive Plan. The assumption is that economic development will increase throughout the community and the population will increase. The current population of the City of Robinson is 11,300 persons. Personnel projections for the city organization for the next 20 years will be based on 15,000, 20,000, 25,000, 30,000, 35,000, and 40,000 persons. The following are the current personnel descriptions and their suggested projections by population.

Existing City Personnel Descriptions

CITY MANAGER

The City Manager is the chief executive and administrative officer to the City. The City Manager is responsible to the City Council for the efficient administration of all the city affairs. The City Manager directs all city department heads. Works closely with professional staff (attorney, prosecuting attorney, city judge, city engineer, and city auditor). Has contact with all city employees, general public, and media. *An Assistant City Manager should be considered when the population increases from 20,000-25,000 persons. A second Assistant City Manager position should be considered when the population increases to 30,000 persons. A Deputy City*

Manager should be considered when the population increases from 35,000 to 40,000 persons. The increase in upper level management positions will be necessary due to the volume of administrative work as the city grows. A City Attorney should be considered once the population increases to 25,000 persons. The City currently employs legal support on an hourly basis. This permanent position will be needed as the city grows and the legal workload increases. An Assistant City Attorney should be added once the City population increases to 30,000 and 35,000 respectively.

CITY SECRETARY

The City Secretary is appointed by the City Council upon the recommendation of the City Manager. The City Secretary reports to the City Manager and is the official City Records Management Officer. Duties include frequent contact with the general public, all department heads, and elected officials. The City Secretary gives notice of all public meetings and keeps detailed minutes of its proceedings.

The Records Management Officer is found under the duties of the City Secretary. This position administers the Records Management Program and provides assistance to Department Heads in its implementation. This position also plans, formulates and prescribes disposition policies, systems, standards, and procedures. In cooperation with Department Heads, identifies essential records and establishes a disaster plan for each municipal office and department to ensure maximum availability of the records in order to re-establish operations quickly and with minimum disruption and expense. This position will be separated from the City Secretary duties when the population reaches 20,000 persons.

The City Secretary assumes responsibilities of the court administrator. Those duties consist of supervision of court personnel, ensuring proper issuance of warrants and insuring all reports are completed. It maintains all official Municipal Court records of the City according to generally accepted accounting principles and standards, as well as state law. *Administrative Assistant positions should be considered when the population increases to 20,000 and 25,000 persons respectively. An Assistant City Secretary position should be considered when the population increases to 25,000 persons. City Council, Planning and Zoning, Zoning Board of Adjustment, and Building Standards meetings will begin to increase in frequency to twice a month due to increased number of cases.*

MUNICIPAL COURT

Municipal Court Judge

The Municipal Court Judge is a current part time position to supervise and run trial, manage a docket of court cases, and issue court orders. The position is responsible for presiding over trials, signing and issuing court subpoenas, warrants, and other court orders, and performing other judicial duties. Presides over jury and non-jury trials and conducts examining trials Issues subpoenas, general, arrest, and search warrants, and summons. Maintains a traffic court docket. Supervises the Juvenile Case Manager. Reports to City Manager. *This position should be considered to be converted to full time status when the population reaches 20,000 persons.*

Juvenile Case Manager

This part time position provides professional services in municipal court cases involving juvenile offenders. This position will also perform a wide variety of specialized clerical duties in support of the municipal court including the initiation, processing, and maintenance of legal documents, correspondence and statistics; and provide information and assistance to the public. Reports to the Municipal Court Judge, and does not supervise any employees. Works with the court to detect and prevent abuse, exploitation, and neglect of children as they will have direct access to families and juveniles in their home, school, and community environments. *This position should be considered to be converted to full time status when the population reaches 20,000 persons.*

Court Clerk

Plan, direct and supervise non-judicial functions of the Municipal Court. Responsibilities include case flow management, records management, jury management, managing budget and fiscal functions, and ensure compliance with state laws and judicial rulings. Perform other administrative duties as required or directed by City Manager. Reports to the City Secretary/Court Administrator, and does not directly supervise any other employees. Maintains accurate records for the Court including: (1) the docket of the Court proceedings, (2) fee book and receipt book showing the fines and fees collected in each case, and (3) prior violators file which may be needed in hearing cases against those violators or in drivers' license suspension hearings against habitual violators. Generates warrants and coordinates their storage within the police department.

FINANCE DIRECTOR

The Finance Director provides administrative direction and supervision to the municipal financial activities and reports to the City Manager on budget preparation, cash management, bank relations, purchasing and debt management. The Finance Director directs the Financial Administrative Assistant, Utility Clerks, Meter Reader and works closely with the City auditor, department budget officers, financial and bonding institutions, mayor and council in relationships to finances. *An Assistant Finance Director, and a Budget Specialist should be considered when the population increases to 20,000 persons.*

Utility Department Billing Clerk

The Utility Department Billing Clerk provides customer service duties by handling incoming calls and walk-in counter customers. Compiles data and operates a computer terminal in performance of clerical duties. Receives payments and reconciles payment records. Reports to the Water Administration/Billing Supervisor. *A Utility Billing Clerk position should be added when the population increases to 20,000.*

Water Meter Reader

Employees in this position are responsible for the accurate reading and recording of water consumption for water utility customers. Reports to the Utility Office Supervisor, and does not

supervise any employees. This position has frequent contact with all City personnel and the general public. Reads water meters on an assigned route and records readings. Checks to see that meters are functioning properly and reports defects. Checks for leaks on reading route and reports for repair. *A Meter Reader position should be added when the population increases to 20,000 persons.*

PURCHASING DIRECTOR

The Purchasing Director reports to the City Manager and plans, coordinates, and manages the operations and activities of the City's Purchasing Department. Coordinates bid processes with the City Secretary for the procurement of supplies, equipment, construction, and/or services utilized by City departments. Works closely with other departments regarding purchasing matters; defines specific items and/or services required with reference to quality, quantity, and availability; plans for future purchases of equipment and supplies. *An Assistant Purchasing Director and Administrative Assistant should be considered when the population increases to 20,000 persons.*

HUMAN RESOURCE DIRECTOR

The Human Resource Director plans, coordinates, manages and directs the operations and activities of the Human Resource Department. Delivers and administers policies and procedures and oversees the delivery of personnel, benefits, risk, and safety programming for the City. Provides human resources advice and support to City officials and departments regarding a variety of personnel matters; assists in resolving internal and external customer complaints involving customer service, employee performance, and employee/supervisor behavior. This position hires, trains, supervises and evaluates the performance of assigned personnel; monitors and ensures staff compliance with departmental policies, procedures, and applicable regulatory requirements. The Human Resource Director reports to the City Manager. *A Benefit Specialist and an Administrative Assistant should be added when the population increases to 20,000 persons.*

Receptionist

Provide general receptionist duties handling all incoming visitors and calls and channeling them to the proper department. Assist Building Official and Code Enforcement Officer. Reports to the Human Resource Director, and does not supervise any employees. This position has frequent contact with other city employees and the general public. General duties include answering the telephone, route calls as appropriate or record messages. Sort and distribute incoming mail and other materials. Operate various office equipment, i.e. copy machine, calculator, fax machine, etc. General knowledge of computers.

POLICE DEPARTMENT

Chief of Police

The Chief of Police develops, manages, plans, directs and administers a comprehensive program for law enforcement, crime prevention, traffic safety and control, animal control, and other related duties as required. The Chief of Police supervises a department consisting of police officers, reserve officers, telecommunicators, animal control officer, and clerical employees as indicated. The Chief of Police creates new ordinances. Reports to the City Manager and directs all police operations personnel. Works closely with the general public, all city personnel, and public safety departments.

Plans, organize, develop and coordinate law enforcement, crime prevention and support programs and activities, operational activities and programs to minimize the effects of natural and man-made disasters, and confers with Emergency Management coordinator, traffic safety and control activities and programs. Oversee the operation of the police department, evaluate the effectiveness of police department activities and programs and suggest, develop and implement plans for improved operations. *An Assistant Police Chief and Administrative Assistant should be considered when the population increases to 15,000 persons.*

Police Lieutenant

The Police Lieutenant, under the supervision of the Police Chief, plans, coordinates, and manages the operations of assigned units or functions of the City's Police Department. This position oversees and participates in law enforcement activities, reviews and prepares various types of law enforcement records and reports, responds to public inquiries and complaints, and supervises assigned personnel. Oversees and coordinates day to day law enforcement activities for area of responsibility including patrol, criminal investigations, special operations, and/or support services.
Reports to the Chief of Police or other superior officer as directed. Directs all employees within the unit, and has frequent contact with other city employees, other law enforcement agencies, and the general public. *Future police Lieutenant positions will be added based on need of the department and increases in population.*

Police Sergeant

The Police Sergeant position performs moderately complex, relatively standardized tasks, processes or operations for the supervisory and operational duties of the Patrol Division or Criminal Investigations Division. Plans, organizes, coordinates, and directs the activities of the Patrol Division or Criminal Investigations Division in general law enforcement operations, investigation, technical or support operations. Reports to the Lieutenant or Chief of Police or other superior officer as directed. Directs all Patrol Corporals and Officers or Criminal Investigations Division Officers. This position has frequent contact with other city employees, other law enforcement agencies, and the general public. *Future police Sergeant positions will be added based on need of the department and increases in population.*

Police Corporal

The Police Corporal, under general supervision, enforces laws and ordinances, maintains order, prevents crime, and makes arrests. Upon assignment, the Corporal may train and supervise officers and conduct police investigations in the absence of a Sergeant. The Corporal reports to the shift supervisor or other superior officer. Directs or supervises officers as assigned. This position has frequent contact with other city employees, other law enforcement agencies, and the general public. *Future police Corporal positions will be added based on need of the department and increases in population.*

Patrol Officer

The Patrol Officer position duties are responsible for crime prevention and law enforcement for the conduct of routine patrols, preliminary investigations, and traffic control during an assigned shift. This position reports to the duty supervisor or other superior officer as directed. The Patrol Officer-Recruit does not supervise any employees and has frequent contact with other city personnel, other law enforcement agencies, and the general public. *Future police Patrol positions will be added based on need of the department and increases in population.*

Records and/Communications Manager

Performs supervisory functions and operations of the communications center, Central Texas Criminal Justice Information Center and police records section. Reports to the Chief of Police, and directs all Telecommunicators and Records Clerk. Interprets and applies department policies and procedures. This position has frequent contact with other public safety agencies, city employees, general public and responding emergency services.

Records Clerk

The Records Clerk position is responsible for the complete and professional operation of the records unit. Reports to the Records and Communications Manager, and does not supervise any employees. Records and files all calls for service reports and provides reports to citizens. This position has frequent contact with other city personnel, other law enforcement agencies, and the general public. *A Records Clerk position should be added when the population increases to 20,000 persons.*

Senior Telecommunicator

The Senior Telecommunicator position is responsible for the complete and professional operation of the communication center. Reports to the Records and Communications Manager, and does not supervise any employees. Oversees the training of new Telecommunicators. Receives calls for service from public by telephone and in person, effectively prioritizes calls according to type and situation, and Dispatches appropriate agency(s) according to type of call received (e.g. Police, Fire, EMS, Public Works). This position has frequent contact with other city personnel, other law enforcement agencies, and the general public.

Telecommunicator

The Telecommunicator position is responsible for the complete and professional operation of the communication center. Reports to the Records and Communications Manager, and does not supervise any employees. Receives calls for service from the public by telephone and in person, effectively prioritizes calls according to type and situation, and dispatches appropriate agency(s) according to type of call received (e.g. Police, Fire, EMS, Public Works). This position has frequent contact with other city personnel, other law enforcement agencies, and the general public. *Future telecommunicator positions will be added based on need of the department and increases in population.*

Animal Control Officer

The Animal Control Officer protects the City's residents from stray, vicious, or diseased animals and enforces animal and rabies control and licensing permit regulations within the municipality. Reports to the Police Department Criminal Investigation Division Lieutenant. Maintains contact with the general public, city employees, and Waco Humane Society.

Evidence Technician

Responsible for managing property room including all evidence in the Police Department, testifying in court, fingerprinting the public, preparing case packets for prosecution, and other duties as assigned. Reports to the Division supervisor of the Criminal Investigations Division. This position does not supervise any employees, and has frequent contact with City employees, other public safety agencies, members of the McLennan County District Attorney=s office, and the general public.

ROBINSON VOLUNTEER FIRE DEPARTMENT

The Robinson Volunteer Fire Department is currently organized and staffed with a Fire Chief, Deputy Chief, Safety Officer, Fire Marshal, two Suppression Captains, two Suppression Lieutenants, and two Rescue Captains. The Fire Department is currently volunteer and will be progressing toward a full-time department within the City organization over the next twenty years. The personnel descriptions that follow will be recommended at that time.

Fire Chief

Supervises the planning, operation and administration of fire-fighting, emergency medical services, fire inspections, loss prevention, life safety, and fire service activities in the city. Provides overall direction for a staff of firefighters, technicians, and administrative employees. Establishes policies, procedures, and regulations. Develops the annual budget and controls expenditures.

Deputy Chief

Oversees various department operations and programs. Provides direction and supervision for a

staff of firefighters, technicians and administrative employees. Monitors performance reports and investigates unusual occurrences to ensure performance standards are met and maintained.

Fire Marshal

Supervises and directs citywide fire prevention and public relations programs. Investigates fire, property damage and life loss or jeopardy. Inspects business and public buildings to ensure adherence to fire regulations. Directs, trains, and monitors all fire/loss prevention activities.

Fire Captain

Supervises and coordinates activities of firefighters within an assigned area, and directs fire-fighting and rescue activities. Ensures proper maintenance of equipment and facilities. Participates in the development and administration of the budget, forecasts funds needed for staffing, equipment, materials, and supplies. Monitors and approves expenditures for assigned area of responsibility.

Fire Lieutenant

Assists in supervision and coordinates the activities of a company of firefighters on an assigned shift. Trains firefighters. Provides basic emergency aid at accident scenes.

Fire Protection Engineer

Advises and assists private and public organizations for purposes of safeguarding life and property against fire, explosion and related hazards.

Fire Recruit

Entry level fire-fighting responsibility for receiving training and completing qualifications as a firefighter. Performs duties under close supervision.

Fire Training Officer

Supervises and coordinates fire-fighting and rescue training activities. Ensures proper maintenance and use of equipment and facilities.

WATER UTILITIES DEPARTMENT

Water Utilities Director

The Water Utilities Director provides supervision and administrative direction to all water plant operations, water plant maintenance and improvement activities. This position controls and monitors all water distribution and storage treatment facilities, mechanical functions, labor and records administration relating to water production. Reports to City Manager, and directs all Water Utilities Department employees. This position has contact with city personnel, vendors,

and the general public. Plans, organizes and directs activities relating to the operation of water production and storage treatment facilities to meet the current and future needs of the City. Helps prepare annual budget and controls expenditures. Conducts inspections and conferences regarding water operations with contractors, subordinates, and other city officials. Reviews and analyzes plant records, makes reports and recommends system improvements. *An Assistant Water Utilities Director should be considered when the population increases to 20,000 persons.*

Water Distribution Field Assistant Lead

The Water Distribution Field Assistant Lead position works in all disciplines such as maintenance, operations or in the laboratory. Duties in these areas include: maintain and operate the system in a safe, effective, and efficient manner; requires technical expertise; operating surface water treatment systems which requires making process control changes as necessary and corrective maintenance and repairs on facilities and equipment. Assists in the installation and maintenance of water lines, meters, etc. Reports to the Water Utility Director, and directs Water Distribution Field Assistants I and II. This position has contact with other public works employees, utility clerks, plumbers, contractors, and the general public.

Water Distribution Field Assistant

The Water Distribution Field Assistant I is a position with work primarily in a single discipline such as maintenance or operations or in the laboratory. Duties in these areas include operating surface water treatment systems which requires making process control changes as necessary and corrective maintenance and repairs on facilities and equipment and providing general labor during construction, repair, and maintenance of City services and facilities. Assists in the installation and maintenance of water lines, meters, etc. Reports to the Water Superintendent, and does not direct any employees. This position has Contact with other public works employees, utility clerks, plumbers, contractors, and the general public. *A Water Distribution Field Assistant I should be added when the population increases to 25,000 persons.*

Water Treatment Plant Operator Lead

The Water Plant Operator III-Lead works in all disciplines such as maintenance or operations or in the laboratory. Duties in these areas include: maintain and operate the system in a safe, effective, and efficient manner; requires technical expertise; operating surface water treatment systems which requires making process control changes as necessary and corrective maintenance and repairs on facilities and equipment. Reports to the Water Utilities Director, and does not supervise any employees. This position has contact with other City employees, customers and the general public. *A Water Treatment Plant Operator III should be added when the population increases to 25,000 persons.*

Water Treatment Plant Operator

The Water Plant Operator I is an entry-level position with work primarily in a single discipline such as maintenance or operations or in the laboratory. Duties in these areas include: maintain and operate the system in a safe, effective, and efficient manner; requires technical expertise;

operating surface water treatment systems which requires making process control changes as necessary and corrective maintenance and repairs on facilities and equipment. Employee must start in this position unless otherwise approved by the City Manager. Reports to the Water Utilities Director, and does not supervise any employees. This position has contact with other City employees, customers and the general public. *A Water Treatment Plant Operator I should be added when the population increases to 25,000 persons.*

PUBLIC WORKS

Public Works Director

The Public Works Director position is responsible for all managerial activities of the City's Public Works Department which includes water, wastewater, and streets. This is accomplished by providing direction and overseeing several divisions within the department and participating in Council and other City meetings. Reports to the City Manager and directs all employees within the water, wastewater, and street divisions. Works with all city employees, plumbers, contractors, developers, and the general public. Other duties may include responding to professional and citizen inquiries, developing and implementing policies and procedures for department activities and interfacing with other City employees and citizens. *An Assistant Public Works Director should be considered when the population increases to 20,000 persons.*

Wastewater Supervisor

The Wastewater Supervisor position provides administrative direction to employees in the planning, operation, maintenance, and improvement of municipal wastewater utility services. This position reports to the Public Works Director and/or the City Manager, and directs wastewater employees. Works with all city employees, plumbers, contractors, developers, and the general public. This position aids in preparation of the annual budget and controls expenditures, advises subordinates, supervisors, citizens, contractors, suppliers, and other city officials regarding public utilities issues, inspects the construction and installation of facilities by contractors, approves material requisitions, coordinates plans and specifications for utility construction projects, and approves work orders and project estimates.

Wastewater Field Assistant

The Wastewater Field Assistant provides manual labor following basic routines directed by an immediate supervisor during construction repair and maintenance of city services and facilities. Reports to the Public Works Director and does not supervise any employees. Works with all public works employees and may have contact with the general public. Assists in the installation and maintenance of sewers. Loads and unloads trucks. Lays pipelines and repairs manholes.

Street Department Supervisor

Provides overall administration and supervision for City's street maintenance and construction activities. Coordinates and supervises crews engaged in a variety of public works projects. Reports to the Public Works Director, and directs lead equipment operators, equipment operators

and field assistants. Works with all public works employees, contractors and the general public. Plans, organizes, and establishes procedures for all street maintenance and construction activities. Plans work schedules to meet work progress, methods, and quality. Assists with hiring, training, appraisal, promotion, and discharge of street personnel. Recommends equipment purchases and approves work orders, requisitions, and purchase orders. Checks maintenance of all street equipment.

Street Department Field Assistant

The Street Department Field Assistant provides manual labor following basic routines directed by a supervisor during construction repair and maintenance of city services and facilities. Responsible for the safe and efficient operation of maintenance equipment. Reports to the Street Department Supervisor, and does not supervise any employees. Works with all public works employees, utility clerks, contractors and the general public. Assists in the installation and maintenance of streets and sewers. Loads and unloads trucks.

TRAFFIC

Traffic Operations Manager

Maintain the working order of traffic signs in the City and to assist in approving new street signs requests. The position is responsible for assembling, installing, repairing and modifying traffic signs, maintaining traffic in certain work areas and conducting traffic counts in certain areas. Reports to the City Manager, and does not supervise any employees. This position has frequent contact with all City personnel and the general public. Installs, repairs, and modifies traffic sings and traffic equipment. Establishes a work schedule of the traffic department. Maintains traffic counting records. Determines whether new traffic sign requests are justified. Works with Public Works department on special projects. *An Administrative Assistant, and Traffic Field Assistant should be considered when the population increases to 15,000 persons. An Assistant Traffic Operations Manager and Traffic Field Assistant should be considered when the population increases to 20,000 persons.*

PLANNING AND COMMUNITY DEVELOPMENT

Planning Director

The Planning Director administers the functions of the Planning and Inspections Department, processes land-use cases, creates new ordinances and performs other duties as required. Reports to the City Manager and acts as supervisor to the Building Official. This position has frequent contact with other city employees, builders, contractors, developers, utility company personnel, and city engineer. Maintains the functions of the Planning Department by supervising the Planning and Inspections staff, processing zoning, plats, special exceptions and variance requests, building inspections, code enforcement, and forwarding these cases to the proper department. Coordinates with the public by disseminating proper information relating to land-use issues, development issues, and code enforcement issues; keeping abreast of changes to state

statutes and acting as liaison between the developer and neighboring property owners. *An Administrative Assistant should be considered when the population increases to 15,000 persons. An Assistant Planning Director and Urban Planner should be considered when the population increases to 20,000 persons. Additional Urban Planners should be considered when the population increases to 25,000 and 30,000 persons respectively.*

Building Official

The Building Official responsibilities include performing skilled inspection work to insure compliance with municipal ordinances and regulations governing construction to buildings and housing, and effective compliance with legally established specifications and requirements. Reports to the City Manager. Acts as supervisor to Code Enforcement and Building Maintenance Positions. This position has frequent contact with other city employees, builders, contractors, developers, utility company personnel, and city engineer. *Two Inspector positions should be considered when the population increases to 20,000 persons. A Plans Examiner position should be considered when the population increases to 25,000 persons.*

Code Enforcement Officer

The Code Enforcement Officer performs routine and complex technical work in code enforcement to ensure compliance with codes, ordinances, and regulations. Reports to the Building Official and does not supervise other employees. This position has frequent contact with other city employees, and citizens of Robinson. *A Code Enforcement Officer should be considered when the population increases to 20,000 persons.*

Building Maintenance Assistant

The Building Maintenance Assistant performs a variety of routine cleaning tasks for buildings and surrounding grounds. Sweeps, mops, floors: vacuums hallways, stairs and office space. Dusts and/or polishes furniture, woodwork, mini-blinds and other surfaces. Washes windows, mirrors, walls, metal and woodwork. Sets up meeting rooms for special functions, parties, and training. Empties trash and ash cans. Trims trees weeds. Cleans and sanitizes rest rooms. Reports to the Planning Director and does not supervise any employees. Works with all employees at all City of Robinson facilities.

