Grand Prairie

COMPREHENSIVE PLAN UPDATE

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Chapter 1 | Community Snapshot

The purpose of this community snapshot is to understand Grand Prairie's physical, social, and economic context. Understanding the City's background and context helps to identify the community's values, needs, and desires, all of which affect future growth and development. Since Grand Prairie conducted a full assessment of these factors in its 2010 Comprehensive Plan, this update revisits each topic to understand what has changed since 2010. This baseline assessment includes discussion of:

- Planning context,
- Baseline (demographic, economic, and housing) assessment, and
- Physical features and existing land uses.

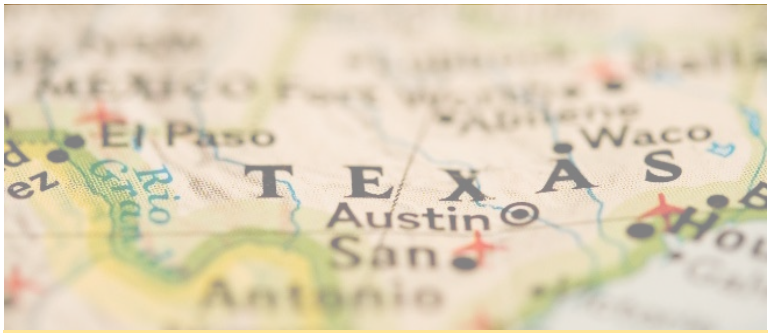
Legal Basis for Planning

A city's comprehensive plan can be defined as a long-range planning tool that is intended to be used by City staff, decision-makers, and citizens to guide the growth and physical development of a community for 10 years, 20 years, or an even longer period of time. The State of Texas has established laws with regard to the way in which incorporated communities can ensure the health, safety and welfare of their citizens. State law gives communities the power to regulate the use of land, but only if such regulations are based on a plan. Specifically, the law states:

In basic terms, the primary objectives of a comprehensive plan are to accomplish the following:

- Efficient delivery of public services,
- Coordination of public and private investment,
- Minimization of potential conflicts between land uses,
- Management of growth in an orderly manner,
- Cost-effective public investments, and
- A rational and reasonable basis for making decisions about the community.

There are two interrelated purposes of a comprehensive plan. It allows the citizens of a community to create a shared vision of what they want the community to become. Subsequently, it establishes ways in which a community can effectively realize this vision.



Texas Local Government Code Chapter 213:

The governing body of a municipality may adopt a comprehensive plan for the long-range development of the municipality... A municipality may define the relationship between a comprehensive plan and development regulations and may provide standards for determining the consistency required between a plan and development regulations.

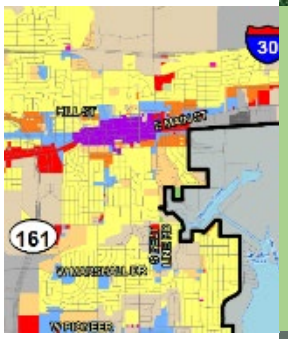
How a Plan is Used

How is a comprehensive plan used day-to-day? This section describes the various mechanisms used by cities that transform a plan from a document to a tool. These mechanisms fall into the three basic categories of Regulatory Ordinances, Financing Mechanisms, and City Procedures and are all informed by the Comprehensive Plan.

Regulatory Ordinances

Subdivision Ordinance

Subdivision regulations direct the division of land into individual lots or parcels prior to development. Such regulations are not only applicable within a city's limits, but also within its ETJ.



Zoning Ordinance

Zoning regulations are applicable within a city's limits and can affect land use integration (mixes of uses and lot sizes), building design, and required amenities for various types of development. Such regulations are not applicable within a city's ETJ.

Financial Mechanisms

Capital Improvements

Capital improvement funding supports Comprehensive Plan recommendations that will generally require a one-time or initial investment to be achieved. Typically, this funding is applied to large municipal projects such as infrastructure improvements and/or land acquisition.

Annual Budget

The annual budget supports Comprehensive Plan recommendations that will generally require a city to commit to annual investment to achieve. This funding typically supports city operations and programs.

City Procedures

City Leadership and Staff Actions

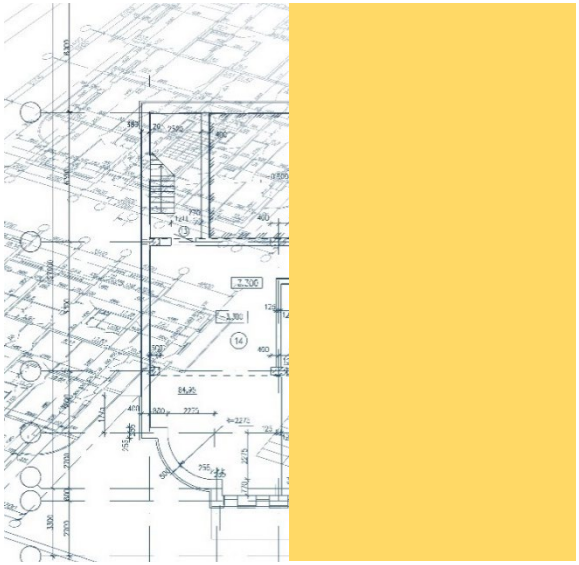
City leadership plays a vital role in achieving the vision of the Comprehensive Plan and implementing policy recommendations. City leaders - such as the Park Board, Planning and Zoning Commission, City Council, and other boards and commissions – use the Plan as a guide when making development, operational, and/or policy decisions.

City staff is also very critical to the process of implementing Plan recommendations. Staff is often the first point of contact for citizens and can educate the community about the visions established by the Plan. Staff can also proactively submit (before the proper boards and commissions) recommended zoning and subdivision amendments, as well as other Comprehensive Plan policy-related recommendations, that may be implemented through resolution or ordinance.

Grand Prairie City Council - 2017

Development Review

The usual processes for reviewing and processing zoning amendments, development plans, and subdivision plats provide significant opportunities for implementing the Comprehensive Plan. Zoning, development and subdivision decisions should be evaluated and weighed against applicable recommendations contained within the Plan. If decisions are made that are inconsistent with Plan recommendations, the Plan should be amended accordingly in order to ensure consistency and fairness in future decision-making.



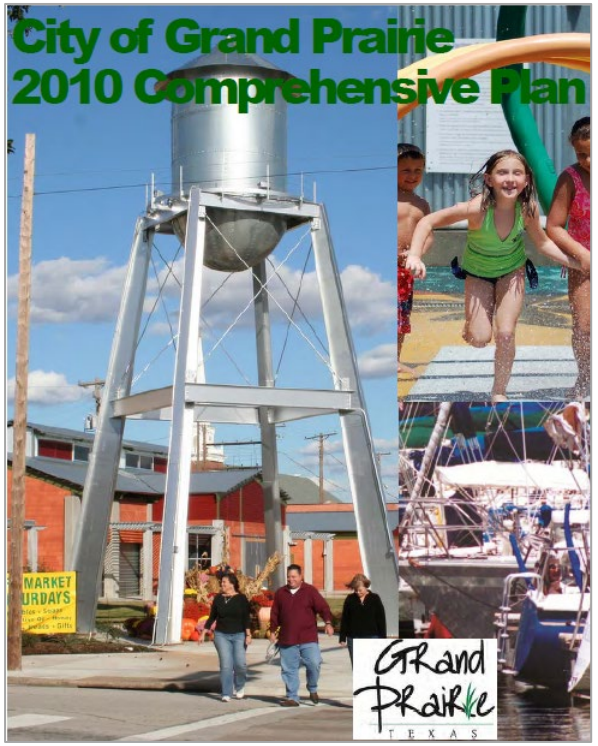
Engineering Studies

Some recommended policies may require more in-depth analysis. These are shown with the implementation mechanism. Generally, these recommended policies involve environmental studies or an analysis of public services (water, wastewater, drainage) that may be needed as a city continues to develop and grow in population.

Planning Context

Planning context considers the administrative, intergovernmental, and regional context of a city. For Grand Prairie, this includes the City's boundaries, relationship to the DFW Metroplex, and previous planning initiatives. This is important because Grand Prairie does not exist in a vacuum – its decisions and actions, as well that those of surrounding cities, affect everyone.

Local Plans



2010 Comprehensive Planning

This Comprehensive Plan update is based on the City of Grand Prairie's previous Plan, completed in 2010. The Plan contains assesses and provides recommendations regarding the following elements:

- Sustainable Development and Land Use,
- Transportation,
- Special Districts,
- Economic Development,
- Neighborhood Amenities and Services,
- Municipal Facilities,
- Watershed Planning and Environmental Quality,
- Intergovernmental Cooperation, and
- Planning Process and CIP Planning.

In addition to the aforementioned areas of assessment and recommendation, the 2010 Plan also includes a baseline assessment and implementation chapter.

Master Transportation Plan

The current Master Transportation Plan is incorporated as Chapter 23 of the Unified Development Code and addresses the need for multi-modal transportation policies. The Thoroughfare Plan is a component of the Master Transportation Plan and designates roadway classifications of thoroughfares throughout the City. Additionally, the thoroughfare plan coordinates with the regional transportation system established by the North Central Texas Council of Governments (NCTCOG). The Thoroughfare Plan was amended with the adoption of the Comprehensive plan in 2010 and the Master Thoroughfare Plan was most recently updated in 2011. The City's Thoroughfare Plan was reviewed and updated as part of this Comprehensive Plan update.

Parks and Recreation Master Plan

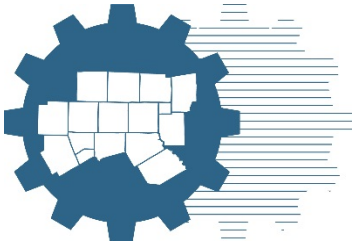
The City adopted a *Parks, Recreation, and Open Space Master Plan* in 2008. This Master Plan evaluated the City's existing facilities, prioritized projects by geographic area, and provided "a framework and balanced approach for existing park upgrades, new park improvements, and strategic high-profile projects throughout the park system." The City is currently in the process of updating this Plan through *Project Discovery 2026" Creating a Grand Park System*. The purpose of the update is to "[guide] decisions in park land acquisition, park and recreation facility development, renovation and improvements to the park system." The study will update and expand on key elements of the 2008 Plan, including analysis of the existing system, population projections, park and facility standards, trends, and development of a comprehensive capital priority list.

Fiscal Assessment for the City's Southern ETJ

In 2017, the City conducted a fiscal impact assessment on eight areas located in its southern ETJ (south of the Ellis County border) and referred to as the Southern Sector in this Plan document. The study assumed land uses for each area and compared the net cost benefit for each land use alternative for each of the eight areas. The study then presented land use combinations for how the areas will develop based on the highest, lowest, and most probable direct net cost benefit to the City.

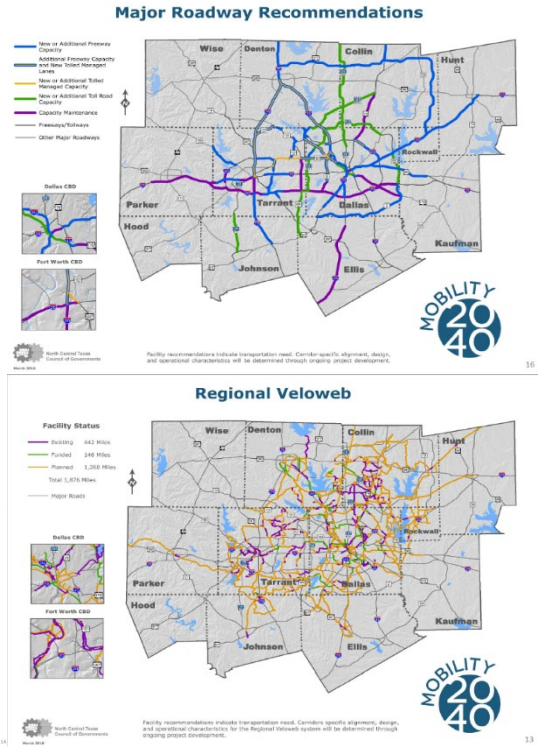
Regional Plans

Grand Prairie is one of hundreds of government entities that form the North Central Texas Council of Governments (NCTCOG); a voluntary and non-binding association established to "assist local governments in planning for common needs, cooperating for mutual benefit, and coordinating for sound regional development." NCTCOG is the predominant regional planning body in the DFW Metroplex - conducting research, studies, and regional plans related to transportation, environmental sustainability, and growth management. Much of this focuses on the rapid growth expected for Dallas-Fort Worth in the years to come.



Mobility 2040

Mobility 2040, adopted in 2016, is NCTCOG's newest transportation plan. In addition to planning for a wide range of future transportation needs, Mobility 2040 also provides projections for future population growth and distribution. Due to Grand Prairie's size and location between Dallas and Fort Worth, several transportation topics are addressed in Mobility 2040 that potentially impact the City.



Trails

Mobility 2040 identifies locations for future Regional Veloweb connections to and through Grand Prairie. Coordinating the Parks, Recreation, and Open Space Master Plan with the alignment of proposed on- and off-street bikeways identified in the Regional Veloweb is an important element for future development projects and may provide opportunities for additional funding.

Public Transit

Mobility 2040 recommends the future alignment of rail lines and locations of bus connections. Though Grand Prairie does not currently have a public transit system, it will be important for the City to continue collaboration with NCTCOG to analyze the benefits of potential station locations, establish relationships with transit entities, and emphasize the mutual benefits for all involved.

Major Roadways

Mobility 2040 recommends alignment and maintenance for major roadways that do currently or could traverse Grand Prairie. Grand Prairie's previous Thoroughfare Plans have been coordinated with the regional transportation plan. Continued coordination is important to ensure continuous connectivity and to be prepared for future transportation needs.

Baseline Assessment

The purpose of a baseline assessment is to understand the physical, social, and economic context of a community, both historically and at the present time. Understanding the background and context of a community can help identify its values, needs, and desires that will affect future growth and development. This baseline assessment includes discussion of:

- Population demographics,
- Economics and workforce, and
- Housing inventory.

Methodology

As an update to the 2010 Comprehensive Plan, this baseline assessment picks up where the 2010 Plan left off by using the findings of the 2010 Plan as a basis for the historical background. It is important to note that, when necessary, this Plan uses data from the 2010 U.S. Census as the source for the 2010 baseline information. This data differs from that of the City's 2010 Comprehensive Plan, as the Decennial Census was still underway at the time of Plan adoption.

This baseline assessment utilizes the U.S. Census Bureau's American Community Survey (ACS) as its primary current data source. The ACS is updated annually using five-year estimates. The most recent ACS data is often one year old or more due to the time required to collect, compile, and publish data. For this reason, the ACS five-year dataset used in the baseline assessment is dated 2011-2015.

Population Demographics

Population impacts every element of this Comprehensive Plan, from land use to tax revenue to the demand for infrastructure and services. Understanding the 'who', 'when', and 'where' of population trends can help the City accommodate current and future needs with a higher degree of efficiency and accuracy. The population of Grand Prairie is roughly 190,682. Since 2010, the City's population has grown by 8.5 percent, with a compound annual growth rate (CAGR) of 1.4 percent. When extrapolating the population to predict future capacity (based on recommended land uses), CAGR will be the basis for the growth rate calculation.

Population trends since 2010:

15,286 | new residents

8.5% | increase in population

Table 1. Population Trends

Year	Population*	Percent Change	Growth	CAGR
2010	175,396**	-	5.3%	0.9%
2011	177,330	1.1%		
2012	178,420	0.6%		
2013	179,630	0.7%		
2014	181,230	0.9%		
2015	182,610	0.8%		
2016	184,620	1.1%		

*NCTCOG Population Estimates

**2010 U.S Census

Source: U.S. Census 2010; NCTCOG Population Estimates

Race and Ethnicity

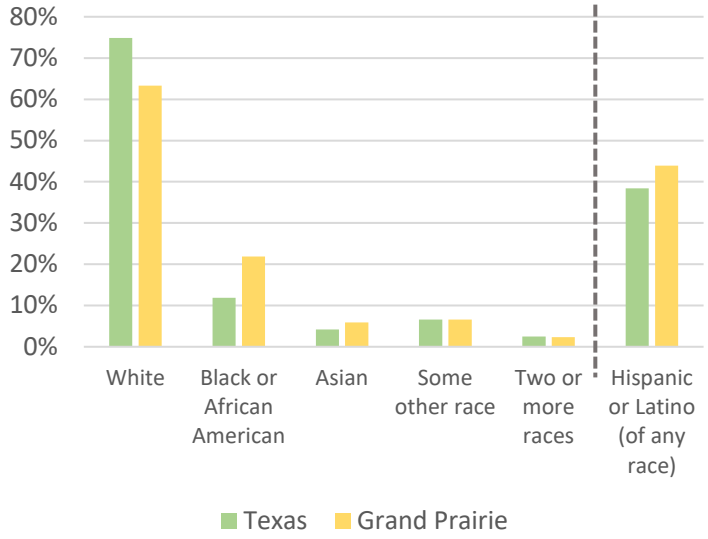
Race and ethnicity are factors that help explain a community's identity, values, and heritage. While the two terms are often used interchangeably, race is associated with biological factors, such as facial features or hair color. Racial classifications in the United States include, but are not limited to, White, Black, Asian, Pacific Islander, and Native American. Ethnicity is associated with cultural factors, such as language and traditions. The most common ethnicity in the US is Hispanic/Latino. For more information about how race and ethnicity are defined, please visit the U.S. Census Bureau website.

Race

Racially, Grand Prairie is slightly more diverse than statewide averages. About 63 percent of the population identified as White, followed by 22 percent who identify as Black or African American, six percent that identify as Asian, about six and a half percent as some other race, and about two percent identifying as multiracial. Those that identify as White are about 11.6 percent less than the state average while those identifying as Black or African American is 10 percent more than average.

It should be noted that the 2010 Plan collected its information for race and ethnicity from the 2000 Census; resulting in a 15-year gap between the 2010 assessment and this Plan update. In that time, the most significant difference in racial breakdowns is among the Black or African American group - which grew to 21.9 percent from 13.5 percent.

Figure 1. Race and Ethnicity



Ethnicity

Over 40 percent of Grand Prairie residents identify as Hispanic or Latino. This is an increase of approximately seven percentage points from the 2000 Census; when 33 percent of residents identified as Hispanic or Latino.

Race	Grand Prairie	Texas
White	63.3%	74.9%
Black or African American	21.9%	11.9%
Asian	5.9%	4.2%
Some other race	6.6%	6.6%
Two or more races	2.3%	2.5%
Ethnicity		
Hispanic/Latino	43.9%	38.4%

Source: 2011-2015 ACS 5-Year Estimates

Age

Age trends within the population can indicate and project need for services such as hospitals, parks, schools, and community centers. Age distribution can also help identify what kinds of land uses might be desirable within a community. For example, a community with a younger population and/or families might prefer starter and move-up housing as well as family-friendly amenities, while an aging community might prefer downsized, small lot housing options or senior living facilities.

Based on a person's age, the U.S. Census Bureau assigns everyone in the population to one of 13 age brackets. For children and young adults, these brackets are divided into five-year intervals. For adults over 25, the brackets are divided into 10-year intervals. This age assessment groups the brackets into the following cohort groups:

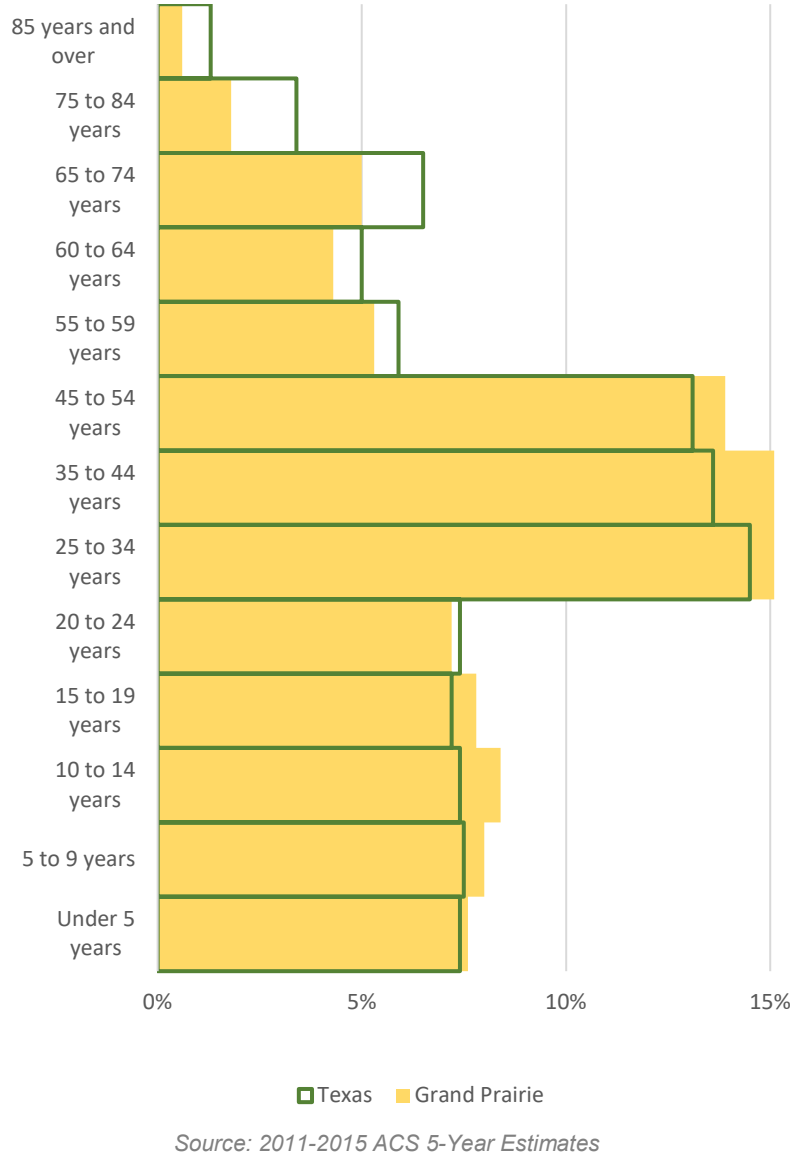
- Children under five years;
- Children and adolescents;
- College students, graduates, and young adults;
- Adults;
- Older adults; and
- Seniors.

Under 5 years

This cohort is important to consider because:

- It is comprised of the next group of children that will enter the school system.
- It is an indicator of the number of families that live in Grand Prairie.
- It represents future demands for schools, childcare facilities, community centers, and parks and recreation.

Figure 2. Age Distribution by Bracket



Source: 2011-2015 ACS 5-Year Estimates

Age	Grand Prairie	Texas
Under 5 years	7.6%	7.4%

In Grand Prairie, the distribution of this cohort is slightly above that of the State. Additional growth of this cohort in coming years could be indicative of future demand for schools, childcare facilities, community centers, and parks and recreation.

Children and Adolescents

This cohort group is comprised of three age brackets: 5-9 years, 10 to 14 years, and 15 to 19 years. This cohort group is important to consider because:

- It is an indicator of the number of families that live in Grand Prairie.
- It represents current demands for schools, childcare facilities, community centers, and parks and recreation.
- It represents the future group of higher education students and entry-level members of the workforce.
- Future increases or spikes in growth rates could be indicative of future needs for school and childcare facilities, parks and recreation and community facilities, student-oriented housing, and increased access to higher education and workforce training programs.

Age	Grand Prairie	Texas
5 to 9 years	8.0%	7.5%
10 to 14 years	8.4%	7.4%
15 to 19 years	7.8%	7.2%

The distribution of these age brackets in Grand Prairie is slightly above statewide trends by up to one percentage point. It is also important to note that each of these age brackets are larger than that of the previous cohort group (children under five). This is important because it signifies the number of adolescent and family related facilities, services, and amenities needed in the community.

Students, Graduates, and Young Adults

This cohort group is comprised of two age brackets: 20-24 and 25-34. Representing college students and graduates, entry level members of the workforce, and young/emerging professionals, this cohort group is important consider because:

- Members of these brackets tend to be more mobile than older cohort groups in pursuit of educational and employment opportunities.
- Members of these age groups can also represent a percentage of starter families.
- To attract and retain this cohort group, the City should provide a range of housing and mobility choices, a diversity of industries and employment opportunities, and unique amenity-rich destinations.

Age	Grand Prairie	Texas
20 to 24 years	7.2%	7.4%
25 to 34 years	15.1%	14.5%

Overall, this cohort group can be difficult to attract and maintain because its members prefer amenities and activities, strong sense of place, a range of housing options, and access to high-paying jobs. The distribution of these age brackets in Grand Prairie is generally on par with statewide distributions.

Adults

This cohort group is comprised of two age brackets: 35-44 years and 45-55 years. This group (typically comprised of mid-career professionals, members of the workforce, and people with growing families) is important to consider because:

- This group is likely to seek quality housing options (such as move-up homes), seek family-friendly amenities, and focus on the quality of social services and amenities such schools, parks, and safety.
- To attract and retain this cohort, the City should provide a range of housing and mobility choices, a diversity of industries and employment opportunities, and unique amenity-rich destinations.

Age	Grand Prairie	Texas
35 to 44 years	15.1%	13.6%
45 to 54 years	13.9%	13.1%

In Grand Prairie, these brackets comprise 15.1 and 13.9 percent of the population respectively and are higher than statewide average by between 1.5 and 0.8 percentage points respectively.

Older Adults

This cohort is comprised of three groups, 55-59, 60-64, and 65-74. Younger members of this age group are likely in the later phases of their carreer or approaching retirement, many with college-age or adult children. This cohort group is important to consider because:

- This group is likely to seek downsized housing options (small lot homes or high quality multi-family) and rich amenities.
- Growth among this portion of the population could signify a need for specialized housing as well as increased emergency and social services.

Age	Grand Prairie	Texas
55 to 59 years	5.3%	5.9%
60 to 64 years	4.3%	5.0%
65 to 74 years	5.0%	6.5%

In Grand Prairie, all three of these age brackets are below the statewide average, from 0.6 to 1.5 percentage points.

Seniors

This cohort group is comprised of the remaining two age brackets: 75-84 and 85+. This cohort group is important to consider because:

- As people in this cohort group age, they often require specialized housing stock, such as senior or assisted living facilities or secondary living quarters with family.
- Mobility of this cohort group can vary greatly. A focused effort to integrate universal design in infrastructure and facilities may be necessary to support all mobility and ability levels.
- Future increases or spikes in growth rates could indicate future needs for medical, emergency, and social services.

Age	Grand Prairie	Texas
75 to 84 years	1.8%	3.4%
85 years and over	0.6%	1.3%

This cohort group forms a small percentage of Grand Prairie's population; approximately 2.4 percent in total. This distribution is nearly half the statewide average of 4.7 percent.