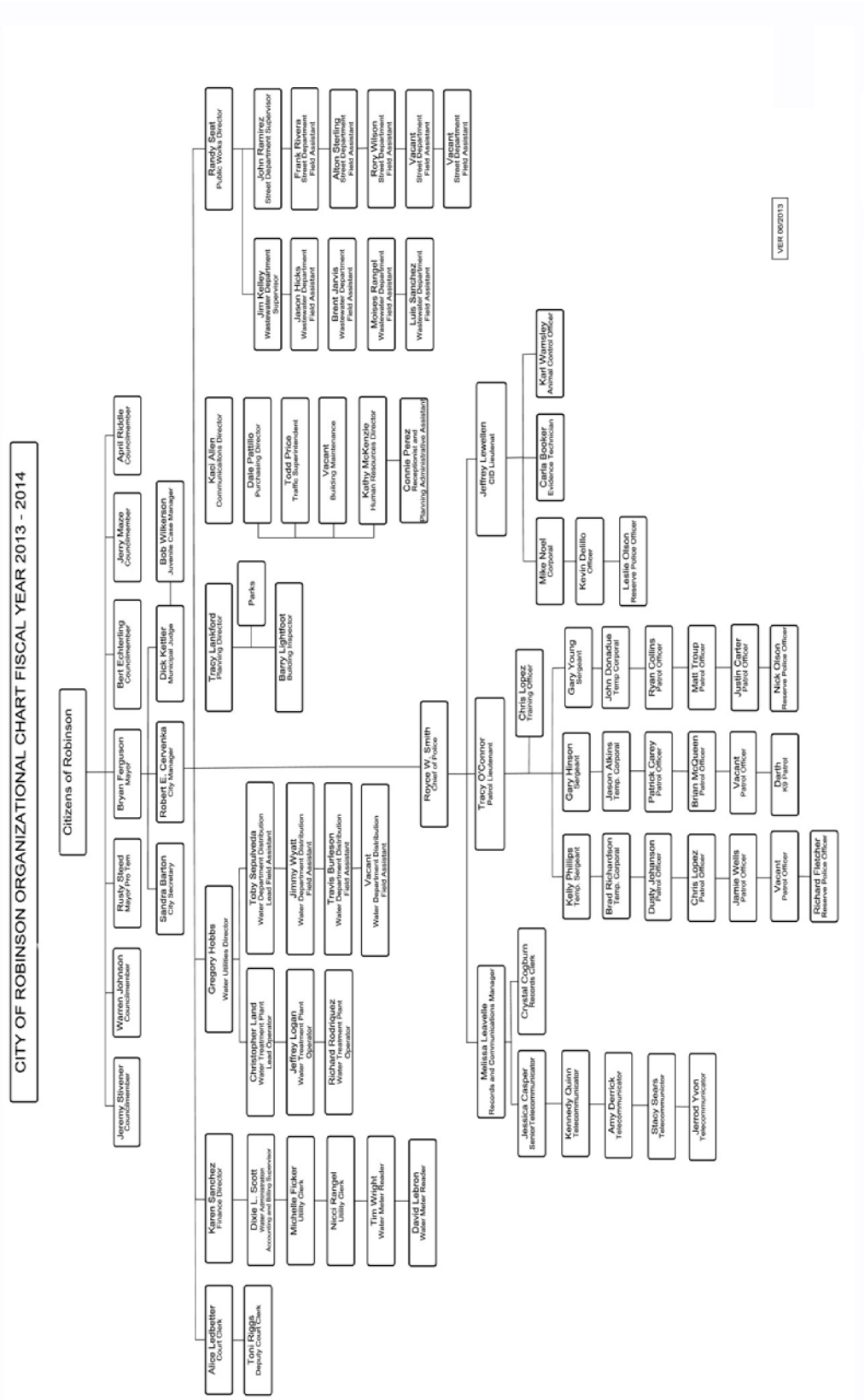
COMMUNICATIONS

Public Information and Communications Director

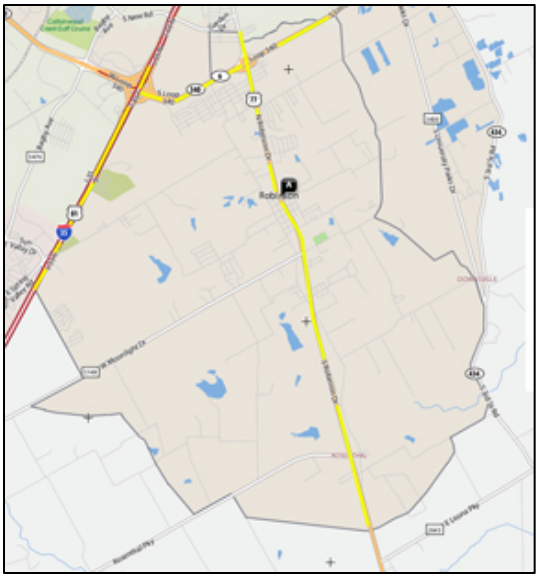
The Public Information and Communications Director is responsible for establishing and maintaining external and internal communications that enhance the understanding, perception and image of the City. This is a very responsible position that serves as general support to all departments as needed. Promotes, organizes and supports informational, educational and special event activities that benefit the community and/or City employees. Establishes and maintains working relationships with print and broadcast media representatives, public officials,

community leaders, and the general public. Coordinates the City's website and use of various social media platforms. Reports to the City Manager, and does not supervise any employees.

This position has frequent contact with print and broadcast media, public elected officials, community leaders, other city departments, governmental officials, community organizations and the general public. Designs, coordinates and produces media releases, advisories, public service announcements, monthly newsletter, and special reports for city administration. Develops and implements new avenues of communications, including communications plans and strategies, surveys and research, web pages, social media and cable television. Persuade media to publish broadcast stories. Responds to information requests from media and the general public. *An Administrative Assistant and Communications Specialist should be considered when the population increases to 15,000 persons. An Assistant Public Information and Communications Director and Communications Specialist should be considered when the population increases to 20,000 persons.*


CITY OF ROBINSON ORGANIZATIONAL CHART FISCAL YEAR 2013 - 2014
Citizens of Robinson
Jeremy Stevener Councilmember
Warren Johnson Councilmember
Rusty Steed Mayor Pro Tem
Bryan Ferguson Mayor
Bert Echterling Councilmember
Jerry Maze Councilmember
April Riddle Councilmember
Sandra Barton City Secretary
Robert E. Cervenka City Manager
Dick Kettler Municipal Judge
Bob Wilkerson Juvenile Case Manager
Alice Ledbetter Court Clerk
Toni Riggs Deputy Court Clerk
Karen Sanchez Finance Director
Dixie L. Scott Water Administration Accounting and Billing Supervisor
Michelle Ficker Utility Clerk
Nicci Rangel Utility Clerk
Tim Wright Water Meter Reader
David Lebron Water Meter Reader
Gregory Hobbs Water Utilities Director
Christopher Land Water Treatment Plant Lead Operator
Jeffrey Logan Water Treatment Plant Operator
Richard Rodriguez Water Treatment Plant Operator
Toby Sepulveda Water Department Distribution Lead Field Assistant
Jimmy Wyatt Water Department Distribution Field Assistant
Travis Burleson Water Department Distribution Field Assistant
Vacant Water Department Distribution Field Assistant
Melissa Leavelle Records and Communications Manager
Jessica Casper Senior Telecommunicator
Kennedy Quinn Telecommunicator
Amy Derrick Telecommunicator
Stacy Sears Telecommunicator
Jerrod Yvon Telecommunicator
Crystal Cogburn Records Clerk
Royce W. Smith Chief of Police
Tracy O'Connor Patrol Lieutenant
Kelly Phillips Temp. Sergeant
Brad Richardson Temp. Corporal
Dusty Johanson Patrol Officer
Chris Lopez Patrol Officer
Jamie Wells Patrol Officer
Vacant Patrol Officer
Richard Fletcher Reserve Police Officer
Chris Lopez Training Officer
Gary Hinson Sergeant
Jason Atkins Temp. Corporal
Patrick Carey Patrol Officer
Brian McQueen Patrol Officer
Vacant Patrol Officer
Darth K9 Patrol
Tracy Lankford Planning Director
Parks
Barry Lightfoot Building Inspector
Karol Allen Community Affairs Director
Dale Pattillo Purchasing Director
Todd Price Traffic Superintendent
Vacant Building Maintenance
Kathy McKenzie Human Resources Director
Connie Perez Planning Administrative Assistant
Jeffrey Llewellen CID Lieutenant
Mike Noel Corporal
Kevin Dolillio Detect
Leslie Olson Reserve Police Officer
Carla Booker Evidence Technician
Karl Wamsley Animal Control Officer
Gary Young Sergeant
John Donadue Temp. Corporal
Ryan Collins Patrol Officer
Matt Troup Patrol Officer
Justin Carter Patrol Officer
Nick Olson Reserve Police Officer
Randy Seat Public Works Director
John Ramirez Street Department Supervisor
Frank Rivera Street Department Field Assistant
Allen Sterling Street Department Field Assistant
Rory Wilson Street Department Field Assistant
Vacant Street Department Field Assistant
Vacant Street Department Field Assistant
Jim Kelley Wastewater Department Supervisor
Jason Hicks Wastewater Department Field Assistant
Brent Jarvis Wastewater Department Field Assistant
Moises Rangel Wastewater Department Field Assistant
Luis Sanchez Wastewater Department Field Assistant
VER 06/2013

Chapter 11 Police Services



The City of Robinson Police Department is a service and community oriented law enforcement agency that strives to protect and serve the community's pursuit for a peaceful and safe existence free from fears. The Department is responsible for enforcing City ordinances, State laws, and Federal regulations with democratic values applied equally and impartially while maintaining the highest degree of ethical behavior and professional conduct through the department's core values of valor, integrity, and initiative.

The Department assists prosecutors in the investigation and presentation of criminal cases. These efforts are administered through a community-oriented and problem-solving approach that endeavors to integrate every available resource toward identifying and solving crime related problems and issues. The narrative that follows describes the facilities, equipment, department structure, community dynamics, police services, criminal investigations division, administration, community trends and growth, and goals of the Robinson Police Department.

Community Dynamics

Robinson has a unique profile as a community with many large areas of agriculture intermingled with areas of dense residential neighborhoods. This, along with the number of officers assigned to patrol duties, often leads to many areas not receiving effective police services, i.e. patrol services. The irregular neighborhood boundaries make it difficult to patrol large areas of neighborhoods either often or in a timely manner. Most of the reported property crimes (crime committed against property only) occur more frequently outside the denser populated areas within the city while most of the persons crime (crimes occurring to a person) occur in residential neighborhoods.

Over the past 12 years, the population of Robinson has grown approximately 46%, from 7,845 in year 2000 to an estimated 11,500 in year 2013. The overall racial makeup has changed little from year 2000. Race estimates for 2012 in Robinson are 80.2% White, 14% Hispanic or Latino of any race, 3.6% Black or African American, 0.4% American Indian, 0.5% Asian, 0.2% Native Hawaiian or Other Pacific Islander, and 1.1% Other Race. The crime rate for Robinson remains relatively low with a crime index of 182.7 in year 2000 and 129.6 in year 2012 while the national crime index was 298.9 in year 2012 (city-data.com).

Community Trends and Growth

There is no magical formula for determining the number of officers a community should have because each community has its own dynamics. For instance, Robinson comprises approximately 35 square miles with over 80 miles of roads in a community that is vastly divided between high density residential areas and large open agricultural and pasture areas. And, Robinson has three

major highways through and along the city limits; IH-35, State Highway 77, and State Highway 6/Loop 340.

Presently there are 1.91 officers serving every 1,000 Robinson residents. This is down from 2 officers per 1,000 residents in 2006 and from 2.24 in 2000. The Texas average is currently 1.95 officers per 1,000 residents. The Robinson Police Department is currently doing a "Calls for Service Workforce Study" to determine the amount of uncommitted time patrol officers have to be able to provide directed patrol activities, such as neighborhood patrol, traffic enforcement, etc., outside the community calls for service.

Certainly the 34% increase in population in the past ten (10) years means the number of citizens (customers) we serve is greater and therefore a need for more employees to serve the growing community is warranted. In addition, the number of calls for service has grown more than 100% during the same ten (10) year period and yet the department has grown only 41 %.

Response times for officers to arrive on scene after being dispatched has remained about the same over the past ten (10) years. This is due, in part, to a redistribution of calls for service to available patrol officer that began in 2007. By redistributing available patrol officers, response times, even with the increase in calls for service, were curtailed.

Even more difficult to qualify than the number of patrol staff is the need for additional records clerks, detectives, telecommunicators, and training/community support staff. As the number of calls for service increase, so does the need for telecommunicators to answer the ever increasing telephone service calls, for records personnel to process the many additional numbers of records and supporting data input, for enough detectives to properly follow-up on initial investigations, for community service officers and training staff members, and even secretarial positions to support the command staff's increasing duties.

Population Served

Referring back to the year 2000, when the number of officers per 1,000 (OP1) citizens served was 2.24, we know that the number of officers employed by the Robinson Police Department served the community well. We have discussed this with many present and past officers of the department and with previous community leaders and they all agree that the 2.24 OP1 was appropriate for the community.

Based on calls for service and the population of 7,845 in year 2000, the call for service disparity index (CSDI) was .764. This means that there were fewer calls for service than there were citizens in Robinson. The CSDI is used to compare the call volume between year 2000 and today.

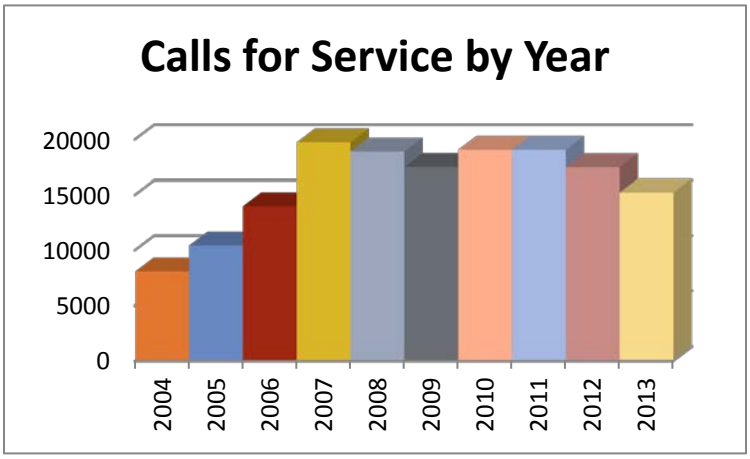
Today the OP1 of 1.91 indicates there are a greater number of calls for service than there are number of citizens in Robinson. Today the CSDI is 1.76. The conclusion is that the number of calls for service have significantly increased and the number of officers per citizen has decreased. To meet the growing needs of the department and the community, the projected number of officers the department should presently be 25.64 officers, based on the OP1 and supported by the CSDI.

Department Structure

The Administrative Division of the Robinson Police Department consists of the Chief of Police. Currently Chief of Police Royce W. "Rusty" Smith is an executive board member of Texas

Police Chiefs Association where he chairs the organization's Strategic Planning Committee. He is also serving his third term as the treasurer for the Central Texas Chief of Police and Sheriffs Association.

In June 2011, the Robinson Police Department employed 30 full time paid employees and three (3) non-paid part time reserve police officers. Of the 30 full time employees, 16 are police officers, one (1) is the Animal Control Officer, five (5) are Telecommunicator/dispatchers, one (1) is the department's record clerk, one (1) is an evidence technician, two (2) are detectives, one (1) is the department's training officer/crime prevention officer, and four (4) are command supervisors . The three (3) reserve officers are non-scheduled officers and are generally non-productive members of the department.



Calls for Service

A call for service is any report of any activity performed by a first responder. An activity may include anything as non-eventful as an officer fueling his patrol unit to a very eventful incident such as call regarding a homicide. The Robinson Police Department provides many community services to citizens and people travelling through the city.

Patrol Division

Services of the patrol division include visible patrol officers that respond to calls that require a police officer's assistance and self-initiated law enforcement tactics that include burglary patrol, vacation house watch, traffic violator contacts, and other public assistance activities. In 2006, the patrol division of the Robinson Police Department had nine (9) active patrol officers, three (3) patrol corporals, one (1) patrol sergeant, and a division supervisor (lieutenant), for a total of 14 patrol personnel. Today, the department has 11 patrol officers, three (3) corporals, one (3) sergeant, and a division supervisor (lieutenant).

Criminal Investigations Division

Under the direction of a division lieutenant, follow-up investigations of reported calls for service usually fall to the services of the Criminal investigation Division (CID). Detectives also prepare warrants and make apprehensions. In 1998, one detective was transferred to a joint area narcotics task force. In the detectives place, another officer was assigned to CID as a detective. The officer that was transferred to the task force returned to his detective assignment in CID in 2006, which now allowed for two detectives to be assigned to the division, in addition to the division supervisor.

In 2007, an evidence technician was added to the staffing of CID. The evidence technician is responsible for the tagging, processing and storing of evidence and found property. This employee also maintains a chain of custody of evidence and provides evidence to the appropriate

court at the time a case goes to trial. Additional responsibilities include preparing and presenting evidence to outside laboratories for testing, returning property to rightful owners, fingerprinting duties, storing video data recorded from patrol vehicle's mobile video recorders, and tracking and registering convicted sex offenders.

In the past several years, the evidence technician has been trained in specific fingerprinting techniques, crime scene investigating and processing, and blood spatter analysis, making the evidence technician an effective crime scene technician.

The department's animal control officer is assigned to CID and is responsible for enforcing state and local laws regarding animal control. This employee can issue citations for violations. In addition to enforcement of laws, the animal control officer also monitors quarantined animals and stays abreast of changing animal control laws.

In 2013 a training officer/crime prevention officer was created in CID. The crime prevention unit specifically targets the organization of neighborhoods into proactive groups to effectively protect neighbors from criminal activities. In addition, the crime prevention unit intercedes with student and local civic group members in an effort to educate citizens about criminal activities and ways of preventing citizens from becoming the victim of crime. These programs and projects are offered at no cost to citizens.

Began in 2007, the crime prevention unit began coordinating a Citizen Police Academy to educate citizens about the operations of the Robinson Police Department and to bolster cooperation between the Robinson Police Department employees and the city of Robinson. This program has seen the formation and police support from the Robinson Citizen Police Academy Alumni Association.

The training officer is tasked with the responsibility of ongoing training on all department policies, to certify officers on use of force and Taser, to schedule officers for TCOLE mandated training, to maintain TCOLE mandated hiring and training records, to schedule and training on specialized topics, to assist with background investigations of candidates, and to assist with candidate recruiting and testing.

Records and Communications Division

Records Unit

Under the direction of the Records and Communications Manager, the Records Unit maintains records of the department from the time the record is created through their eventual disposal. This may include classifying, storing, securing, and destruction (or in some cases, archival preservation) of records in accordance with records retention laws and open records rules. The department uses Tyler Technologies' InCode Public Safety for their records management system. InCode electronically maintains all police reports and its maintenance of records falls under the Records Unit.

The Records Unit provides the public with reports and data. Request for open records are funneled through the Records Unit. In 2010, the Record Unit began making crash reports available online through the Internet. Using this technology, the department saves times processing customer requests for crash reports and saves customers time by allowing them to

obtain these reports without having to come to the police department. The records unit also compiles overtime data for staffing purposes.

Communications Unit

Under the supervision of the Records and Communications Manager, the Communication Unit is housed in the Communications Center and is often called the heart of the police department's operations. Calls for service usually begin when a citizen calls the Communications Unit for police assistance.

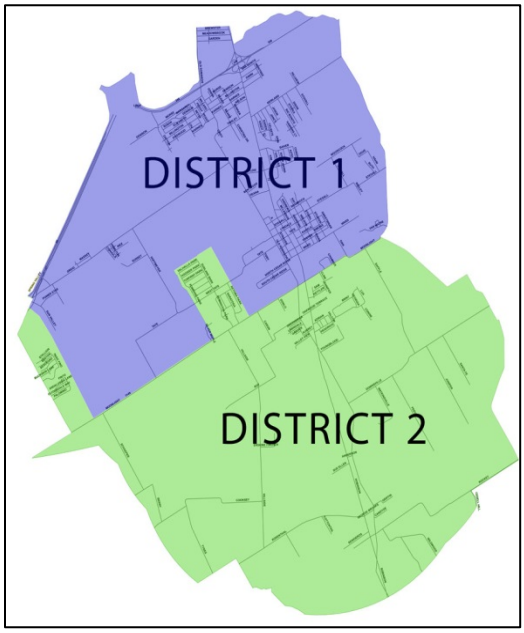
Five (5) fulltime telecommunicators (previously titled dispatchers) operate the Communications Unit 24/7. The unit receives calls around the clock for emergency and non-emergency services.

After regular working hours, the Communications Unit receives calls for city utility services, including water and waste water emergencies, and dispatches these calls to the appropriate city department. The unit receives calls for police, fire and emergency medical services for all of Robinson and for the Beverly Hills Police and Fire Departments.

In 2007 the Beverly Hills Police Department approached the Robinson Police Department asking Robinson to answer their 9-1-1 calls. To be able to receive financial support for 9-1-1 services, a public service answering point (PSAP) must receive a substantial number of calls for service. Because Beverly Hills did not meet the quantity of calls required for their own PSAP, Robinson Police Department agreed to answer these calls and forward them to Beverly Hills Police and Fire Departments. The agreement has been successful for both agencies.

In 2008 the Communications Unit moved to a new location within the police facilities due to the need for an additional telecommunicator's workstations. Calls for service handled by the Communications Unit in 2004 number just below 8,000. That number grew to just under 20,000 calls for service by 2007.

Police District Map



Parol Districts

Currently, the city is divided into two patrol districts. At any one period of the day there is a minimum staffing level requirement of two patrol officers, one for each district. However, districts often have more than one district officer assigned to them, depending upon the time of day and the day of the week.

The District Map is designed to assign patrol duty responsibilities for on-duty patrol officers and to try and equalize the number of calls for service each patrol officer will receive during a shift by district boundary.

Depending upon the number of officers assigned to a district, when more than two patrol officers are on-duty at the same time, the additional officers may be assigned to cover a district with another officer or they may be assigned special duties, such as proactive or directed neighborhood patrol, directed traffic enforcement, or other crime reduction and safety enhancement techniques.

Cross Use Equipment

The Robinson Police Department has purchased a previously used mobile computer lab and reconfigured it for use as a mobile command unit. As a member of the Robinson, Woodway, and Hewitt SWAT team, the need for a mobile command unit was identified as a necessity for the operations of SWAT operations during actual SWAT events. The previous vehicle used for this purpose was an ambulance that neither provided sufficient space for mobile command operations nor did it have sufficient space for rehab of team members.

In addition to use for SWAT operations, the mobile command unit is available for major fire scene command operations, crime prevention programs, such as child identification programs, rehabilitation of city field works, such as water or waste water repairs on extremely cold or hot days, and in major criminal investigations, just to name a few of its uses.

Recommendations

Police Department Facilities

The Robinson Police Department is located in the City Hall Complex at 111 West Lyndale Drive in Robinson, Texas. The offices of the department encompass the old city hall and police department facility that had been built in 1978. It connects directly to the City Hall offices built in 2001.

The police facility is approximately 5,000 square feet and includes a 600 square foot training room, a 150 square foot evidence/property room, a 50 square foot interview room, 130 square feet of storage space, and employee offices. To accommodate further storage needs, a 160 square foot air conditioned outside storage building has been added accommodate storage of such items as uniforms, duty gear, and other items not used primarily on a daily bases. A 160 square foot non-air conditioned transportation container has been purchased as a fortified storage facility for non-perishable seized evidence as the current evidence storage area within the police department has far exceeded its storage limits. An approximately 48 square foot storage closet has been converted into an office for the animal control officer and the previous approximately 70 square foot uniform closet has been converted into an officer for the training/crime prevention officer's office.

The police facility houses 11 employees regularly on a Monday through Friday 8:00 a.m. to 5:00 p.m. work schedule, and 20 employees that work either on alternate schedules and/or are those who do not work frequently within the facility.

The Robinson Police Department took over the old city hall complex in 2002 when the city administration and utility offices moved into the new city hall. At the time of the move, the police department used six (6) of the buildings offices for the then eleven (11) offices. Since the city hall moved out of the old building, the police department has redesigned some of the offices to accommodate additional space for the records unit, the evidence technician's office and evidence processing area, expanded the patrol supervisors' area to accommodate additional supervisors working at the same time, accommodated two telecommunicators at the same time, expanded the patrol officer's report writing area to accommodate additional officers, converted a storage closet into an office for animal control, converted a storage closet into an office for the training instructor/crime prevention officer, and provided the Chief of Police additional office space.

Even with the redesign and expansion of work space, the police department facility does not allow for any additionally created employee positions and has far exceeded its capacity for storage. The energy efficiency of the structure is below today's construction standards and electrical wiring is questionable in some areas. The electrical system is overwhelmingly insufficient to properly supply energy during emergency power outages in most all areas of the building. Plumbing problems are another issue that has plagued the building for years but is presently repaired in a functional capacity. Many flooring areas were constructed with asbestos tile but have either been abated or covered with carpet in compliance with TCEQ standards.

In 2010, the City of Robinson received a federal grant that allowed for the upgrading of room lighting, replacement of the HVAC systems, and for the replacement of the kitchen refrigerator. As the City of Robinson continues to grow and as the Robinson Police Department grows, the city will have to consider how it will address the continued maintenance of the building as well as the need for additional space.

Equipment

The Robinson Police Department has made significant improvements in the equipment needed to efficiently perform police services. In 2003 the department installed the InCode records management system (RMS). While this system was basic in its ability to record data, it did move the department in a positive direction toward technology based crime reporting. However, InCode remains a basic RMS and does not support data driven intelligence. It simply records date and does not efficiently provide crime data for proactive intelligence and enforcement.

The Federal Communications Commission (FCC) mandated January 1, 2013 as the date all governmental communications using the same system the Robinson Police Department uses for radio communications to become "narrow banded." Narrow banding allows more radio channels/frequencies to be shared in the same air space. Fortunately, the Robinson Police Department saw this coming many years ago and started purchasing radios that would convert to the new FCC regulations. Other than reconfiguring our present radios to conform to the new "narrow banding", which was done in house, and meet the 2013 deadline.

Unfortunately, the FCC has set a theoretical date of 2015 for changing all governmental radios to digital capable. Digital capable radios are much more expensive than the present analog radio system and no provisions have been made to meet this deadline. Presently, there are no sanctions if an agency does not meet the 2015 digital conversion deadline. While studying the digitization of radio frequencies, the police department is currently considering moving its radio frequencies to the 800 Mhz band so it can communicate with area law enforcement agencies through the McLennan County Sheriff's Department and Waco Police Departments "core" radio system.

Police Strategic Action Plan

Until late 2013, the Robinson Police Department had never purposefully addressed its strengths, weaknesses, opportunities, and threats, defined its strategy, or direction, for making decisions regarding short and long range goals, or for planning the allocation of its resources. This all changed with the creation of its Strategic Planning Committee in December 2013.

An 11 member voluntary committee was created from every division and most every rank. Though in its early stages, much communications has exchanged regarding the operations of the department. Immediately there was a discovery that the lack of communications within the

department had led to many team members having incorrect impressions as to how certain decisions were made that effected the while department.

One of the issues discussed in the organization's meetings was the lack of cohesion between fellow team members. A suggestion was made that led to the department's first workshop being held on a weekend. Being a 24/7 operation, holding meetings during the week meant that someone in the department was on their weekend no matter when the meeting was held. It was decided that workshop held on a weekend twice a year would equal out the discomfort other members experienced when meetings were held during the week.

At its first workshop, the whole department was apprised of the work the Strategic Planning Committee had made, as well as discussion of the department's strengths, weaknesses, opportunities, and threats. The workshop was held off of the police department premises and it was notable that the atmosphere of the team members was substantially more cheerful that when meetings were previously held at the police department headquarters.

Work continues in developing a mission statement, vision statement, values statement, and goals statement. Individual division goals will be defined to direct comprehensive, progressive, and professional growth and operations within each division as well as within the whole department.

Cooperative Local Policing

The Robinson Police Department works closely with the Robinson Independent School District Police Department. The Department is located two blocks from the middle and junior high school facilities, three blocks from the high school, and about five blocks from the primary and elementary schools.

The Robinson Police Department does not patrol the school facilities regularly when school is in session. The Department does provide backup to calls for service to the school's district only officer. Further support is provided when the school district officer is busy on other calls for service. The Robinson Police Department provides primary security patrols at night, weekends, holidays, and other times when the school is not in session.

As a proactive approach to possible violence on any Robinson school campus, every Robinson Police Department officer has been or will soon be trained in Advanced Law Enforcement Rapid Response Training (ALERRT). Developed after the tragedy at Columbine High School, ALERRT has become the national standard in active shooter response training. The first responders to the Fort Hood shootings on November 5, 2009 had been trained by ALERRT, and credited their swift and effective response on that day to the ALERRT training they had received.

Robinson has no alcoholic establishments and only permits the sale of beer and wine within the city limits for off premise consumption. While the Robinson Police Department receives information that a relatively large number of youth consume alcohol illegally, the department has found no indication that there is a large number of youths consuming alcohol illegally is wide spread or chronic. Rarely does the department identify youth committing alcohol violations and when these violations are identified, citations are usually issued by police officers. Robinson Police Department officers often make driving while intoxicated (DWI) apprehensions with over 99% of the apprehensions being adults.

Similar to reports of illegal consumption of alcohol, the Robinson Police Department often receives information that a large number of youth use illegal drugs or narcotics. In 2013 the Robinson Police Department's Canine Unit started actively following up on patrol officer

generated narcotic leads and has discovered a larger than previously proven amount of illegal narcotics use in Robinson by juveniles. Due to the lack of patrol workforce and the lack of time the Canine Unit has to effectively work follow-up narcotics investigations, the Canine officer has been unable to effectively penetrate the tight secrecy that prospers with the illegal drug usage by juveniles in Robinson. However, the Canine Unit has effectively investigated and arrested numerous suspects who live outside Robinson but whom where in possession of illegal narcotics within Robinson. Most of these suspects were adults.

Chapter 12 Fire Services

Early History

In the early 1950's, Robinson, Texas was a small rural farming community just south of Waco. As an emergency arose, there was no one to call in the time of need. On March 16, 1955, a group of citizens formed the Robinson Volunteer Fire Department. The original officers and board members included William H. Kettler (Chief), Jack Norred and Homer Drummond (Asst. Chiefs), Henry A. Karels (Fire Marshal), Everette H. O'Dowd (President), George T. Andrews (Secretary-Treasurer), Reverend Theodore Shumacher (Chaplin), and Perry Landrum (Vice-President).

The first truck purchased by the department was a used 1942 International Crash Truck with a Bean piston pump and 300-gallon water capacity tank. Soon after, land was purchased to build a two-bay fire station. In December 1955, the department increased its firefighting capabilities by being the high bidder on a surplus Ford American LaFrance 500-gallon/minute pumper obtained from James Connally Air Force Base. The department paid $777.99, and this included hose and equipment. The department continued to expand with the addition of a brand new 1959 Ford 500-gallon/minute pumper purchased from Central Fire Truck Company in St. Louis, Missouri. This was followed in 1963 with a new International 500 gallon/minute truck, which continued the trend for providing outstanding service to the community.

In the early years, the reporting of calls for help was performed by telephone and a siren on top of the station. The ability of a volunteer to hear the alarm depended greatly on the direction the wind was blowing at the time of the alarm. The person receiving the call would set off the siren, write the address on a chalkboard at the station and head for the scene. Additional responding personnel would arrive at the station, read the address and head for the smoke. This system progressed to a paging system that replaced the chalkboard. Today, phones are monitored 24 hours a day by a 911 operator, which receives that call and then transmits the information to each member via voice pager or cell phone.

In order to raise funds for the operation of the department, the tradition of an annual barbeque was established. At the first barbeque, approximately 600 persons were served at $1.00 per plate. In the summer of 2004, the department held the 50th Annual Barbeque Fund Raiser. Crowds exceeded 3,000 people. While the proceeds from this barbeque were vital to the department, it was not the only source of funding. Throughout the years, the citizens and businesses of the City of Robinson were generous in contributing donations to the department. Currently, the department also receives funding from the City of Robinson via a long-term contract. The funds received are poured back into the department for maintenance, replacement and upgrading of tools and equipment.

In the late 1970's, the department began to provide first responder assistance for medical calls

within the city. These capabilities were enhanced with the addition of two used ambulances that were converted to rescue trucks, and several volunteers becoming certified as ECA's and EMT's. The department is currently certified as First Responders with Advanced Life Support Capabilities, and the majority of the membership are certified EMT's or higher. In 1984, the department purchased its first set of the "Jaws of Life". Recently a second set of "Jaws" was added to the list of rescue equipment.

As the city continued to grow, the need for additional protection became evident. In 1993, a second station was built, in order to provide better response times to the northern portion of the city, as well as along the Interstate Highway 35 corridor that borders the west side of the response area. This station was built with contributions of funds and materials from the community, as well as hundreds of hours of volunteer labor. This station now houses an engine and a brush truck, as well as one rescue truck.

As the department continues in to the future, members will not forget the men and women who have devoted countless hours of time and effort to the department to ensure its continued success. During the department's over 50 years of history, seven men have led the department as Fire Chief. These men include William H. Kettler (1955-1975), James Threlkeld (1975-1976, 1981-1985), Oliver Bridges (1976-1978), Arthur Staas (1978-1981), Howard Fasshauer (1985-1987), Steve Ostrum (1987-2001), and Gerald Groppe (2001-present). The department would like to recognize and thank all of the past and present members of the Robinson Volunteer Fire Department Auxiliary. Founded in 1990, this important group has assisted the department with fundraisers, annual parties and most importantly, provided refreshments during many a fire call. The original officers were Rene Groppe (President), Martha Knight (Vice-President), and Grace Cling (Secretary-Treasurer).

Fire Department Organization

The Department currently averages 30 members, with two part-time employees. These members protect a city that has grown to a population over 11,500 people. The fire protection area of the department is approximately 53 square miles with a 3A school in the central portion of the city, and an industrial park in the western portion of the city. The department also provides mutual aid assistance to several other surrounding communities.

The Robinson Volunteer Fire Department is currently organized and staffed with a Fire Chief, Deputy Chief, Safety Officer, Fire Marshal, two Suppression Captains, two Suppression Lieutenants, and two Rescue Captains. Apparatus currently in use consists of two fire engines with a full complement of hose and equipment to satisfy the ISO requirements. This includes extrication equipment, thermal cameras, gas monitors, generators and a multitude of hose and small tools.

The department also has two tankers that include a 2,000 gallon and 3,500 gallon. These tankers carry portable tanks, float pumps, and a compliment of hose for fire suppression. There are two

brush trucks that include a 1 ton chassis and a 2 ton chassis, 4-wheel drive that have pump and roll capabilities, foam systems, and miscellaneous tools. The command/rescue truck is a Tahoe equipped with basic life support devices. The service truck carries all miscellaneous tools.

City of Robinson Support

The Robinson Volunteer Fire Department is ready, willing, and able to provide excellent fire and rescue protection to the citizens of Robinson. The members of the Robinson Volunteer Fire Department are proud to consider themselves as “Citizens serving Citizens”.

The volunteer department has been the backbone of the city's services because of its volunteer status for 59 years. Thanks to the cooperative spirit between the city and the department, the financial support of the city over the years has elevated the department into one of the best volunteer departments in Central Texas.

The contractual position of the city and department has provided funding for over twenty years that has allowed the department to build and acquire the necessary equipment to provide fire prevention and suppression as well as first responder medical for the citizens of Robinson, while remaining all volunteer.

Fire Commission

The Fire Commission is an internally elected board of seven commission members along with one City of Robinson appointed liaison member that serve as the governing body for the Department. The elected commission consists of a president, vice-president, secretary treasurer, chaplain and 3 directors. The Fire Chief, Deputy Fire Chief, and Fire Marshal positions within the department are also elected positions. The Fire Chief appoints all other suppression and rescue officers.

Fire Marshal Duties

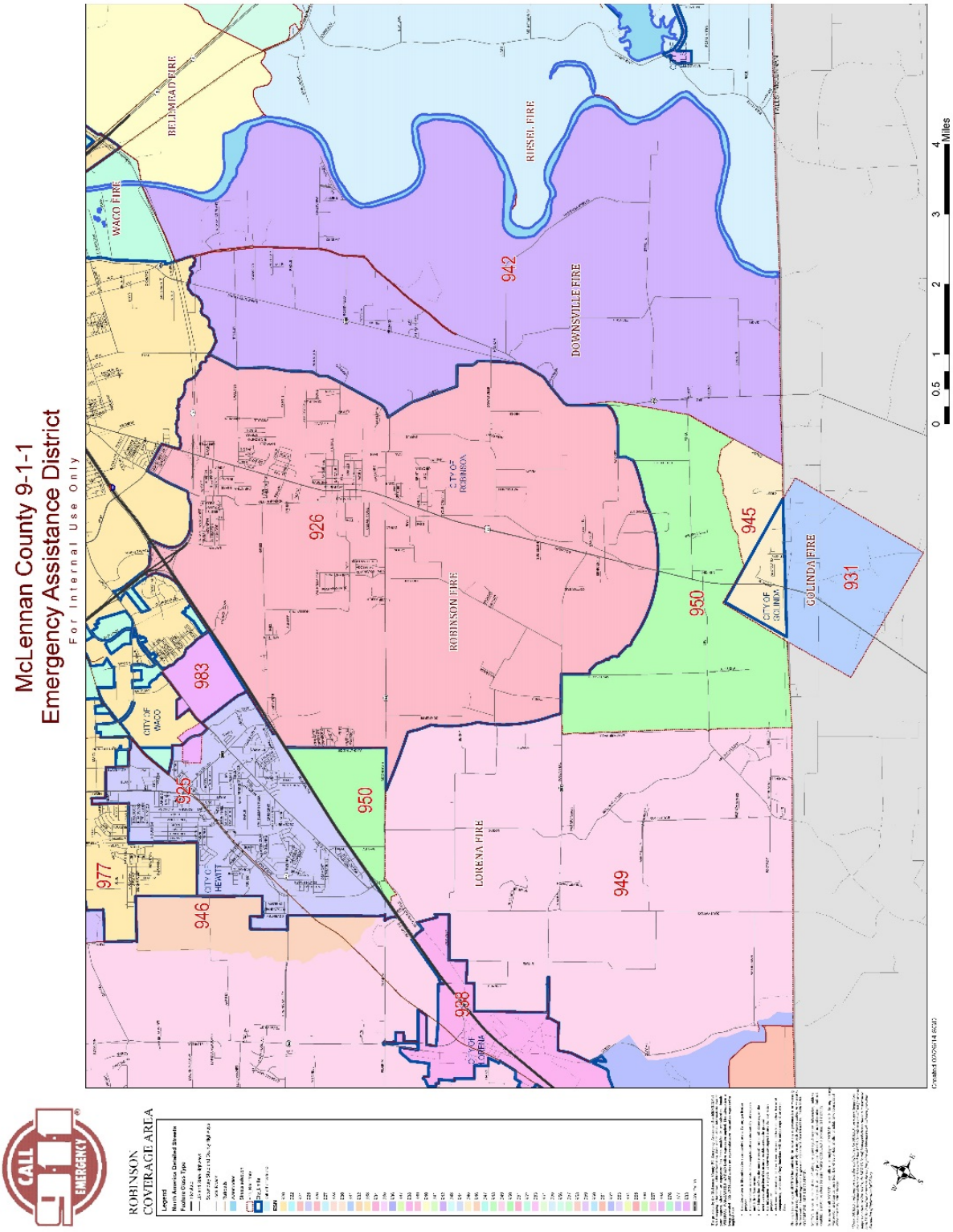
The Fire Marshal conducts all Fire Code inspections within the City. The City of Robinson has approximately 304 commercial and/or public occupancies. These occupancies are inspected annually. Some occupancies that have code violations are inspected more than once as violation corrections require. There are approximately 25 other type facilities that require annual inspections such as assisted living homes, foster care and adoption homes. The Fire Marshal also is responsible for conducting fire investigation cases since all fires, by law, require an investigation as to the cause of the fire.

Average Service Calls

The Fire Department is a volunteer organization that responds to all fires, emergency medical service calls, major motor vehicle collisions, fuel and gas leaks, power line arcing/down calls,

mutual aid and other type calls for public assistance within the City of Robinson and surrounding assigned fire districts.

The types and average numbers of Fire Department calls by type experienced during the years 2010-2012 include 13 structure fires, 20 grass/brush fires, 9 vehicle/mobile property fires, 6 other types of fires, 2 explosions/overpressure fires, 64 rescue/extrication MVC related calls, 259 EMS



calls, 27 hazardous condition (gasoline, natural gas leaks, electrical lines down, CO calls, etc.), 97 service calls, smoke scares, assist citizens, and false calls. The average number of calls during this type period were 497.

Future Growth

The City Of Robinson should increase in population within the next 20 years. It should be taken into consideration that many factors will ultimately determine the actual timeline for the progression of the Fire Department. Some of these factors are ISO requirements and the number of calls for service to the Fire Department. The current volunteer organization functions at a high level of quality service with adequate numbers of responding personnel in an adequate time frame.

However, as the population and building structures age, an increase in call volume should be anticipated. At some point in the near future, the call volume and ISO requirements will necessitate the need for a full-time paid firefighter department that will be on duty and immediately respond to calls for service. This type of department should be the next step in the evolution of the Robinson Fire Department. The following recommendations would need to be considered during that time period:

1) The City should staff two fire stations on a 24-hour basis with one officer and one engineer. On a 24-hour on duty/48-hour off duty work rotation, this would require two station captains, four station lieutenants and six engineers. This does not take into consideration staffing for vacation and sick time.

2. The City of Robinson should consider the employment of a full time fire chief, administrative assistant, fire marshal, deputy fire marshal, and a full time station/vehicle maintenance staff member.

New Fire Station Construction

The Robinson City Council approved a construction contract for the new City of Robinson Fire Department Building on August 5, 2013. This project provides for design and construction of a Fire Department building of approximately 12,100 square feet and will include offices and related spaces for the City of Robinson Volunteer Fire Department. This will include bays for fire apparatus as well as parking for fire department employees. The proposed project will be situated on 0.895 acres of land, more or less located at the intersection of South Strauss Street and West Stegall Drive in the City of Robinson, Texas.

Chapter 13 Emergency Management

The City of Robinson is a member of the McLennan County Emergency Management system along with the participating cities within McLennan County. A McLennan County Hazard Mitigation Plan was developed in accordance with the provisions of the Disaster Mitigation Act of 2000 (Public Law 106-390), the Pre-Disaster Mitigation Grant Program, 44 Code of Federal Regulations Part 201.6 and 206, and the planning standards adopted by the Federal Emergency Management Agency (FEMA) and the Texas Division of Emergency Management (TDEM).

Mitigation Plan

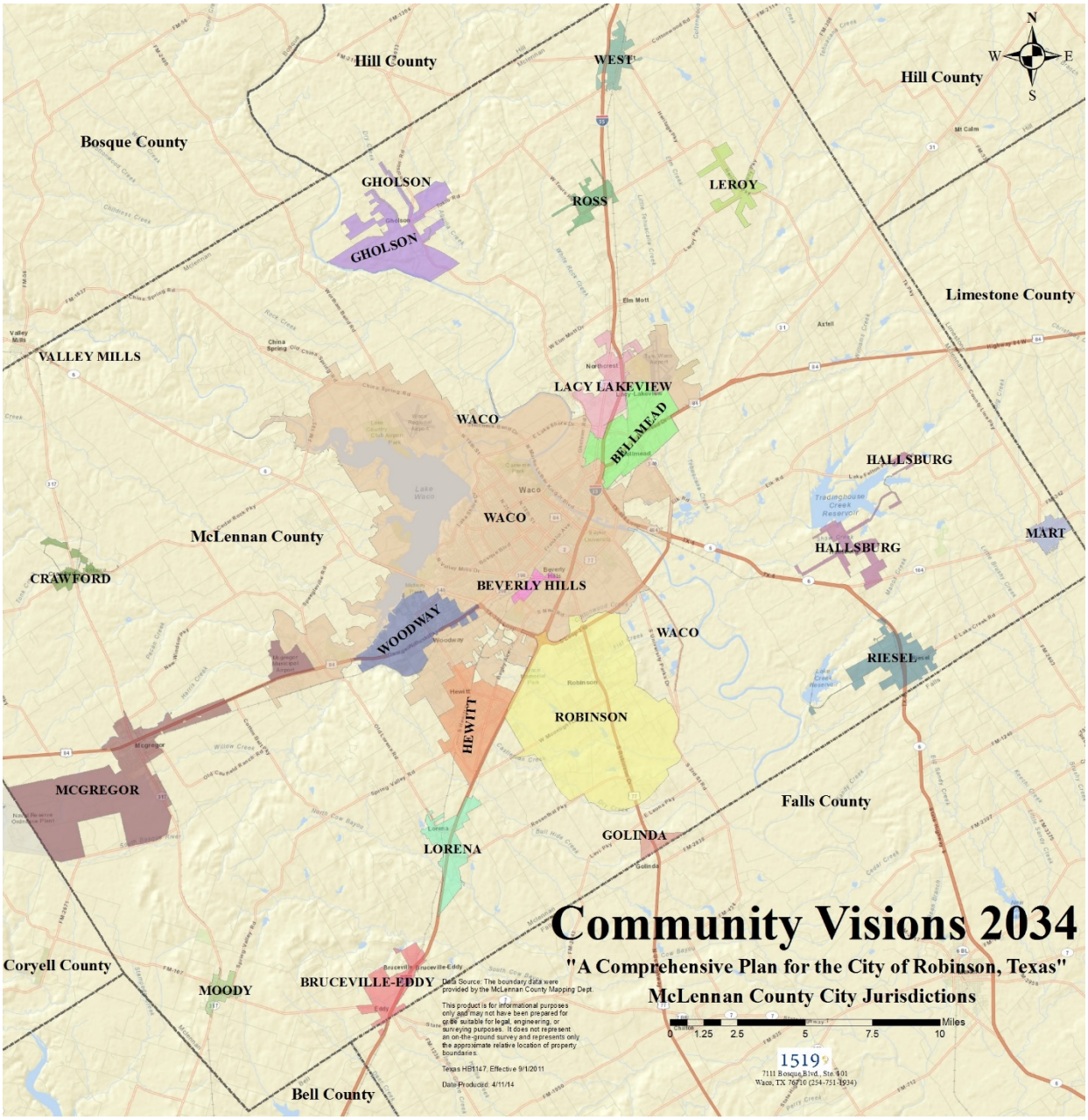
The mitigation plan was created for McLennan County in 2011-2013 by the McLennan County Office of Emergency Management. This plan was funded by the Federal Emergency Management Agency (FEMA) under a mitigation planning grant awarded to McLennan County on August 23, 2010. This plan was adopted by the City of Robinson on October 1, 2013, Resolution No. 2013-012. This new mitigation plan covers only McLennan County and participating jurisdictions of Bellmead, Beverly Hills, Bruceville-Eddy, Crawford, Gholson, Golinda, Hallsburg, Hewitt, Lacy-Lakeview, Leroy, Lorena, Mart, McGregor, Moody, Robinson, Riesel, Ross, Waco, West, and Woodway (See jurisdiction map on the next page). The following information was taken from the narrative of the plan for comprehensive planning purposes.

The plan identifies and assesses the potential impact of natural hazards that threaten human life and property. This plan is designated to help build a sustainable community that, when confronted by natural disasters, will sustain fewer losses and will be able to recover more quickly from them. It is also intended to address the following:

- Minimize disruption to the region following a disaster;
- Streamline the disaster recovery process by having in place pre-identified actions that can be taken to reduce or eliminate future damage;
- Provide the basis for the Small Business Administration to make low interest, fixed rate loans to small businesses for the purpose of implementing mitigation measures to protect their commercial real property (buildings) or leasehold improvements or contents from disaster related damage;
- Capitalize on Federal funding that may become available after the disaster strikes; and
- Ensure that the region maintains its eligibility to the full range of future Federal disaster relief.

The plan is intended to serve as a basis for future funding that may become available from State or Federal grants and technical assistance programs. It will enable McLennan County and the

participating jurisdictions to take advantage of rapidly developing mitigation grant opportunities as they arise.



Potential funding sources for implementation are identified for each proposed action. These include general revenues, state and federal grants. The County and participating jurisdictions will seek to obtain the necessary funding to implement the mitigation actions set forth when possible. However, in this period of increased demands and constrained resources at all levels of government, the lack of resources, especially from external sources, may hamper the ability of

the jurisdictions to implement some mitigation actions identified in the plan or to implement them within the timeframe specified.

Natural Hazards

McLennan County and the City of Robinson face the potential impact of natural hazards that threaten human life and property at any time. The potential hazards include floods, droughts, wildfires, tornadoes, thunderstorms, winter storms, hail, and dam failure. The following is a brief description of each of these potential hazards.