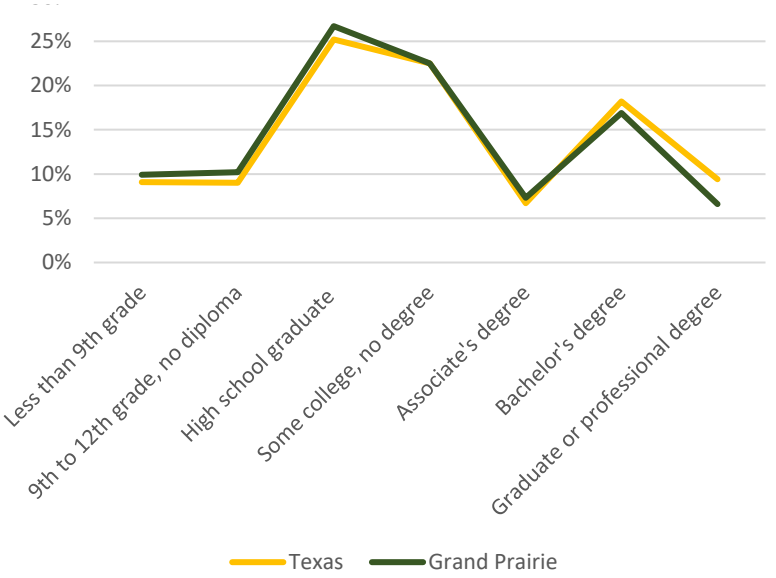
Education

Educational attainment is sampled for adults over 25. This means it does not consider children or young adults who are currently in school. The following factors are important to consider when extrapolating educational attainment to understand community implications:

- High educational attainment in a city can indicate that the city is successfully retaining a pre-existing educated population and/or attracting highly educated people to the city.
- High educational attainment tends to correspond to the presence of high skill, high paying jobs in or near the community, a range of quality housing choices, and rich amenities and services.

Grand Prairie closely follows statewide distributions of educational attainment.

Figure 3. Educational Attainment



Source: 2011-2015 ACS 5-Year Estimates

Economics and Workforce

Economic conditions are another important element of a baseline assessment, as they can shed light on a community's buying power, tax base, preferences for land uses, and likelihood of needing social services. Grand Prairie has an estimated 136,324 citizens of working age (over age 16). Of this subset:

- 66.4 percent are employed,
- 5.5 percent are unemployed, and
- The remaining percentage of citizens is not in the labor force (i.e. retired, in school full time, etc.).

Occupation and Industry

Occupation and industry are two measures used to gauge the diversity and skill level within the job market. Occupation is generally defined as the job a person has, whereas industry is the sector in which a person is employed. Both factors are measures of the kind of work that employs a community's citizens. This measurement does not consider whether such employment is based in the community.

Occupation

Every job that is available in the US falls into one of five categories, as defined by both the U.S. Census Bureau and the Bureau of Labor Statistics. These categories are: Management, business, science, and arts; Service; Sales and office; Natural resources, construction, and maintenance; and Production, transportation, and material moving.

Table 2. Occupation Type Distribution by City

	Arlington	Cedar Hill	Mansfield	Grand Prairie	Irving	Midlothian
Management, business, science, and arts	34.6%	37.9%	49.1%	**31.1%**	35.3%	39.2%
Service	16.5%	12.1%	11.3%	**14.4%**	16.6%	11.6%
Sales and office	26.9%	31.9%	25.9%	**26.4%**	24.1%	29.4%
Natural resources, construction, and maintenance	8.8%	6.6%	5.1%	**10.6%**	10.3%	7.9%
Production, transportation, and material moving	13.3%	11.4%	8.6%	**17.5%**	13.8%	11.9%

Source: 2011-2015 ACS 5-Year Estimates

Compared to neighboring cities, Grand Prairie has:

- The lowest distribution of people employed in Management, business, science, and arts;
- The highest distribution of people employed in Natural resources, construction, and maintenance;
- The highest distribution of people employed in Production, transportation, and material moving;
- An average distribution of people employed in Service and Sales/Office.

Industry

Every industry in the U.S. falls into one of 13 categories, as defined by the U.S. Census Bureau and Bureau of Labor Statistics. The distribution of these industries as a percent of the total job market can indicate a community's level of education, disposable income, provision of services, and strength of economy.

Grand Prairie's top three employment industries, making up a total of each making up over 40 percent of the job market, are:

- Educational services, and health care and social assistance (18.1 percent)
- Manufacturing (12.7 percent); and
- Retail trade (11.5 percent)

These trends are indicative of a labor market that is able to provide employment for a diverse workforce.

Table 3. Industry Distribution by City

	Arlington	Cedar Hill	Mansfield	Grand Prairie	Irving	Midlothian	Average
Agriculture, forestry, fishing and hunting, and mining	0.6%	0.5%	0.9%	**0.5%**	0.6%	1.4%	0.75%
Construction	6.7%	4.8%	4.8%	**7.8%**	8.4%	6.3%	6.47%
Manufacturing	11.0%	7.4%	12.9%	**12.7%**	8.6%	11.8%	10.73%
Wholesale trade	3.2%	3.4%	3.6%	**4.5%**	3.7%	3.9%	3.72%
Retail trade	12.9%	10.7%	9.9%	**11.5%**	10.8%	11.4%	11.20%
Transportation and warehousing, and utilities	6.2%	7.9%	5.7%	**8.0%**	7.7%	7.0%	7.08%
Information	2.1%	2.5%	2.3%	**2.0%**	3.0%	2.4%	2.38%
Finance and insurance, and real estate and rental and leasing	8.1%	10.5%	8.7%	**8.2%**	9.1%	10.0%	9.10%
Professional, scientific, and management, and administrative and waste management services	10.4%	9.7%	11.4%	**9.4%**	16.7%	7.1%	10.78%
Educational services, and health care and social assistance	19.8%	25.4%	24.1%	**18.1%**	14.2%	22.2%	20.63%
Arts, entertainment, and recreation, and accommodation and food services	9.9%	7.8%	6.9%	**8.3%**	10.7%	5.9%	8.25%
Other services, except public administration	5.7%	4.7%	3.9%	**6.0%**	4.6%	5.1%	5.00%
Public administration	3.3%	4.8%	4.9%	**3.1%**	1.6%	5.6%	3.88%

Source: 2011-2015 ACS 5-Year Estimates

Income

Income is directly tied to important factors like level of education, occupation, and industry. It is also an important predictor of buying power, land use preferences, generation of tax revenue, and need for social services.

Household income is one of the most commonly used areas of income assessment. Table 4 illustrates the mean and median household incomes in Grand Prairie and neighboring cities. Mean household income is the average of all households. While this measurement is useful because it provides an average, this number does not account for very high or very low outliers. Median income is a measurement of the 50th percentile's income, meaning that half of the population earned more while half earned less.

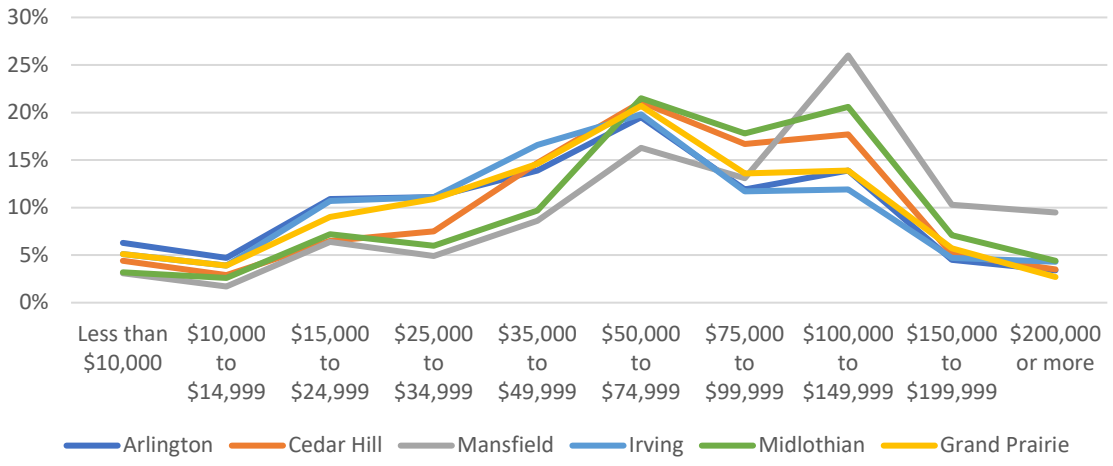
Table 4. Median and Mean Household Income by City

	Arlington	Cedar Hill	Mansfield	Grand Prairie	Irving	Midlothian
Median household income (dollars)	53,326	67,669	90,089	**56,475**	52,154	74,881
Mean household income (dollars)	69,265	78,881	108,878	**70,011**	71,922	85,254

Source: 2011-2015 ACS 5-Year Estimates

Figure 4 shows that Grand Prairie's mean and median incomes are generally underrepresented in higher income brackets. When household income is distributed into brackets, the median household income continues be in line with the surrounding cities with the highest percentage of the city being in the $50,000 to $74,999 income bracket.

Figure 4. Median Household Income Distribution by City



Source: 2011-2015 ACS 5-Year Estimates

Housing Inventory

This section assesses the changes to Grand Prairie's housing market since 2010. Population and housing are closely related factors and, as discussed in the Population section, the City's population has grown by more than 15,000 people since 2010. While the U.S. Census Bureau conducts annual population estimates, it does not do the same for housing. Since housing trends have direct implications on a range of demographic and financial topics, it is recommended that this information be reviewed and updated routinely.

Age

Regardless of whether a City is growing or not, age of housing stock is an important factor to consider because housing units and neighborhoods inevitably deteriorate over time. Generally, new housing is more expensive and becomes less expensive as it ages, so a range of housing age is very important in maintaining a housing market that accommodates a range of incomes. A steady cycle of housing also ensures that neighborhoods age at different times.

Grand Prairie's housing stock is relatively new; 45.5 percent was built after 1989 and another 33.6 percent was built between 1970 and 1989. In all, 79 percent of Grand Prairie's housing is less than 50 years old. In the short term, this means that the city can focus its effort on the 20 percent of older housing that is more likely to fall into disrepair. However, in the long-term, the City's distribution of housing age means that a large percentage of the housing stock will be at the point of needing attention in the next 20 years.

Type

The type of housing that is available in a community has a direct impact on the diversity of the community. It is important to note that 'housing type' in this case refers only to the number of units on a lot, not the form of the development. Of Grand Prairie's existing housing stock, 67 percent is estimated to be traditional single family housing. Another 30 percent of the housing stock is some form of attached housing, (townhomes, duplexes, multi-family). The remaining percentage (2.8 percent) are mobile homes.

Figure 5. Housing Year Built

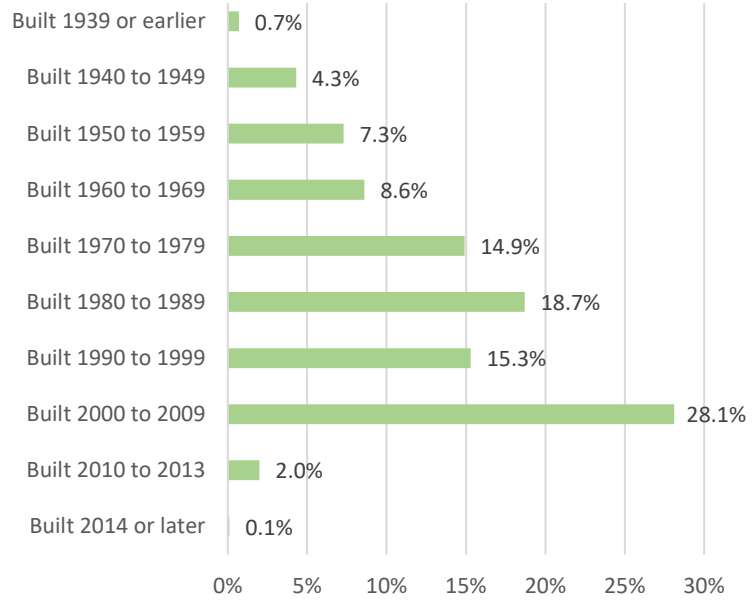
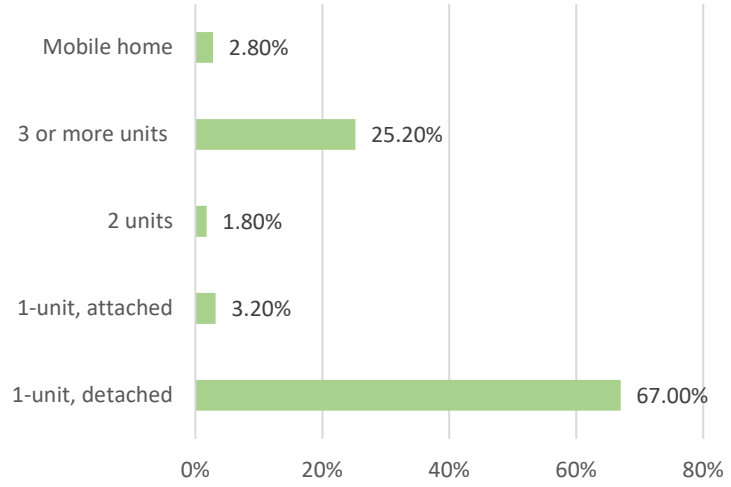


Figure 6. Housing Type



Source: 2011-2015 ACS 5-Year Estimates

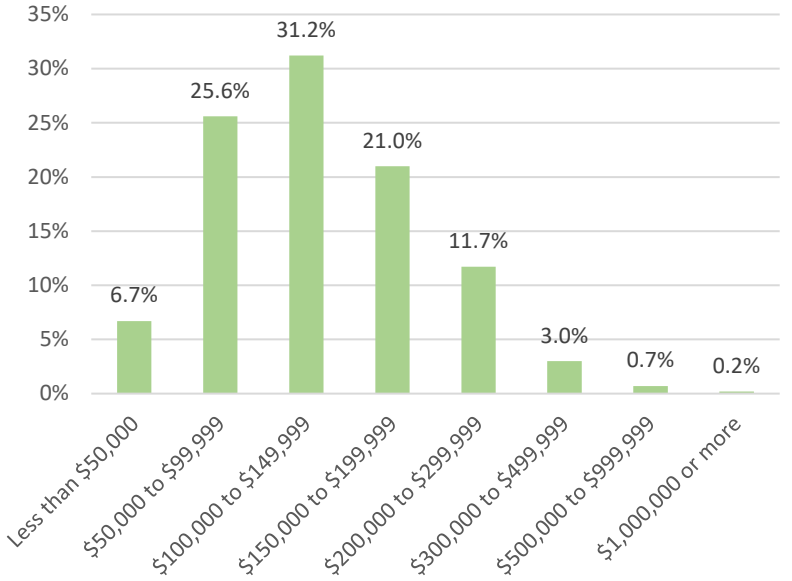
Value

Like income, home value is measured by mean, median, and bracketed distribution of homes within the City. The majority of homes (31.2 percent) in Grand Prairie are valued at $100,000-149,999; 25.6 are valued at $50,000-99,999, and 21 percent from $150,000-199,999. Grand Prairie has more homes above the average value than below the average value. This measurement will likely continue as newer and planned units are figured into future comparisons.

Median Home Value:

$126,200

Figure 7. Housing Value



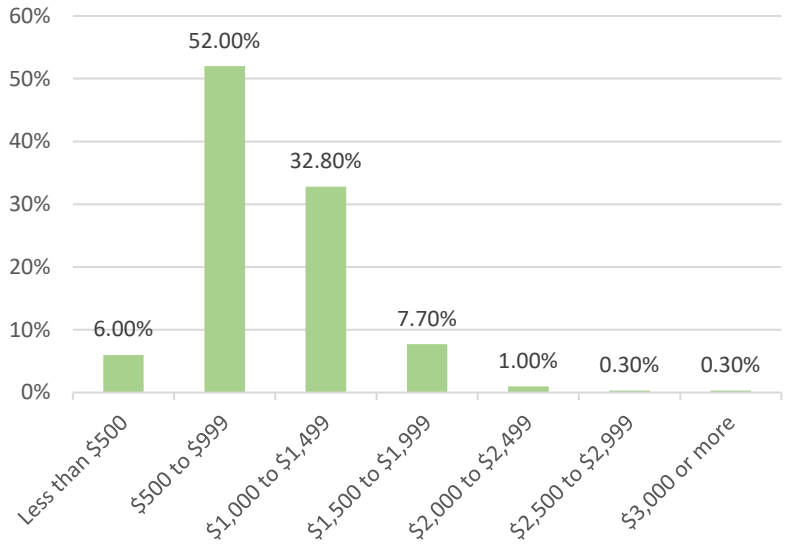
Rent

Rent Values within the City are measured by the cost of rent per multi-family unit regardless of the number of bedrooms. The majority of rents in Grand Prairie, 52 percent, range from $500-599 per unit and another 32.8 percent range from $1,000-1,499 per unit. The majority of rents in Grand Prairie are within, or higher than, the average rent bracket. This trend will likely continue as newer and planned units are figured into future estimates.

Median Rent:

$922

Figure 8. Rent Value



Source: 2011-2015 ACS 5-Year Estimates

Physical Features

Natural and built patterns influence the shape and growth of cities. Understanding such features, which ultimately control and regulate the City's expansion, creates knowledge of how and where the City can grow in the future. These patterns, shown in Map 1, are divided into two primary categories: natural and built.

Natural Constraints

Natural constraints are naturally occurring features that create impediments to development. These features typically include geographic factors such as bodies of water, floodplains, and topography.

Topography

The City's high point elevation is 663' at the southern part of the City along Kimble Road north of US-287 and the low point is 433' located along the Trinity River south of Verizon Theatre in the floodplain; creating an elevation range of 230' as shown on Map 1. With two lakes and the Trinity River traversing the City, this range of elevation creates significant floodplain areas. Beyond floodplains, this topographic range is important to consider because it can impact the stormwater runoff and placement of lift stations; which in part determines where development can and cannot occur.

Floodplain

Floodplain refers to the FEMA 0.5 and 1-Percent Flood Risk Zones that are typically located along creeks and streams that run throughout the City. Development generally should not be planned in the floodplain area, as it can be challenging, expensive, and possibly detrimental to downstream development. The typical uses in floodplain areas are parks and preserved open space. In general, most development in Grand Prairie is not located in the floodplain, however, portions of Lynn Creek Park and Loyd Park, and some industrial developments on the eastern part of the City along IH 30 and Main Street are currently are located in the floodplain.

Mira Lagos

Within the city limits of Grand Prairie there are 16,220 acres of floodplain. The City's highest concentration of floodplain is located north of IH 30, though large swaths also occur in the northeastern corner of the City (around the lake), and in the southern portion of the City and unincorporated areas. There are another 2,470 acres of floodplain within the City's ETJ.

Bodies of Water

There are nearly a dozen creeks and streams that traverse Grand Prairie, which feed into the two lakes nearby. In the northern portion of the City, north of IH 30, the west fork of the Trinity River is the leading cause of the City's substantial bodies of water. Some of the more significant bodies of water (apart from the Trinity River) include Fish Creek, Mountain Creek, Soap Creek, Bear Creek, and Cottonwood Creek.

Similar to the floodplain areas, the creeks, streams, and lake that run throughout the City create an opportunity for parks, trail, and preserved open space. These areas can constrain roadways because of increased cost to build a bridge across a creek or stream.

Joe Pool Lake

Joe Pool Lake

Joe Pool Lake significantly impacts Grand Prairie in several ways. It splits the City north/south; creating a peninsula and making the southern portion of the City accessible only by bridge. However, it provides the City with a significant amount of parkland space and is a high-value location for higher end development.

Built Constraints

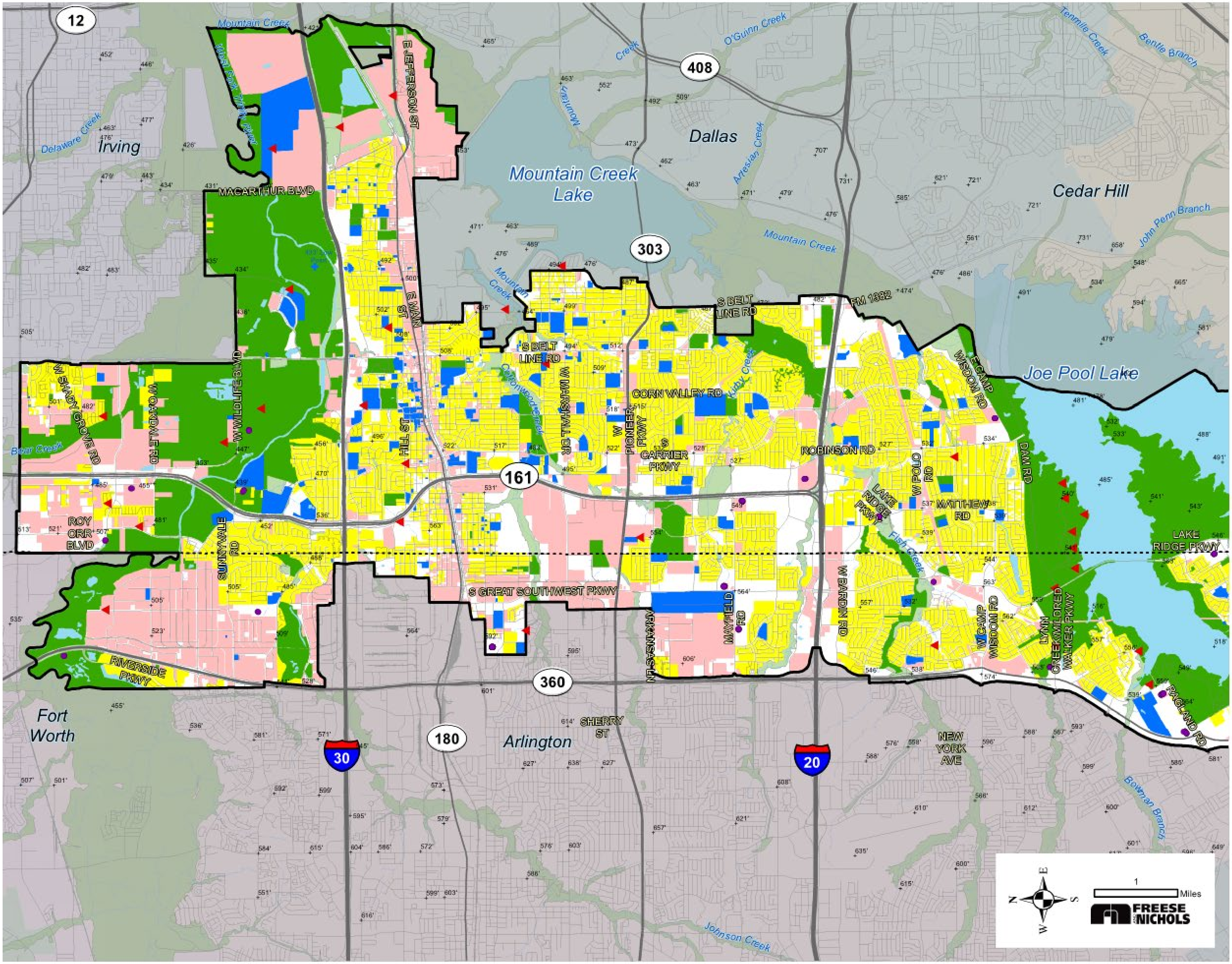
Built constraints are manmade structures that may cause impediments to development by obstructing the ability to develop either by bisecting the area or preventing construction. These structures include railroads and roadways.

Railroad

The Union Pacific Railroad has an active freight rail corridor running east to west through Grand Prairie. The corridor generally runs along Jefferson Street and Main Street. Another railroad track traverses diagonally across the Southern Sector, creating a barrier between Grand Prairie and its neighboring cities of Cedar Hill and Midlothian, and impacting the existing and potential future connectivity. Typically, the more active a freight railroad line - the more of an impediment it can be to connectivity and the placement of certain land uses.

Major Thoroughfares

Major highways present both challenges and opportunities to cities. On one hand, they improve connectivity and can be instrumental in facilitating certain land uses. Particularly those that are nonresidential in nature. However, highways can also divide communities. Additionally, the noise associated with them can limit where residential development is desirable. There are several regionally significant roadways in Grand Prairie that currently or could in the future present such tradeoffs: IH 30, SH 360, IH 20, SH 161 and US 287. A full discussion of the impact of these roadways can be found in the Thoroughfare Plan of Chapter 3 | Future Land Use and Thoroughfares.