Floods

Numerous areas of Texas are susceptible to floods, especially in Central Texas, where McLennan County and the City of Robinson are located. Potential flooding areas within the City of Robinson are mainly located along Flat Creek, Castleman Creek, and Cottonwood Creek. The definition of a “flood” is an, “overflow of water that submerges land which is normally “dry”. The Central Texas area is a breeding ground for big thunderstorms in the spring and fall that spawn tornadoes and feed the heavy rains that cause flash flooding. Flooding takes many forms in McLennan County and the City of Robinson.

Flash Flooding

Most flash flooding is caused by slow-moving thunderstorms, by thunderstorms repeatedly moving over the same area, or by heavy rains from hurricanes and tropical storms. Flash floods can occur within a few minutes or after hours of excessive rainfall. Often there is no warning that flash floods are coming.

Flash flooding can pose a deadly danger to residents of McLennan County and the City of Robinson. A number of roads run through low-lying areas that are prone to sudden and frequent flooding during heavy rains. Motorists often attempt to drive through barricaded or flooded roadways. It takes only 18-24 inches of water moving across a roadway to carry away most vehicles. Floating cars easily get swept downstream, making rescues difficult and dangerous.

Urban Flooding

Urban flooding occurs as land is converted from fields or woodlands to roads, buildings and parking lots and when the natural land loses its ability to absorb rainfall. Urbanization changes the natural hydrologic systems of a basin, increasing runoff two to six times over what would occur on natural terrain. During periods of urban flooding, streets can become swift moving rivers, while highway underpasses and underground parking garages can become death traps as they fill with water.

Flood Hazard Areas

Flood hazard areas are determined using statistical analyses of records of river flow, storm tides, and rainfall. This information is obtained through consultation with communities, floodplain topographic surveys, and hydrological and hydraulic analyses. FEMA's Flood Insurance Rate Maps (FIRMs) identify areas subject to flood hazard. These include Special Flood Hazard Areas, which are defined as areas that will be inundated by a flood event having a one-percent chance of being equaled or exceeded in any given year. The one-percent-annual-chance flood is also referred to as the base flood or 100-year flood. Moderate flood-hazard areas are also shown on the FIRM, and are the areas between the limits of the base flood and the two-tenths of a percent-annual-chance or the 500-year flood frequency. All FIRM's are available for the public to view and print at the FEMA Map Center located at www.msc.fema.gov/. In addition, local flood maps are held in the offices of the local Emergency Management Coordinator for each participating jurisdiction. In the City of Robinson, the coordinator is located in the Planning and Community Development Department at City Hall.

Drought

Drought is defined as a period of time without substantial rainfall that persists from one year to the next. Drought is a normal part of virtually all-climatic regimes, including areas with high and low average rainfall. Drought is the consequence of a natural reduction in the amount of precipitation expected over an extended period of time, usually a season or more in length. Droughts can be classified as meteorological, hydrological, agricultural, and socioeconomic. The table below provides an explanation of these drought classifications:

Drought Classifications

Meteorological Drought	The degree of dryness or departure of actual precipitation from an expected average or normal amount based on monthly, seasonal, or annual time scales.
Hydrologic Drought	The effects of precipitation shortfalls on stream flows and reservoir, lake, and groundwater levels.
Agricultural Drought	Soil moisture deficiencies relative to water demands of plant life, usually crops.
Socioeconomic Drought	The effect of demands for water exceeding the supply as a result of a weather-related supply shortfall.

Source: Multi-Hazard Identification and Risk Assessment: A Cornerstone of the National Mitigation Strategy, FEMA.

Drought is one of the most complex and least understood of all natural hazards. It affects more people than to other natural hazards but differing from them in important ways. Drought unfolds at an almost imperceptible pace with beginning and ending times that are difficult to determine

and with effects that often are spread over vast regions. It is the most costly of all natural disasters, and because of the famines it causes, it is the most deadly.

Over time, droughts can have very damaging effects on crops, municipal water supplies, recreational uses, and wildlife. If droughts extend over a number of years, the direct and indirect economic impact can be significant. Their impact on wildlife and area farming is enormous. Droughts can kill crops, grazing land, edible plants and even in severe cases, trees. Dying vegetation also serves as a prime ignition source for wildfires.

A heat wave combined with a drought is a very dangerous situation. Although drought can occur in any season and when extreme heat combines with drought conditions, the result can be a community disaster. Droughts occur regularly in Texas and are a normal condition. They can vary greatly, however, in their intensity and duration. On average, a year-long drought takes place somewhere in Texas once every 3 years and a major drought every 20 years. Major droughts can last for years. In the summer of 2011, all of McLennan County was experiencing an exceptional drought event.

Wildfires

A wildfire is defined as any fire occurring on grassland, forest, or prairie regardless of ignition source, damages, or benefits. Increases in population, urban expansion, land-management decisions that place neighborhoods adjacent to wildlife preserves, parks, and greenbelts have increased the threat of wildfires. More and more people are building their homes in woodland settings or near open grasslands. Homeowners enjoy the beauty of the environment but they also face the very real danger of wildfire.

Years of fire suppression have significantly disturbed natural fire occurrences. The result has been the gradual accumulation of understory and canopy fuels to levels of density that can feed high-energy intense wildfires. Three different classes of wildfires exist. A “surface fire” is the most common type and burns along the floor of a forest, moving slowly and killing or damaging trees. These are the most common in the City of Robinson. A “ground fire” is usually started by lighting and burns on or below the forest floor in the humus layer down to the mineral soil. “Crown fires” spread rapidly by wind and move quickly by jumping along the tops of trees. Humans start about 90 percent of wildfires (cigarettes thrown from cars, burning of refuse, etc.), and lightning starts the other 10 percent.

Tornadoes

A tornado is a violently rotating column of air extending between, and in contact with a cloud and the surface of the earth. The most violent tornadoes are capable of tremendous destruction with wind speeds of 250 miles per hours or more. In extreme cases, winds may approach 300 miles per hour. Damage paths can be in excess of one-mile wide and 50 miles long. The most powerful tornadoes are spawned by “super-cell thunderstorms.” These storms are affected by

horizontal wind shears (winds moving in different directions at different altitudes) that begin to rotate the storm. This horizontal rotation can be tilted vertically by violent updrafts, and the rotation radius can shrink, forming a vertical column of very quickly swirling air. This rotating air can eventually reach the ground, forming a tornado. The Chart below shows how tornadoes are rated based on the Fujita Tornado Scale.

Enhanced Fujita Tornado Scale Implemented February 1, 2007

EF0 (Gale)	65-85 mph / 3-second gusts
EF1 ((Weak)	86-110 mph / 3-second gusts
EF2 (Strong)	111-135 mph / 3-second gusts
EF3 (Severe)	136-165 mph / 3-second gusts
EF4 (Devastating)	166-200 mph / 3-second gusts
EF5 (Incredible)	over 200 mph / 3-second gusts

It cannot be predicted where a tornado will touch down. All facilities and buildings in McLennan County and the City of Robinson are considered to be exposed to the tornado hazard and could potentially be impacted. The impact of tornadoes in McLennan County and the City of Robinson can be substantial. They can cause multiple deaths, completely shut down facilities for thirty days or more, and can cause more than fifty percent of affected properties to be destroyed or suffer major damage.

Seasonal patterns are relevant to tornadoes. Thunderstorms form when warm, moist air collides with cooler, drier air. Since these masses tend to come together during the transition from summer to winter, most thunderstorms and resulting tornadoes occur during the spring (March-June) and, at a lesser intensity, during the fall (September-November). Warning time for tornadoes is minimal.

Thunderstorms

A thunderstorm is a form of turbulent weather characterized by the presence of lightning and its acoustic effect on the Earth's atmosphere known as thunder. Thunderstorms form when clouds develop sufficient upward motion and are cold enough to provide the ingredients (ice and super-cooled water) to generate and separate electrical charges within the cloud.

Thunderstorms are like nature's heat pumps. At the very top of giant thunderstorms, air temperatures can sometimes drop to below -100 degrees F. Sometimes, on a hot summer day, this air originates near the ground at 100 degrees F. Thunderstorms carry the sun's energy from the surface into the cooler reaches of the atmosphere. Without this convective heat transport it is estimated that the mean temperature of the planet would increase by over 20 degrees F, making many areas uninhabitable.

The National Weather Service (NWS) classifies a thunderstorm as severe if it contains hail of three-quarter inches or larger, and/or wind gusts of 58 mph or higher, and/or a tornado. Severe thunderstorm watches, meaning conditions are suitable for severe thunderstorm development during the next several hours, are issued for areas several hundred miles on a side by the National Weather Service Storm Prediction Center in Norman, Oklahoma. A severe thunderstorm warning is issued by the local NWS office, usually for a county or several counties over an hour or so, based on spotter reports or radar indications of conditions exceeding several levels. If there is a distinct threat or actual observation of a tornado, a tornado warning is issued.

Winter Storms

A winter storm is an event in which the varieties of precipitation are formed that only occur at low temperatures, such as snow or sleet, or a rainstorm where ground temperatures are low enough to allow ice to form (i.e. freezing rain). A severe winter storm event includes a storm with snow, ice or freezing rain, all of which can cause significant problems for area residents. Winter storms that threaten McLennan County and the City of Robinson usually start out as powerful cold fronts that push south from central Canada.

Most of the precipitation seen in McLennan County from severe winter storms takes the form of ice or sleet. Freezing rain occurs when rain developing in a relatively warm (above freezing) layer of air falls through a layer of air that is below freezing (25-32 degrees F). The rain is ‘supercooled” as it falls through the cold layer near the surface of the earth. When the supercooled but still liquid raindrops strike the ground or an object already below freezing, they freeze on contact. The resulting coating of ice is commonly known as glaze.

A heavy accumulation of ice can topple power and telephone lines, television towers, and trees, and may cause significant damage. Highways become impossible for travel, and even stepping outdoors can be extremely risky. The severity of an ice storm and the amount of damage caused by the storm depends on the amount of rain and thus the amount of icing taking place, the strength of the wind, and whether or not the storm strikes an urban or rural area. Urban areas tend to suffer more damage than rural areas because of the concentration of utilities and transportation systems (aircraft, trains, buses, trucks, and cars), all of which may be affected to a great degree by the icing.

Hail

Hail is defined as a form of solid precipitation. Hail is made up of spherical balls of ice and is a product of thunderstorms or intense showers. It is generally white and translucent, consisting of liquid of snow particles encased with layers of ice. Hail is formed within the high tops of well-organized thunderstorms. An updraft will sometimes throw rain droplets high up into the tops of a cloud, where the temperature is well below freezing. The droplet freezes, then falls and can become caught in another updraft. This time a second coating of ice is added, making the hail stone larger. This cycle continues until the hailstone is too heavy to be lifted again and falls to

the ground as hail. The stronger the updraft, the longer the hail develops and the bigger the hailstone is when it falls. Hail can be smaller than a pea or as large as a softball and can be very destructive to plants, cars, homes, buildings, and crops.

The development and maturation of hailstones are very complex processes. Numerous factors impact the resultant size of the hailstone including updraft strength, storm scale wind profile, height of the freezing level, and the mean temperature and relative humidity of downdraft air. The complexities of hail formation and sub-cloud processes make utilizing Doppler radar data to forecast the occurrence of large hail difficult. Verification of hail events is also important, but is a cumbersome process due to the limited temporal and spatial distribution of the event.

Large hailstones fall at speeds faster than 100 mph. These large falling balls of ice can be very dangerous. Large hail can do significant damage to automobiles, windows, roods, crops, and animals. When caught in a hailstorm, it is important to seek shelter immediately. Pets and livestock are particularly vulnerable to hail and should be brought into a shelter.

Dam Failure

Dams are classified as containing water storage, control, or diversion barriers that impound water upstream in reservoirs. The examples of water storage in the City of Robinson include the water treatment plant reservoirs, conservation lakes, and various sizes of ponds. Dams provide many benefits and are an important part of our public works infrastructure. They are built for a variety of reasons, including maintenance of lake levels, flood control, soil conservation, power production, and water supply.

Although dams have many benefits, the risk that a dam could fail still exists. Dams can pose a risk to communities if not designed, operated and maintained properly. Dam failure is defined as a collapse or breach in the structure. While most dams have storage volumes small enough that failures have little or no repercussions, dams with large storage amounts can cause significant flooding downstream.

Emergency Notification System

Quick and reliable communication is critical to the operations of any municipality. Whether related to criminal activities, severe weather or missing persons, the ability to quickly and reliably reach staff, emergency personnel, and citizens – over any voice or text device – can help protect life and property. Through the service of the McLennan County Emergency Management Office, made available to the City of Robinson at no or very low cost, deliver of emergency and non-emergency notifications are available quickly and efficiently using an emergency notification system known as Everbridge. Everbridge alerts are pre-recorded telephone messages made to publicly-listed phone numbers. If a resident’s name and landline phone numbers are currently listed in the white pages or yellow pages or a citizen has previously signed up for the

service through the Heart of Texas Council of Governments, they are automatically in the Everbridge system. This service is free to the public.

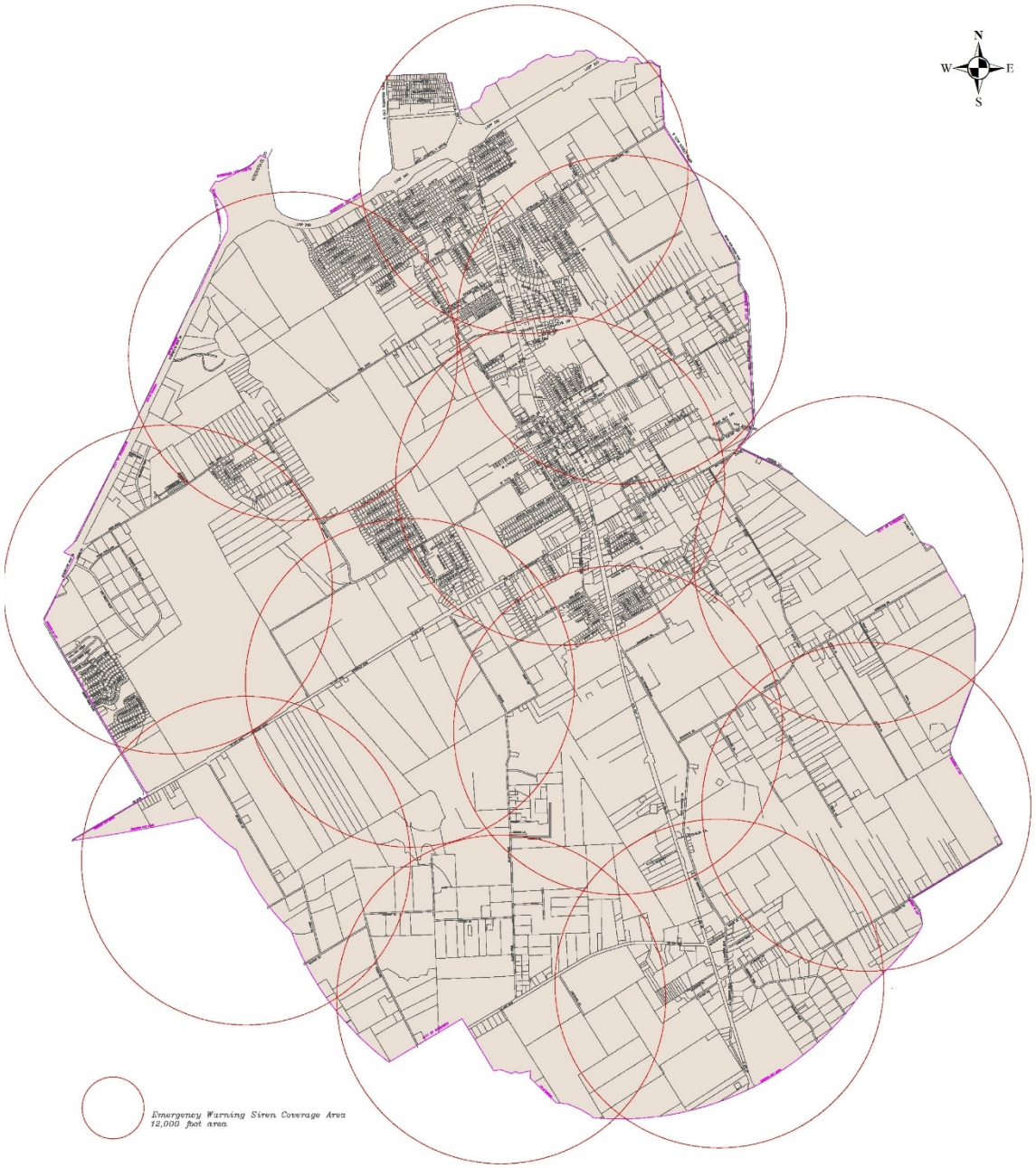
Emergency Warning Sirens

The current emergency warning siren locations that cover the City of Robinson include a site at the intersection of East Shamrock and McLendon Drive, and the other at the intersection of Tinsley Drive and North Old Robinson Road. These used warning sirens were installed around ten years ago, and were previously installed at a local military base. These sirens are approximately 30 + years old. There is also a warning siren at the Robinson Volunteer Fire Station across from City Hall along West Lyndale Drive at Strauss Drive that is currently out of service. The age of this siren is approximately 40 to 50 years old. All of these sirens need immediate replacement.

A review of the coverage area for emergency warning sirens within the City suggest that twelve (12) sirens would be required to maintain adequate coverage in the event of an emergency. The emergency siren map on the next page illustrates the locations of these proposed sirens and their coverage area. The typical coverage area has a radius of 6,000 linear feet. Weather, terrain, and other vertical structures may impact the range of these warning sirens.

Future Emergency Management Department

The City of Robinson is currently member of the McLennan County Emergency Management system along with the participating cities within McLennan County. It is the intent over the next twenty years that, as the city grows, to research and develop an independent emergency management department within the city organization. The City would still be a part of the McLennan County system for government funding purposes, but would function separately from the current coalition of surrounding cities.



Data Source: The parcel boundaries were provided by the McLennan County Mapping Dept. The Preferred Alternative data were provided by Renaissance Planning Group.

This product is for informational purposes only and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

Texas HB1147, Effective 9/1/2011

Date Produced: 4/16/14

Community Visions 2034

"A Comprehensive Plan for the City of Robinson, Texas"

Emergency Sirens

0 500 1,000 2,000 3,000 4,000 Feet

1519

7111 Bosque Blvd., Ste. 101
Waco, TX 76710 (254-751-1934)

Chapter 14 Land Use

The purpose of the land use section of the Comprehensive Plan is to examine existing land uses within the City, and to project future land use for a period of twenty years. No land use studies have been written in the City of Robinson in recent years. Therefore, this study will provide the initial baseline for future development projections. The methodology used to produce the existing and future land use plan and map included a windshield survey, aerial photography, the City's geographical information system, and general knowledge of the City.

Existing Land Use

The existing land use designations in the City of Robinson consists of agricultural, residential, commercial, industrial, floodplain/surface water, public/semi-public, parks and open space, and vacant land uses. The majority of the City consists of single-family residential uses in neighborhoods of varying density. The older neighborhoods are denser than the newer neighborhoods. These uses may be seen throughout the City to the north, west, and east as older and recent single-family subdivisions. Areas to the south indicate sporadic development of small to large farmstead and ranch homes. The comprehensive plan illustrates this continued pattern of development in the Future Land Use Plan Map and does not seek to make significant changes to that pattern of development within the city limits.

The city has a mix of commercial and industrial uses that provide employment opportunities for its citizens. The commercial core also has most of the main offices for various public institutions such as the City municipal building and school district offices. New commercial development is located generally along major arterial streets and highways as linear or strip commercial corridors in the city.

Since strip commercial development along the length of the arterial or highway has immediate access to the street, vehicles stopping and slowing down to enter these numerous access points tend to slow traffic down. The Texas Department of Transportation's newly adopted "curb-cut" or access management regulations will help to reduce the number of entry/exit points serving these arterials and thus allow traffic to flow more efficiently.

Land Use Calculations

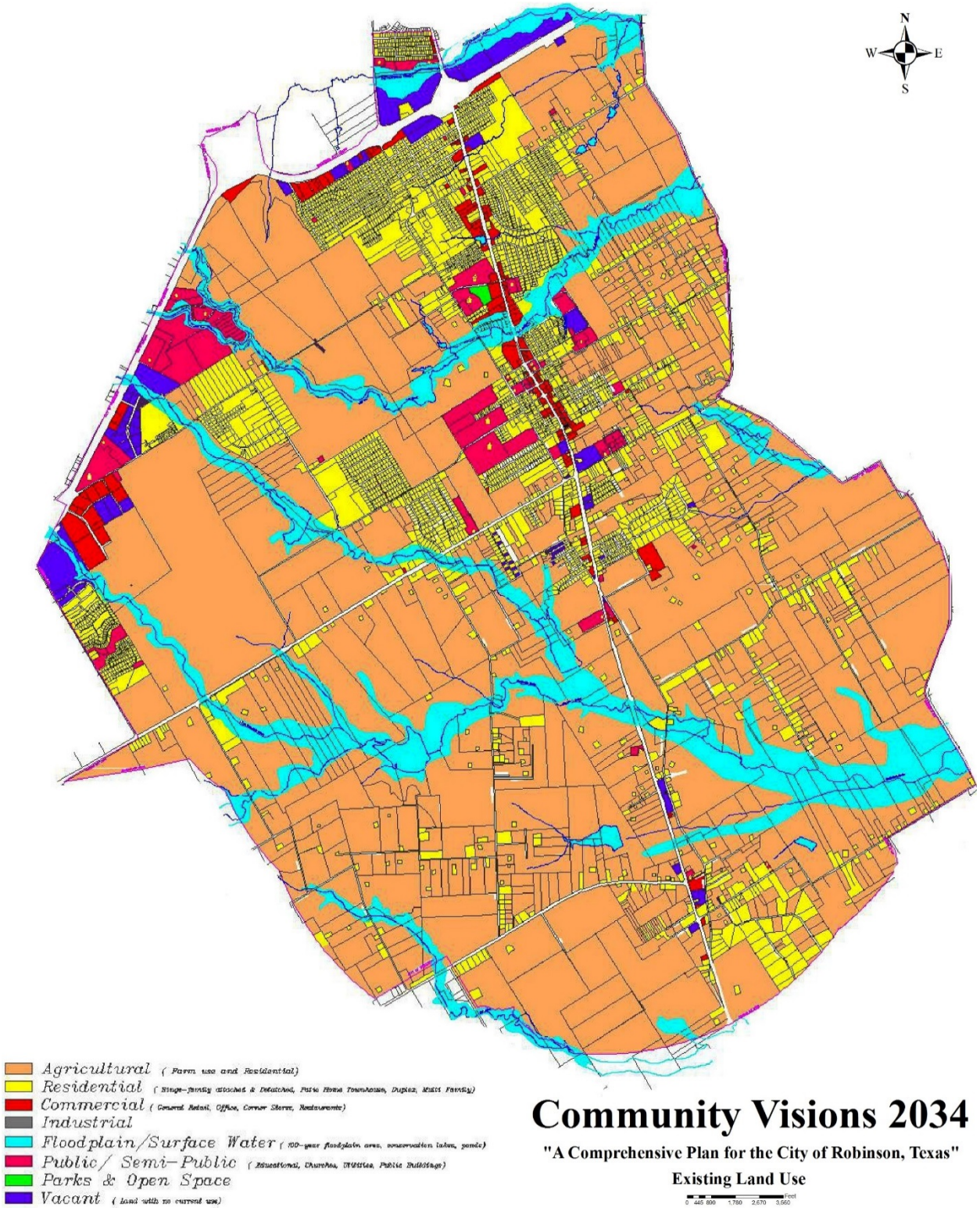
The area of the City of Robinson is comprised of 20,139.76 acres or 31.468 square miles of land. Land uses comprise 19,506.17 acres or 30.478 square miles of land. Land area for right-of-way purposes contributes 633.599 acres or .99 square miles of land. The largest land use category includes rangeland and ranchland. These categories comprise 69.632 percent of the City of Robinson. Rangeland comprises 397 parcels of land and 44.260 percent of the City. Ranchland comprises 393 parcels of land and 25.372 percent of the City. There are 5,456 parcels of land in the City of Robinson.