Irving
Dallas
Cedar Hill
Mountain Creek Lake
Joe Pool Lake
Fort Worth
Arlington
Mountain Creek
O'Gunn Creek
Tenmile Creek
Bentle Branch
Delaware Creek
Arlesian Creek
John Penn Branch
Bear Creek
Fish Creek
Johnson Creek
Bowman Branch
12
408
303
161
360
180
30
20
MACARTHUR BLVD
E JEFFERSON ST
E MAIN ST
S BELT LINE RD
FM 1382
CORN VALLEY RD
W MARSHALL DR
W PIONEER PKWY
S CARRIER PKWY
ROBINSON RD
W WILDLIFE BLVD
W OAKDALE RD
W SHADY GROVE RD
ROY ORR BLVD
SUNNYVALE RD
HILL ST
S GREAT SOUTHWEST PKWY
RIVERSIDE PKWY
MAYFIELD RD
W BARDIN RD
LAKE RIDGE PKWY
W POLO RD
MATTHEW RD
E CAMP WISDOM RD
W CAMP WISDOM RD
DAM RD
LYNN CREEK/WILDRED WALKER PKWY
RAGLAND RD
SHERRY ST
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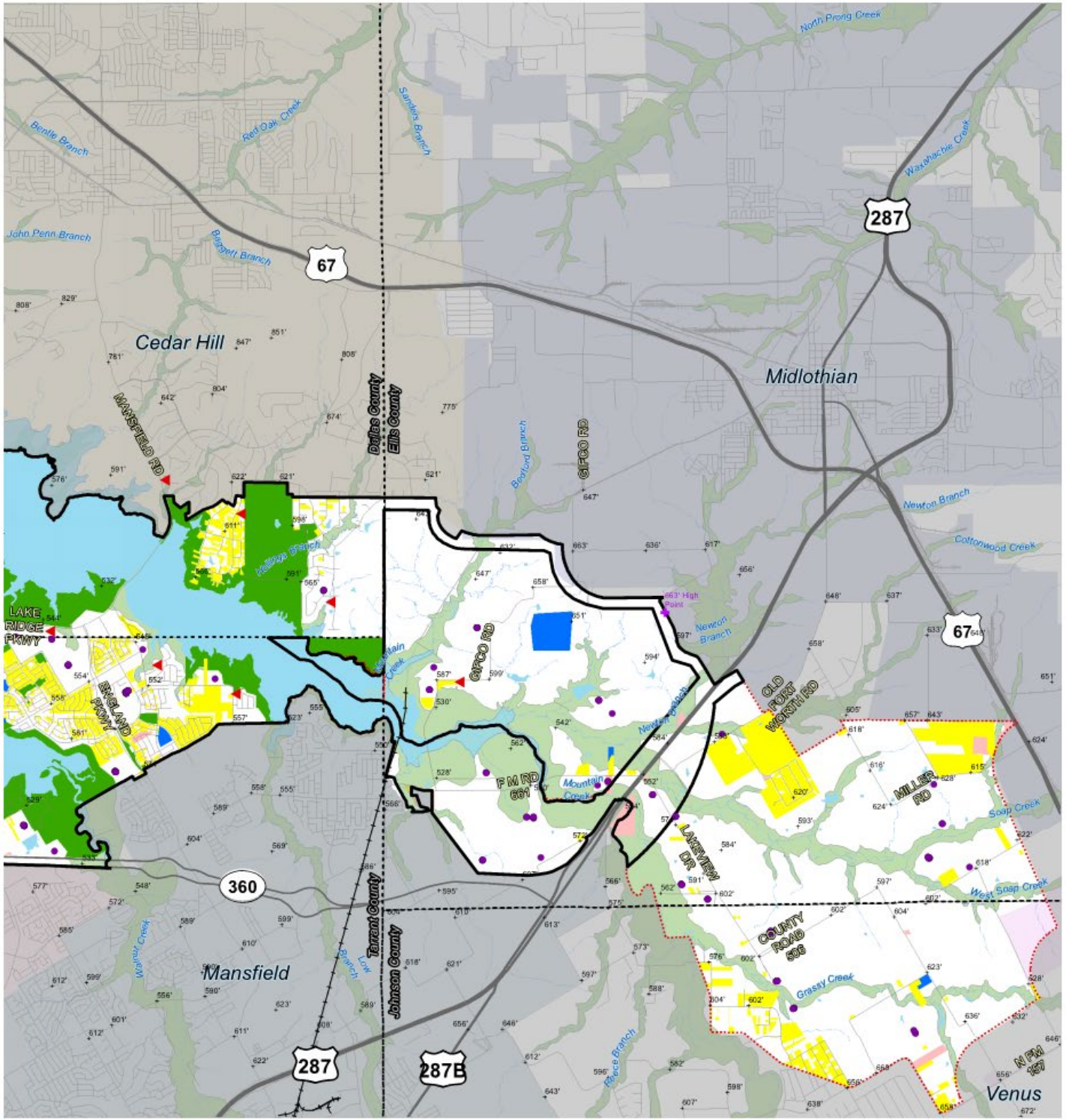
FREESE NICHOLS

Map 1. Physical Features Map



Physical Features

- High Point Elevation
- Low Point Elevation
- Spot Elevation
- Lift Stations
- Gas Wells
- Residential Areas
- Non-Residential Areas
- Parks and Open Space
- Public/Semi-Public
- Water Bodies
- Grand Prairie City Limits
- Grand Prairie ETJ
- County Line
- 1-Percent Flood Risk Zones (FEMA)
- Lakes
- Railroads
- River/Creeks

N W E S

1 Miles

FREESE NICHOLS

Existing Land Use and Development Patterns

The distribution of land uses throughout a city impacts all other elements of city management, including infrastructure, traffic, quality of life, and economic development. In addition to the Comprehensive Plan, the Grand Prairie controls development with several regulatory tools (ordinances)—zoning and subdivision regulations being the most common. Subdivision regulations govern primarily the physical characteristics of the land such as the arrangement of streets, lots, utilities, and drainage systems. Zoning, on the other hand, regulates the specific land use types, standards, and aesthetics of development. Zoning can only be enforced within the city limits; while subdivision regulations are enforceable within the city limits and Extraterritorial Jurisdiction (ETJ).

Existing land use is important because it establishes the current conditions for the City and determines what options are available for future development. Typically, land uses that are already in existence will remain the same because they are appropriate for the area or are difficult to transition. This leaves the opportunities for development in vacant areas that have not yet been developed. For Grand Prairie, the largest areas exist in the southern portion of the City and in the ETJ.

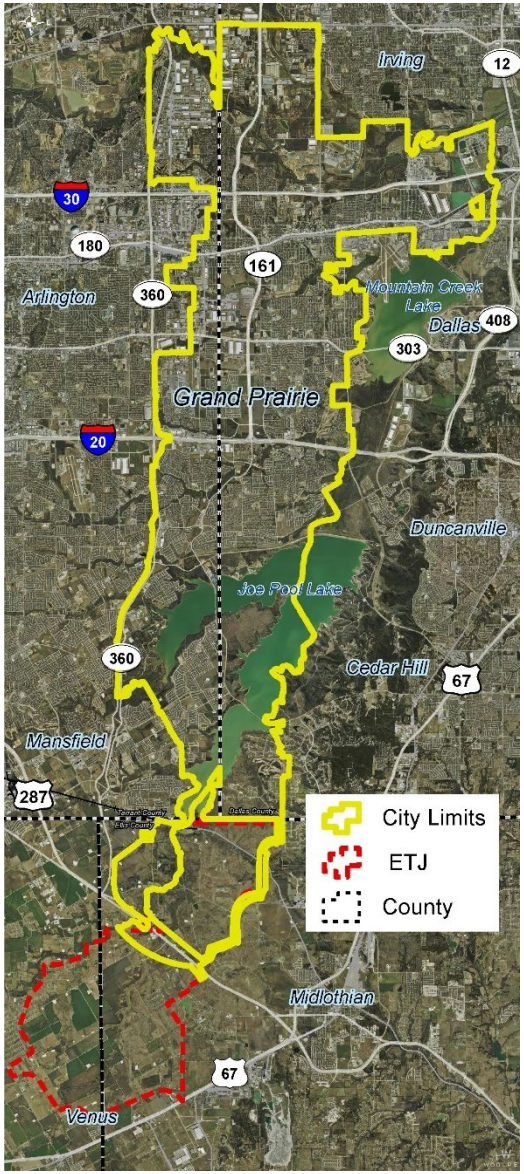
City Limits and Extraterritorial Jurisdiction

According to Texas law, cities may identify land up to five miles outside of the city limits to fall under the city's extraterritorial jurisdiction (ETJ). Land identified as a city's ETJ cannot overlap with another city's ETJ or city limits. As cities grow, they may incorporate their ETJ into the city in accordance with strict state laws. Until part of an ETJ is incorporated, the only city regulations that are enforceable are subdivision regulations. As a city incorporates part of an ETJ, it may expand its ETJ based on the location of the new city limits; assuming there is available land to do so.

As of December 1, 2017, cities located in counties with over 500,000 people:

- May only annex by petition of 50 percent of the property owners in unincorporated areas with under 200 people; or
- May only annex with approval from voters in the area in areas with over 200 people.

Map 2. City Limits Map



The city limits of Grand Prairie currently contain 51,123 acres. Grand Prairie abuts many communities and only has an ETJ in its southern areas, which covers an additional 11,769 acres extending just over 4 miles from the southern border of the City. Most of the ETJ is sparsely developed.

Existing Land Use

To more accurately assess Grand Prairie's future land use needs, an analysis of the present land use pattern is important. The pattern of land uses that exist today within the City has evolved to satisfy the requirements of the community as it has grown, both in geographic size and in population. This section of the plan provides documentation of the way in which the parcels within Grand Prairie are currently being used. This will allow for land use recommendations to be tailored to the needs of the City's citizens.

Existing land use assessments from NCTCOG were used for the preliminary Citywide land use discussion. An additional level of analysis was conducted for the Focus Areas, in

Chapter 7 | Focus Areas, which are the focus of this Plan update. To analyze the land use trends within the Focus Areas, aerial photography supported by field verification was used to identify existing land uses. This data was compiled and used to create Table 5 and Table 6 and to discuss Grand Prairie's current land use pattern.

Percent of Developed Land in City Limits: 47%

Percent of Undeveloped Land in City Limits: 53%

Table 5 shows 21.3 percent developed land in the City is comprised of residential uses, 14.4 percent is comprised of nonresidential uses, and 11.6 percent is comprised of institutional uses.

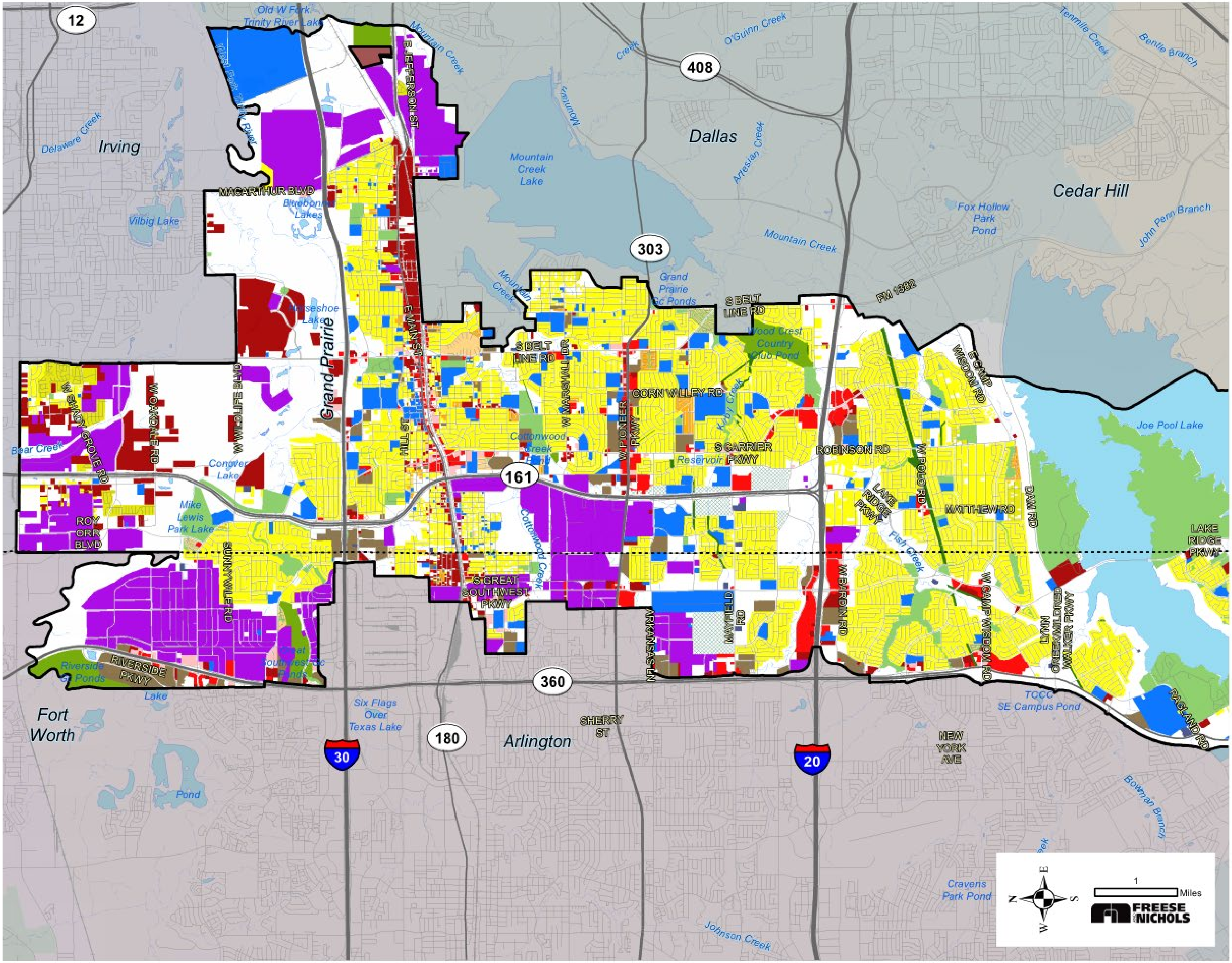
The five largest developed land uses are:

1. Single Family (9,346.7 acres);
2. Industrial (4,684.9 acres);
3. Parks/Open Space (2,970.7 acres);
4. Public/Semi-Public (2,227.0 acres); and
5. Commercial (1,718.5 acres).

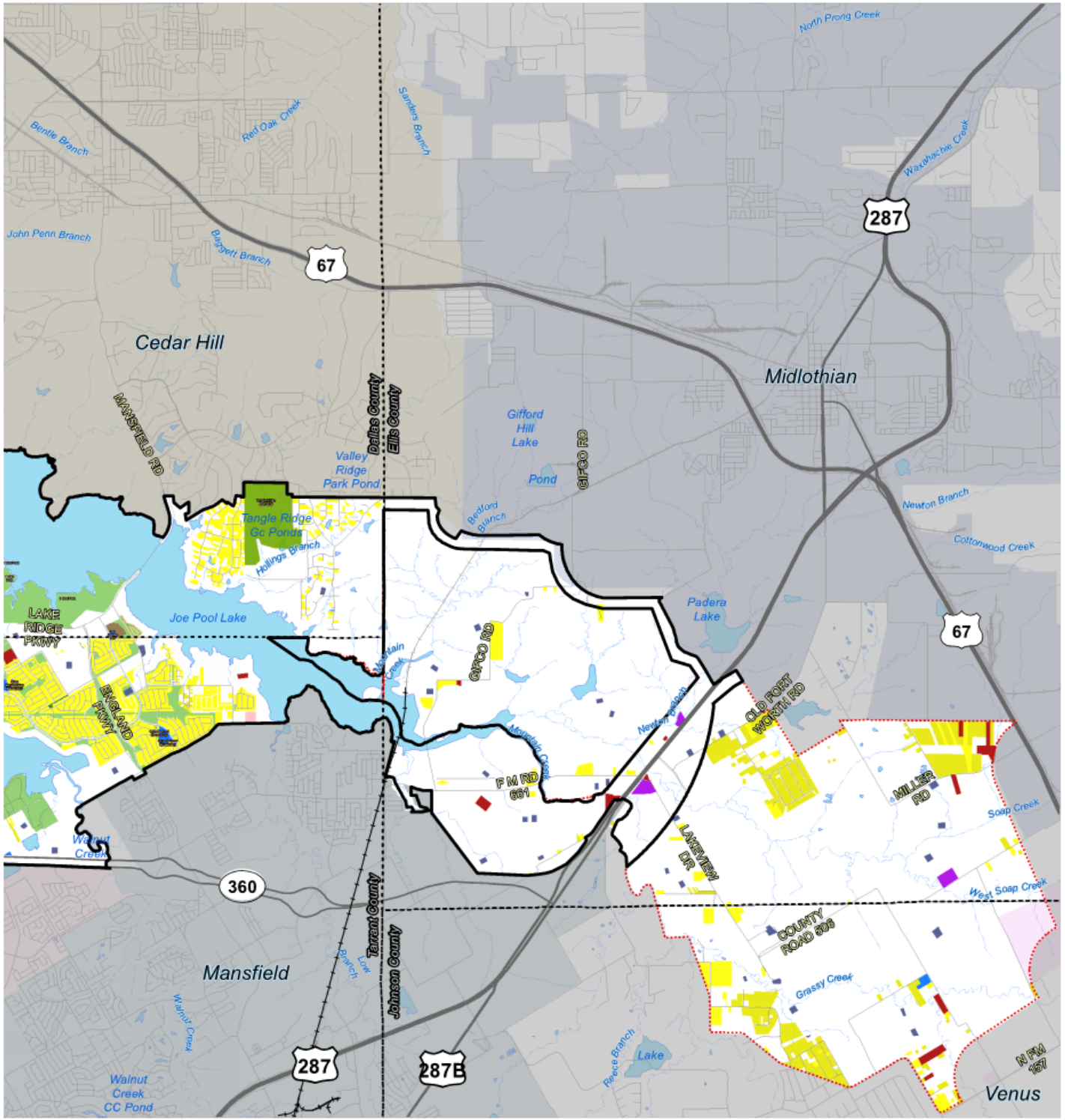
Table 6 shows 87.4 percent of Grand Prairie's ETJ is currently vacant, 7.7 percent is residential in nature; another 1.1 percent and 0.1 percent are comprised of nonresidential and institutional uses respectively.

Percent of Developed Land in ETJ: 9%

Percent of Undeveloped Land in ETJ: 91%


Irving
Dallas
Cedar Hill
Fort Worth
Arlington
Grand Prairie
Mountain Creek Lake
Joe Pool Lake
MACARTHUR BLVD
E JEFFERSON ST
E MAIN ST
S BELT LINE RD
W MARSHALL DR
W PIONEER PKWY
CORN VALLEY RD
S CARRIER PKWY
ROBINSON RD
W POLO RD
LAKE RIDGE PKWY
MATTHEW RD
DAW RD
W CAMP WISDOM RD
E CAMP WISDOM RD
S GREAT SOUTHWEST PKWY
RIVERSIDE PKWY
SUNNYVALE RD
ROY ORR BLVD
W WILDLIFE BLVD
ARKANSAS LN
MAYFIELD RD
W BARDIN RD
RAGLAND RD
SHERRY ST
NEW YORK AVE
HILL ST
12
408
303
161
360
180
30
20
FM 1382
Miles
FREESE NICHOLS

Map 3. Existing Land Use Map



Existing Land Use

- Single-Family
- Two-Family (Duplex)
- TownHome
- Multi-Family
- Manufactured Home
- Office
- Retail
- Commercial
- Industrial
- Parks and Open Space
- Private Recreation
- Easement
- Public/Semi-Public
- Utility
- Planned Development
- Vacant Building
- Parking
- Vacant
- Joe Pool Lake
- Grand Prairie City Limits
- Grand Prairie ETJ
- County Line
- Railroads
- River/Creeks

N E S W

1 Miles

FREESE NICHOLS

Table 5. Existing Land Uses in City Limits

Developed			
Land Use	**Acres**	**Percent of Developed Uses**	**Percent of City**
Residential			
Single Family	9,346.7	38.6%	18.3%
Two-Family (Duplex)	141.2	0.6%	0.3%
Townhome	127.3	0.5%	0.2%
Multi-Family	960.6	4.0%	1.9%
Manufactured Home	332.1	1.4%	0.6%
Total Residential	10,907.84	45.0%	21.3%
Nonresidential			
Industrial	4,684.9	19.32%	9.16%
Commercial	1,718.5	7.09%	3.36%
Retail	783.6	3.23%	1.53%
Office	194.2	0.80%	0.38%
Total Nonresidential	7,381.2	30.4%	14.4%
Institutional			
Parks/Open Space	2,970.7	12.3%	5.8%
Private Recreation	755.9	3.1%	1.5%
Public/Semi-Public	2,227.0	9.2%	4.4%
Total Institutional	5,953.70	24.6%	11.6%
Total Developed	**24,242.7**	**100.0%**	**47.4%**
Undeveloped			
Land Use	**Acres**	**Percent of Undeveloped Uses**	**Percent of City**
Planned Development	326.5	1.2%	0.6%
Right-of-Way	6,873.2	25.6%	13.4%
Lakes/Ponds	4,800.7	17.9%	9.4%
Utilities	83.9	0.3%	0.2%
Easement	167.4	0.6%	0.3%
Railroad	184.8	0.7%	0.4%
Vacant	14,442.1	53.7%	28.2%
Parking	2.4	0.0%	0.0%
Total Undeveloped	**26,881.1**	**100.0%**	**52.6%**
Total City Limits	**51,123.8**		**100.0%**

Table 6. Existing Land Uses in ETJ

Developed			
Land Use	**Acres**	**Percent of Developed Uses**	**Percent of City**
Residential			
Single Family	278.0	26.8%	2.4%
Manufactured Home	625.3	60.2%	5.3%
Total Residential	903.3	87.0%	7.7%
Nonresidential			
Industrial	15.2	1.5%	0.1%
Commercial	112.0	10.8%	1.0%
Total Nonresidential	127.2	12.3%	1.1%
Institutional			
Public/Semi-Public	7.6	0.7%	0.1%
Total Institutional	7.6	0.7%	0.1%
Total Developed	**1,038.1**	**100.0%**	**8.8%**
Undeveloped			
Land Use	**Acres**	**Percent of Undeveloped Uses**	**Percent of City**
Right-of-Way	0.7	0.0%	0.0%
Lakes/Ponds	266.2	2.5%	2.3%
Utilities	56.5	0.5%	0.5%
Railroad	126.8	1.2%	1.1%
Vacant	10,281.0	95.8%	87.4%
Total Undeveloped	**10,731.2**	**100.0%**	**91.2%**
Total ETJ	**11,769.3**		**100.0%**

Residential Land Use Types

The following residential land use types currently exist within the City of Grand Prairie.

Single Family

The single family land use designation is representative of a single dwelling unit that is detached from any other dwelling unit, is built on-site, and is designed to be occupied by only one family. The density for single family homes is generally 0-6 units per acre. Single family homes are the dominant housing type currently existing within Grand Prairie.

Two-Family

Two-family homes, commonly referred to as duplex units, are structures with two dwelling units attached by a common wall that are designed to be occupied by two families (one in each unit) at approximately 6-12 units per acre.

Townhome

Townhome units consist of a group of three or more attached units; generally with 6-12 units per acre.

Multi-Family

Multi-family homes are structures with multiple dwelling units that are designed to be occupied by several families. This term can be used to describe a single structure or series of structures in a complex, generally with 12 of more units per acre. Multi-family homes are also commonly referred to as apartments.

Manufactured Home This land use consists of single family dwelling units that are manufactured in a factory rather than on-site.

Nonresidential Land Use Types

The following nonresidential land use types currently exist within the City of Grand Prairie.

Parks and Open Space Public park land, open space, and/or other recreational areas fall within the parks and open space land use type. This land designation includes facilities such as tennis courts, public swimming pools, public pavilions, and basketball courts.

Private Recreation Private recreation refers to privately owned facilities that generally require some form of membership or residence.

Public/Semi-Public Public/semi-public facilities are accessible to the public. Such facilities include schools, churches, public buildings, cemeteries, and some medical facilities. This land use type also includes some support services, such as school bus storage lots.

Office

The office land use designation includes all types of professional and administrative office uses; including those occupied by doctors, lawyers, dentists, realtors, architects, and accountants.

Retail

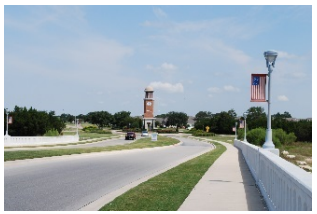
Retail uses refer to businesses that primarily sell commodities or goods to consumers. Examples include restaurants, grocery stores, beauty salons, and shopping centers.

Commercial

Businesses that primarily provide a service to consumers are referred to as commercial land uses. Examples include hotels, automobile service stations, automobile sales lots, self-storage businesses, etc.

Industrial

The industrial land use allows for the processing, storage, assembly, and/or repairing of materials. Businesses within this use designation range from light industrial (with all activity occurring indoors) to heavy industrial (with activity potentially occurring outside).



Right-of-Way

Right-of-way is land that is dedicated to public use for streets and alleys and also includes rail lines.

Vacant

The vacant use represents unimproved and/or undeveloped land or land used for crop production and/or other agricultural uses.

Utility

Utility land uses involve the location or transmission of utilities like electrical substations. This land designation does not include offices for utility companies.

Easement

Easements are areas of land that provide the right to use a property, under separate ownership, for a specific purpose. Typically, easements are granted to allow access to utilities such as electrical lines, cable lines, and sewer lines. They can also be granted for other public uses such as drainage areas or trail access.

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UPTOWN
H&R BLOCK
ARTS COUNCIL
RESERVED PARKING
GRAFF CHEVROLET
Ultra Lounge

Chapter 2 | Issue Identification and Plan Goals

Input from Grand Prairie residents regarding the community's needs, desires, and opinions of the City was collected in the beginning phase of the comprehensive planning process. This input is summarized on page 46 and detailed at length in the Appendix A | Public Input Summary. The public input, as well as baseline data discussed in Chapter 1 | Community Snapshot, were used to identify the recurring, high-level issues affecting the community.

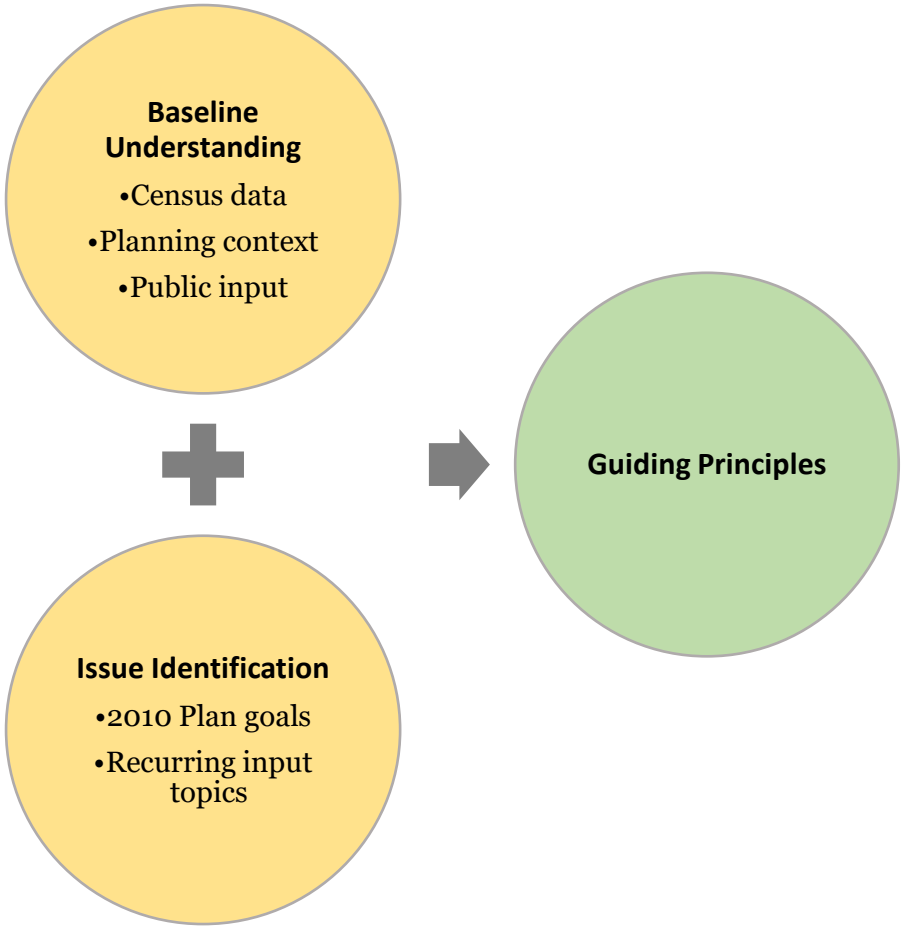
Document Structure

With an understanding of the community-wide issues, a threefold approach was used to update the Comprehensive Plan:

1. Organize the issues facing Grand Prairie in a structured, understandable manner;
2. Identify which goals from the 2010 Plan are still relevant today; and
3. Formulate any necessary new recommendations that were not considered in 2010.

Broad, recurring topics areas were identified from the public input and baseline assessments. To categorize these recurring themes, three categories (referred to as guiding principles) were formed to guide the overall scope and layout of the Comprehensive Plan update. Summarized beginning on page 49, the guiding principles are:

- Healthly community
- Smart community; and
- Sustainable community.



Public Input | Big Ideas

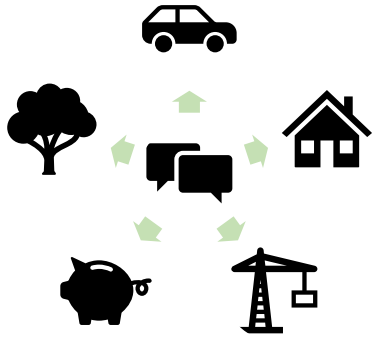
From June to September 2017 and June to September 2018, public input was collected in preparation for the Comprehensive Plan update. This input serves as a base understanding for the needs, desires, and values of Grand Prairie residents. Sources of this input included feedback collected at community events, stakeholder interviews, and an online opinion survey posted on the City's website. Appendix A | Public Input Summary contains a full methodology, survey response results, and descriptions of the outreach strategies.

Citywide

Recurring citywide public input generally fell into one of five topic areas: transportation, neighborhoods and quality of life, development and land use, finance, and environment. These five citywide input themes are central to the approach and structure of this Comprehensive Plan update.

Transportation

Public transportation is a top desire among many residents. Additionally, traffic congestion, both along major roadways and in neighborhoods, is a concern for many.



Multimodal Transportation

- Mass transit and connections to regional rail needed
- More opportunities for pedestrian connectivity
- Bike traffic safety issues along Lake Ridge Parkway bridge

Traffic and Congestion

- Traffic studies and wayfinding studies needed for various existing corridors and intersections
- Concerns regarding neighborhood streets used as cut-throughs
- Concerns regarding additional impact to traffic from planned developments

Neighborhoods and Quality of Life

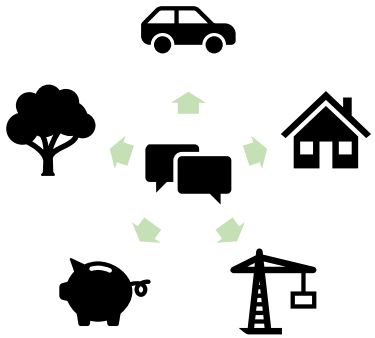
Many residents would like to see targeted revitalization efforts in aging neighborhoods; including expanded housing options, employment opportunities, local retail amenities, and improved provision of services.

- Desire to maintain the community's family-oriented feel and low cost of living
- Additional housing options and price ranges, though high quality still needs to be maintained

Development and Land Use

A balanced mix of land uses is needed to provide a strong tax base, adequate amenities, and demand for services. Many residents view recent growth and development as a good thing for the City; though many residents differ on where additional activity should be focused. High quality development is a top priority for future development, regardless of land use. Specifically, there is need or desire for:

- Unique, locally-owned development, specifically in Downtown
- Additional housing north of IH 30 to support commercial development
- Destination retail/commercial and entertainment uses
- Sit-down dining beyond existing fast food options
- Upscale entertainment and hospitality amenities
- Great Southwest Parkway at IH 20 could be optimal focal area for more entertainment venues, though a traffic plan would be needed



Finance

Responsible financial decision-making is important to the community.

- Timing of infrastructure needs for the southern area of the City need to be evaluated
- SH 360 extension: could be 30 years before it is self-funded
- There is opportunity for major developments to transform the City

Environment

There is a desire to maintain, enhance, and promote the City's natural amenities; including the City's open space and Joe Pool Lake.

- Desire for continued expansion of the parks system
- Balance opportunities to preserve/reclaim floodplain for development

Focus Areas

Southern Sector/State Highway 360

High quality development is the top priority; area will need a balance of residential and nonresidential uses.

- Various residential densities could be appropriate, but there is no rush to develop if it is not unique and high quality
- Potential economic zone for tech industries
- More housing could help the City attract more retail and commercial/keep sales tax dollars in the City
- Infrastructure needs of the area will need to be identified
- The State Highway 360 corridor needs to be considered as a key gateway into the City.

State Highway 161/PGBT

Upscale, destination commercial development is a top priority; traffic impacts are a concern.

- There is currently a high level of development activity and interest
- There is a strong desire for development of high quality
- Developments should be highest and best use
- Upscale retail/commercial including sit-down restaurants and entertainment venues

Interstate Highway 30

Revitalization of northern neighborhoods is needed; there is also potential for an entertainment-based corridor.

- Higher quality hotels and entertainment venues along IH 30 should be considered
- Specialty and general retail needed in northern sector, especially grocery stores
- There is a need for focus on the relationship between IH 30 and Main Street
- Frontage roads on IH 30 will create new development opportunities

Guiding Principles

Identified through the baseline understanding of Grand Prairie and through public input, Guiding Principles are broad policy areas that guide the overall scope and layout of the Comprehensive Plan update. These Guiding Principles serve as the basis for the Plan's layout because this structure allows for more thoughtful considerations of how issues are interconnected. In this subsection, the three Guiding Principles are summarized and linked to their respective input topics and 2010 Plan goals.

Healthy Community

Directly and indirectly influencing factors such as: socioeconomic circumstances, environmental exposures, and behavioral patterns with the intent of improving community health and wellness.

Applicable Input Topics

- Transportation
- Neighborhoods and Quality of Life
- Development and Land Use

Applicable 2010 Goals

- Revitalize older developed areas, including the Downtown area
- Promote and enhance economic development strengths, like entertainment venues
- Maintain a safe city with a high quality of life
- Provide recreational options and protect open space

Smart Community

Leveraging technology and the internet to improve municipal operations such as: communication, innovation, data analytics, transportation, and infrastructure.

Applicable Input Topics

- Transportation
- Neighborhoods and Quality of Life
- Development and Land Use
- Finance

Applicable 2010 Goals

- Maintain and upgrade the city's transportation infrastructure
- Use current technology for a more user-friendly development process

Sustainable Community

Providing for the current population while preserving resources for the next generation. Divided into three areas: environmental, economic, and social.

Applicable Input Topics

- Transportation
- Neighborhoods and Quality of Life
- Development and Land Use
- Finance
- Environment

Applicable 2010 Goals

- Use sound land use and urban design principles to optimize city land resources
- Encourage resource conservation and renewable energy
- Promote and enhance economic development strengths, like entertainment venues
- Maintain and improve drainage through watershed planning and floodplain management
- Promote and adopt "sustainable growth practices"
- Achieve a broad housing selection for a diverse population
- Maintain and upgrade the city's transportation infrastructure
- Investigate opportunities for intergovernmental cooperation

Chapter 3 | Future Land Use and Thoroughfares

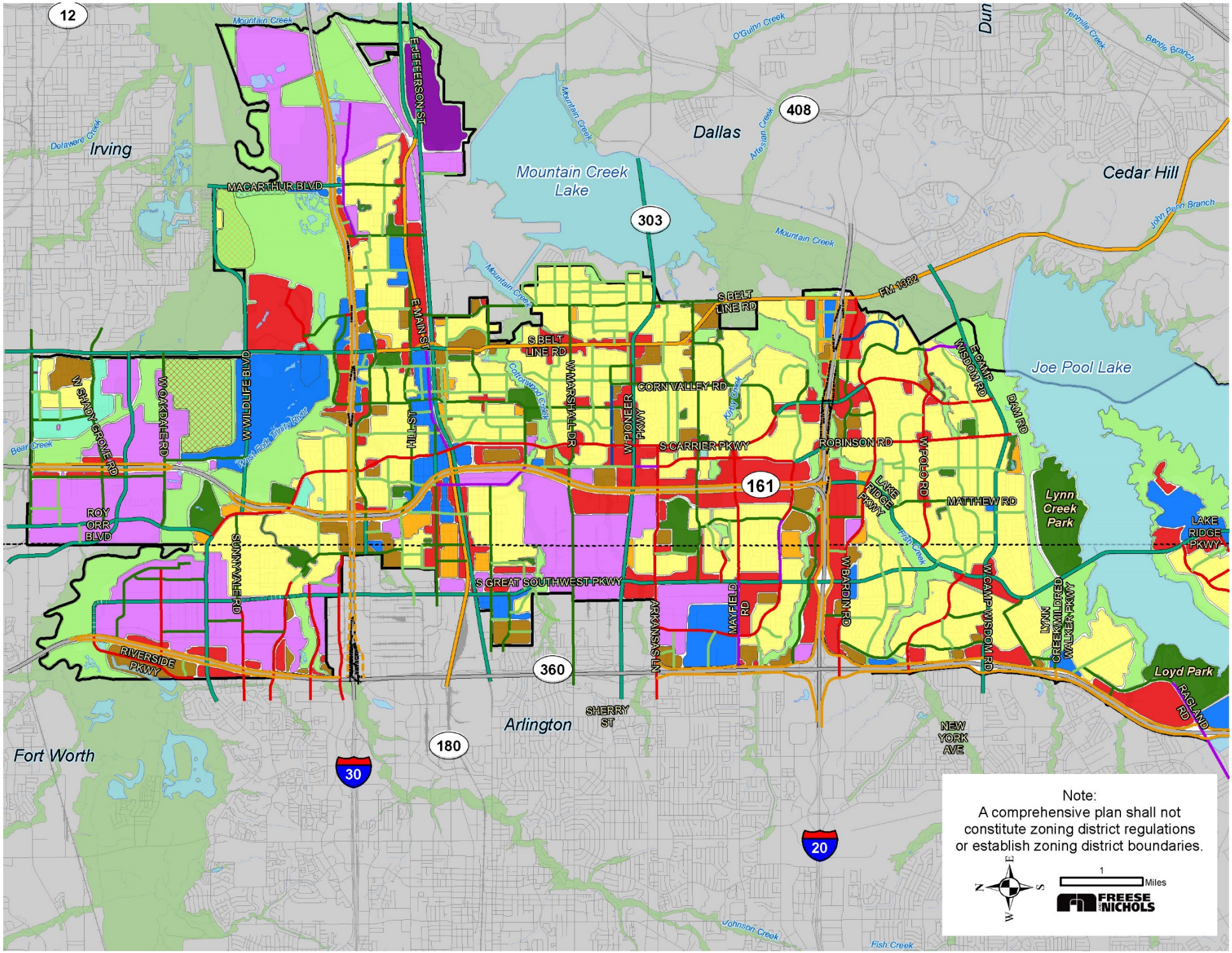
The Future Land Use Plan provides necessary guidance to enable a city to effectively plan for future growth, development, and redevelopment. The Master Thoroughfare Plan identifies future transportation needs as well as short-term and long-term capital investments for improvements to existing roads, construction of new roads, and potential bicycle, pedestrian, and transit facilities. It will provide a framework for a balanced transportation system that offers choices in how people travel, supported by a realistic approach to fund improvements. The Future Land Use Plan and Master Thoroughfare Plan work together to identify locations for future growth, designate the intended land uses in these locations, and access the transportation system needs for adequate access and circulation. Sound planning is important to ensure the City is prepared to serve additional infrastructure needs of the community while preserving key community areas and existing infrastructure. These plans help form the basis for the City's zoning and subdivision regulations. Additionally, these plans serve as a guide for Grand Prairie's leaders, staff, citizens, and developers to articulate the community's development expectations.

Figure 9. Comparison of Future Land Use Map Versus Zoning District Map

Future Land Use Map	Zoning District Map
Purpose	*Purpose*
– Outlook for the future use of land and the character of development in the community. – Macro-level, general development plan.	– Basis for applying unique land use regulations and development standards in different areas of the City. – Micro-level, site-specific focus.
Use	*Use*
– Guidance for City zoning and related decisions (zone change requests, variance applications, etc.). – Baseline for monitoring the consistency of actions and decisions with the City 's adopted Comprehensive Plan.	– Regulating development as it is proposed, or as sites are positiond for the future (by the owner or he City) with appropriate zoning.
Input and Considerations	*Input and Considerations*
– Inventory of existing land use in the City. – Developing better area character and identity as a core planning focus along with basic land uses. – The map includes a notation required by Texas Local Government Code Section 213.005: "A comprehensive plan shall not constitute zoning regulations or establish zoning district boundaries."	– Future Land Use Plan is referenced for general guidance. – Other community objectives, such as economic development, redevelopment, flood prevention, etc. – Zoning decisions that are not compliant with the FLUP will need to be updated or changed when the Comprehensive Master Plan is next updated.

Future Land Use Map

The Future Land Use Map is designed to facilitate the efficient, sustainable, and fiscally sound development and redevelopment of Grand Prairie. This land use framework will enable the City to coordinate development and guide the many land use decisions that the City ultimately make. Although not a precise formula, the basic composition of land uses shown on the Plan will provide a sound direction and basis for land use deliberations.


12
Irving
Dallas
Cedar Hill
Mountain Creek Lake
Joe Pool Lake
Arlington
Fort Worth
408
303
161
360
180
30
20
MACARTHUR BLVD
E JEFFERSON ST
E MAIN ST
S BELT LINE RD
FM 1382
CORN VALLEY RD
S CARRIER PKWY
ROBINSON RD
MATTHEW RD
W WILDLIFE BLVD
W SHADY GROVE RD
W OAKDALE RD
ROY ORR BLVD
SUNNYVALE RD
RIVERSIDE PKWY
S GREAT SOUTHWEST PKWY
W MARSHALL DR
W PIONEER PKWY
ARKANSAS LN
MAYFIELD RD
W BARDIN RD
W POLO RD
LAKE RIDGE PKWY
W CAMP WISDOM RD
E CAMP WISDOM RD
DAM RD
LYNN CREEK
MILDRED WALKER PKWY
RAGLAND RD
SHERRY ST
NEW YORK AVE
Lynn Creek Park
Loyd Park
Mountain Creek
O'Guinn Creek
Bear Creek
West Fork Trinity River
Cottonwood Creek
Kirby Creek
Fish Creek
Johnson Creek
Delaware Creek
Artesian Creek
Bents Branch
John Penn Branch
Note:
A comprehensive plan shall not constitute zoning district regulations or establish zoning district boundaries.
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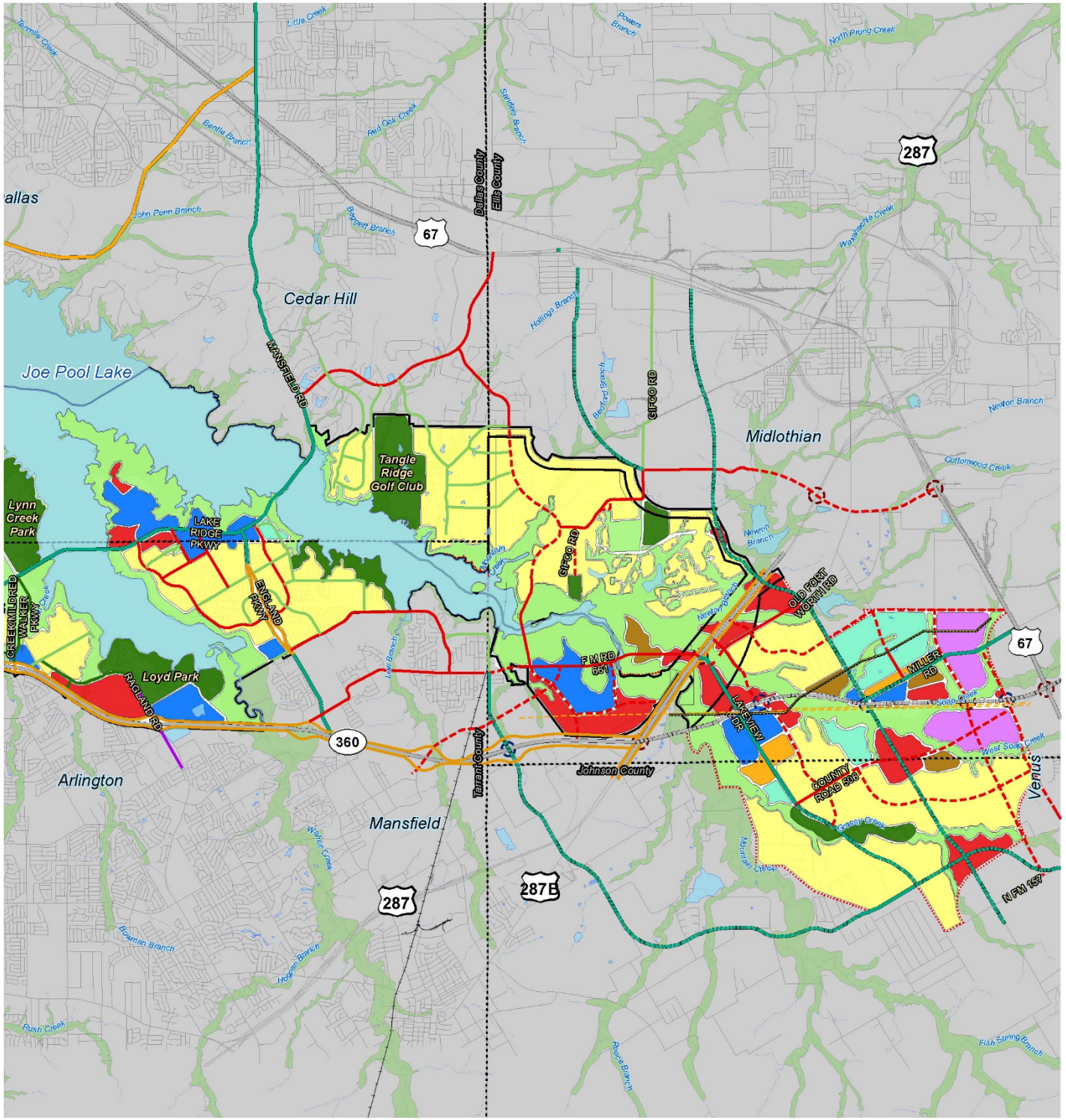
Map 4. Future Land Use Map



Future Land Use

Land Uses

- Low Density Residential
- Medium Density Residential
- High Density Residential
- Mixed Residential
- Mixed Use
- Commercial/Retail/Office
- Heavy Industrial
- Light Industrial
- Parks and Recreation
- Open Space/Drainage

Potential Floodplain Reclamation Subcategories

- Medium Density Residential
- Mixed Use
- Commercial/Retail/Office

- Grand Prairie City Limits
- County
- Waterbodies
- 1-Percent Flood Risk Zones (FEMA)
- Railroads
- River/Creeks

Note:
A comprehensive plan shall not constitute zoning district regulations or establish zoning district boundaries.

1 Miles

FREESE NICHOLS

Future Land Use Designations

The following designations correspond to the land uses shown on Map 4.

Residential Land Use Types

Low Density Residential

Low density residential is the predominant land use within Grand Prairie. It represents a traditional single-family detached neighborhood and includes housing and living units for people with a range of incomes and needs. Low density residential areas generally range between zero and six dwelling units per acre. The following are policies to guide low density areas:

- They should be protected from, but accessible to, the major roadway network, commercial establishments, and industrial areas.
- Subdivisions should be accessible to collector and arterial streets, but should directly access only local streets.
- They should not be directly accessible to major arterials and freeways without adequate buffering and access management.

Medium Density Residential

Medium density residential represents single-family residential neighborhoods at densities between six and 12 dwelling units per acre. Medium density residential types take the form of townhomes, duplexes, and patio homes. Medium density residential can be used as a transitional use between low density areas and higher intensity uses, such as commercial, retail, and industrial activity. The following are policies to guide medium density areas:

- They can serve as a transitional use between low density residential and high density residential uses.
- Subdivisions should be accessible to collector and arterial streets, but should directly access only local streets.
- They should not be directly accessible to major arterials and freeways without adequate buffering and access management.

High Density Residential

High density residential is reflective of multi-family apartments. Depending on location, densities in high density residential may vary significantly. Garden style apartments have densities between 12 and 20 dwelling units per acre. Newer construction, particularly if a mixed- use configuration, have densities above 20 dwelling units per acre. The following are policies to guide high density residential areas:

- They are appropriate along major collector or arterial roadways.
- They serve as a buffer between commercial or retail uses and lower density residential areas.

Mixed Residential

Mixed residential areas should include master planned neighborhoods with a range of size and type of residential at densities between three and a half and six dwelling units per acre overall average. This type of development is typically referred to as a Traditional Neighborhood Development (TND). These types of developments are blend a variety of housing types, but can also serve a transition between neighborhoods of different densities. The following are policies to guide mixed residential areas:

- They should be integrated into mixed use areas.
- Can serve as a transition between areas of neighborhoods with different densities.
- Should be located near neighborhood retail and services.
- Should be pedestrian oriented.

Nonresidential Land Use Types

Mixed Use

Areas with this land use designation are intended for an appropriately planned mixture of non-residential and residential uses. They are referred to as mixed-use because it is envisioned that these areas would be integrated developments of retail, public, office, and entertainment, with a residential component appropriately blended into larger scale buildings that would otherwise be used to support those uses independently. Mixed-use areas are intended to provide flexibility for the City and the development community in order to encourage innovative, unique, and sustainable developments. Residential uses in mixed-use developments have begun to appeal to seniors or younger generations. Walkable connections to shopping and dining should be key components of the mixed-use areas. There are two types of mixed-use – vertical and horizontal. Vertical mixed-use (sometimes referred to as New Urbanism) incorporates multiple uses in one building on different floors. For example, a building could have shops and dining on the first floor and residential and office on the remaining floors. Horizontal mixed-use is defined generally as different land uses on different lots in one area, and is not intended to be included with this description. The following are policies to guide mixed-use areas:

- A well thought-out, master planned approached is needed to make certain these development types are coordinated with surrounding developments.
- Mixed-use design should be oriented around the pedestrian.
- Buildings should be placed near the front property line and should be oriented towards the street.
- Mixed-use development should be located at high points of visibility, such as along arterials and collectors.

Commercial/Retail/Office

Commercial

Commercial uses are more intense than retail establishments, yet also provide goods and services for the public. Examples of commercial establishments would include hotels, automotive services, and big box retailers. The following are policies to guide development of commercial areas:

- They are located along major arterial, super arterial and freeway corridors.
- Outside storage associated with commercial activity should be screened from the primary roadway on which the establishment is located.

- Commercial activity should be buffered from low density residential areas through the use of enhanced landscaping, increased rear setbacks, the use of medium density residential, and by floodplains or other man-made features.

Retail

This land use type is intended to provide for a variety of restaurants, shops, grocery stores, and personal service establishments. Retail uses require high visibility locations and should be located in high-traffic areas such as along arterial roadways. The following are policies to guide retail areas:

- Retail should be located in areas with high visibility.
- Retail uses should provide services to support neighboring residential areas.
- They should serve as a buffer and transition between higher and lower intensity uses.

Office

Office areas provide for low- to medium-rise suburban-scale developments. Generally, permitted uses include corporate, professional, medical and financial offices as well as offices for individuals and non-profit organizations. These areas can also serve as a lower intensity transitional use to adjacent residential areas. The following are policies to guide office areas:

- A combination of screening, increased rear setbacks, and enhanced landscaping should be used to ensure adequate buffering from adjacent residential areas.
- Buildings adjacent to residential areas should be two stories or less.
- They provide a transitional land use between residential uses and higher intensity commercial land uses.

Light Industrial

Light Industrial development has a wide range of uses, appearances, and intensities. Forms of industrial development may include refining or manufacturing facilities (with no outdoor activity), indoor warehouse/storage facilities, and industrial business parks. Industrial business parks that function as employment centers are encouraged. The following are policies to guide light industrial areas:

- Light Industrial areas should be located along arterial thoroughfares, in proximity to freeways, rail lines and/or areas with access to airports and other transportation outlets.
- These areas should be screened and buffered from residential uses using a major roadway, commercial/retail/office use, or floodplain/natural area.
- They should serve as a buffer and transition between Heavy Industrial and lower intensity uses.

Heavy Industrial

Heavy industrial development includes more intense industrial uses that than those included in light industrial and involve toxic or biological material; or elements that may cause a nuisance to surrounding areas. These industrial uses should not be permitted adjacent to residential areas. These uses should also be buffered from floodplain/natural areas. The following are policies to guide heavy industrial areas:

- Heavy Industrial areas located along arterial thoroughfares and in proximity to freeways should be heavily screened from public roadways.
- Heavy Industrial areas should not be located in close proximity to residential or commercial/retail/office areas.

Parks and Recreation

This land use designation identifies public and private parks. Facilities include recreation centers, golf courses, active and passive outdoor parks.

- Parks and Recreation uses may be incorporated into areas designated at Open Space/Drainage.
- Parks and Recreation uses should be located near residential neighborhoods.
- Parks and Recreation uses should be located in areas with good traffic and pedestrian access.

Open Space/Drainage

The Open Space/Drainage category primarily comprises of floodplains located along the many waterways running through Grand Prairie. These areas should be preserved as public and neighborhood-oriented open spaces, and incorporate trails and drainage corridors which are left in a naturalistic state. Impacts on these areas should be closely considered when intense uses are proposed within close proximity.

Potential Floodplain Reclamation

These areas of land are designated as Open Space/Drainage that could potentially be developed. This land use designation should only occur after a detailed engineering studies are conducted to determine the impact to the remaining floodplain system.

Long-Range Opportunity Areas

The Future Land Use Map designates appropriate land use types for areas throughout the City for the next 10 to 20-year timeframe. However, in some areas, there are opportunities for redevelopment that do not fall within the timeframe of this Comprehensive Plan. These areas have characteristics that make them ideal for alternative land uses, however, due to the existing environment, changing land uses at this time is not necessary or recommended. These areas are identified as Long-Range Opportunity Areas and they provide an opportunity for redevelopment in the distant future. Long-Range Opportunity Areas are larger than 150 acres in size and possess the potential to host alternative land uses that would benefit the community by redeveloping the site. As the physical and economic environment in these areas evolve, the City should consider redevelopment of these sites. City efforts should not be focus on these areas in the immediate future, but the City should revisit these areas periodically to assess if the existing land use is still appropriate and the opportunity for change is present. The following sections describe locations in Grand Prairie that have been identified as Long-Range Opportunity Areas and the opportunities for redevelopment available to each.