The improvements that include residential, commercial, and industrial land comprise 22.85 percent of the City. The individual categories include residential land use that contains 3,625 lots or 15.800 percent; commercial land use that contains 5 lots or 0.038 percent; and industrial land use that contains 238 lots or 7.012 percent. This information reveals that less than 23 percent of the City of Robinson is developed. There are 262 vacant residential platted lots; 74 vacant commercial platted lots; and 6 vacant industrial platted lots. There are 27 mobile home lots, 216 duplexes, 2 triplexes, 12 fourplexes, and 4 apartments in the City of Robinson.

Existing Land Use Category's in the City of Robinson

Description	Parcels	Acreage	Percentage
Single-Family Residential	3625	2556.44	13.105
Mobile Home	27	34.92	0.178
Duplexes	216	69.62	0.356
Triplexes	2	0.36	0.001
Four-plexes	12	4.13	0.021
Apartments	4	2.82	0.014
Platted Residential Lot-Vacant	262	301.87	1.547
Platted Commercial Lot-Vacant	74	371.14	1.902
Platted Industrial Lot-Vacant	6	17.82	0.091
Vacant Residential Land	88	276.93	1.419
Improved Land	7	17.12	0.087
Rangeland	399	8633.45	44.260
Ranchland	393	4947.03	25.372
Rural Land	53	484.33	2.482
Farm/Ranch House	23	263.81	1.352
Farm/Ranch Mobile Home	10	133.82	0.686
Commercial	238	1367.90	7.012
Industrial	5	7.43	0.038
Gas Utility System	2	0.90	0.004
Electric Utility System	3	9.59	0.049
Telephone Utility System	2	1.41	0.007
Water System	5	3.33	0.017
Total	5456	19506.17	100.00

Source: McLennan County Appraisal District property records, October 1, 2013. Land uses based on State categories for McLennan County.


N
W
E
S
Agricultural (Farm use and Residential)
Residential (Single-family detached & Detached, Patio Home Townhouse, Duplex, Multi Family)
Commercial (General Retail, Office, Corner Store, Restaurants)
Industrial
Floodplain/Surface Water (100-year floodplain area, conservation lakes, ponds)
Public/ Semi-Public (Educational, Churches, Utilities, Public Buildings)
Parks & Open Space
Vacant (Land with no current use)
Community Visions 2034
"A Comprehensive Plan for the City of Robinson, Texas"
Existing Land Use
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Feet

Future Land Use Plan

Existing conditions and development patterns, community goals and objectives, and land development standards and policies serve as the basis for the Future Land Use Plan. The plan represents a generalized scheme of land development that reflects continuity in maintaining the City's current low-density development pattern while providing for future residential, commercial, office, and industrial growth.

The purpose of the Future Land Use Plan identifies the intended long-range patterns and character of residential, commercial, office, industrial, and supporting land uses. It identifies the needs for adjustments to zoning regulations, land use, subdivision regulations, development plan review procedures and other tools. It directs the desired land use pattern and quality of development. It guides utility planning in order to insure proper sizing of infrastructure and anticipation of facilities needed for short-term and long-term growth.

Residential Development Patterns

In order to maintain compatibility with existing development patterns and to reinforce continuity of the City's character, single-family residential uses are proposed as the predominant future residential development pattern. Single-family residential development is proposed on undeveloped tracts in or adjacent to existing neighborhoods and in growth areas on the City's northeast, west, central, and east perimeters. Although it is not generally recommended that single-family residential developments receive primary access from major streets, this development pattern is unavoidable in certain areas of the City of Robinson due to existing land use patterns and land parcel configurations.

Areas the south, southwest, and southeast are projected to continue slow growth as rural areas with single-family residential homes on small to large farmsteads and ranchland. Higher density residential uses are generally proposed to locate along collector or arterial streets. Duplex and multi-family residential uses also serve as land use buffers between single-family residential developments and commercial and industrial activity. Most land parcels available for duplex and multi-family residential uses are located in developing areas on the City's north side along Interstate Highway 35.

Commercial Development Patterns

Most commercial activity is projected to be focused along the Interstate Highway 35 and State Highway 6/Loop 340 intersection with the greatest concentration of new commercial development located in the core area along these highways. Future commercial development will continue to locate along U.S. Highway 77 and at intersections with collector and arterial streets.

It is recommended that such development should be clustered at intersections of primary streets and that, when possible, development should occur in planned commercial mixed-use centers.

Office Development Patterns

Office uses are recommended to further develop at growth area corridors along Interstate Highway 35 at major intersections. These office uses will act as a buffer to existing and proposed future commercial development along those corridors. Other areas of office development should be encouraged to develop along State Highway 6/Loop 340 in conjunction with commercial land uses. Sporadic office development should be retained along U.S. Highway 77 due to existing land uses that are compatible with office land uses. These office land uses will also act as buffers between the older residential neighborhoods along this highway. Further office development should be encouraged in conjunction with commercial uses at intersections with collector and arterial streets.

Industrial Development Patterns

Future industrial uses are proposed to locate in existing industrial-zoned areas on the community's north, west, northeast perimeters along Interstate Highway 35 and State Highway 6/Loop 340. These areas are served by city utilities and are accessible via the Interstate Highway 35 frontage road system.

The City may assist a private developer in acquiring land in a variety of way to reduce the cost of developing in a new area. One approach is to identify and inventory parcels of land suitable for the type of development. This reduces the time and effort a private developer must spend on the site location research. A recommendation may be to maintain a computerized inventory of available vacant commercial and industrial land. This inventory will provide site-specific information on zoning, acreage, street location, utilities, assessed value, topography, and other development constraints.

Future Land Use Map

The Future Land Use Map does not constitute zoning, nor does it establish zoning district boundaries. Nor is it appropriate for application on a parcel-by-parcel basis. The map reflects the Comprehensive Plan broad policy for future distribution of land uses to be achieved over a 20-year period. The revisions to zoning and other regulations required to implement these policies will be based upon detailed, site specific considerations that are beyond the scope and intent of the comprehensive plan.

The Future Land Use Map provides a graphic reference for a property owner or public official who is interested in the plan's policy direction for a certain area of the city or specific property. It is intended to provide a generalized picture of future development patterns. Many of the

boundaries between two land use categories are intended to represent general transitions between uses.

The Future Land Use Map should be considered along with the goals, objectives, and policies in the Comprehensive Plan document. These policies can add support for a particular development pattern or may set forth additional criteria a development project must meet for approval by the City.

Future Land Use Map District Boundaries

The district boundary lines shown on the Future Land Use Map are usually along existing and proposed streets, alleys or property lines. Where uncertainty exists as to the boundaries of districts as shown on the Future Land Use Map, the following rules apply.

1.1 Boundaries indicated as approximately following the centerlines of streets, highways or alleys are construed to follow such centerlines.

1.2 Boundaries indicated as approximately following platted lot lines are construed as following such lot lines.

1.3 Boundaries indicated as approximately following City limits are construed as following City limits.

1.4 Boundaries indicated as following railroad lines are construed to follow the centerline of the public street right-of-way or if no centerline is established, the boundary is interpreted to be midway between the public street right-of-way lines.

1.5 Boundaries indicated as following shore lines are construed to follow such shore lines, and in the event of change in the shore line are construed as moving with the actual shore line; boundaries indicated as approximately following the centerlines of streams, rivers, lakes or other bodies of water are construed to follow such centerlines.

1.6 Boundaries indicated as parallel to or extensions of features indicated in 1.1 through 1.5 above are so construed. The scale of the map determines distances.

1.7 Whenever the City Council vacates a street, alley or other public street right-of-way or whenever such area is franchised for building purposes, the zoning district line adjoining each side of such street, alley or other public way is automatically extended to the centerline of such vacated public street right-of-way and all areas so involved become subject to all regulations of the extended districts.

1.8 Where physical features on the ground vary from information shown on the official Future Land Use Map or when there arises a question as to how or whether a parcel of property is zoned and the application of this Section cannot resolve such question the property must be considered classified as AG-Agricultural zoning district, temporarily in the same manner as provided for newly annexed territory and the issuance of a Building

Permit and the determination of permanent zoning must be in accordance with the provisions provided for newly annexed territory.

Future Land Use Map Category's

The Future Land Use Map is comprised of a variety of compatible land use categories that are comprised of agricultural, residential, commercial, office, industrial, floodplain/surface water, public/semi-public, parks & open space uses, and vacant land uses. These categories will be used in implementing the City's Comprehensive Plan through the zoning ordinance district regulations.

Agricultural Land Use Category

The Agricultural Land Use category and zoning district allows single-family detached residences and related accessory structures. It is the typical zoning assigned to property upon annexation of additional property into the city limits. The Agricultural zoning district consists generally of areas containing rural land uses or undeveloped acreage that is not anticipated to be put to urban use in the near future. The typical acreage amounts would be greater than 5 acres and consist of farms, ranches with associated residential use. This district is intended for areas that are farther from the City's center and large enough that municipal wastewater facilities are not required. This district allows the continuation of general rural uses within the City with the intent that the area can be reassessed and classified as an appropriate urban district according to its characteristics and suitability as urban development occurs. The zoning districts within this category are Agricultural (AG).

Residential Land Use Category

The Residential Land Use Category includes a wide range of uses from low density to high density residential. The single family dwelling uses provide standard size lots and should serve as a transition between larger and smaller lot single family zoning districts. Other uses allowed are patio homes, and related accessory structures on smaller lots with higher densities. It should be located near collector thoroughfares to accommodate the higher density of population that may occur in the future.

It may also be used as a zone of transition from the more restrictive single-family district to a lesser restrictive or denser residential zoning districts. It may also provide single-family development at urban densities in locations well served by public utilities and roadways. It should have adequate thoroughfare access and be relatively well connected with community and neighborhood facilities such as schools, parks, shopping areas, and transit services. The zoning districts within this land use category are Single Family Dwelling (SF-1, SF-2, & SF-3).

The Two-Family dwelling zoning district permits single-family residential to duplex housing up to a seven (7) units per acre density. This is an intermediate classification allowing an orderly transition from single-family residential neighborhoods to higher densities of residential use. The zoning district within this land use category are Two Family Dwelling (2F).

The Multiple Family Dwelling zoning district permits a range of higher density residential developments: 1) typical garden apartments of one to two stories allowing fifteen (15) units per acre, 2) modest sized dwelling units and increased number of units within the multiple family complex of twenty (20) units per acre in buildings of three to four stories, and 3) conventional and high density, high-rise apartment development (i.e. 5-10 stories) allowing approximately forty (40) units per acre. Other permitted uses include boarding houses, hotels, motels, and homes for the aged. These uses are intended to be located near, and reasonably accessible to, major arterial for direct vehicular access, collectors and arterials due to the traffic generating capacity of medium to high density multiple family dwellings. These types of uses are further suitable near major employment centers, downtown urban core, and other high intensity areas. The zoning districts within this land use category are Multiple Family Dwelling (MF-1, MF-2 and MF-3).

The Manufactured Home zoning district allows HUD-Code manufactured home developments, HUD-Code manufactured home land lease communities, single-family residences and family or group homes. Manufactured home land lease communities require a minimum of five (5) acres of land and a maximum density of ten (10) units per acre. This district is intended to provide moderately priced housing opportunities in areas with less development. It should serve as a buffer zone between single-family residential development and retail and office uses. The zoning district within this land use category are Manufactured Home (MH)).

Office Land Use Category

The Office Land Use Category permits low, mid, and high rise office development providing professional, financial, medical, corporate offices and major employment centers, and other office services to residents in nearby neighborhoods. The use of high density residential uses are allowed within this category. Buildings may be built to any legal height. This district should be located convenient to residential areas and should be complimentary to the character of the residential neighborhood that will be served by this use. This category is designed to be a transitional zone allowing low intensity administrative and professional offices that are not intended to be major traffic generators nor require high visibility to conduct business. The zoning districts within this category are Office (O-1, O-2).

Commercial Land Use Category

The Commercial Land Use Category will allow most commercial, retail and office uses such as sales, restaurants, grocery stores, auto dealerships with complete servicing facilities, building material sales, light manufacturing and heavy machinery sales and storage. This category of uses is intended to serve the Central Business District, larger service areas than neighborhoods, serve citywide, or regional service areas. These uses should be located at the intersections of major arterials and should provide on-site traffic maneuvering such that traffic entering and exiting the facility should have room to turn, stack, and park within the confines of the retail facility. These uses may also be located at the intersection of major thoroughfares or highways. This category of uses should be located away from low and medium density residential development and may be used as a buffer between retail, office, and industrial uses. Adjoining districts should be carefully selected to reduce environmental conflicts. The maximum building height may be any legal limit

that other laws and ordinances do not prohibit. The zoning districts within this category are Commercial (C-1, C-2, & C-3).

Industrial Land Use Category

This land use category is used to identify light, medium, and heavy industrial uses. The light industrial use acts as a transition from other commercial or retail uses to industrial use, and is intended to be located away from areas of low and medium density residential development. The location for light industrial use should be carefully selected to avoid or reduce environmental impacts to residential areas.

The medium and heavy industrial land uses within this category are intended for those industrial uses that may need to be buffered from another land use, and is intended to be located away from all residential developments. Lots should be large enough to contain air, noise, odor, and vibration pollution to a reasonable amount. The primary location of this use should include access to a major highway. The zoning districts within this land use category are Industrial (I-1, I-2, & I-3).

Public-Semi Public Land Use Category

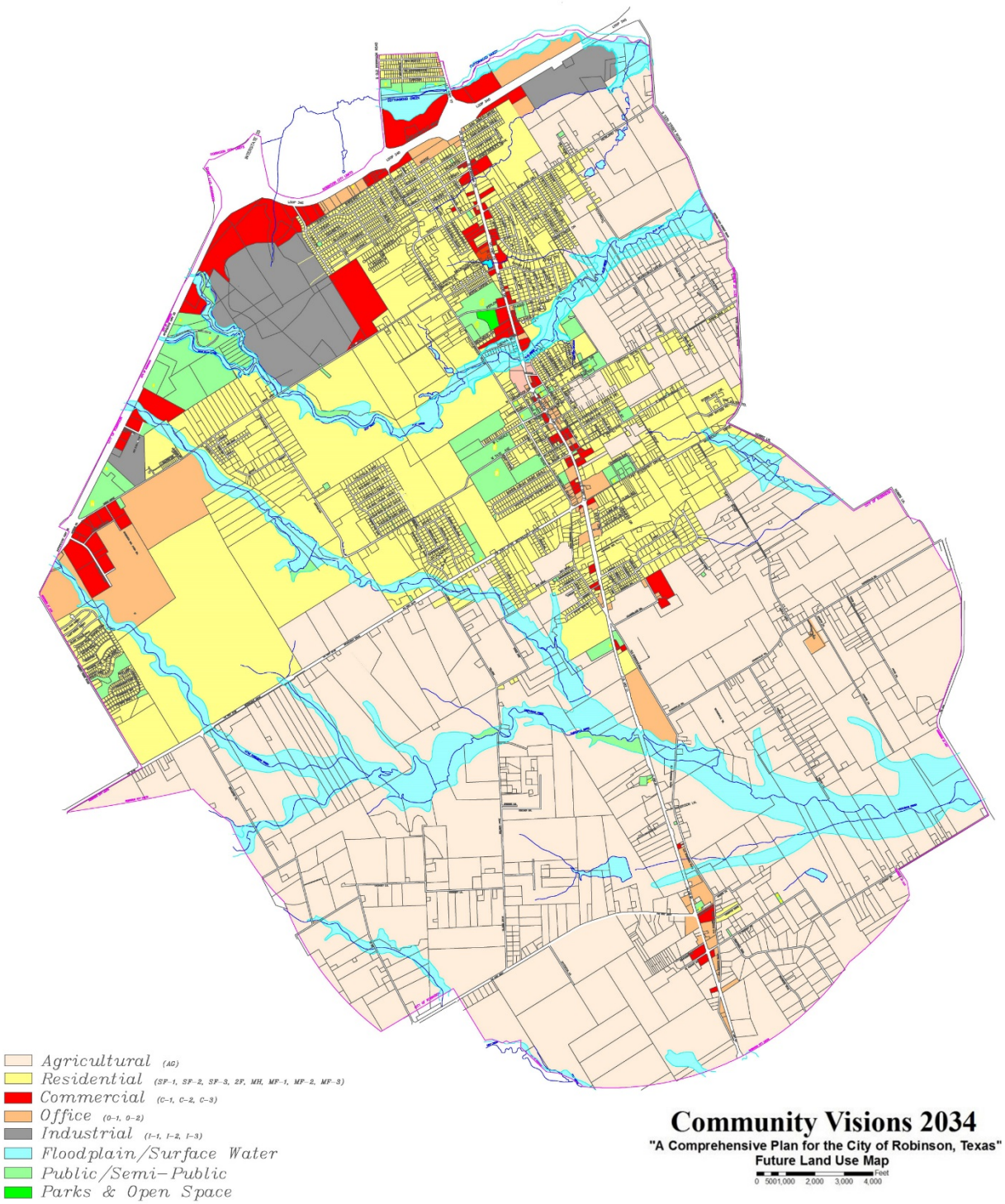
The Public-Semi Public land use designation reflects uses that are educational, governmental, churches, public/private utilities, civic or institutional in nature. Public-Semi-Public uses are generally permitted within any area. Over time, there will be a need for additional public uses as the population grows and the City's area expands. The City should consider the needs for new public facility sites as part of planning for service to developing areas. Such sites could include new locations for schools, police, fire, or recreational facilities.

Floodplain/Surface Water Land Use Category

This land use category is used to identify the surface water within creeks, streams, conservation lakes, ponds and their associated floodplain areas. In developed areas, the floodplain may be shown over development, although there has likely been some reclamation and rerouting of drainage ways where development has occurred. In undeveloped areas, land uses have been shown adjacent to the floodplain, and not infringing into the 100-year floodplain areas. This land use designation does not necessarily need to be implemented with a zoning district, because floodplain/surface water areas can be within any zoning district.

Parks and Open Space Land Use Category

This land use category is used to identify all public parks 5 acres or greater and open spaces within the City of Robinson. A community's park system is essential to a high quality of life. The City has recognized this through the initial development of its first park. It is recommended that a Park Master Plan be developed that will address specific future park locations, local park and open space needs, and other recreation-related issues, as well as funding mechanisms. It will be intended to help the City of Robinson meet the park and recreation needs of its citizens as it continues to grow.


Agricultural (AG)
Residential (SF-1, SF-2, SF-3, 2F, MH, MF-1, MF-2, MF-3)
Commercial (C-1, C-2, C-3)
Office (O-1, O-2)
Industrial (I-1, I-2, I-3)
Floodplain/Surface Water
Public/Semi-Public
Parks & Open Space
Community Visions 2034
"A Comprehensive Plan for the City of Robinson, Texas"
Future Land Use Map
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Vacant Land Use Category

This land use category is used to identify all vacant tracts of land with no determined use within the City of Robinson. This land use designation does not necessarily need to be implemented with a zoning district.

Development Proposals

It is stated in Chapter 211 of the Texas Local Government Code that "*zoning regulations must be adopted in accordance with a comprehensive plan".* A zoning map should reflect the Future Land Use Map to the fullest extent possible by the City. When a zoning change or other development proposal is received, the City will evaluate it to determine whether it is consistent with the Comprehensive Plan. This evaluation will be based on the goals and policies of the plan, as well as the land use categories depicted on the Future Land Use Map.

When a zoning proposal is received that is not consistent with the Comprehensive Land Use Plan, the City may consider a change in the plan's policies or the Future Land Use Map. The review of the proposal should consider the following criteria:

- Will the proposed change enhance the site and the surrounding area
- Is the proposed change a better use than that recommended by the existing Future Land Use Map
- Will the proposed use impact adjacent residential areas in a negative manner, or will the proposed use be compatible with, and/or enhance adjacent residential areas
- Are the uses adjacent to the proposed use similar in nature in terms of appearance, hours of operation, and other general aspects of compatibility
- Does the proposed change do an equally good job of achieving the Comprehensive Plan's other policies related to livability and growth
- Can the proposed use be served by available public facilities and services
- Does the proposed use present a significant benefit to the public health, safety, and welfare of the community, and would it contribute to the City's long-term economic well-being

It should be incumbent upon the applicant to provide evidence that the proposal meets the aforementioned considerations and supports community goals and objectives as set forth within this Comprehensive Plan.

If a development proposal would require a change to the Comprehensive Plan Future Land Use Map, it is recommended that the City amend the Future Land Use Map prior to the rezoning of the property. In order to expedite the process of amending the Future Land Use Map to ensure the zoning regulations correspond to it, the related amendment recommendations may be forwarded simultaneously with the rezoning request.

Urban Design Considerations

Urban design is unique to each community whether the design is a result of deliberate planning or whether it is through development that happened naturally over time. Although often overlooked, good urban design is essential to the health of a community. It can enhance future development, make the community function more efficiently, and make a positive impact on the citizens of the community, as well as visitors.

Purpose of Urban Design

The purpose of an urban design strategy is not only to provide a more aesthetically pleasing environment but also to provide a more efficient physical environment in which the community can pursue its various functions. To accomplish this dual purpose, urban design is categorized into three general areas as noted in the *"The Practice of Local Government Planning"* (International City Managers Association). First, urban design is concerned with the conservation of non-renewable resources necessary to achieve a workable, comfortable physical environment. In this context, urban design can encompass energy conservation, historic preservation, and conservation of valuable and non-replaceable open space. Second, urban design can provide a focus that is concerned with the location of development. In this context, urban design concentrates on the orderly arrangement of land uses and the efficient investment of resources necessary for development. Finally, urban design is concerned with development character. In this final context, urban design works with the quality of development by determining the appropriate physical forms and types of uses to be permitted.

Levels of Urban Design

The three levels associated with urban design include the city-wide level, the district level, and the project specific level. City-wide designs apply to urbanized areas where a coordination of public and private physical development are required. On a slightly smaller scale, district designs are concerned with the physical development of functionally or environmentally cohesive areas with distinctive boundaries, most often defined as neighborhood units. Finally, urban design at the project scale level is site-specific and plays host too many types of design elements such as sign controls, traffic considerations, physical features, and environmental features.

The citizens of Robinson have expressed a great interest in improvements to the appearance of many areas of the City. They recognize the potential for development along the Interstate Highway 35 frontage, and for redevelopment of the older areas of the City. They visualize attractively landscaped roadways and pleasant places to walk. Successful retail and office areas that appeal to shoppers are high on their lists of desires along U.S. Highway 77.

Urban design is the combination of appearance and function….how the city appears to both residents and visitors and how the important areas work together. Within these contexts urban design works to form the sense of community. In the City of Robinson, the community is a

diverse composition of commercial, office, industrial, and residential elements, which are independent and yet intermingled. Together these elements form the overall visual appearance of the community.

Urban Design Infrastructure

It must be noted that streets, draingeways, water and sanitary sewer lines, overhead utilities, sidewalks, walking trails, and even parks are part of the infrastructure aspect of urban design. Sidewalks and trails can be much more than concrete strips. More than just necessities for pedestrians, they should be pleasant places to walk and linger to observe adjacent physical features.

Sidewalks can include brick or stone pavers to improve the appearance. When increased in width and landscaped they become amenities for use by residents and visitors alike. Traffic calming devices can be utilized as part of street design and construction to reduce traffic speed and safety problems on local streets. Sidewalks and trails also link one activity center to another and relieve traffic congestion by encouraging people to walk rather than drive to their destination.

The design of street, pedestrian, and greenbelt linkages all present opportunities for corridors. They are included as urban design elements so that their appearance and function can be addressed for improvements. Major corridors can benefit from improved sidewalks, landscaping, and signage.

Entrance Features

Entrances provide a lasting impression of the City to visitors and those passing through the community. The City of Robinson exhibits high visibility entrances along Interstate Highway 35, State Highway 6/Loop 340, and U.S. Highway 77. The community receives many visitors along those roadways who could be potential residents, commercial or industrial investors. Efforts to provide positive visual impressions become vital for promoting the City and its economic future.

The City of Robinson requires businesses to identify their location with physical advertisement and directional signs. These signs can be designed and located to form a better visual impression without detracting from their purpose. The City's sign ordinance should include provisions to regulate the maximum amount of signage allowed for wall, ground, window signs, and spacing.

The impressions that are formed at the City's entrances are influenced to a large degree by the roadway and its conditions. Positive impressions as well as efficient traffic movement result from adequately sized and maintained roadways. The condition of the right-of-way conveys a message of how well a community maintains its infrastructure and how much "pride" the community has in itself. Another impression is formed by the condition of the property adjacent to the right-of-way. Quality development with all of the elements of good design, such as landscaping and tree plantings, unified developments, adequate parking, parking design, and

appropriate signage can also show the City's best attributes. Visitors and those just passing through do not often have the opportunity to view all of the city. Their perception of the community often stems from only the entrances and streetscapes they view and observe.

Improvements to the appearance, infrastructure, and structures in the older neighborhoods should continue to be pursued by the City. A continuing program to improve the overall safety, appearance, and function of the older residential areas should be implemented. There are opportunities for improvements through a combination of public and private efforts. Improvements to commercial corridors include items such as attention to landscaping and street trees, appropriate signage, elimination of clutter, and improvements to commercial building facades.

Urban Streetscapes

Although entrances are important to the community as a way of conveying to visitors a positive first impression, entrances alone cannot convey that impression. A well designed entrance must be complimented with well-designed transportation corridors and streetscapes. Just as entrances provide an important first impression, streetscapes throughout the city continue that impression as visitors and citizens travel the roadways in the community. Streetscapes are comprised of different design elements which include such items as the street design, landscaping, signage, access design, lighting, utilities, buildings, and parking lots.

The condition of the roadway and especially the condition of property adjacent to the roadway is important in establishing a positive urban image. That image not only includes the aesthetics of streetscape, but also the safety features of the corridor by both vehicles and pedestrians. Streetscapes with positive elements usually have the following items in common:

- *Clear Signage*. Easy to find and read, uncluttered, provides concise directions or information, private signage does not compete with public/traffic signage for the motorist's attention nor is it distracting;
- *Street Design*. Constructed of adequate width with curbs and gutters in good condition, sufficient design to handle the traffic load, well planned intersections, good access control:
- *Utility Placement*. Place utilities underground or a sufficient distance from the roadway so as not to compete with traffic signs or private signs, do not obstruct the view of the roadway; and
- *Landscaping*. Use of tree plantings and shrubbery, topographic relief to define access points and to screen distracting roadside activities from the motorist.

Chapter 15 Zoning Regulations

All zoning ordinances establish a range of uses for real property, beginning with the most restrictive classifications typically single-family residential and ending with the least restrictive classification such as heavy industrial. In general, there are two types of zoning ordinances: A cumulative style and a noncumulative style.

A cumulative zoning ordinance permits any use within a zone that is more restrictive than the least restrictive use permitted. The least restrictive use under the cumulative zoning ordinance would allow all other uses, whereas the most restrictive use would only allow that particular use. This is the current type of zoning ordinance used by the City of Robinson. Planning for future development using this type of ordinance is difficult. A non-cumulative zoning ordinance restricts a district to a single use. Non-cumulative zoning ordinances are permissible and constitutional so long as they can survive the test of reasonableness.

Zoning regulations and districts are established in accordance with a Comprehensive Plan for the purpose of promoting the health, safety, morals and general welfare of the citizens of the City. They are designed to lessen congestion in the streets; to secure safety from fire, panic and other dangers, to ensure adequate light and air, to prevent the overcrowding of land; to avoid undue concentration of population; to facilitate the adequate provision of transportation, water, sewerage, schools, parks and other public requirements. They have been established with reasonable consideration for the character of each district and its peculiar suitability for the particular uses specified; and with a view to conserving the value of buildings and encouraging the most appropriate use of land throughout the City.

Purpose of Zoning

Zoning is a key tool to implement comprehensive and development plans in all communities. It is very important to note the important distinction between a comprehensive plan and a zoning ordinance. Comprehensive plans are merely guiding plans for future development that establish a community's vision, goals, and objectives. The zoning ordinance is the legally binding regulatory tool that helps to make the comprehensive plan a reality.

Typical zoning ordinances are related to concepts of promoting public health and safety through zoning regulations such as limitations on building in flood plains, setbacks, or driveway access. The most important and primary purposes of zoning ordinances are to protect property values, decrease public costs, and enhance the overall quality of life for residents.

Zoning ordinances are also often used to regulate the appearance and aesthetic objectives of the community. Most zoning ordinances already contain regulations that influence the appearance such as height limitations and building setback regulations, but other development components such as landscape requirements and signage regulations may be controlled.

With zoning ordinances regulating and influencing development and growth, it is important to remember that zoning ordinances are not unalterable nor are they the final word. Through

processes such as variances, parcels of land may be rezoned or allowed to be developed not according to the zoning ordinance. Whenever these situations may arise, it is still important to reference the community's comprehensive plan to ensure that the development is occurring in the right quality, quantity, and location.

Composition of a Zoning Ordinance

Zoning Ordinances contain two parts: text and a zoning map. Both parts have important roles and careful attention should be paid to the development of each. The *Zoning Map* is important because it establishes the zoning classification for each property. Maps should be made so that they are easily understood and useable both for board members and the public.

The *Zoning Text* is what frequently causes many complaints and objections mainly because of its complexity. Land use is an intricate issue, therefore, the ordinances that regulate it are also complex. Communities can create a more user-friendly ordinance that will help overcome the preconceived notion of zoning. Text should be written clearly.

Illustrations should be used to describe the more complex concepts that the average citizen may not be familiar. Another tool to help citizens understand their zoning ordinance is preparing an annotated copy with explanatory material on how to read it and use the information. In addition to the zoning classifications, zoning ordinances also include basic provisions such as a purpose statement, proper procedures, definitions, development standards, and/ or severability clauses. Other land development issues can be regulated in the zoning ordinance which can vary in complexity and level of ruling. Some of the subjects that are most frequently addressed are parking, signs, landscaping, and non-conforming uses.

The most important thing is to maintain its relationship to the comprehensive plan. Each regulation should be an implementation of some policy from the comprehensive plan. Although there should be some citizen involvement, it is often viewed that the public's input during the comprehensive plan is sufficient to guide a zoning ordinance as long as the ordinance mirrors the plan's visions and policies. Too much community involvement in preparing a zoning ordinance can sometimes slow down the process because of the complexities and large number of details.
Zoning ordinances should be tailored to the individual community's needs and vision. However, it is not uncommon to borrow other ideas from other communities. In many instances, the same regulations from one zoning ordinance can be adapted to fit another community. Some sections can even be worded the same such as penalty provisions or severability clauses. There is no reason to go through the time and frustration of reinventing the wheel by rewriting some sections if they satisfy the municipality's needs.

Zoning helps city planners bring about orderly growth and change. It controls population density and helps create attractive, healthful residential areas. In addition, zoning helps assure property owners and residents that the characteristics of nearby areas will remain stable.

Zoning is not merely the division of a city into districts and the regulation of the structural and architectural designs of buildings within each district. It also requires consideration of future

growth and development, adequacy of drainage and storm sewers, public streets, pedestrian walkways, density of population, and many other factors that are within legislative competence.

Zoning regulations may validly prescribe a type of building, location of utility lines, restrictions on accessory buildings or structures, and preservation of historical areas and buildings. General rules of construction apply to restrictions affecting architectural and structural design of buildings and open spaces. Such rules apply to building setbacks from the streets and other boundaries, size and height of buildings, number of rooms, floor space or area and cubic feet, and minimum cost of buildings. They also apply to frontage of lots, minimum lot area, front, rear, and side yards, off-street parking, the number of buildings on a lot, and the number of dwelling units in a certain area. Regulations may restrict areas to single-family homes or to multifamily dwellings or townhouses. An ordinance may permit the construction of a building intended for nonresidential use, such as a school, church, hospital, or charitable institution, in a residential district.

Municipalities have gained some flexibility in their regulations by authorizing special use permits in certain districts. This gives them the power to impose restrictions and requirements that might not otherwise be possible under the strict classification of the district. It is also possible to create a unit development in an entire district or a large part of one, with plans and restrictions governing the entire project. This arrangement may mix some commercial and residential uses and "clustering" of certain properties, leaving room for green spaces and parkways.

A municipality may use broad discretion to fix the location and boundaries of business, commercial, and industrial districts and has the power to review and periodically update zoning regulations. This should be done whenever growth and progress require. Failure or refusal to make a change in regulations when they are clearly appropriate in view of development may be regarded as unreasonable, arbitrary conduct. Only the legislative body empowered to enact zoning regulations has the power to amend them. This must be done with the same formality, including required notices and hearings, as the original enactment. Neither the courts nor boards of zoning appeals should undertake such amendment, regardless of how archaic the regulations may be.

Zoning ordinances may permit or prohibit certain uses and may create whole districts devoted only to residence, commerce, or industry. When a structure's use does not conform to a zoning ordinance but the structure existed before the adoption or amendment of the ordinance, the structure has nonconforming use status, sometimes called legal nonconforming use. A vested legal nonconforming use is safeguarded by the Constitution unless it is abandoned or terminated. It is a property right that cannot be taken away without just compensation. However, the nonconforming use structure may not be expanded, its use may not be changed, and, under many laws, if it is destroyed by fire or other cause, it may not be rebuilt.

Existing Zoning Regulations

The zoning regulations and districts in the City of Robinson have been developed in accordance with the comprehensive plan for the purpose of promoting health, safety, morals and the general

welfare of the city. They have been designed to lessen congestion in the streets; to secure safety from fire, panic, and other dangers; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue concentration of population; to facilitate the adequate provision of transportation, water, sewage, schools, parks and other public requirements. They have been made with reasonable consideration, among other things, for the character of the district and its peculiar suitability for the particular uses, and with a view of conserving the value of buildings and encouraging the most appropriate use of land throughout the city.

The current cumulative zoning districts and regulations are divided into four major types of districts. They include the following: 1) R Districts-Residential (R-1 Single-Family, R-1M HUD Code Manufactured Home, R-1P Patio Home, R-1T Townhouse Home, R-2 Duplex, and R-3 Multi-Family), 2) C Districts-Commercial (C-1 Light Commercial, C-2 Medium Commercial, C-3 Heavy Commercial, and C-P Planned Commercial), 3) M Districts-Industrial (M Industrial, and M-P Planned Industrial), and Planned Unit Development. Land or premises in each of the following classified districts in the City of Robinson shall be used for the following purposes.

R-1 Single-Family Residential District

Land use in the R-1 single-family residential district: Single-family dwellings containing a minimum living area of 1,350 square feet. The minimum front yard of 25 feet measured from the property line. The minimum side yard of ten feet measured from the property line. The minimum rear yard of at least 30 percent of the depth of the lot but need not exceed 40 feet. The minimum lot area, width, and building size regulations for R-1Single Family dwellings state that for each detached single-family dwelling the minimum lot area shall be 12,000 square feet and the minimum lot width shall be 100 feet. In the case of irregular shaped lots where the side property lines are not parallel, the minimum lot width shall be measured along the minimum front yard building set back line.

R-1M Single Family HUD-Code Manufactured Home District

Land use in the R-1M single-family HUD-Code manufactured home district may be used as single-family dwellings, and for no other purpose. The uses shall comply with the single-family residential district with exceptions. All HUD-code manufactured homes, if in a manufactured home subdivision, shall contain a minimum living area of 1,350 square feet and shall meet all other requirements of the R-1 single-family district as to lot size, height of dwellings, size of yards, parking, open space, recreation areas and accessory uses. The minimum lot area, width, and building size regulations in the R-1M Single-Family HUD-Code Manufactured home states that no detached single-family dwelling, including a HUD-Code manufactured home, shall contain less than 1,350 square feet of living space. Residential lots platted before the effective date of this ordinance shall not be considered nonconforming if not less than 6,000 square feet in area nor less than 60 feet in width. No single-family HUD-Code manufactured home, if located in a manufactured home park, shall contain less than 1,100 square feet of living area.

R-1P Residential Patio Home District

Land use in the R-1P Residential Patio Home District states that no building or land shall be used and no building shall be erected or structurally altered which is arranged or designed to be used for other than a

single family patio home dwelling. The uses shall comply with the single-family residential district with exceptions. The minimum lot size shall be 6,050 square feet. No structure shall exceed two stories or 35 feet in height. The minimum lot area, width, and building size regulations for R-1P Single-Family Patio dwellings state that for each single family patio home, the minimum lot area shall be 6,050 square feet and the minimum lot width shall be 55 feet. No single-family patio home shall contain less than 1,350 square feet of living area.

R-1T Residential Townhouse District

Land use in the R-1T Residential Townhouse District states that no building or land shall be used and no building shall be erected or structurally altered which is arranged or designed to be used for other than a single family townhouse dwelling. The minimum lot size shall be 6,050 square feet. No structure shall exceed two stories or 35 feet in height. The minimum lot area, width, and building size regulations for R-1T Townhouse dwellings state that for each single-family townhouse dwelling unit, the minimum lot area shall be 6,050 square feet and the minimum lot width shall be 55 feet.

R-2 Duplex Residential District

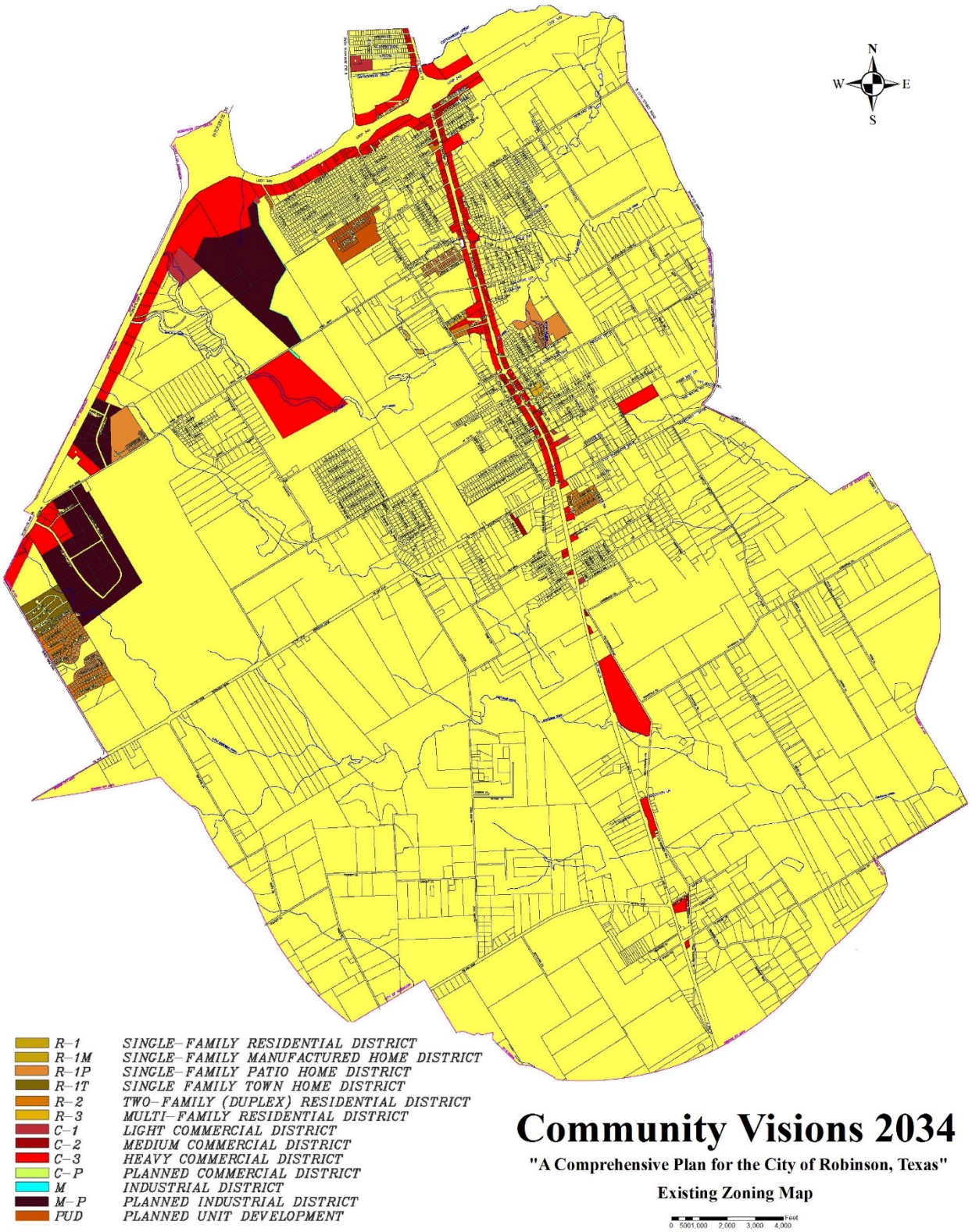
Land use in the R-2 Duplex Residential District shall include single-family attached dwellings commonly referred to as duplexes. This district shall comply with all uses permitted in the R-1 Single-Family Residential District. The minimum lot area, width, and building size regulations for R-2 Duplex dwellings state that for each detached single-family dwelling the minimum lot area shall be 12,000 square feet and the minimum lot width shall be 100 feet. In the case of irregular shaped lots where the side property lines are not parallel, the minimum lot width shall be measured along the minimum front yard building set back line. For each pair of attached single-family dwellings (duplex) no one-bedroom unit shall contain less than 900 square feet of living area, no two-bedroom unit shall contain less than 1,100 square feet of living area, and no three-bedroom unit shall contain less than 1,200 square feet of living area.

R-3 Multi-Family Residential District

Land use in the R-3 Multi-family Dwelling District shall include all uses as permitted in the R-1 Single-Family Residential District and the R-2 Duplex Residential Districts. Apartment houses or multifamily dwellings (low density minimum lot size), and assisted living centers are permitted. The minimum lot area, width, and building size regulations for multifamily dwellings state that there shall be no more than 6 living units per acre computed on the gross area of the lot, no one-bedroom unit shall contain less than 900 square feet of living area, no two-bedroom unit shall contain less than 1,100 square feet of living area, no three-bedroom unit shall contain less than 1,200 square feet of living area, and the minimum lot shall be 14,400 square feet and the minimum lot width shall be 120 feet.

C-1 Light Commercial District

Land use in the C-1 Local Retail District shall include retail and service type uses and all uses as permitted in the R Residential District. Other uses include utility, recreational, entertainment, educational, institutional, special uses, transportation, and related uses. Except as may be determined by the plan commission there are no minimum lot areas or widths. Any building may be erected to any height provided that the building is set back at least one foot for every foot of height exceeding 35 feet. This setback is in addition to any required yard setbacks.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R–1 SINGLE–FAMILY RESIDENTIAL DISTRICT
R–1M SINGLE–FAMILY MANUFACTURED HOME DISTRICT
R–1P SINGLE–FAMILY PATIO HOME DISTRICT
R–1T SINGLE FAMILY TOWN HOME DISTRICT
R–2 TWO–FAMILY (DUPLEX) RESIDENTIAL DISTRICT
R–3 MULTI–FAMILY RESIDENTIAL DISTRICT
C–1 LIGHT COMMERCIAL DISTRICT
C–2 MEDIUM COMMERCIAL DISTRICT
C–3 HEAVY COMMERCIAL DISTRICT
C–P PLANNED COMMERCIAL DISTRICT
M INDUSTRIAL DISTRICT
M–P PLANNED INDUSTRIAL DISTRICT
PUD PLANNED UNIT DEVELOPMENT
Community Visions 2034
"A Comprehensive Plan for the City of Robinson, Texas"
Existing Zoning Map
0 500 1,000 2,000 3,000 4,000
Feet

C-2 Medium Commercial District

Land use in the C-2 Medium Commercial District includes all uses permitted in the R-1 Residential and C-1 Light Commercial Districts. In addition, other uses include automobile and related services, and special industrial processes. Except as may be determined by the plan commission there are no minimum lot areas or widths. Any building may be erected to any height provided that the building is set back at least one foot for every foot of height exceeding 35 feet. This setback is in addition to any required yard setbacks.

C-3 Heavy Commercial District

Land use in the C-3 Heavy Commercial District includes all uses permitted in R-1 Residential, C-1 Light Commercial and C-2 Medium Commercial Districts. Except as may be determined by the plan commission there are no minimum lot areas or widths. Any building may be erected to any height provided that the building is set back at least one foot for every foot of height exceeding 35 feet. This setback is in addition to any required yard setbacks.

C-P Planned Commercial District

Land use in the C-P Planned Commercial District includes all uses permitted in the C districts, but plans for such uses that yards are not to be used for display, sale, or storage of merchandise, for service to customers, or for the storage of vehicles, equipment, containers or waste materials. Except as may be determined by the plan commission there are no minimum lot areas or widths. Any building may be erected to any height provided that the building is set back at least one foot for every foot of height exceeding 35 feet. This setback is in addition to any required yard setbacks.

M Industrial District

Land use in the M Industrial Districts includes any uses permitted in R-1 Residential, C-1 Light Commercial, C-2 Medium Commercial, and C-3 Heavy Commercial Districts. Other uses include agricultural, natural resource storage and extraction, Special industrial processes, general manufacturing or industrial, and light or heavy manufacturing. Except as may be determined by the plan commission there are no minimum lot areas or widths. Any building may be erected to any height provided that the building is set back at least one foot for every foot of height exceeding 35 feet. This setback is in addition to any required yard setbacks.

M-P Planned Industrial District

Land use in the M-P districts includes all uses permitted in C-1 Light Commercial, C-2 Medium Commercial, C-3 Heavy Commercial, and M Industrial Districts. Other uses may be the sales of goods and products at wholesale, and light industrial uses as long as such uses are not obnoxious or offensive because of odor, smoke, gas, dust, pollutants to air, water or land, noise vibration, presence of vermin or rodents or similar nuisances. Except as may be determined by the plan commission there are no minimum lot areas or widths. Any building may be erected to any height provided that the building is set back at

least one foot for every foot of height exceeding 35 feet. This setback is in addition to any required yard setbacks.

Planned Unit Development Regulations

The purpose of the planned unit development regulations is to encourage flexibility in the use and development of land in order to promote its most appropriate use; to provide a high level of urban amenities; to preserve the quality of the natural environment; and to provide flexibility in the development of land subject to development standards coordinated with the provisions of necessary public services and facilities. The minimum size for a Planned Unit Development is one acre of land, and it may be located within any zoning district. Except as may be determined by the plan commission there are no minimum lot areas or widths.

Description of Current Zoning

The existing zoning in the City of Robinson may be described as a predominantly residential zoned community with strip commercial zoning along the collector streets, highways, and major thoroughfares that traverse the area. The residential zoning districts may be found in the urban, suburban, and rural areas of the City. The residential uses indicate single-family density in the older and newly developing neighborhoods. The townhouse and duplex residential density may be found in the central and west areas of the City.

Commercial zoning may be noted along U.S. Highway 77, State Highway 6/Loop 340, and Interstate Highway 35. The uses in these areas consists of grocery stores, professional offices, municipal government, schools, churches, fast-food establishments, restaurants, and a variety of commercial retail and service businesses.

Planned industrial zoning may be found to the west of the city along and just south of Interstate Highway 35. Industrial zoning is shown along North Flat Creek and bounded by Greig Drive, Dayton Drive, and Interstate Highway 35.