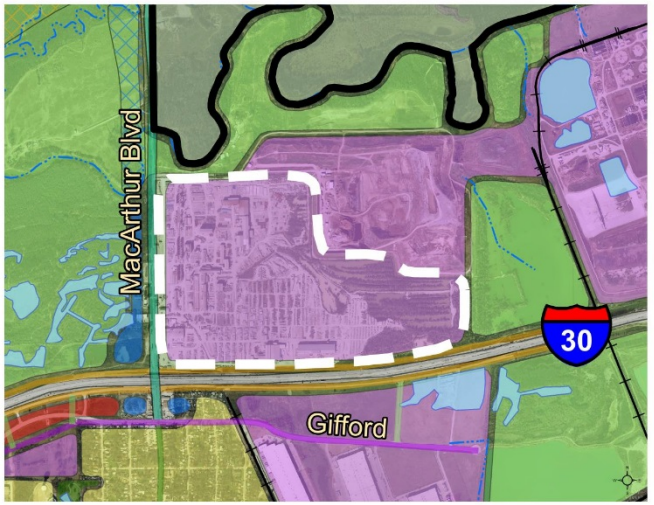
Macarthur Boulvard and IH 30

At the northeast corner of Macarthur Boulevard and IH 30, there is approximately 260 acres currently used for infrastructure material storage and designated for light industrial uses. The site is located within the floodplain along the Trinity River and adjacent to the Grand Prairie Landfill. Currently, there are no frontage roads along IH 30 and no future plans to construct frontage roads at this location. The site has high visibility from IH 30, has good access from Macarthur Boulevard to the site, and is close proximity to the Entertainment District at Belt Line Road and IH 30.

The location close to the Trinity River and the entrance to the City make this site more suitable for a mix of uses to highlight the Trinity River as an amenity and create an entry to the City. The size of the site allows for multiple uses to develop as opposed to a single use for the entire site. Increasing density on the site by developing multiple uses utilizes the space more efficiently and provides opportunity for more business development in the area.

In the future, the City should consider redevelopment of the site by incorporating commercial, retail, high density residential, and some office. These uses are recommended to capitalize on the traffic traveling on both Macarthur Boulevard and IH 30. High density residential and commercial or retail in a mixed use setting would be appropriate along IH 30 and Macarthur Road while commercial and office uses would be appropriate in the northeastern portion of the site. From the east to the west, the height and density of development should decrease from high to low.

Figure 10. Long-Range Opportunity Area - Macarthur and IH 30

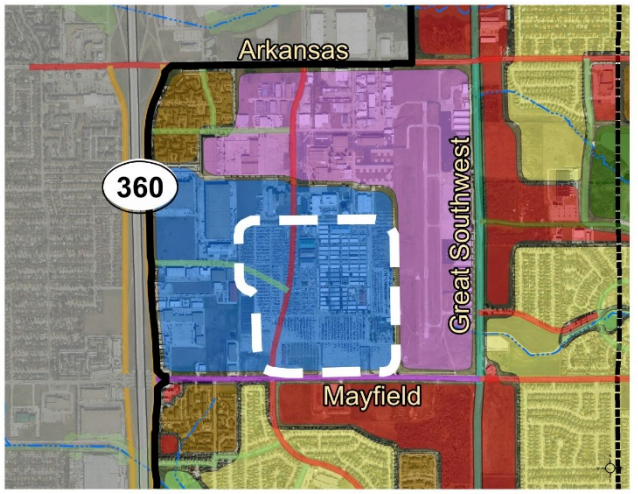


Mayfield Road and SH 360

Approximately 150 acres at the corner of Mayfield Road and SH 360, is currently utilized for an outdoor market. The site is surrounded by the Grand Prairie Municipal Airport to the east, light industrial and office development to the north, commercial and retail to the west, and residential to the south. The location has excellent access from SH 360 and Mayfield Road provides, and the size can accommodate a variety of uses on one site.

Since the site is currently utilized with a retail type use, redevelopment of the site is not necessary at this time. However, this property could accommodate higher density development which could increase property utilization and provide additional commercial development through infill development. Providing a balance of commercial, residential and office on the site would also be appropriate whether through one large master planned development or dividing the site into sections. As the market changes, the City should work with property owners to consider options for redevelopment.

Figure 11. Long-Range Opportunity Area - Mayfield Road and SH 360



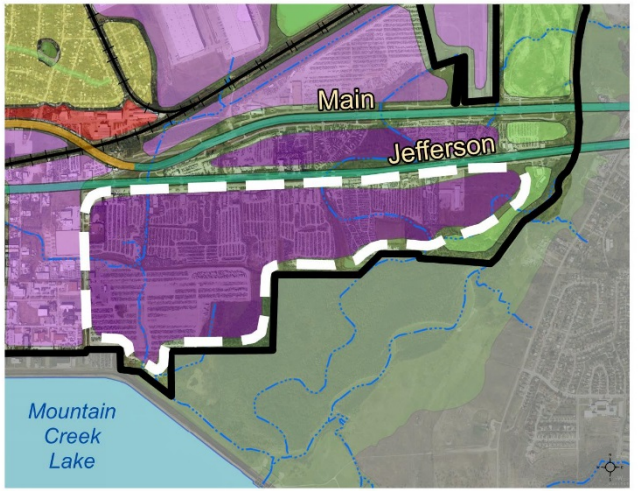
Jefferson Street East of Macarthur

South of East Jefferson Street at the eastern border of the City is approximately 375 acres currently used as auto storage and light industrial. Most of the property is located in the floodplain and is currently developed with some vacant land located along the border of the City. This location along East Jefferson Street gives the site good accessibility to both SH Loop 12 and Macarthur Boulevard and serves as an entrance to the City.

Increasing the level of density of the site can be conducted through infill development and can increase the utilization of the site. Commercial uses would benefit from visibility along East Jefferson, while industrial uses do not generally require as high of a level of visibility to the roadway or access to vehicular traffic.

In the future, the City should consider incorporating other uses such as commercial and office into the site. A buffer of commercial development could be located along the frontage of East Jefferson Street, with office and industrial uses away from the roadway. This organization is suggested to increase density, vary uses and activate the street with other uses.

Figure 12. Long-Range Opportunity Area - Jefferson Street East of Macarthur Boulevard



Future Land Use Projections

Future Land Uses

The table to the right delineates the City's land uses by type and color—both of which correspond to the same classifications and colors seen in Map 4. Future Land Use Map on Pages 54 and 55. The table further breaks down the City's land area (in acres) based upon classifications made in the Future Land Use Map.

The largest land use in Grand Prairie will continue to be Low Density Residential, comprising approximately 33.4 percent of the total city limits. At almost 50 percent, the ETJ is also designated to develop primarily as Low Density Residential. The largest nonresidential land uses will be Commercial/Retail/Office and Light Industrial making up 9.8 and 12.9 percent respectively. The smallest land uses are Mixed Residential at 0.7 percent, Heavy Industrial at 0.7 percent, and Medium Density Residential at .9 percent.

Table 7. Future Land Uses

Land Use		Acres	Percent of City	Acres	Percent of ETJ
Residential					
	Low Density Residential	17,098	33.4%	5,383	45.7%
	Medium Density Residential	469	0.9%	205	1.8%
	High Density Residential	1,562	3.1%	264	2.2%
	Mixed Residential	360	0.7%	662	5.6%
Total Residential		**19,489**	**38.1%**	**6,514**	**55.3%**
Nonresidential					
	Mixed Use	3,201	6.3%	289	2.5%
	Commercial/Retail/Office	5,053	9.8%	776	6.6%
	Light Industrial	6,575	12.9%	660	5.6%
	Heavy Industrial	366	0.7%	0	0.00%
Total Nonresidential		**15,195**	**29.7%**	**1,725**	**14.7%**
Undeveloped					
	Parks and Recreation	2,435	4.8%	313	2.7%
	Open Space/Drainage	9,159	17.9%	2,945	25.0%
	Lake	4,846	9.5%	273	2.3%
Total Undeveloped		**16,440**	**32.2%**	**3,531**	**30.0%**
Total Acreage		**51,124**	**100%**	**11,770**	**100%**

Ultimate Capacity

The ultimate capacity, or build out, is the maximum number of residents a city can support within its city limits and ETJ. The ultimate capacity shown in Table 8 represents the total population that could be accommodated if Grand Prairie were to develop according to the land use patterns portrayed in the Future Land Use Map. This calculation is important because it helps determine future infrastructure needs—particularly water, wastewater, and transportation. The ultimate capacity is based upon a number of different assumptions. The 2015 American Community Survey 5-Year Estimates for Occupancy Rate and Persons Per Household (PPH) were used as assumptions, and the dwelling units per acre were referenced from the Future Land Use designations. The vacant areas are multiplied by approximated dwelling units per acre, persons per household and occupancy rates to calculate how many new residents the Future Land Use Map can accommodate. New residents are added to the existing population to reach the ultimate capacity provided in Table 8.

The City currently has 63,413 housing units, comprised of 58,171 households, and a population of approximately 183,500 people. The ultimate capacity of Grand Prairie is 110,556 housing units, 102,156 households, and 319,235 people. According to the ultimate capacity projections in Table 8, a total of 47,143 housing units could potentially be added, bringing nearly 43,985 households and close to 136,625 people to the City.

Additionally, if the vacant land were to fully develop within the ETJ, then approximately 26,873 housing units, 25,072 households, and 79,459 new residents could be supported in the ETJ alone.

Table 8. Ultimate Capacity

Vacant Residential Land Use	City Limits (Acres)	ETJ (Acres)	DUA[1]	Occ. Rate[2]	PPH[3]	ROW[4]	Future Projections		
							Housing Units	House-holds	Population
Low Density Residential	2,063	4,349	6.0	93.3%	3.26	30%	26,930	25,126	81,911
Medium Density Residential	158	167	12.0	93.3%	2.83	15%	3,315	3,093	8,753
High Density Residential	226	217	16.0	93.3%	2.83	15%	6,025	5,621	15,908
Mixed Residential	82	575	6.0	93.3%	3.26	15%	3,351	3,126	10,191
Mixed Use[5]	1,530	240	20.0	93.3%	2.83	15%	7,523	7,018	19,862
Ultimate Capacity within Vacant Areas							47,143	43,985	136,625
Current Conditions (2015)							63,413	58,171	182,610
Estimated Ultimate Population Capacity (City Limits + ETJ)							110,556	102,156	319,235

Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates, FNI Data, and City Data

(1) Dwelling Unit Per Acre (Net Acre)
(2) Occupancy Rate - 2011-2015 American Community Survey 5-Year Estimates (DP04)
(3) Person Per Household - 2011-2015 American Community Survey 5-Year Estimates (DP04)
(4) Percentage of "Vacant Acres" subtracted for roadways
(5) Minimum 25% for residential use per the Unified Development Code Article 3.2.15 Table 1:Required Mix of Use

Thoroughfare Plan

The Thoroughfare Plan is a component of the Master Transportation Plan. As part of the 2018 Comprehensive Plan process, the Thoroughfare Map portion of the Master Transportation Plan was amended to update current network advancements and to include network for growth areas of the city. The adopted changes to the City's Thoroughfare Plan are shown in Appendix B | Thoroughfare Plan Updates.

Existing Transportation Framework

Grand Prairie, located in the middle of the region, is supported by a network of regional freeway facilities and connecting subregional and local roadways, as shown in Map 5.

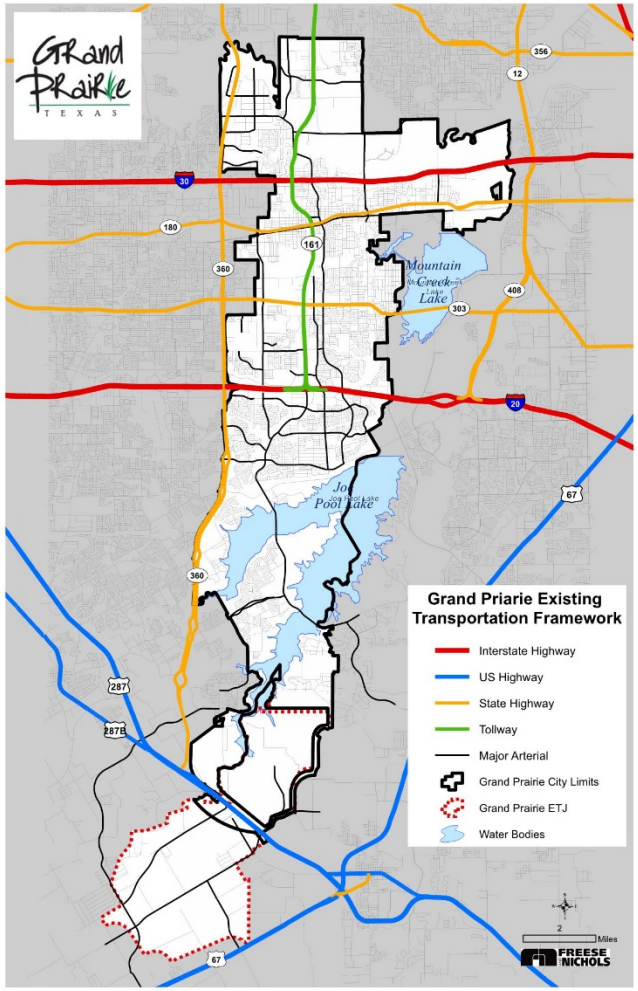
Freeways/Expressways

IH 30, IH 20, SH 161, SH 360, US 287 as well as Loop 12 to the east and SH 183 to the north are the regional high speed and high capacity transportation corridors serving near or within Grand Prairie. These freeways have a significant impact on the overall mobility and connectivity of the region as a whole. IH 30 and IH 20 provide the primary access routes between Dallas and Fort Worth, and are among the most heavily traveled roads of the region – each carrying over 190,000 vehicles per day though Grand Prairie. State Highway 161, a north-south toll road with free frontage roads, carries about 120,000 vehicles per day, and SH 360, located just west of the city, carries about 200,000 vehicles per day.

Subregional, Intercity and Intracity Roadway Network

In addition to the freeway system, Grand Prairie's mobility needs are supported by a robust network of roadways that provide subregional mobility, crosstown movements, local circulation and property access. Subregional roadways serving Grand Prairie include FM 1382 (Belt Line Road), US 80 (Division Street), and Spur 303 (Pioneer Parkway). Other major local roadways include Great Southwest Parkway, Carrier Parkway, and Lake Ridge Parkway. Other major and minor roadways serve to move traffic between the regional network and local destinations.

Map 5. Existing Transportation Framework



Existing Functional Classification

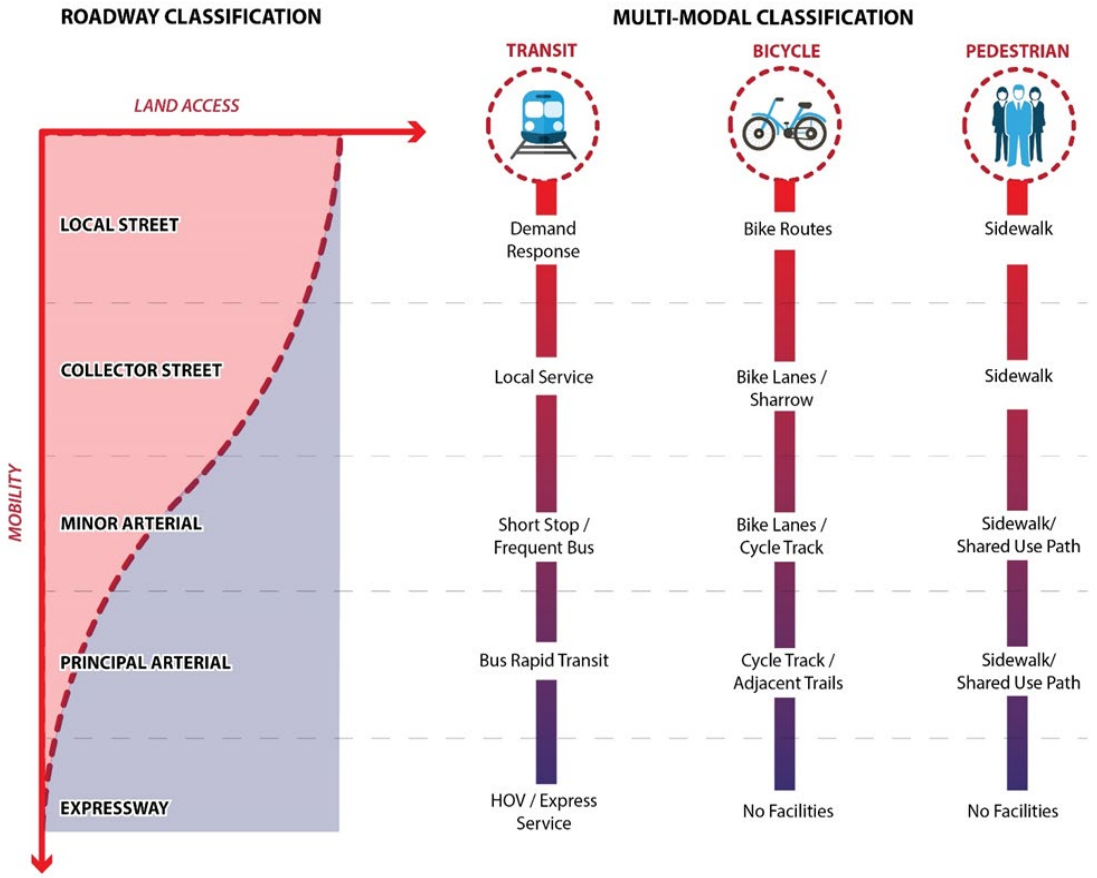
Grand Prairie's network of roadways are classified based upon their function within the network. This functional classification system consists of five groups: Freeways/Expressways, Principal Arterials, Minor Arterials, Collectors, and Local Streets.

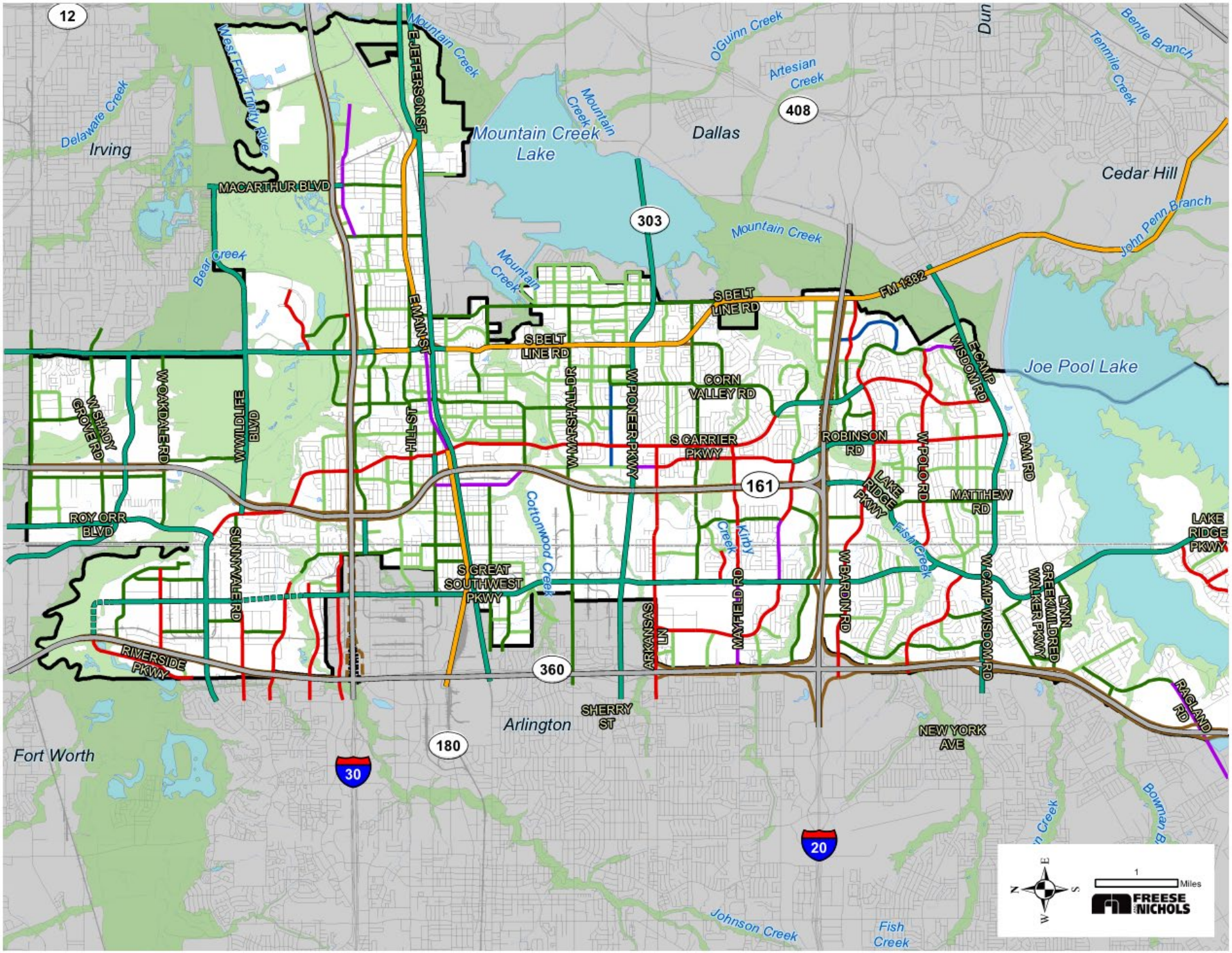
Figure 13 illustrates the relationship between access (accessibility of adjacent properties from the particular street) and mobility (movement of traffic in terms of speed and capacity). Typical attributes of the roadway classifications are shown in Table 9 on page 70.

Figure 13 also illustrates that multimodal accommodations fit within the functional classification system. The types of transit services and bicycle and pedestrian facilities are indicated that would typically be provided for each class of roadway.

The Master Transportation Plan (MTP) contains more detail on the dimensional and functional attributes of the roadway classifications. The MTP is accompanied by a Thoroughfare Plan Map, presented in Map 6 on pages 68 and 69, which shows the locations of all of the classified roadways, except for Local Roads.

Figure 13. Land Use Access and Roadway Mobility




12
Irving
Delaware Creek
West Fork Trinity River
Mountain Creek
E JEFFERSON ST
Mountain Creek Lake
O'Guinn Creek
Artesian Creek
Dallas
408
Tenmile Creek
Bentle Branch
Cedar Hill
John Penn Branch
MACARTHUR BLVD
303
Bear Creek
Mountain Creek
FM 1382
S BELT LINE RD
E MAIN ST
W SHADY GROVE RD
W OAKDALE RD
WMILDLIFE BLVD
S 14TH ST
W MARSHALL DR
W PIONEER PKWY
CORN VALLEY RD
S CARRIER PKWY
ROBINSON RD
W POLO RD
WISDOM RD
E CAMP WISDOM RD
Joe Pool Lake
DAM RD
161
LAKE RIDGE PKWY
MATTHEW RD
ROY ORR BLVD
SUNNYVALE RD
Cottonwood Creek
Kirby Creek
Fish Creek
S GREAT SOUTHWEST PKWY
MAYFIELD RD
W BARDIN RD
W CAMP WISDOM RD
GREEN MILDRED WALKER PKWY
LYNN
LAKE RIDGE PKWY
RIVERSIDE PKWY
360
ARKANSAS LN
SHERRY ST
RAGLAND RD
Arlington
NEW YORK AVE
180
Fort Worth
30
20
Johnson Creek
Fish Creek
Bowman Creek
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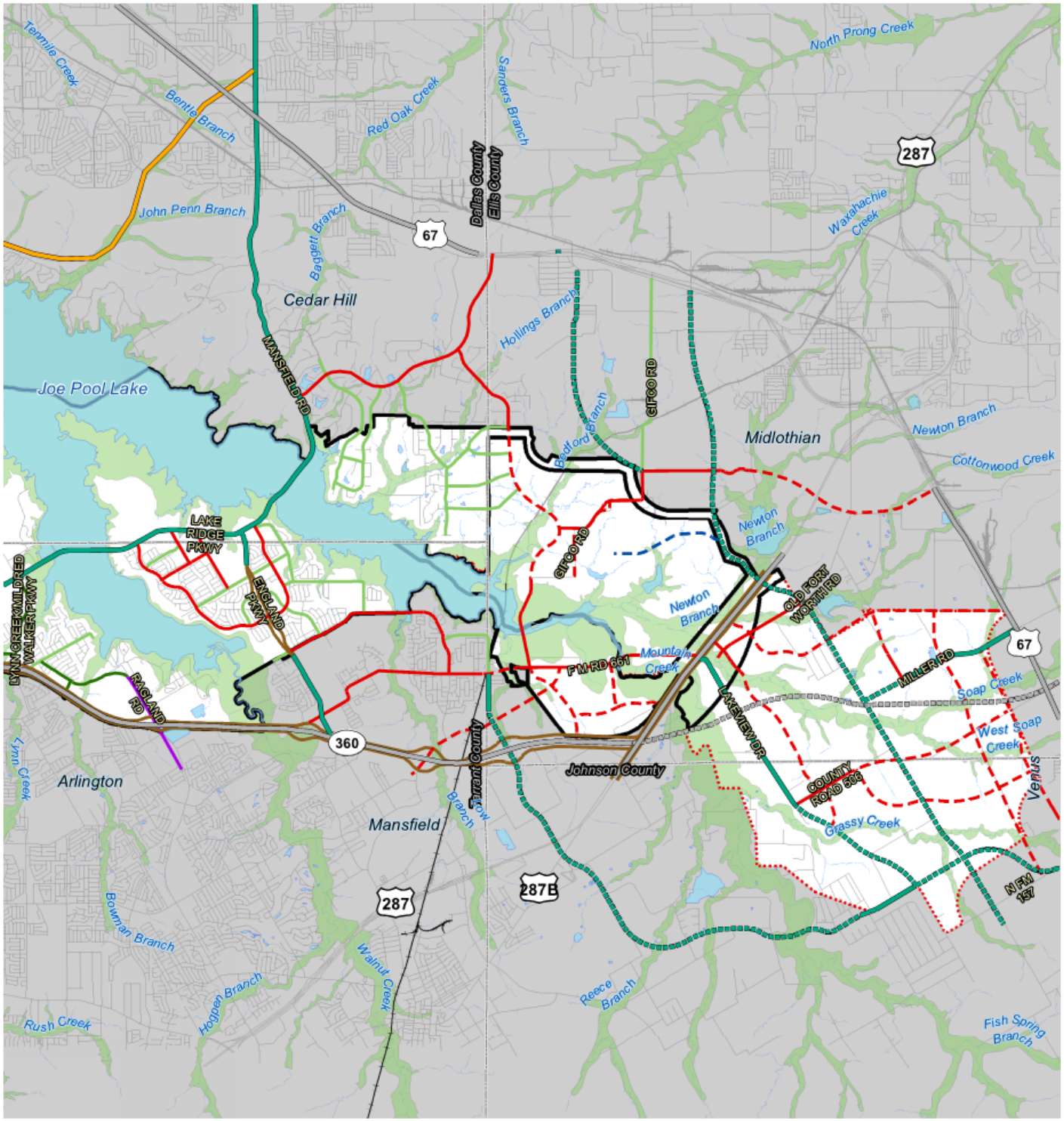
Map 6. Thoroughfare Plan Map



Thoroughfare Plan

Road Classifications

- Highway
- P7U: Principal Arterial, 7 Lane, Undivided
- P6D: Principal Arterial, 6 Lane, Divided
- P4D: Principal Arterial, 4 Lane, Divided
- P3U: Principal Arterial, 3 Lane, Undivided
- M5U: Minor Arterial, 5 Lane, Undivided
- M4U: Minor Arterial, 4 Lane, Undivided
- M3U: Minor Arterial, 3 Lane, Undivided
- C2U: Collector, 2 Lane, Undivided
- L2U: Local Street, 2 Lane, Undivided
- (Dashed for Proposed
- Grand Prairie City Limits
- Grand Prairie ETJ
- County
- Waterbodies
- 1-Percent Flood Risk Zones (FEMA)
- Railroads

N E S W

1 Miles

FREESE NICHOLS

Table 9. Existing Functional Classification System

Typical Attribute	Functional Classification				
	Freeway/Expwy	**Principal Arterial**	**Minor Arterial**	**Collector**	**Local**
Primary Function	Regional and intercity mobility; high volume/speed movements; uninterrupted flow on main lanes; service roads for interface with arterial roadways	Provide for continuity and high-volume traffic movement between major activity centers; serves intercity and cross-town movements	Collects and distributes traffic from lower classified streets to principal arterials; provides for intracity movements between activity centers	Collect and distribute traffic from local access streets to the arterial system. This thoroughfare is usually positioned to not attract through traffic movements	Provide access within residential areas and to collector streets. Only vehicles having an origin or destination on the local street are usually attracted to it
Classification Spacing	2 to 10 miles	1 to 2 miles	0.25 to 1 mile	0.1 to 0.25 miles	200 to 500 feet
Facility Length	Over 15 miles	5 to 15 miles	1 to 5 miles	0.25 to 1 mile	Less than 0.25 mile
Traffic, vehicles/day	Over 100,000	35,000 to 100,000	10,000 to 35,000	1,000 to 10,000	Less than 1,000
Right-of-Way	300 to 500 feet	100 to 120 feet	70 to 100 feet	60 to 70 feet	50 to 60 feet
Number of Lanes	Main + Service Rds	4 to 6 lanes	3 to 5 lanes	2 to 4 lanes	2 lanes
Median	Yes	Yes	Yes/No	No	No
Speed Limit	55 to 75 MPH	35 to 55 MPH	30 to 45 MPH	30 to 35 MPH	Max. 30 MPH

Level of Service

The quality of traffic flow on a roadway is characterized by a performance measure known as Level-of-Service (LOS). LOS is defined in the Highway Capacity Manual (HCM 2010) and is used by many communities to define comparative traffic flow through a transportation network. LOS has many numerical indicators, one of which is the volume to capacity ratio (v/c) for flow along a roadway.

- Volume is the number of vehicles traveling through a segment during a designated period of time – typically the AM or PM peak period of a typical day, expressed in vehicles per hour.
- Capacity is the number of vehicles a roadway was designed to accommodate. The theoretical capacity of the roadway occurs near the threshold of LOS E/LOS F, when severe reductions in travel speed cause a net reduction in vehicular throughput.

Figure 14. Level of Service, Volume to Capacity Relationship

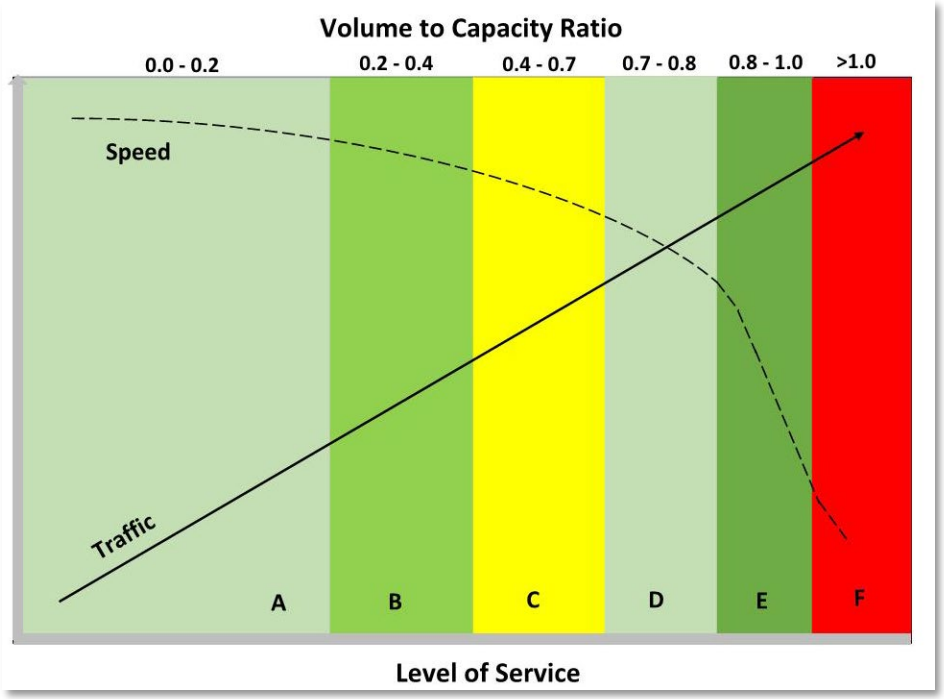
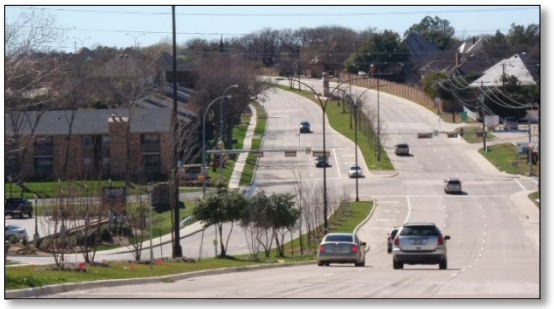


Figure 14 illustrates the relationship between level-of-service and traffic movement characteristics of speed and v/c ratio. LOS designations range from A through F, with A referring to free flow traffic conditions and F representing severely congested facilities. Notably, the travel speed of traffic flow diminishes greatly as LOS crosses from LOS D into LOS E. Thus, many communities identify the D-to-E threshold as the upper limits of desirable traffic operations during peak periods of the day. The traffic flow characteristics of each of the LOS ranges are described on the following page.

LOS A: free flow. Traffic flows at or above the posted speed limit and motorists have complete mobility between lanes. Motorists have a high level of physical and psychological comfort. The effects of incidents or point breakdowns are easily absorbed. LOS A generally occurs late at night in urban areas and frequently in rural areas. At intersections, LOS A correlates to having less than 10 seconds of delay on an approach.



LOS B: reasonably free flow. LOS A speeds are maintained, through maneuverability within the traffic stream is slightly restricted. Motorists still have a high level of physical and psychological comfort. At signalized intersections, LOS B correlates to having 10 to 20 seconds of delay on an approach. LOS A and LOS B are typically considered together as very high levels of service that utilize less than 40% of the facility's capacity.

LOS C: stable flow, at or near free flow. Ability to maneuver through lanes is noticeably restricted and lane changes require more driver awareness. Most experienced drivers are comfortable, roads remain safely below but efficiently close to capacity, and posted speed is maintained. At signalized intersections, LOS C correlates to having 20 to 35 seconds of delay on an approach. The threshold of LOS C to LOS D occurs at about 50% of the facility capacity.

LOS D: approaching unstable flow. Speeds slightly decrease as traffic volume slightly increase. Freedom to maneuver within the traffic stream is much more limited and driver comfort levels decrease. Minor incidents typically create delays. It is a common goal for urban streets during peak hours, as attaining LOS C would require prohibitive cost and societal impact in bypass roads and lane additions. At signalized intersections, LOS D correlates to having 35 to 55 seconds of delay on an approach. Facilities operating at LOS D utilize up to about 70% of the facility capacity.

LOS E: unstable flow, operating at capacity. Flow becomes irregular and speed varies rapidly because there are virtually no usable gaps to maneuver in the traffic stream and speeds rarely reach the posted limit. Any disruption to traffic flow, such as merging traffic or lane changes, will create a shock wave affecting traffic upstream. Any incident will create serious delays. Driver level of comfort becomes poor. At signalized intersections, LOS E correlates to having 55 to 80 seconds of delay on an approach.

LOS F: forced or breakdown flow. Every vehicle moves in lockstep with the vehicle in front of it, with frequent slowing required. Travel time cannot be predicted, with generally more demand than capacity. A road in a constant traffic jam is at this LOS.

Roadway Level of Service and Capacity

While the theoretical capacity of a roadway occurs at the threshold of LOS E/LOS F, operations at or near theoretical capacity are unstable and locally undesirable. Most large urban areas use LOS D as the upper operational condition for peak hour operations because it balances traffic flow, diver inconvenience, right-of-way requirements, capital costs and economic development. Grand Prairie desires most city roadways perform at LOS C or better during the peak hours, and operations worsening to LOS D would indicate a need to consider roadway enhancements to mitigate traffic congestion and delay.

Table 10 shows the planning-level estimated hourly capacity per lane for each non-freeway functional classification on city roadways, and compares capacity thresholds at LOS C, LOS D and LOS E. As an example, a roadway with a maximum desirable operation of LOS D during the peak hours of the day, rather than LOS C, would be planned to carry more traffic at the target level of service without indicating a need for improvement. Also shown is a planning-level estimate of the daily capacity of the roadway, which reflects the variations of traffic throughout the day. The value in the table assumes that the peak hour is 10% of the daily volume and thus the daily capacity is computed as 10 times the hourly capacity.

Table 10. Planning-Level Hourly and Daily Roadway Capacity Estimates by Functional Class

Classification Code	Number of Lanes	(D)ivided (U)ndivided	Capacity, Vehicles Per Hour (vph)				Daily Capacity, Vehicles Per Day (vpd)		
			LOS E per lane	LOS E total both directions	LOS D total both directions	LOS C total both directions	LOS E total both directions	LOS D total both directions	LOS C total both directions
R2U	2	U	525	1,050	840	683	10,500	8,400	6,830
L2U	1	U	425	425	340	276	4,250	3,400	2,760
C2U	2	U	525	1,050	840	683	10.500	8,400	5,250
M3U	2	U	850	1,700	1,360	1,105	17,000	13,600	8,250
M4U	4	U	825	3,300	2,640	2,145	33,000	26,400	16,500
M5U	4	U	850	3,400	2,720	2,210	34,000	27,200	17,000
P3U (1-way)	3	U	900	2,700	2,160	1,755	27,000	21,600	18,380
P4D	4	D	925	3,700	2,960	2,405	37,000	29,600	18,500
P6D	6	D	925	5,550	4,400	3,575	55,500	44,000	27,750
P7U	6	U	875	5,250	4,200	3,413	52,500	42,000	26,250

Existing Traffic Operations

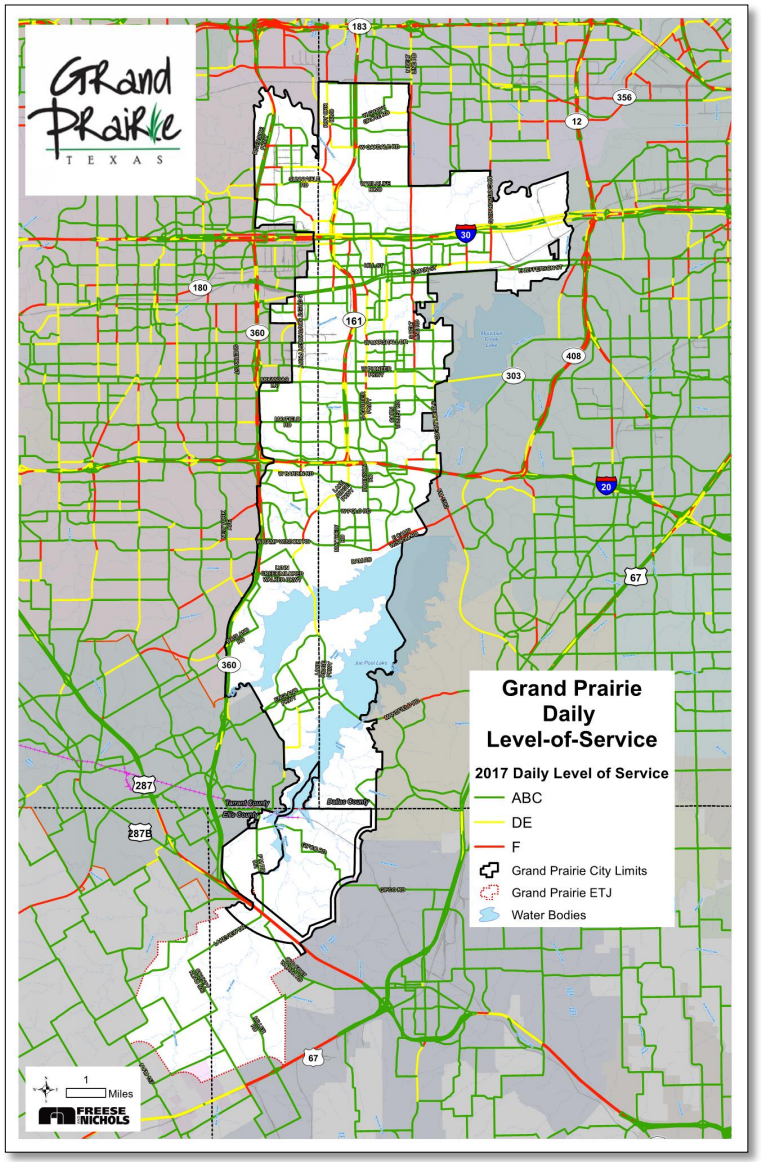
Map 7 illustrates the lowest LOS during AM or PM peak periods throughout the day for the City of Grand Prairie, derived from the 2017 baseline model from NCTCOG's 2040 Plan. A comprehensive list of the roadways with LOS E or F during both the AM and PM peak periods is available in Appendix B | Thoroughfare Plan Updates. Overall, the majority of the city roadway network performs efficiently and has adequate capacity to meet current traffic demands. Most of the arterial and collector network, which makes up the majority of the city's roadways, operate at LOS A, B or C during both peak hours. There are, however, a few congested corridors that operate near (LOS E) or above (LOS F) capacity. Belt Line Road, for instance, operates at LOS F from the northern city limits to Pioneer Parkway during peak periods. Other roadways with segments that operate at LOS F include Duncan Perry, 19th Street, Carrier Parkway, and Great Southwest Parkway. Table 11 summarizes some of the arterial and collector classified facilities that operate at LOS F within the City.

On the highway network in 2016, the main lanes of IH 20 operate at a LOS F from the eastern to western limits of the city during peak periods, as does US 287, SH 360 and SH 161. Freeway operations are impacted by the operations at their interchanges and on-ramps.

Table 11. Partial List of 2016 Level-of-Service F Roads

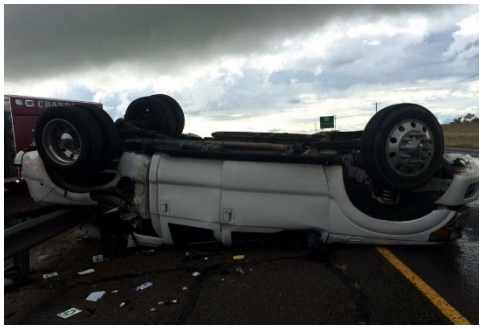
Roadway	Segment	LOS	Lanes
Duncan Perry Rd	Avenue K to Egyptian Way	E	2
Belt Line Rd	North City Limits to Pioneer Pkwy	F	6
Carrier Pkwy	Roy Orr to SH 161	F	4
Carrier Pkwy	Main St to Conover Dr	F	4
Great SW Pkwy	Division St to W. Marshall Dr	F	4
Lake Ridge Pkwy	W Polo Rd to Camp Wisdom Rd	F	6
Camp Wisdom Rd	Robinson Rd to Eastern City Limits	F	2

Map 7. 2017 Grand Prairie Daily Level-of-Service



Crashes

The number of annual traffic accidents is important because it further illustrates the impact of traffic operational issues within a city. The location, timing, and conditions of the accidents are also pivotal when assessing critical locations.



Texas Department of Transportation (TxDOT) Crash Records Information System (CRIS) reported 18,263 traffic accidents in Grand Prairie from 2011 to 2016; 93 resulted in fatalities. This is significantly lower than neighboring Dallas and Arlington which had 168,188 and 34,919 crashes respectively. Although the total collisions in Grand Prairie is much lower than neighboring cities, the annual number has steadily increased since 2011 – increasing by 78% from 2,196 in 2011 to 3,919 in 2016; outpacing the increase in vehicle miles of travel during that time period. Contributing factors included, but were not limited to, failure to control speed, drifting into adjacent lanes, and following too closely. The high intensity crashes, resulting in death or injury, were concentrated at highway interchanges, and the majority of all crashes happen at or near intersections.

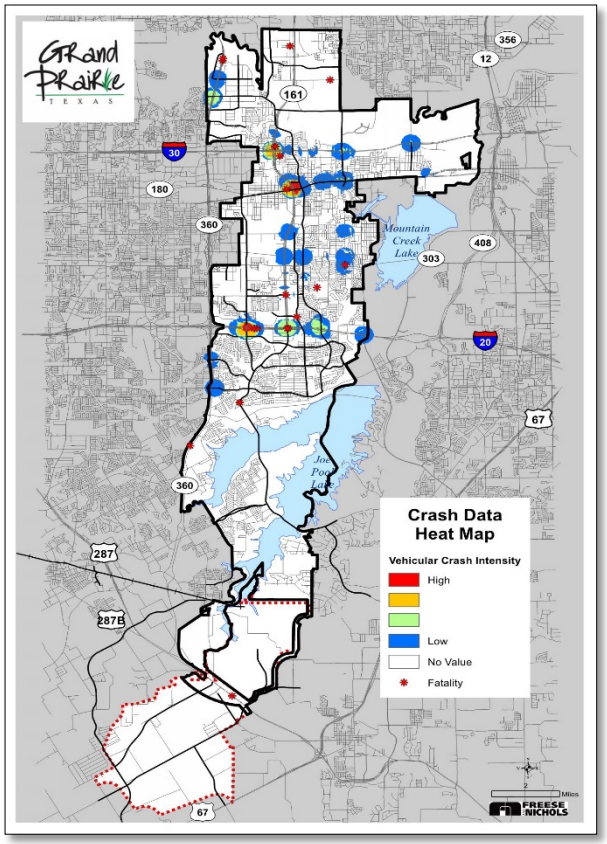
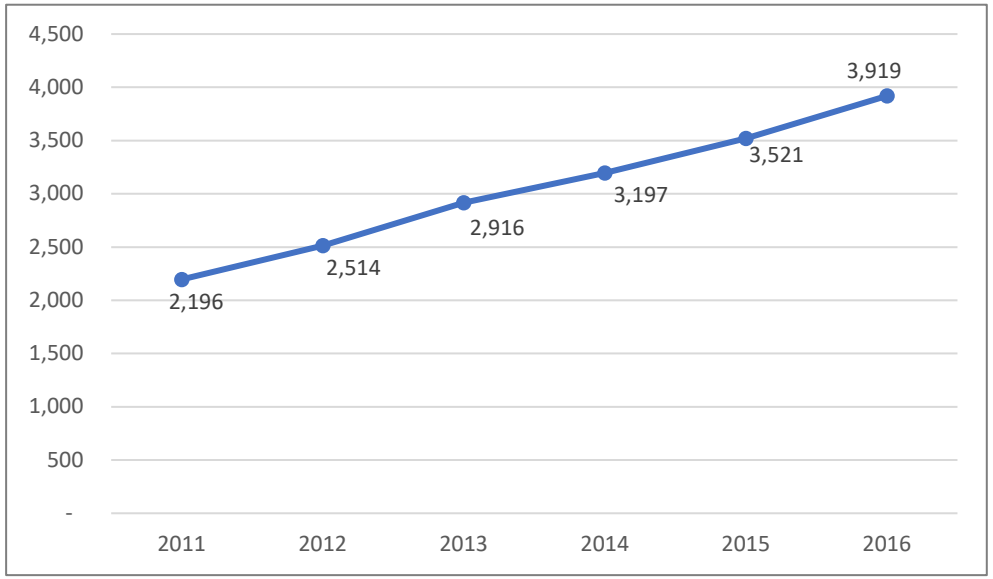


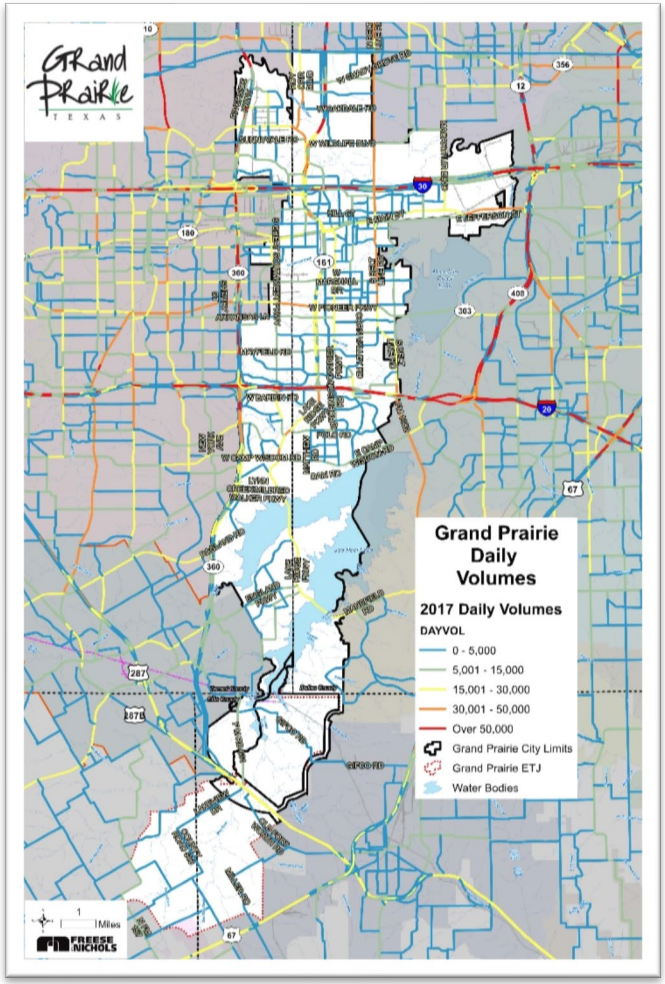
Figure 15. Grand Prairie 2011 - 2016 Traffic Collisions



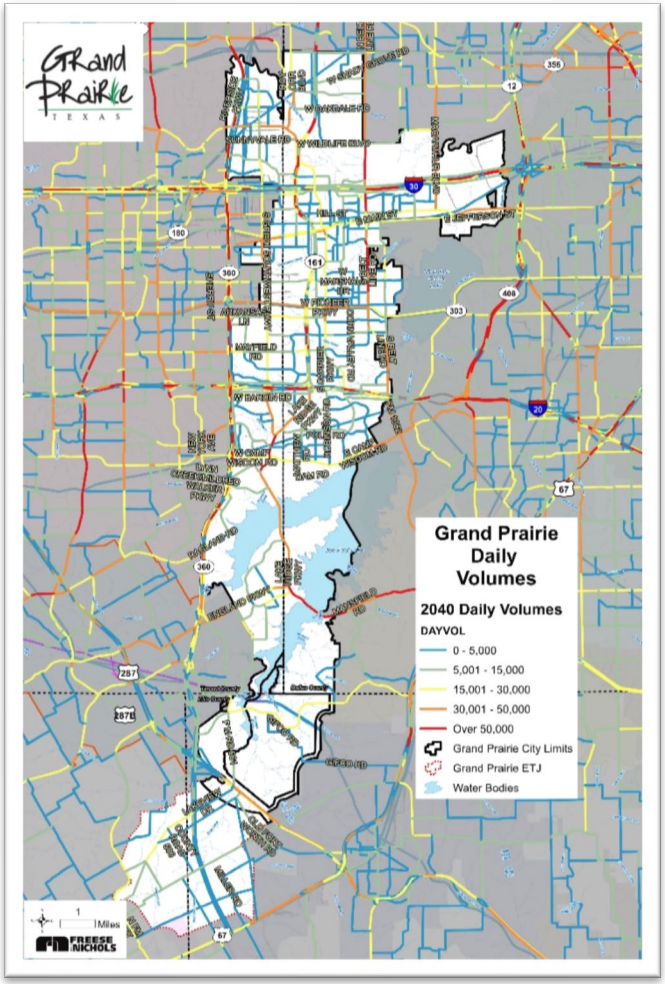
Existing and Projected Traffic Volumes

Volumes used for analysis in the Grand Prairie Comprehensive Plan were generated from NCTCOG's regional travel demand model for the 2017 base year (Map 8) and 2040 forecast year (Map 9). Inputs for the 2017 and 2040 models included existing and projected households, population and employment, as well as existing and planned transportation infrastructure anticipated for constructed by 2040. Map 9 and Map 8 illustrate the anticipated increase in daily traffic volumes in Grand Prairie between 2017 and 2040.

Map 8. Grand Prairie 2017 Daily Traffic Volumes



Map 9. Grand Prairie 2040 Daily Traffic Volumes



Planned roadway Improvements

Regional Roadway Improvements

There are planned roadway improvements that have been programmed to address existing roadway congestion and the anticipated future growth in traffic. Roadways have been programmed regionally and have been incorporated by NCTCOG into the financially constrained 2040 Metropolitan Transportation Plan. These planned improvements, in addition to network improvements developed through the 2018 thoroughfare planning process are listed in Table 12.