Chapter 16 Transportation System

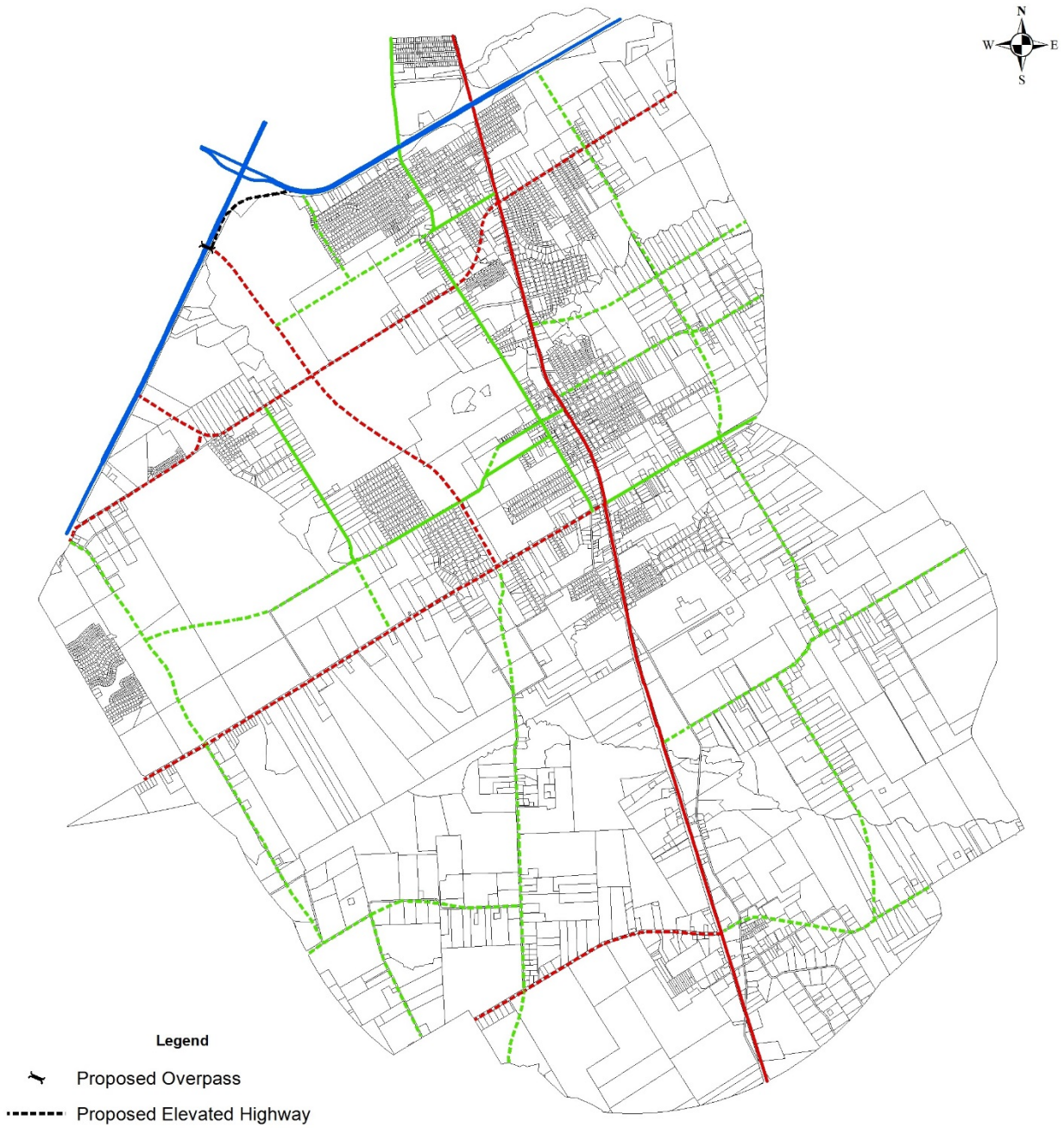
The "Transportation System" Plan is extremely important to a City, and without a plan, the City would find itself in a situation of acquiring land only after problems may have surfaced. During the platting process in undeveloped areas, any portion of future right-of-way that is identified in the plan and which is required as a result of the proposed development will be required as a "dedication to the city" on the subdivision plat. Setbacks for the proposed developments are based on the new property line boundaries adjacent to this new dedicated right-of-way. As development continues to occur in the proposed development area and demands are made for additional travel lanes, right-of-way is already in place for the required street improvements. Building construction sites after the subdivision process is complete will be located at appropriate distances from the fully improved street system.

If this opportunity was lost by the City during the platting process, development would occur without gaining the necessary right-of-way and the City would be in a position of purchasing land and condemning property for street construction. In addition, buildings that were constructed according to an inadequate right-of-way width would most likely exist as non-conforming structures that encroach into the newly established setback areas.

The Transportation System Plan establishes a long-range guide for the location of arterial, collector, and local streets (See Transportation System Plan Map). Arterial streets are intended primarily to provide for uninterrupted movement of high volume, moderate to high-speed traffic for cross-town traffic and connection to activity centers within the city. Access to abutting property is a secondary function to traffic movement. Arterial street spacing is generally one mile apart although it is recognized that existing topography and development patterns may dictate that these locations be a greater or lesser distance. The arterial streets that traverse the City of Robinson include U.S. Highway 77 (Robinson Drive), Moonlight Drive, and Rosenthal Parkway.

Collector streets are intended to circulate and move traffic from the local residential streets to the arterial street system. Collector streets generally provide access to neighborhood activities such as churches, elementary schools, and parks. Their spacing is generally a half-mile apart, although as already noted, existing topography and development patterns may prevent this type of spacing. Collector streets should receive a level of land development protection to ensure an adequate balance between traffic movement and property access functions. The collector streets that traverse the City of Robinson include East Moonlight Drive, Tate Drive, Old Robinson Road, Peplow Drive, Lyndale Drive, and Greig Drive.

Local streets are designed to provide direct access to residences. It is intended to provide direct access to abutting properties and is designed for low volume, low speed, and short duration trips. The ideal network would direct traffic from a residence on a local street to a collector street. The collector street would then intersect with an arterial street, then finally directing the traffic to the major activity centers of the City. In the City of Robinson, these major activity centers would be along major thoroughfares such as highways (State Highway 6/Loop 340) and interstate access (Interstate Highway 35).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Legend
Proposed Overpass
Proposed Elevated Highway
Interstate, State Highway
Existing Arterial
Proposed Arterial
Existing Neighborhood Collector
Proposed Neighborhood Collector
Data Source: The parcel boundaries were provided by the McLennan County Mapping Dept. The Preferred Alternative data were provided by Renaissance Planning Group.
This product is for informational purposes only and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.
Texas HB1147, Effective 9/1/2011
Date Produced: 2/4/14
Community Visions 2034
"A Comprehensive Plan for the City of Robinson, Texas"
Transportation System Plan
0 500 1,000 2,000 3,000 4,000 Feet
1519
7111 Bosque Blvd., Ste. 101
Waco, TX 76710 (254-751-1934)

Street Classification System

The purpose of establishing a system of street classifications is to define a means for determining the most preferable locations for streets based on their specific functions within the City. Public streets should be adequate to accommodate development as it occurs. The "Transportation System Plan" establishes the general locations, widths and function of the city's existing and future streets and thoroughfares. It produces the basis for requiring the dedication and acquisition of right-of-way to accommodate future development.

Financial costs or payment for the right-of-way and physical construction of the streets is generally the responsibility of the developer at the time of development. The City may in certain instances, provide additional funding for increased widening of a roadway if it complies with the "Transportation System Plan". The City may also provide funding for a roadway as an incentive to a developer in other instances. The basic criteria for the City of Robinson "Street Classification System" are function and movement, orderly spacing, and width criteria. The following is a brief discussion of those criteria:

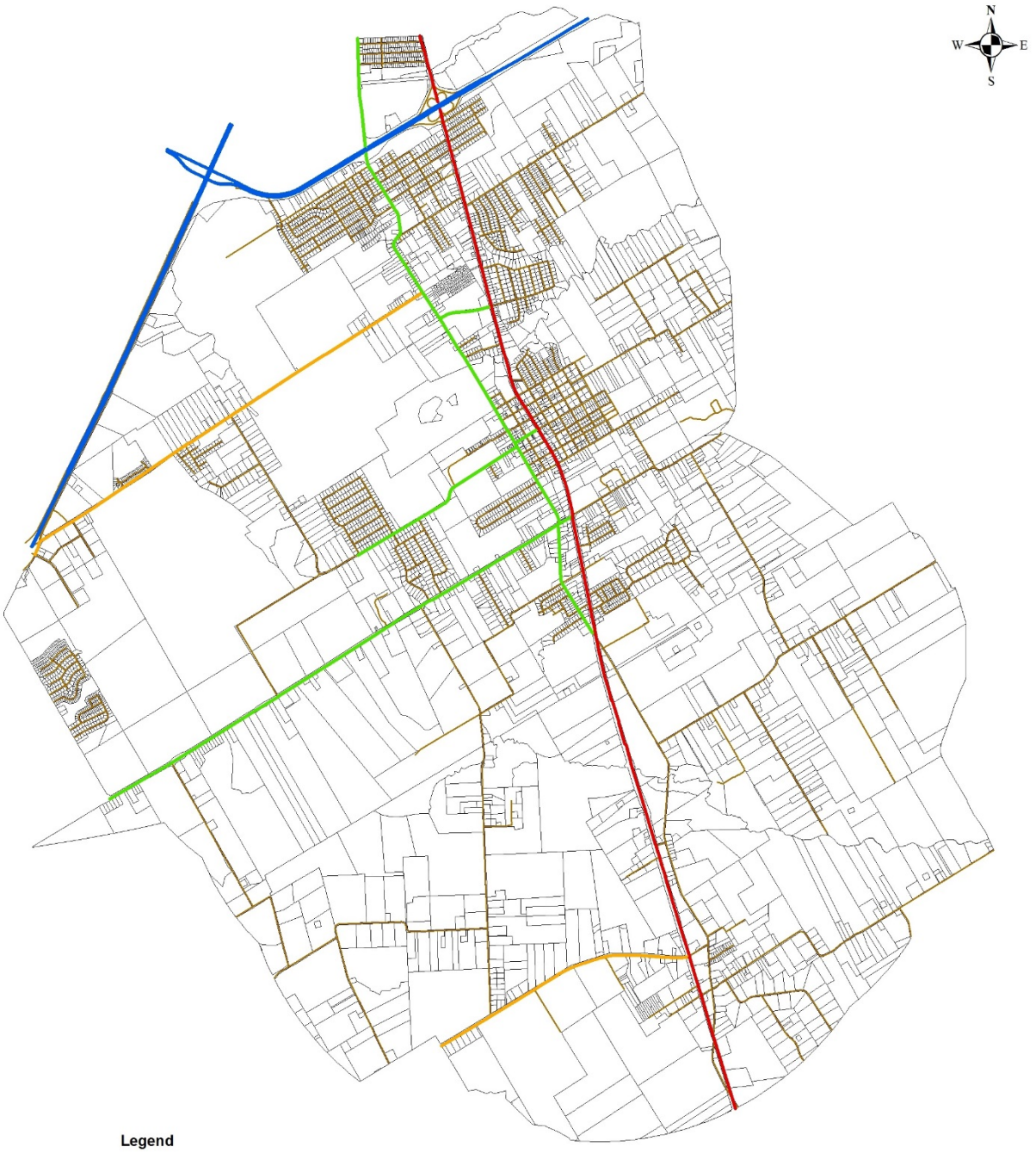
Function and Movement

The streets and highway system of the City of Robinson have two major functions…moving traffic between different points and providing access to individual properties. Since there are opposing characteristics of these two functions, problems are encountered when traffic movements on a major thoroughfare are interrupted by constant movements onto or from adjacent properties. Problems are also encountered when residential streets are used for high speed cut-through traffic. The purpose of street function is to establish the street type early in the development process so that a reasonable configuration or spacing can be established and so that each proposed roadway will contain sufficient width.

Function is also used to define the future use of existing streets. A roadway may function at a higher level from which it was originally designed due to the intensity of adjacent development that has evolved over time. A roadway may have evolved as a major thoroughfare simply because it has traversed a long distance in a continuous manner. It may be necessary to redefine the appropriate street type to allow for future improvements and upgrades. Reclassification may increase the intensity of future land use activities permitted along the street and change the character of the surrounding area. A solution may be to establish an alternative route rather than re-defining the street type.

Orderly Spacing

The basic goal in transportation planning is to coordinate the location and spacing of each street in an orderly pattern based on identified functions. Spacing is important as a means for establishing ease of movement through the city by minimizing intersection points.



Legend

- Existing Interstate, State Highway
- Existing Arterial
- Existing Neighborhood Collector
- Existing Residential Collector
- Existing Local Roads

Data Source: The parcel boundaries were provided by the McLennan County Mapping Dept. The Preferred Alternative data were provided by Renaissance Planning Group.

This product is for informational purposes only and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

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Community Visions 2034

"A Comprehensive Plan for the City of Robinson, Texas"

Existing Street Classification System

0 500 1,000 2,000 3,000 4,000 Feet

1519

7111 Bosque Blvd., Ste. 101
Waco, TX 76710 (254-751-1934)

The higher volume of traffic a street is expected to have due to its function, the greater the interval of distance that the street should be from a parallel street of the same or higher functional classification.

One of the benefits of establishing spacing criteria is the limiting effect it has on the future public and private expenditures for the construction of city streets. Spacing criteria ensures that major thoroughfares will not be over-represented in certain areas and under-represented in other areas. The end result is an efficient network of streets with an adequate pattern of linkages and spacing.

Width Criteria

The width criteria is used to ensure that streets have an adequate capacity to handle expected traffic volumes based on the established functional classification. Streets which move large volumes of traffic long distances will require more travel lanes and greater widths than streets that function to provide access to individual residential lots. It is important that the street widths are established in accordance with the location, spacing, and function of the street.

Access decreases as the thoroughfare type changes from local residential streets to highways, and interstate influences, while mobility increases. The "Urban Street Classification Standards" for the City of Robinson illustrates the function and other characteristics of each roadway type. These classifications relate to vehicular travel on these roadways.

The typical cross-sections that follow are illustrated for each of the existing and future roadway types in the City of Robinson. These illustrations should guide the design of roads constructed through public improvement projects and private developments as the City grows. The precise alignment of these future roads will be determined through additional engineering design prior to construction.

Existing Traffic Counts and Speed Data

Traffic volumes in the City of Robinson were monitored by city staff from January 2011 through April 2012 utilizing traffic counting devices along various arterial, residential and neighborhood collectors, and local streets. The data produced by the traffic counts was comprised of low, high, and average counts based on 24-hour monitoring day, and 85th percentile speeds (i.e. speeds at or below 85% of all vehicles are observed to travel under free flowing conditions. This is a nationally recognized method of assessing traffic speeds).

One of the most traveled neighborhood collector streets in the City of Robinson is Greig Drive. It extends from Old Robinson Road to Interstate Highway 35. Land use along this roadway is comprised of mainly residential homes on farmstead acreages and within new and older subdivisions. Data received from monitoring for a 24-hour period exhibited a 39.68 mph speed, an average of 954.5 trips/day, a low of 933.25 trips/day, and a high of 982 trips/day.

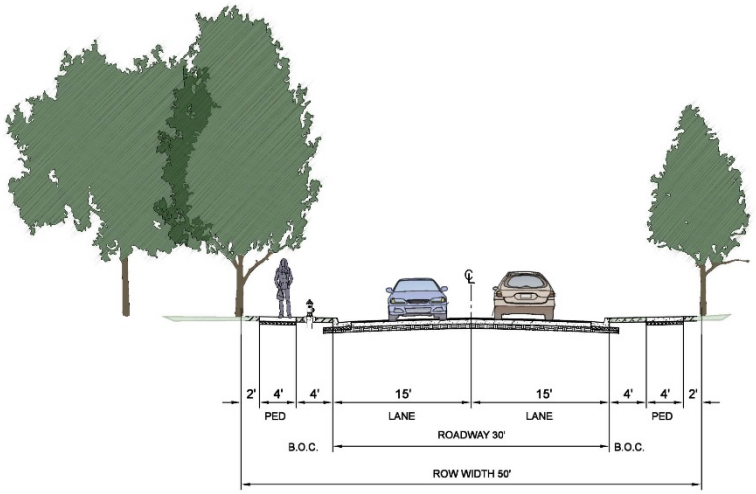
URBAN STREET CLASSIFICATION STANDARDS

ity of Robinson Detail	Street Classification	ROW Width (ft)	Street Width (ft)	Sidewalk Side(s)/Width (BOC-BOC) (ft)	D.U.s Served/ Typical Traffic Volumes	Design Speed (mph)	Minimum Center Line Radius (ft)	Maximum Grade (%)	Maximum Sustained Grade (%)	Maximum Desirable Length (ft)
-000 G1	Residential Street	50	30	one, 4 ft	< 50 / 500	25	150	20	20	1,500
-000 A1	Residential Collector	60	40	one, 4 ft	< 50-200 / 1,000	30	300	20	15	3,000
-000 A1	Neighborhood Collector	70	48	both, 4 ft	200+ / 5,000	30	470	12	8	2 miles
N/A	Commercial/Industrial Collector	80	60	both, 6 ft	--- / 10,000	35	470	12	8	2 miles
N/A	Arterial	90	2 @ 28	both, 6 ft	--- / 10,000-20,000	45	1,000	6	6	N/A

lote: All standards assume an urban street section with curb & gutter.

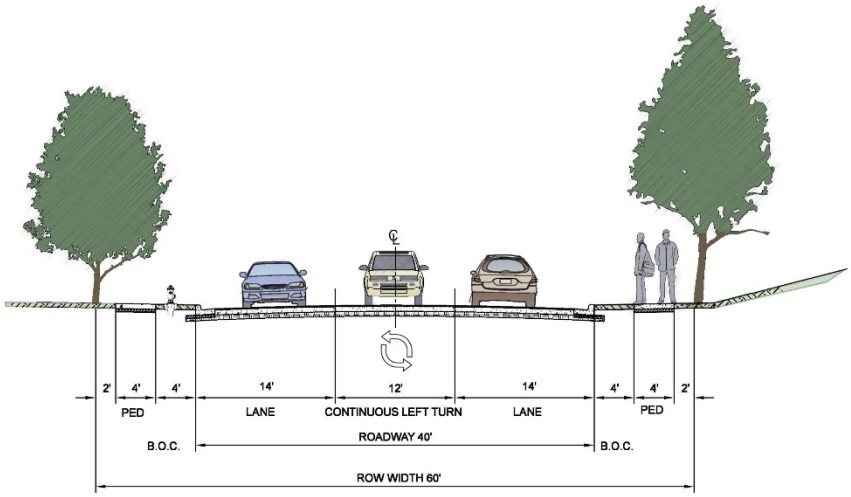
RESIDENTIAL (LOCAL) STREET

TYPICAL SECTION

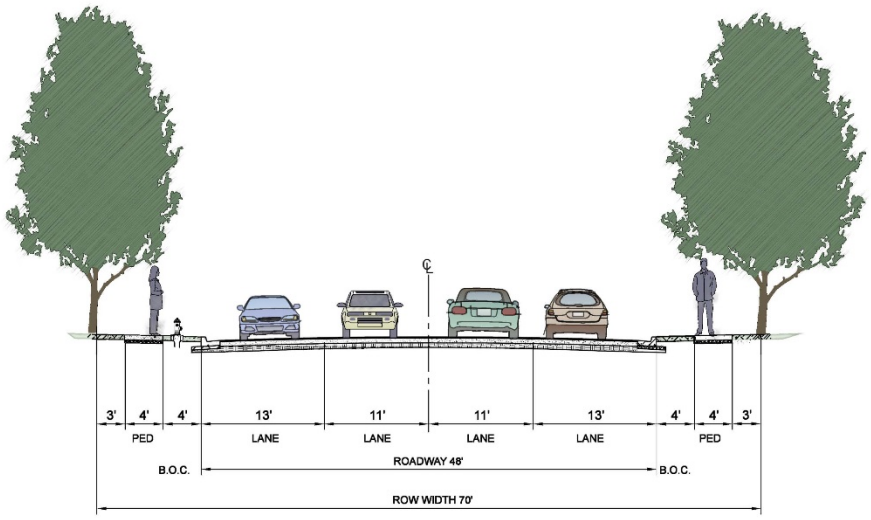


RESIDENTIAL COLLECTOR

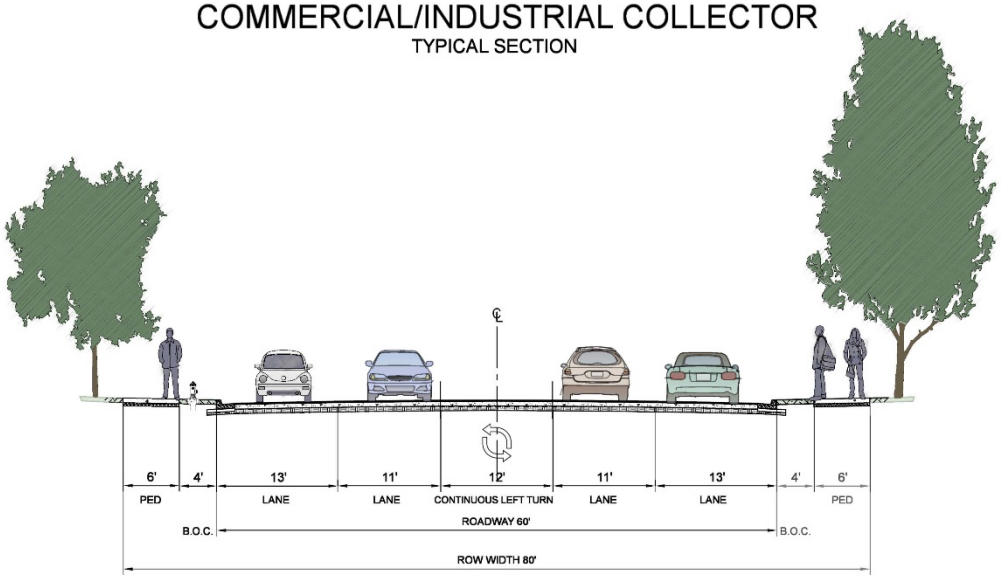
TYPICAL SECTION

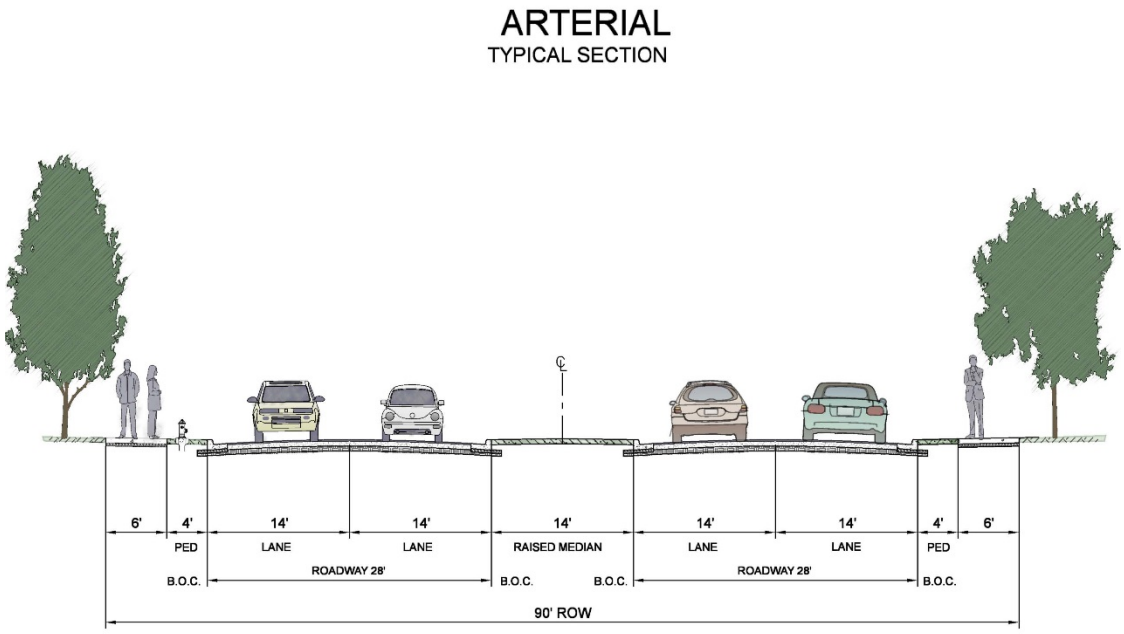


NEIGHBORHOOD COLLECTOR
TYPICAL SECTION



COMMERCIAL/INDUSTRIAL COLLECTOR
TYPICAL SECTION





West Tate Street which extends from Old Robinson Road to Hoffmeyer Drive is mainly affected by Robinson High School and surrounding residential area traffic volumes. This street is considered a neighborhood collector. Data received from monitoring for a 24-hour period exhibited a 32.65 mph speed, an average of 1,674.75 trips/day, a low of 1,076 trips/day, and a high of 1,676 trips/day.