Table 12. Regional Projects in Grand Prairie, 2017-2040

Project Location	Existing	Proposed
Macarthur Blvd*	Four-Lane Principal Arterial	Six-Lane Principal Arterial
Wildlife Blvd*	Two-Lane Collector	Four-Lane Collector
Great Southwest Parkway Extension*	Segment of Two-lane	Extend from Avenue J to Avenue K
Carrier Parkway	Four-Lane Minor Arterial	Six-Lane Principal Arterial
Great Southwest Parkway	Four-Lane Minor Arterial	Six-Lane Principal Arterial
Robinson Rd	Four-Lane Collector	Six-Lane Principal Arterial
Dalworth St	Two-Lane Collector	Four-Lane Minor Arterial

*Indicates project currently included in NCTCOG's fiscally constrained thoroughfare network.

City Roadway Improvements

Each fiscal year, the City of Grand Prairie plans for improvements to its city streets that it programs into the City's Capital Improvements Plan, including those listed in Table 13. In FY 2017-2018, the Streets/Signal fund targeted projects totaling over $25 Million. The City also allocated over $7 Million for Public Works crews to maintain and repair the city's streets and underlying public utilities in FY 2017-18.

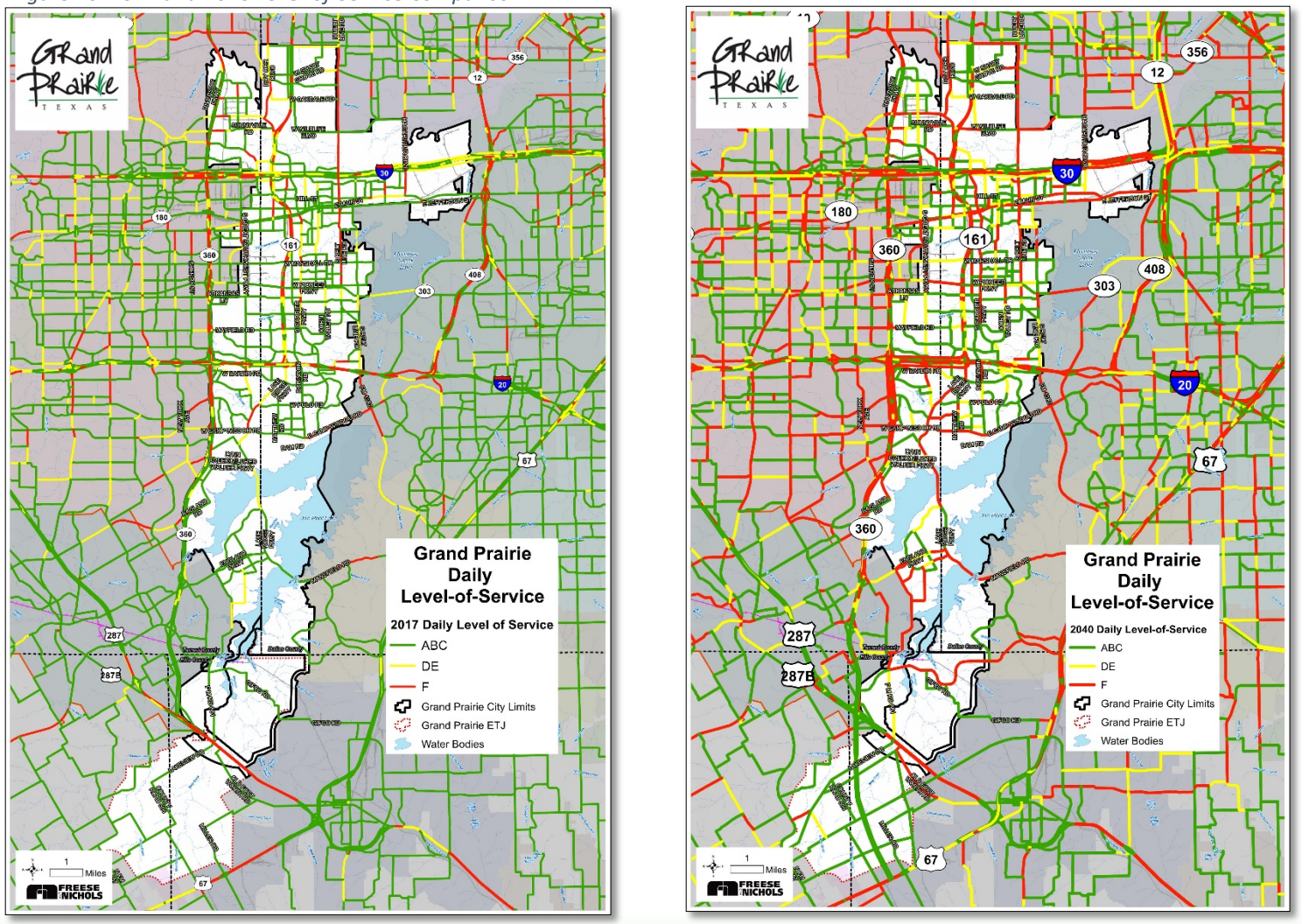
Table 13. City of Grand Prairie Transportation Improvement Projects, FY 2015-18

	City Funding (Millions)		
Key Projects	**2015-16**	**2016-17**	**2017-18**
Total Appropriations from Streets/Signals Fund	*$20.74*	*$19.93*	*$25.37*
SH 360 South Intersection	$6.94		
Waterwood	$5.00		
Capetown from Denmark to Sweden	$0.41		
Seeton from Grand Penin. to Day Miar		$4.48	
Esplanade south of Warrior Pkwy		$2.00	
Camp Wisdom west of Carrier 1382	$0.50	$0.50	
Grandway Arlington Webb-Britton		$0.82	
Fish Creek Rd from Beltline to Westchase Widening/Reconstruction			$5.31
IH20 / SH 161 Slip Ramp			$3.60
Street Assessment Implementation			$3.61
Great Southwest Parkway Sara Jane to Mayfield Place	$1.20	$3.76	$2.72
Marshall and Robinson Paving Improvements $1,995,000			$2.00
Wildlife Road		$1.00	$1.42
Carrier Parkway Improvements (Phase 1 from I-30 to SH 161)			$0.37
GSW Industrial District	$0.38	$0.38	
City Bridges, new and upgraded	$1.40	$0.49	$0.95
Signals, communications, battery backup, Opticom, Street lights	$0.43	$0.71	$0.36
Sidewalks, crosswalks, flashers, ramps, speed humps, school areas	$0.67	$0.72	$1.79
Localized improvements for capacity and safety enhancement	$0.38	$0.38	$0.50

Future LOS and Improvement Needs

The programmed roadway improvements by 2040 and the anticipated traffic volumes from increased development expected by 2040 are incorporated into the travel demand model prepared by NCTCOG to forecast roadway conditions for the 2040 Metropolitan Transportation Plan: Mobility 2040.

Figure 16. 2017 and 2040 Level-of-Service Comparison



Roadway Improvement Needs

Many Grand Prairie roadways are forecast to be at or over capacity given the projections of traffic volumes in 2040. Some corridors are at capacity due to the scarcity of alternative routes, while other roadways are projected to receive diverted traffic from congested freeways. The following is a list of anticipated needs on city streets and their relative priority. The overcapacity conditions on regional highways will require a regional assessment of needs, but their poor levels of service in 2040 have implications on diversion of trips onto local streets. Longer range project needs should be evaluated over the upcoming years for the validity of future development and growth assumptions.

Table 14. Anticipated City Roadway Improvement Needs in Grand Prairie

Facility	Location	Existing	Proposed	Priority Level
Duncan Perry Road	Avenue K to Egyptian Way	2-lane (24')	M4U	Medium
Duncan Perry Road	Egyptian Way to Avenue H	2-lane (34')	M4U, pkg off-peak	Medium
Egyptian Way	Duncan Perry to SH 161 SR	2-lane	M3U	Medium
N. Great Southwest Pkwy	Avenue J to Avenue K	2 lane only to creek	4-lane undivided	High
N. Great Southwest Pkwy	Avenue J to Avenue H	2-lane divided	4-lane divided	High
N. Great Southwest Pkwy	Avenue K to Fountain Pkwy	none	P4D	High
N. Great Southwest Pkwy	Conn. To SH 360 at Riverside Pkwy	none	P4D	High
Belt Line Road	North City Limits to Pioneer Pkwy	P6D	ITS, Access Management	Medium
Carrier Parkway	SH 161 to Pioneer Pkwy	P4D	ITS, Intersection capacity	Medium
Great Southwest Parkway	Division St to Park Row	P4D	P6D/Intersection capacity	Medium
Camp Wisdom Road	Robinson Rd to city limit	2 lanes	P6D	Medium
Lake Ridge Pkwy	Camp Wisdom Rd to Gr. Peninsula Dr	P4D	P6D	Medium
Lake Ridge Pkwy	England Pkwy to city Limit	P4D	P6D	Medium
Lakeview Dr (FM 661)	SH 161/Heritage Pkwy to US 287	2 lanes	P4D	Low
Lakeview Dr (FM 661)	US 287 to FM 157	2 lanes	P4D/P6D	Low
FM 506 Extension	FM 157 to US 287/Windsor Hills	none	P 4D/P6D	Low
Kimble Road (Windsor Hills)	US 287 to city limit	none	P4D/M4U	Low

Active Transportation

As described further in Chapter 4, a healthy community provides options for its residents and visitors to walk and bicycle for recreation and transportation purposes. The Master Transportation Plan addresses the multimodal elements for consideration within the roadway classifications set forth in the Thoroughfare Plan. Within the street right of way, accommodations should be made for motor vehicles (cars, trucks and buses) as well as bicyclists and pedestrians.

Pedestrians

Within the street right of way, for all roadway types except highways, pedestrian accommodations should be provided along both sides of the roadway, as appropriate for the local conditions.

- Sidewalks –A sidewalk should be a hard surface, 5 feet in width to allow for passage of mobility impaired persons along its length.
- ADA Compliant – Comply with the Americans with Disabilities Act (ADA) requirements for slope, cross slope and ramps.
- Sidepaths - A two-way multiuse path of at least 10 feet in width, with a buffer zone consisting of a raised island, may be provided roughly parallel to the roadway and separated from the travel lanes by and to better accommodate bicyclists traveling with traffic.

Bicyclists

Within or adjacent to the roadway, there are various configurations of facilities that can be provided to accommodate bicycling within the street right of way, as described in the Urban Bikeway Design Guide published by the National Association of City Transportation Officials.

- Shared Lanes – The travel lane can be shared by both motorists and bicyclists on most local streets and some collectors with low volumes (below 2,000 vehicles per day and speeds not exceeding 30 MPH). Shared lanes can be typical travel lanes or can be as wide as 15 feet to allow both modes to ride side-by-side under busier street conditions. The shared lanes can be provided with a "sharrow" pavement marking to indicate the recommended position of bicyclist in the shared lane, as appropriate.
- Bike Lanes – On some collector and most minor arterial roadways, a one-way bike lane of at least 5 feet in width may be provided between the traffic lane and the edge of pavement or curb or parking lane to better accommodate bicyclists traveling with traffic.
- Buffered Bike Lanes – On some minor arterials and some principal arterials, a one-way bike lane of at least 5 feet in width, with a striped buffer lane of between 3 and 5 feet in width between the bike lane and the traffic lane, may be provided to better accommodate bicyclists traveling with traffic.
- Cycle Tracks – On some minor arterials and some principal arterials, a one-way bike lane of at least 5 feet in width or a two-way bike lane of at least 8 feet in width, with a buffer zone consisting of a raised island or a parking lane between the bike lane and the traffic lane, may be provided to better accommodate bicyclists traveling with traffic. A cycle track can be raised above the level of the adjacent roadway pavement, typically adjacent to a sidewalk, and may be edged with a mountable curb.
- Sidepaths - On some minor arterials and some principal arterials, a two-way multiuse path of at least 10 feet in width may be provided roughly parallel to the roadway and separated from the travel lanes by at least 5 feet to separate bicyclists from motor traffic in the roadway.

Public Transportation

Grand Prairie is not a member of Dallas Area Rapid Transit (DART). When DART was created in 1983, it required cities to devote a 1 cent sales tax in order to participate, which Grand Prairie elected to reserve and use for other purposes. In order to join now, cities have to devote the 1 cent sales tax by vote of the people. With the state-mandated cap on taxes, Grand Prairie does not have a 1 cent sales tax available for this purpose.

IH 30 Park and Ride Facility

Grand Prairie does have a Park and Ride facility on IH 30 east of Belt Line Road, built in conjunction with TxDOT, that is open to anyone to use to facilitate ride sharing. Grand Prairie is in discussions with DART to potentially serve the lot in the future.

Nearby Passenger Rail Transportation

- Trinity Railway Express (TRE) – This commuter rail service is operated jointly by DART and Fort Worth Transit Authority (Trinity Metro). The TRE West Irving station serves Grand Prairie near Belt Line Road at Rock Island Road, about one-half mile east of SH 161 and 1.5 miles south of SH 183. TRE connects to Trinity Metro service in Downtown Fort Worth and DART service in Downtown Dallas.
- DART Orange Line – About 6 miles to the east of Grand Prairie, along Pioneer Parkway, the Westmoreland Station on the DART Red Line can be accessed near Illinois Avenue at Westmoreland Road.

Grand Connection

The city's "Grand Connection" transit system serves those who are at least 60 years of age or have a physical or mental disability. All trip requests must be made at least two working days in advance of the day of desired travel. There are no fare charges for medical/dental appointments to the Dallas County Health and Human Services Nutrition Program. However, there is a $1.00 fare charged each way for other trip purposes such as to the grocery store, school and work.

Transportation for Hire (TFH)

Trips can be made for any purpose on an as needed basis without the use of a personal car by utilizing one of the emerging transportation for hire services, such as Uber or Lyft, or a taxi. These services can be arranged on an as needed basis with just a few minutes wait time for an available vehicle to come pick you up at a designated location and drop you off at or near your destination.

Demand Responsive Ridesharing Transit Service

The adjacent city, Arlington, is initiating a demand responsive rideshare service in a small area around its Entertainment District in partnership with a private ridesharing company, Via Transportation, Inc. This pilot program is proving successful for Arlington and could be a model for potential ridesharing service in Grand Prairie.

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Chapter 4 | Healthy Community

Improving the health of a community is a growing priority of local governments which relies heavily on public policy and community design. Health-related public policies determine the nature of the built environment and can help or hinder the type of development that is conducive to healthy living. Public policy also results in community design that shapes the City's infrastructure, and ultimately, how people use these spaces within the City. Some design characteristics encourage walking, bicycling, and community activity; while others encourage auto-dependency and long commute times.

According to the Center for Disease Control and Prevention (CDC):

- More than half of American adults have at least one chronic disease.
- Seven out of 10 deaths in the US are caused by chronic diseases.
- Care and treatment of chronic diseases account for 86 percent of the nation's health care costs.
- Many chronic diseases are often preventable through healthy nutrition and regular physical activity.

Public policies and community design characteristics that foster more active forms of transportation and daily living can help combat many chronic diseases.

Input topics addressed in this chapter:

- **Transportation**
- **Neighborhoods and Quality of Life**
- **Development and Land Use**

Applicable 2010 Goals

- Revitalize older developed areas, including the Downtown area.
- Promote and enhance economic development strengths, like entertainment venues.
- Maintain a safe city with a high quality of life.
- Provide recreational options and protect open space.

Walkability and Connectivity

The term walkability refers to much more than just the infrastructure to walk. It refers to creating and maintaining safe, desirable pedestrian infrastructure that carries people *both* to and through locations. Walkability and connectivity are correlated; as a walkable area or community is measured by the level of ease and convenience to reach destinations, goods, and services without the use of a vehicle.

"Cyclin' with the Mayor"

The Mayor hosts a monthly event for residents to join in on a social bike ride around the City to promote health and wellness.

Citywide Connectivity: Walk Score

Walk Score is an online tool that measures the walkability of communities by using a walking radius around amenities in various categories. It is a helpful tool because it provides a free connectivity benchmark. Walk Score also factors in the pedestrian friendliness of an area by examining the population density, block length, and intersection density.

Table 15. Walk Score by Neighborhood

Neighborhood	Walk Score	Population
Dalworth Park	51	4,744
Inglewood Park	44	2,420
Phillips Park	41	1,023
Westchester	29	10,956
Sheffield Village	26	6,079
Trailwood	25	4,803
Mira Lagos	7	2,518
Grand Peninsula	1	2,054

Grand Prairie's overall score is 32 out of 100, which classifies it as an auto-dependent city. Three neighborhoods in Grand Prairie scored higher than the city average; Dalworth Park, Inglewood Park, and Phillips Park received scores of 51, 44, and 41 respectively. The Walk Score data reveals that southern areas of Grand Prairie, such as Grand Peninsula and Mira Lagos, are the least walkable. This can likely be attributed to their isolated location on or south of the peninsula. Conversely, older and more central residential areas are more walkable because they are closer to amenities and the core of the City.

Did you know?

Realtors and developers advertise high walk scores. Many real estate websites even allow potential customers to sort properties by Walk Score.

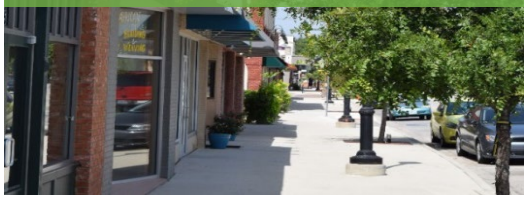
Sidewalks and Trails

Facilitating a walkable community starts with pedestrian infrastructure, such as sidewalks, trails, and crosswalks. These forms of infrastructure create environments that are safe and comfortable for pedestrians.

While many areas of Grand Prairie (specifically newer neighborhoods and Downtown) have sidewalks, the provision of sidewalks is intermittent throughout the City. Additionally, maintenance of existing sidewalks is the responsibility of property owners. The City does not maintain a database of existing sidewalks or sidewalks conditions.

Map 10 shows the City's existing and future sidewalk and trail network. This network should correspond to the Future Land Use Plan and be periodically updated to ensure a continually-growing network of trails and sidewalks is provided to connect residents to parks, schools, retail areas, and the regional trail systems.

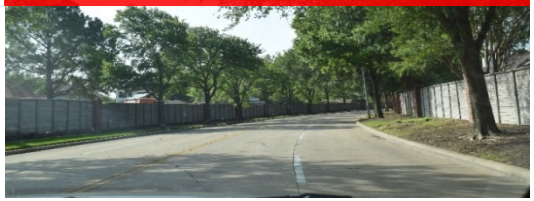
$1.1 million has been invested in Downtown improvements; which included sidewalks

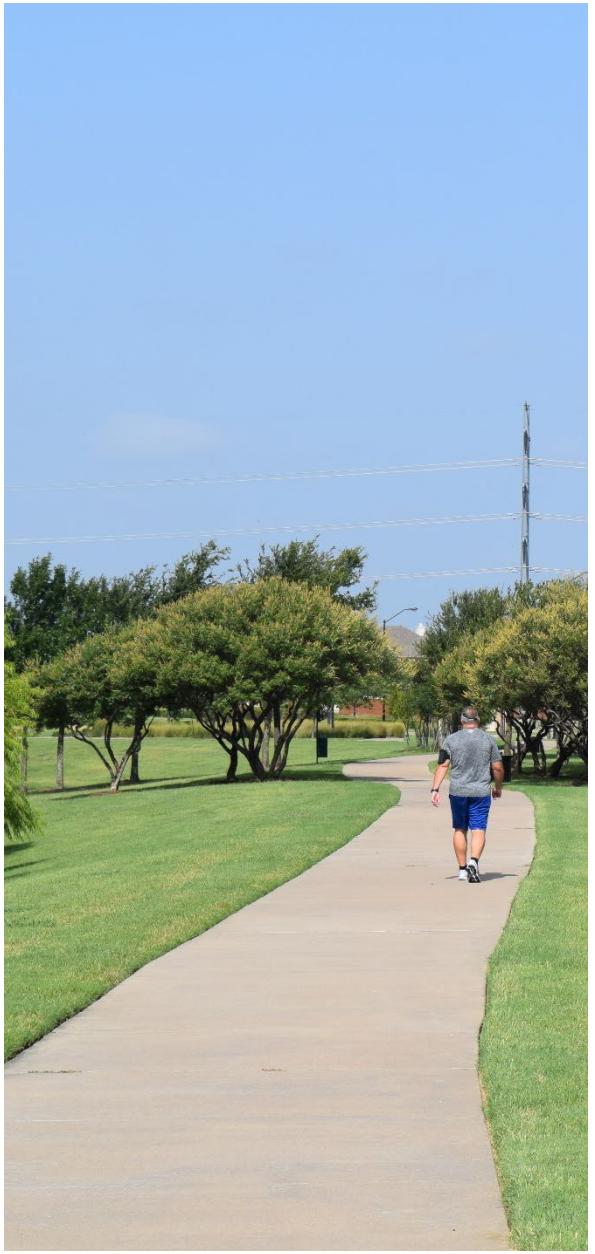


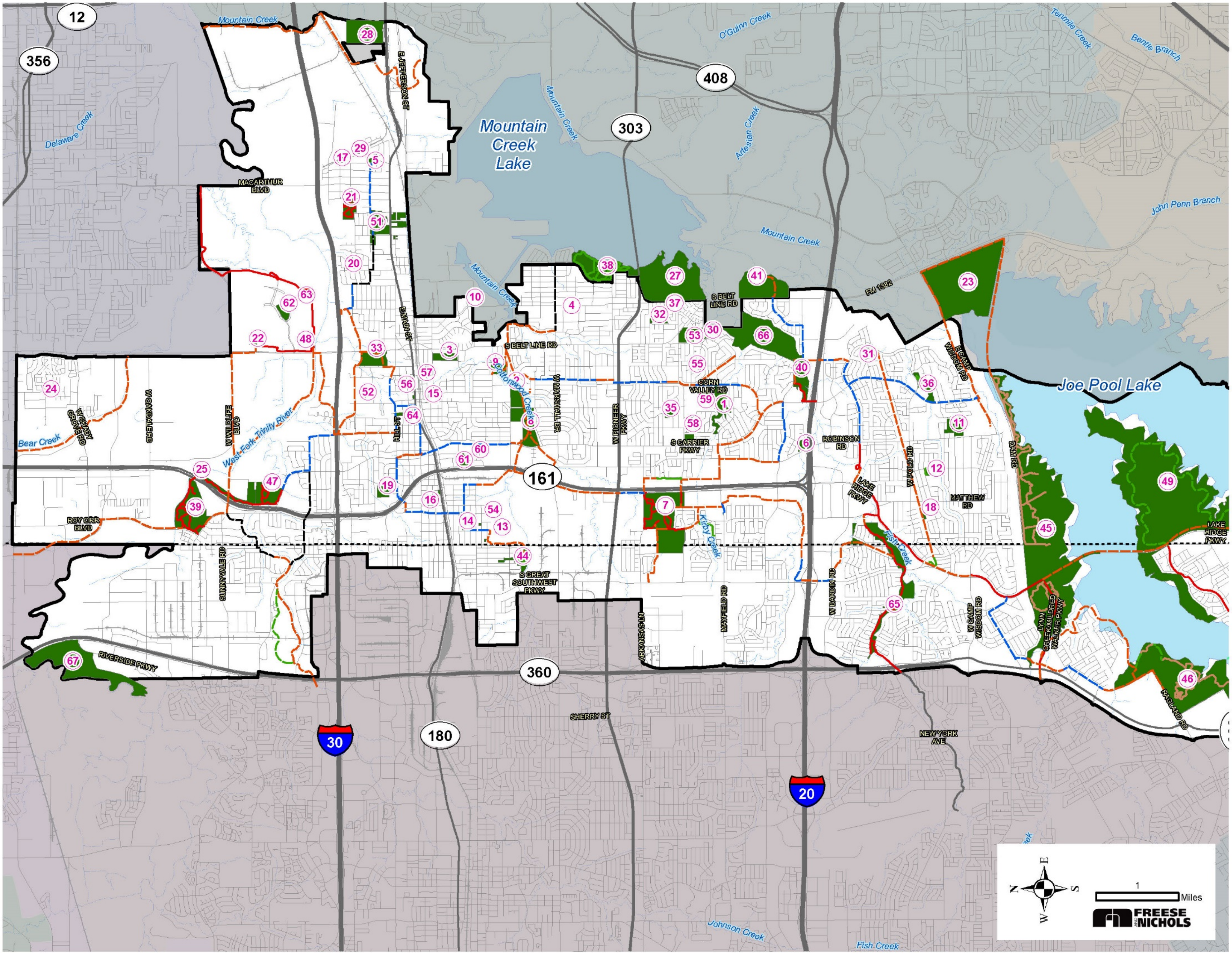
Some newer neighborhoods contain off-street trails in place of sidewalks

Sidewalks in older areas of the City will require maintenance in the future

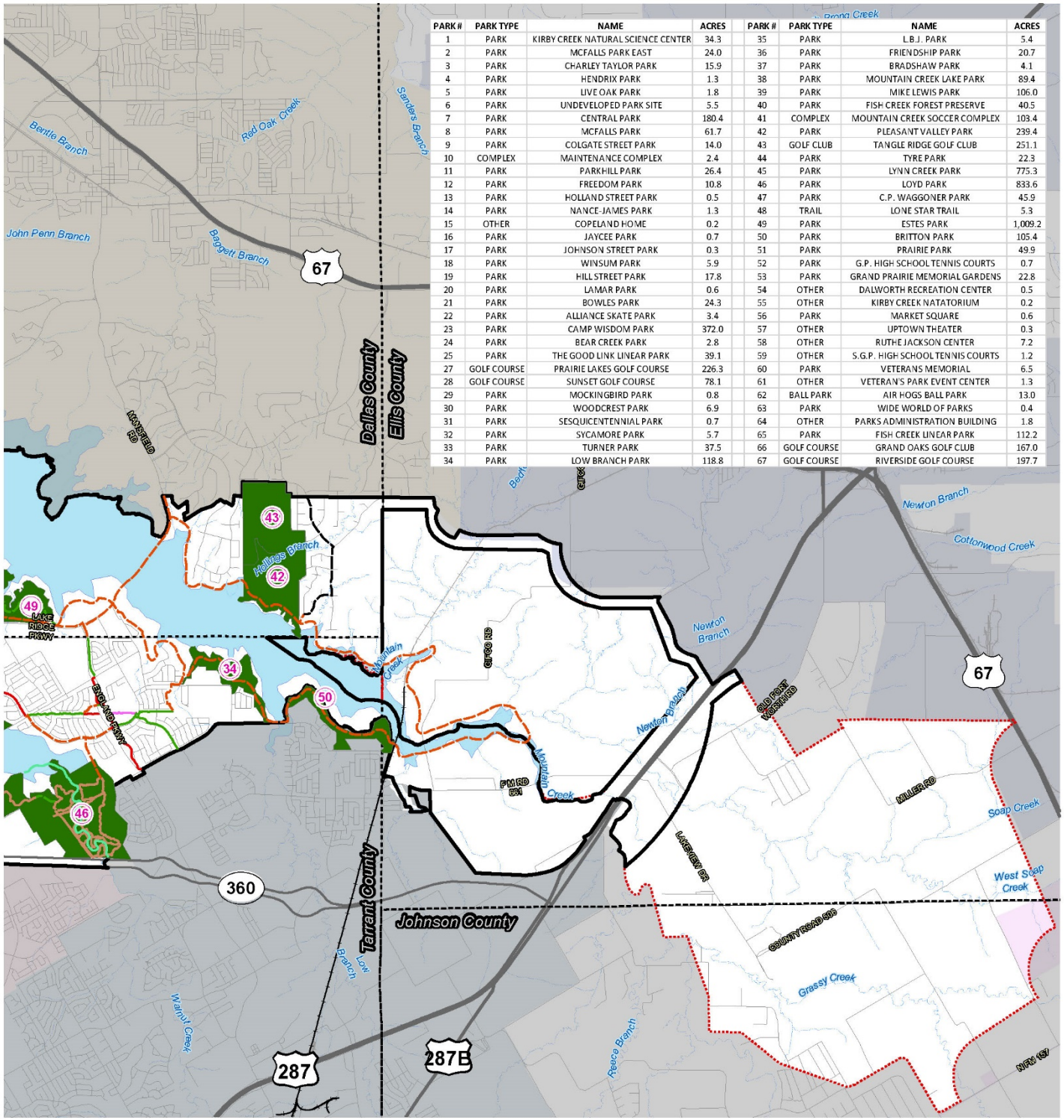
Lack of continuous sidewalks in older neighborhoods and between neighborhoods