Old Robinson Road extends from State Highway 6/Loop 340 to U.S. Highway 77 south of Moonlight Drive and is categorized as a neighborhood collector. This roadway parallels U.S. Highway 77 and provides services to residential subdivisions. Data received from monitoring for a 24-hour period exhibited a 33.7 mph speed, an average of 1,734.21 trips/day, a low of 1,514.36 trips/day, and a high of 1,913.43 trips/day.

West Lyndale Drive extends westward from U.S. Highway 77 to its termination at the Robinson Independent School District property and is categorized as a neighborhood collector. This roadway provides service to government offices, restaurants, residential homes and schools. Data received from monitoring for a 24-hour period exhibited a 28.7 mph speed, an average of 1,866 trips/day, a low of 1,699 trips/day, and a high of 2,033 trips/day.

Peplow Drive extends from U.S. Highway 77 to Old Robinson Road and is categorized as a neighborhood collector. It provides connection to commercial and public uses (schools). Data received from monitoring for a 24-hour period exhibited a 34.8 mph speed, an average of 1,745 trips/day, a low of 1,618 trips/day, and a high of 1,950 trips/day.

Rosenthal Parkway extends from U.S. Highway 77 to just west of Hillside Drive and is categorized as a residential collector. It provides collection from primarily farmsteads and residential land uses. Data received from monitoring for a 24-hour period exhibited a 58.7 mph speed, an average of 528.50 trips/day, a low of 509 trips/day, and a high of 549.50 trips/day.

West Moonlight Drive extends from U.S. Highway 77 to just west of Surrey Ridge Road and is categorized as a neighborhood collector. It provides collection from primarily farmsteads and residential land uses. West Moonlight Drive provides access to Interstate Highway 35 to the west of the City of Robinson. Data received from monitoring for a 24-hour period exhibited a 55.95 mph speed, an average of 1,897 trips/day, a low of 1,869 trips/day, and a high of 1,925.50 trips/day.

State Highway 6/Loop 340 exhibits varying traffic data in two distinct sections within the City of Robinson. The first section from U.S. Highway 77 to Interstate Highway 35 to the west provides traffic support and access for commercial land uses and vacant tracts in the Cities of Robinson and Waco. This section also provides for access into the City of Robinson onto U.S. Highway 77 and southward. Data received from monitoring for a 24-hour period exhibited a 64.6 mph speed, an average of 19,551 trips/day, a low of 18,125 trips/day, and a high of 20,978 trips/day. The second section of State Highway 6/Loop 340 to the east extends from U.S. Highway 77 to South 12th Street. It provides traffic support and access to large tracts of vacant land and commercial land uses. Data received from monitoring for a 24-hour period exhibited a 68.2 mph speed, an average of 6,743 trips/day, a low of 6,105 trips/day, and a high of 7,382 trips/day.

U.S. Highway 77 (Robinson Drive) extends from Brewster Drive to just south of Old Robinson Road at the Robinson city limit line. This roadway is considered an arterial street that collects traffic from residential, office, commercial, governmental and public land uses. Data received from monitoring for a 24-hour period exhibited a 50.33 mph speed, an average of 6,800 trips/day, a low of 7,537.75 trips/day, and a high of 7,556.25 trips/day.

The City of Robinson corporate boundary maintains a majority of its frontage along Interstate Highway 35. This interstate section extends from Surrey Ridge Road to State Highway 6/Loop 340. It provides access into the City of Robinson via State Highway 6/Loop 340 and U.S. Highway 77 and collects traffic from commercial, and vacant land uses. According to the Texas Department of Transportation 2010 traffic counts, Interstate Highway 35 at its intersection with State Highway 6/Loop 340 exhibited 77,000 trips/day. This traffic count has increased 8,010 since the year 2005. Traffic speed data from 2000 indicate an 85th percentile speed of 55 mph and top speed of 58 mph in a northbound direction. The southbound data indicates an 85th percentile speed of 56 mph and a top speed of 70 mph.

Existing Street System

The City of Robinson transportation system is in need of maintenance and reconstruction. The base material consists of various thicknesses of gravel and sand that has been built-up over time. The finished portion of the street consisted of several courses of chip-seal treatment. The City has provided periodic maintenance in recent years in the form of cold patching, hot mix patching, and resurfacing with chip seal through McLennan County Interlocal Agreements. The

arterial streets are in relatively good condition and are maintained by the Texas Department of Transportation.

Street Inventory by Condition

In October of 2013, the City of Robinson prepared an inventory of information for each street section within the corporate boundary. Windshield survey of all streets were categorized by each section based on current street conditions (See Current Street Conditions Map). The criteria to categorize these street sections and their measurements are listed below:

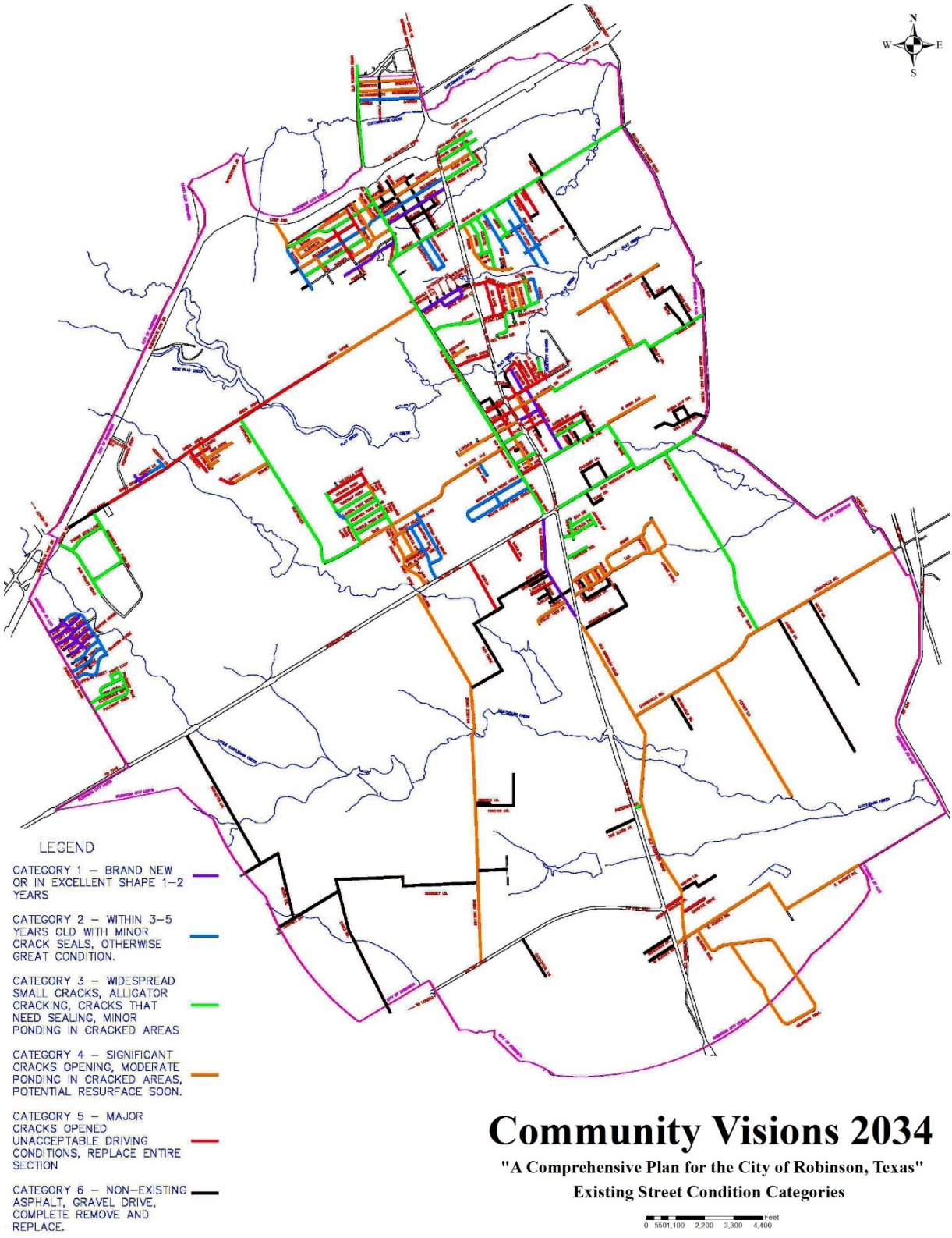
Category 1.	Brand new streets in excellent shape, 1-2 years old	5.4%	4.3 Miles
Category 2.	Streets 3-5 years old with minor cracks, great condition	9.1%	7.3 Miles
Category 3.	Widespread small cracks, sealing required, minor ponding	26.2%	21.0 Miles
Category 4.	Significant crack openings, potential resurfacing	29.9%	24.0 Miles
Category 5.	Major crack opened, unacceptable driving conditions	11.4%	9.1 Miles
Category 6.	Non-existing asphalt, gravel, needs to be removed and replaced	17.9%	14.4 Miles
			80.3 Miles

Note: In addition, Interstate and State Highways constructed of asphalt, concrete, and chip seal overlay comprise 22.4 miles. Private streets constructed of chip seal and gravel comprise 2.8 miles. Therefore, the City of Robinson is comprised of a total of 105.6 miles. Note: Data compiled by City of Robinson Planning and Community Development, October 2012.

Street Inventory by Surface Type

Management and staff compiled the street inventory data for all public and private streets and categorized each section based on current street surface type by total miles of coverage. These categories include asphalt, chip seal, and gravel streets. The following is a listing of these measurements:

State Highway, County Concrete/Asphalt	20.9%	22.0 Miles
Public Asphalt Streets	21.2%	22.4 Miles
Public Chip Seal Streets	41.0%	43.3 Miles
Public Gravel Streets	12.4%	13.1 Miles
Private Street Chip Seal	0.4%	0.4 Miles
Private Gravel Streets	4.2%	4.2 Miles
Total		105.6 Miles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LEGEND
CATEGORY 1 – BRAND NEW OR IN EXCELLENT SHAPE 1–2 YEARS
CATEGORY 2 – WITHIN 3–5 YEARS OLD WITH MINOR CRACK SEALS, OTHERWISE GREAT CONDITION.
CATEGORY 3 – WIDESPREAD SMALL CRACKS, ALLIGATOR CRACKING, CRACKS THAT NEED SEALING, MINOR PONDING IN CRACKED AREAS
CATEGORY 4 – SIGNIFICANT CRACKS OPENING, MODERATE PONDING IN CRACKED AREAS, POTENTIAL RESURFACE SOON.
CATEGORY 5 – MAJOR CRACKS OPENED UNACCEPTABLE DRIVING CONDITIONS, REPLACE ENTIRE SECTION
CATEGORY 6 – NON–EXISTING ASPHALT, GRAVEL DRIVE, COMPLETE REMOVE AND REPLACE.
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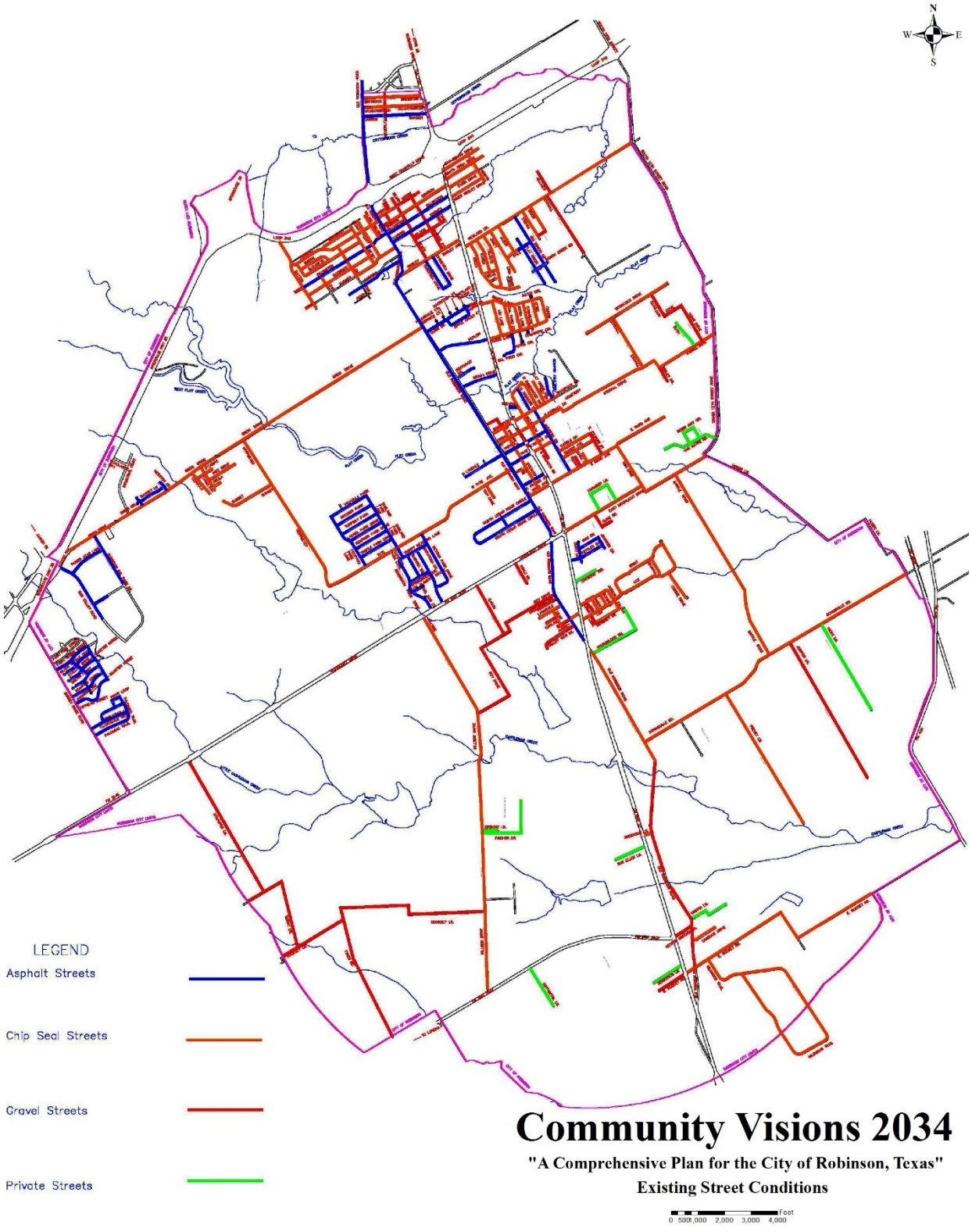
"A Comprehensive Plan for the City of Robinson, Texas"
Existing Street Condition Categories
0 550 1,100 2,200 3,300 4,400
Feet


N
W
E
S
LEGEND
Asphalt Streets
Chip Seal Streets
Gravel Streets
Private Streets
Community Visions 2034
"A Comprehensive Plan for the City of Robinson, Texas"
Existing Street Conditions
0 500 1,000 2,000 3,000 4,000
Feet

The street re-construction strategy involves the full depth reclamation of all streets that have been categorized to be in poor to unacceptable condition. Those streets that require periodic maintenance and are in good to excellent condition will receive a chip seal surface treatment. The ultimate goal would be to create a much improved street system that is functional and aesthetically pleasing the general public.

The replacement of the aged water and wastewater lines is not expected to be a part of this strategy. No new curb and gutter replacement will be included in the process, however, isolated cases of replacing existing damaged curb and gutter may occur. Drainage culverts may be replaced or repaired. The current steel corrugated culverts will be replaced with round or square concrete reinforced culverts. Since the water and wastewater lines are aged, a risk must be assumed that these lines may have to be replaced after the reconstruction process is completed.

This strategy should be considered a temporary measure until such a time that the city is in more of a financial position to overlay with asphaltic concrete. The city does intend to begin replacing aged water and wastewater main lines in various areas of the city according to the adopted 2013 Master Water and Wastewater Plans. Management will coordinate this effort with the street reconstruction and maintenance strategy.

Management does recommend that the City allow individual homeowners that adjoin existing private streets to be included in the street reconstruction strategy. The procedure to follow will require that all adjoining homeowners dedicate right-of-way (i.e. quitclaim deed) of the required width to the centerline of the street to be constructed. A survey by a registered professional surveyor would be required of each section of right-of-way to be dedicated. A field note description and exhibit illustrating the survey will also be required. Once this information is received, the City Council will consider the reconstruction of the street.

Traffic Impact Analysis Guidelines (TIA)

The City may require a Traffic Impact Analysis (TIA) if it is determined a proposed development will have a significant impact on the City's street transportation system. The City may require any and all public improvements or proportionate share recommended by the TIA for the development. These guidelines have been developed to ensure that the proposed TIA will include the necessary information in a format that allows City staff to review and make informed comments/decisions in a timely and efficient manner.

A TIA is intended to coordinate land use and transportation facility development and to adequately assess the traffic-related impacts of a development proposal on the existing and planned thoroughfare system. It is a means of identifying strategies and solutions to current and future traffic problems. The results of this analysis should:

- Compare the traffic generated to thoroughfare system capacity,

- Address the City's requirements,
- Establish proportionate mitigation measures for the identified impacts, and
- Recommend the safest and most efficient transportation system in conjunction with the development process.

Texas Rail Plan

The Texas Department of Transportation developed its first rail plan in 2005 after statewide planning authority for rail was transferred from the Texas Railroad Commission (TRC). The plan was known as the Texas Rail System Plan and consisted of an inventory of existing and planned freight and passenger rail projects, but did not establish the state's vision and goals for the system. The purpose of this rail plan, now known simply as the Texas Rail Plan (TRP), was introduced in November 2010 and will be to set policy, direction, and vision for the state in compliance with both federal and state regulations.

The TRP will be coordinated with other statewide planning documents. The plan will be guided by the Texas Department of Transportation's strategic plan and coordinated with the Statewide Long-Range Transportation Plan. Guidance will also be extracted from the recently published "Vision for High-Speed Rail in America: High-Speed Rail Strategic Plan," developed by the Federal Railroad Administration and will help to inform the National Rail Plan being developed by the Federal Railroad Administration.

While official rules for the development and content of the state rail plans is still pending, the main components of a rail plan include establishing vision, goals, and objectives for the rail system and how it is to be integrated into the state's multimodal transportation system. Other key components are an inventory of the freight and passenger rail infrastructure and performing a needs assessment. The final component is planning for the future by developing prioritized programs and financing strategies to achieve the state's vision, goals, and objectives. The City of Robinson currently has no rail system which passes through the City limits. It is suggested that the City work with local property owners and the State of Texas to provide an avenue for future rail access.

Access Management

Access management is important to street continuity. Many of the concerns related to access management are the same as those in relation to street intersections such as median openings, access, deceleration, and storage of vehicles. The Texas Department of Transportation "Access Management Manual", completed in July of 2011, states that proper access management assists in protecting the substantial public investment in transportation by preserving roadway efficiency and enhancing traffic safety, thus reducing the need for expensive improvements.

Furthermore, access management can significantly reduce traffic accidents, personal injury, and property damage. To appreciate how access management fits into the entire spectrum of the roadway network, one should understand that freeways, arterials, collectors, and local streets serve varying levels of through-traffic movement and access to property.

Below are some of the benefits that have been realized in communities with effective access management policies:

- Delaying or preventing costly highway improvements,
- Improving roadway safety conditions (reduced crash rates),
- Reducing traffic delay and congestion, which has a positive economic effect on market areas,
- Promoting properly designed access and circulation systems for development,
- Improving the appearance of transportation corridors and increasing the area available for landscaping, which can help attract investment and enhance the image of an area,
- Providing property owners and customers with safe access to roadways,
- Reducing air pollution, and
- Making pedestrian and bicycle travel safer.

The benefits of access management operational effects frequent access connections, median openings, and closely spaced traffic signals are a recipe for congestion on major roadways. Studies of the effects of access management on roadway operations have addressed effects of access spacing on travel time by simulating traffic performance. Collectively, these studies indicate that access management helps to maintain desired speed and reduce delays, which also reduces fuel consumption and vehicle emissions. Another significant benefit is that access management requires a more coordinated, long-term approach to land use and transportation; therefore, effective access management promotes inter-governmental cooperation relating to land development and transportation decisions.

Metropolitan Planning Organization

The Waco Metropolitan Planning Organization (MPO) coordinates transportation planning activities for all of McLennan County. The MPO was established by the federal government to ensure that transportation decisions within the MPO area are performed in a continuing, comprehensive and cooperative process. The MPO provides a forum for local input into the expenditure of federal highway and transit dollars.

The MPO is governed by a 20 member Policy Board who adopts all MPO plans and programs and determines regional transportation policy. The City of Robinson is a member of the policy board and attends all technical committee meetings. The other members of the Board include Bellmead, Beverly Hills, Bruceville-Eddy, Crawford, Gholson, Moody, Riesel, Ross, Hallsburg, Hewitt, Waco, West, Woodway, Lacy-Lakeview, Leroy, Lorena, Mart, McGregor, McLennan County, U.S. Department of Transportation, Texas Department of Transportation, Federal Transit Administration, Waco Transit System, and the Texas Department of Transportation-Waco District. The Policy Board receives technical recommendations regarding specific projects and all plans and programs from the MPO Technical Committee.

The Waco Metropolitan Planning Organization develops plans and programs annually for the entire area. “Connections 2035: The Waco Metropolitan Transportation Plan”, identifies the transportation needs for the Waco area for the next 25 years and identifies specific projects to

address those needs. The Waco Metropolitan Transportation Plan is fiscally constrained to only include those projects that can be realistically funded by the year 2030.

The 2013-2016 "Transportation Improvement Program" federally funds highway construction and transit projects. The "Waco Thoroughfare Plan" was developed by the Metropolitan Planning Organization to help preserve highway corridors for development up to 50 years into the future. The plan is intended to assist in the identification of projects for future "Metropolitan Transportation Plans". The Metropolitan Planning Organization prepares annual reports such as the "Annual Performance and Expenditure Report", and "Annual Listing of Projects-Federal Obligations".

The "2014-2015 Unified Planning Work Program" is the annual budget for the Metropolitan Planning Organization. The Unified Planning Work Program identifies the work tasks the Metropolitan Planning Organization intends to perform over the next fiscal year and allocates the necessary funds to accomplish those tasks. The "Public Participation Plan" describes the efforts the Metropolitan Planning Organization will undertake to solicit stakeholder and other interested party's involvement in the development of plans and programs. In addition, it describes the opportunities the public will have to participate in the transportation planning process such as the "Limited English Proficiency Plan".

Transportation analysis data is also provided by the Metropolitan Planning Organization such as the traffic count program, population projections for McLennan County cities, employment estimates by traffic analysis zone, socio-economic data trends report, special generator locations, and traffic analysis zones.

Waco Transit System

The Waco Transit System provides transit services to the immediate Waco area and surrounding communities. The transit services that effect the City of Robinson is a fixed route bus service that works as a flag stop system. There are designated stops for all routes and vehicles may be flagged for a stop at most places along the route. To "flag" a bus for a ride, the resident must position themselves on the correct side of the street well before any major intersection. Then attempt to make eye contact with the driver and wave your arm up arm up and down (not like a hello wave). If safe, the bus operator will stop the vehicle as close to your location as possible. Operators are instructed NOT to stop for citizens on the opposite side of the street, along busy highways or near congested intersections.

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