Mountain Creek Lake
Joe Pool Lake
Mountain Creek
O'Guinn Creek
Tenmile Creek
Bentle Branch
Delaware Creek
Artesian Creek
John Penn Branch
Bear Creek
West Fork Trinity River
Cottonwood Creek
Kirby Creek
Fish Creek
Johnson Creek
12
356
408
303
161
360
180
30
20
MACARTHUR BLVD
S BELT LINE RD
FM 1382
E CAMP WISDOM RD
CORN VALLEY RD
W MARSHALL DR
W PIONEER PKWY
S CARRIER PKWY
ROBINSON RD
LAKE RIDGE PKWY
W POLO RD
MATTHEW RD
DAM RD
ROY ORR BLVD
SUNNYVALE RD
S GREAT SOUTHWEST PKWY
ARKANSAS LN
MAYFIELD RD
W BARDIN RD
W CAMP WISDOM RD
LYNN CREEK MILDRED WALKER PKWY
RIVERSIDE PKWY
SHERRY ST
NEW YORK AVE
RAGLAND RD
Miles
FREESE NICHOLS

Map 10. Parks and Trails Map



PARK #	PARK TYPE	NAME	ACRES	PARK #	PARK TYPE	NAME	ACRES
1	PARK	KIRBY CREEK NATURAL SCIENCE CENTER	34.3	35	PARK	L.B.J. PARK	5.4
2	PARK	MCFALLS PARK EAST	24.0	36	PARK	FRIENDSHIP PARK	20.7
3	PARK	CHARLEY TAYLOR PARK	15.9	37	PARK	BRADSHAW PARK	4.1
4	PARK	HENDRIX PARK	1.3	38	PARK	MOUNTAIN CREEK LAKE PARK	89.4
5	PARK	LIVE OAK PARK	1.8	39	PARK	MIKE LEWIS PARK	106.0
6	PARK	UNDEVELOPED PARK SITE	5.5	40	PARK	FISH CREEK FOREST PRESERVE	40.5
7	PARK	CENTRAL PARK	180.4	41	COMPLEX	MOUNTAIN CREEK SOCCER COMPLEX	103.4
8	PARK	MCFALLS PARK	61.7	42	PARK	PLEASANT VALLEY PARK	239.4
9	PARK	COLGATE STREET PARK	14.0	43	GOLF CLUB	TANGLE RIDGE GOLF CLUB	251.1
10	COMPLEX	MAINTENANCE COMPLEX	2.4	44	PARK	TYRE PARK	22.3
11	PARK	PARKHILL PARK	26.4	45	PARK	LYNN CREEK PARK	775.3
12	PARK	FREEDOM PARK	10.8	46	PARK	LOYD PARK	833.6
13	PARK	HOLLAND STREET PARK	0.5	47	PARK	C.P. WAGGONER PARK	45.9
14	PARK	NANCE-JAMES PARK	1.3	48	TRAIL	LONE STAR TRAIL	5.3
15	OTHER	COPELAND HOME	0.2	49	PARK	ESTES PARK	1,009.2
16	PARK	JAYCEE PARK	0.7	50	PARK	BRITTON PARK	105.4
17	PARK	JOHNSON STREET PARK	0.3	51	PARK	PRAIRIE PARK	49.9
18	PARK	WINSUM PARK	5.9	52	PARK	G.P. HIGH SCHOOL TENNIS COURTS	0.7
19	PARK	HILL STREET PARK	17.8	53	PARK	GRAND PRAIRIE MEMORIAL GARDENS	22.8
20	PARK	LAMAR PARK	0.6	54	OTHER	DALWORTH RECREATION CENTER	0.5
21	PARK	BOWLES PARK	24.3	55	OTHER	KIRBY CREEK NATATORIUM	0.2
22	PARK	ALLIANCE SKATE PARK	3.4	56	PARK	MARKET SQUARE	0.6
23	PARK	CAMP WISDOM PARK	372.0	57	OTHER	UPTOWN THEATER	0.3
24	PARK	BEAR CREEK PARK	2.8	58	OTHER	RUTHE JACKSON CENTER	7.2
25	PARK	THE GOOD LINK LINEAR PARK	39.1	59	OTHER	S.G.P. HIGH SCHOOL TENNIS COURTS	1.2
27	GOLF COURSE	PRAIRIE LAKES GOLF COURSE	226.3	60	PARK	VETERANS MEMORIAL	6.5
28	GOLF COURSE	SUNSET GOLF COURSE	78.1	61	OTHER	VETERAN'S PARK EVENT CENTER	1.3
29	PARK	MOCKINGBIRD PARK	0.8	62	BALL PARK	AIR HOGS BALL PARK	13.0
30	PARK	WOODCREST PARK	6.9	63	PARK	WIDE WORLD OF PARKS	0.4
31	PARK	SESQUICENTENNIAL PARK	0.7	64	OTHER	PARKS ADMINISTRATION BUILDING	1.8
32	PARK	SYCAMORE PARK	5.7	65	PARK	FISH CREEK LINEAR PARK	112.2
33	PARK	TURNER PARK	37.5	66	GOLF COURSE	GRAND OAKS GOLF CLUB	167.0
34	PARK	LOW BRANCH PARK	118.8	67	GOLF COURSE	RIVERSIDE GOLF COURSE	197.7

Parks and Trails

- Existing
- Existing (6 Ft. or Less)
- Existing Hiking
- Outside of City
- Proposed On-Road
- Proposed Park Trail
- Proposed Trail
- Proposed Widened Sidewalk
- Sidewalk (5 Ft)
- Water
- Existing Parks
- Grand Prairie City Limits
- Grand Prairie ETJ
- County
- Railroads
- Waterbodies
- Rivers and Creeks

Access To Services and Healthy Food

Access to services, recreational and health related amenities, and healthy food are key factors in public health. They also serve as social sustainability indicators, as discussed in Chapter 6 | Sustainable Community.

Services

Healthcare and social services are significant factors in preventative health. Apart from such services that are offered on an emergency basis, routine use of healthcare and social services is often out of reach to at-risk households; such as those with single parents, low vehicular access, and the uninsured. The location and number of healthcare clinics within a community is important to ensure services are available in underserved or vulnerable communities. Low cost health clinics, run by multiple organizations, are currently located in the central part of the City. While these services are provided by the private sector, the City can play a role in coordinating with entities that provide such services and identify ways that their services can be more easily accessed by those in need. The City can also promote healthy living initiatives by providing information about available clinics, and healthy living habits, on the City's website.

Parks and Recreational Facilities

The City is currently in the process of updating its Parks Master. Parks, open space, and recreational amenities are important factors in public health because they afford people access to fresh air and exercise. While the location, condition, and amenities offered in each park differ, the City nonetheless maintains more than 60 park and recreational facilities. The updated plan will expand this park system.

Food Access

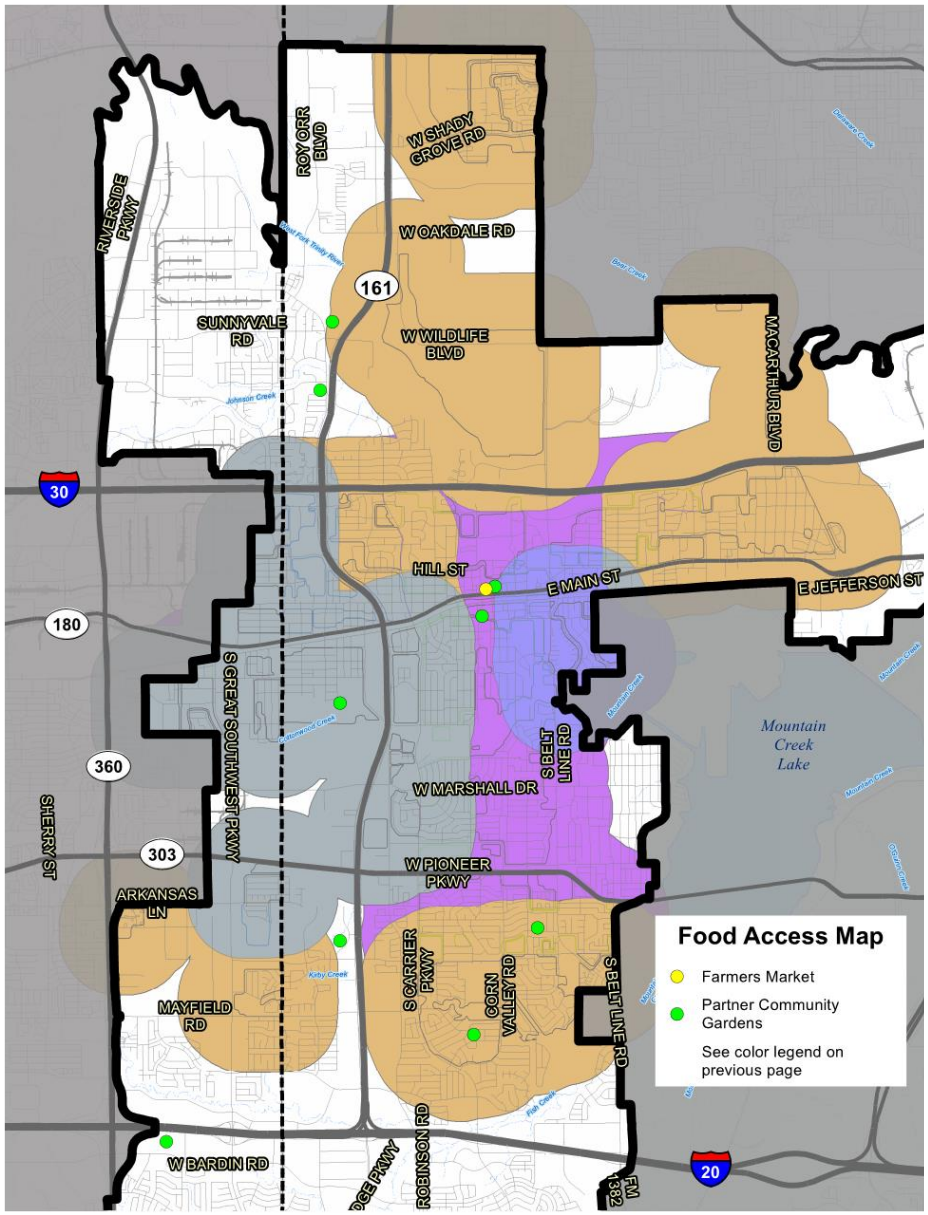
Food deserts are defined as locations where fresh fruit, vegetables, and other healthful whole foods are not accessible to the population. These areas typically lack affordable and accessible grocery stores, farmers' markets, and other healthy food providers. The United States Department of Agriculture (USDA) established a Food Access Research Atlas that maps low income, low food access, and low vehicle access areas. Low vehicle access is a factor of food deserts because individuals with low vehicle access may not be able to reach healthy food providers that are even within driving distance of their homes.

Conditions

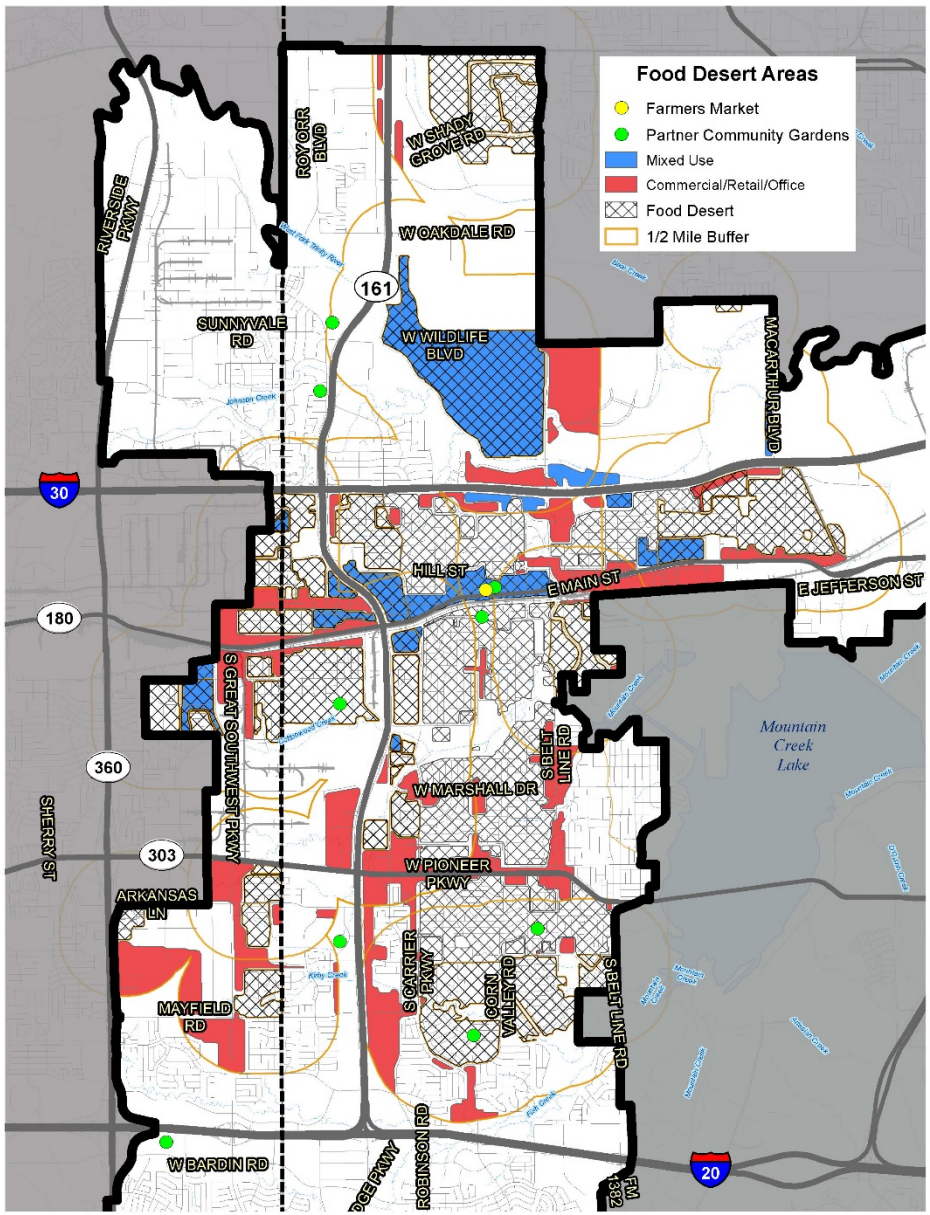
To better understand if and where food deserts exist in Grand Prairie, the USDA's food desert indicators were compared to locations of existing and recommended residential land uses. According to 2015 USDA food access data, there are food desert conditions in Grand Prairie that vary in severity. The different color shadings in Map 11 indicate census tracts with the following conditions:

- Low-income with a significant share of residents 1/2+ mile from the nearest supermarket by census tract.
- Low-income with a significant share of residents 1+ mile from the nearest supermarket by census tract.
- Low-income and more than 100 housing units without a vehicle by census tract.
- Low-income with a significant share of residents 1/2+ mile from the nearest supermarket and with more than 100 housing units without a vehicle by census tract.
- Low-income with a significant share of residents 1+ mile from the nearest supermarket and with more than 100 housing units without a vehicle by census tract.

Map 11. Food Desert Conditions by Census Tract



Map 12. Location of Existing and Future Commercial Areas Compared to Food Deserts



Source: United Stated Department of Agriculture (USDA)

Of the analyzed factors, food desert conditions exist in some areas north of IH 30 as shown in Map 11. The most severe condition (Low-income with a significant share of residents 1+ mile from the nearest supermarket and with more than 100 housing units per census tract without a vehicle) are generally concentrated in the following areas:

- West of NW 19th Street between IH 30 and Main Street,
- West of SH 161 between Main Street and Pioneer Parkway, and
- East of SH 161 between Main Street and Pioneer Parkway.

The Future Land Use Plan can serve as a tool to remedy some of the issues that cause food deserts by identifying potential locations for fresh food sources near or within targeted areas. Map 12 shows the locations of commercial and mixed use areas in comparison to areas designated as food deserts. Targeting development of grocery/specialty food stores in these locations would offer residents who use alternative means of transportation access to nutritious foods. Map 12 also shows the locations of existing farmers markets and community gardens. The City currently has a Downtown farmers' market (120 W. Main St.), as well as ten partner community gardens. Supporting these facilities and allowing additional farmer's' markets and/or community gardens would grant added benefits. These facilities provide additional opportunities for Grand Prairie residents to access fruits and vegetables; and may foster more consumption of healthy foods.

Healthy Community Strategies

- Create a sidewalk conditions database to monitor improvement needs and identify priority projects.
- Align the Parks Master Plan and Parks and Trails Map with the Future Land Use Plan.
- Prioritize and implement the multi-modal transportation recommendations within the Master Thoroughfare Plan.
- Conduct a walkability and connectivity assessment on proposed new developments when development applications are submitted.
- Perform a diagnostic of the zoning and subdivision ordinances to ensure pedestrian oriented design elements are incorporated into new development projects.
- Coordinate with government entities, non-profit and community groups, and private organizations to expand access to healthcare and social services where needed. Such entities could include school districts, on-demand transportation providers, local churches, hospital systems, and clinics.
- Develop economic development strategies to attract grocery/specialty food stores to targeted locations that are near or within food desert designated neighborhoods.
- Continue to support farmers markets and community gardens.
- Create a database of community health indicators and set annual goals to address priority locations.


Police-Fire | Main Entrance

Chapter 5 | Smart Community

Technology and the internet play an ever-growing role in modern life, and the same is true for cities. From necessity to convenience, cities leverage technology and the internet to improve municipal operations such as communication, innovation, data analytics, transportation, and infrastructure.

Applicable 2010 Goals

- **Maintain and upgrade the city's transportation infrastructure**
- **Use current technology for a more user-friendly development process**

Input topics addressed in this chapter:

- **Transportation**
- **Neighborhoods and Quality of Life**
- **Development and Land Use**
- **Finance**

Big Data and the Internet of Things

Big Data

Big Data is a term used to describe the real-time information that is transmitted from internet-enabled devices, such as cell phones, cars, wearables, kitchen appliances, or thermostats. Individually, the data collected by a device is of limited use, such as location, speed, motion, vibration, or temperature. However, when the data of all devices in use is compiled and analyzed, it can provide powerful, real-time information about important factors that impact cities; such as congestion or electrical and water consumption.

Internet of Things (IoT)

The Internet of Things (IoT) is a network of internet-connected objects that collect and exchange data using embedded sensors.

These devices are capable of "talking" to each other. Any stand-alone internet-connected device that can be monitored and/or controlled from a remote location is capable of being part of the IoT (Business Insider, 2016). On a small scale, an example of the IoT in action could be controlling the light in a house via smartphone; on a large scale the IoT could use the Big Data from all residential electrical usage to automatically adjust power output for a city. For this system to work effectively, quality internet access must be available for devices to communicate through. The City promotes this initiative by facilitating the installation of fiber-optic cables in underserved neighborhoods and commercial corridors. This lays the ground work for the implementation of future programs that require quality internet access across the City.

Applicability

According to the American Planning Association (APA), Big Data and IoT technologies will allow cities to better understand, measure, and improve areas involving variables that previously were difficult to measure. "Using this information, city infrastructures can be reimagined…connected cars will make driving safer and cut down on carbon emissions, while public spaces can adapt and adjust to users' needs to create entertainment, educational opportunities, and interactive spaces for gathering, collaboration, fellowship, and further innovation. This will all be done through insights gleaned from the collection of Big Data and analytics - insights that will be used to connect all facets of daily life." (APA, 2016) There are several city functions and initiatives in which the use of Big Data and the IoT could be applied to benefit the Grand Prairie community:

Mapping and Analytics **Road Network and Transportation**

Neighborhood Revitalization **Economic Development**

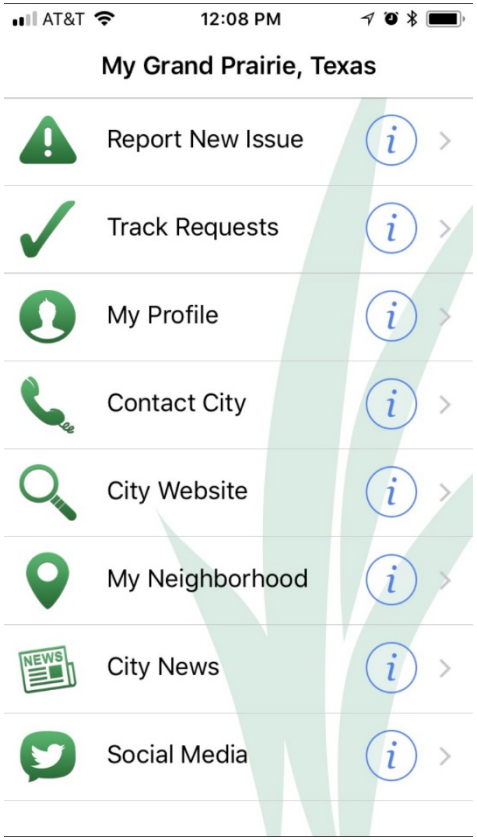
Mapping and Analytics

With more and more data being made available to cities, data mapping and analytics is a significant and broad area of municipal operation that stands to be greatly improved. Many applications, such as GIS, now have data collection tools related to transportation, economic development, utilities, city services, an issue reporting. In order to interpret and articulate data trends, it is important that the City begin to create databases about mappable issues.

Crowdsourcing

Crowdsourcing is a form of data collection in which, through an app linked to GIS, members of the public can upload photos, text, and create reports that are georeferenced and uploaded to the city in real-time. In addition to saving city resources, crowdsourcing can help cities continually gather information from the community about current issues and needs. Grand Prairie has initiated a crowdsourcing program called My GPTX Mobile App. Through this app, residents can report issues and connect to neighborhood and City information. This will continue to be a valuable tool to link the City and its residents quickly and conveniently.

Figure 17. My GPTX Mobile App



Road Network and Transportation

Phones, GPS services, and cars are some of the most widespread sources of Big Data. They could potentially offer a wealth of new information about how, when, and where people use the transportation network.

Parking

While parking was not a common traffic concern raised by the public, the location, capacity, and demand for parking can have major impacts on traffic. Today there are numerous apps and devices related to parking. This technology includes:

- Web-connected sensors in pavement that help people find, reserve and/or book a parking spot,
- Smart-meters that allow drivers to pay and reload their parking meter via phone, and
- Sensors that count, and in some cases, display where and how many open spots are in a parking structure.

With a mapping database of all public, special event, and high-volume parking facilities, the City could identify congestion factors (such as location of ingresses and egresses, peak demand times, peak usage capacity, etc.) and compare parking facility functions to the adjacent roadways. With a greater understanding of parking needs, the City could identify parking improvement projects that could help improve traffic circulation and flow along roadways. These projects could involve:

- Modifying the location or capacity of existing ingress and egress into parking facilities.
- Introducing electronic counters in parking facilities to monitor and relay parking capacity.
- Introducing additional wayfinding to guide visitors to alternate facilities; some wayfinding can even display the number of open parking spots or guide visitors to individual spots.
- Working with property owners to identify opportunities for shared parking.

Walkability and Bikeability

Planning for multimodal users such as walkers and bikers can be difficult for cities because quantitative data is not always available, and it can be difficult to reach out specifically to members of the community. Technology offers many options to more efficiently identify multimodal infrastructure needs. Using technology for walkability and bikeability assessments will assist in maintaining the health of the community and improving connectivity across the City, as discussed in the Walkability and Connectivity section in Chapter 4 | Healthy Community.

Did You Know

The Oregon Department of Transportation (ODOT) consulted a popular cycling app to collect data on cyclists when it was considering biking infrastructure improvements. The app showed where people were biking (e.g., streets, sidewalks) and the traffic flow (e.g., where they slow down or speed up). ODOT was able to identify patterns (by mapping the datasets) to identify the locations that riders most used, assess the size and traffic density of those areas, manage detour planning during construction, schedule maintenance, and develop travel demand forecasting models. (APA, 2015).

Autonomous Vehicles

Technology, categorized as the Internet of Things, that is most likely to change in the next 20 years involves autonomous vehicles (AVs). AVs are driverless vehicles that navigate the roadway using GPS technology, high definition cameras, infrared and radar scanning, advanced control and sensory systems, and algorithms that use data from this equipment and that from the roadway to operate a vehicle—all without human intervention. The U.S. Department of Transportation forecasts that AV technology will positively impact the transportation network in multiple ways, including the following:

- Avoiding traffic collisions that are usually caused by human error
- Reducing traffic congestion by reducing crashes and normalizing operations
- Providing vehicle-to-vehicle and vehicle-to-infrastructure communication to optimize vehicle and roadway operations
- Reducing the need for public safety employees as safety regulations and laws are complied with more consistently
- Providing more predictable and potentially faster travel times
- Reducing the need for physical parking spaces in activity centers because AVs will ultimately allow for car-sharing throughout the day

As AV's become more prevalent, cities need to be prepared for potential changes in their roadway networks, development patterns, and public spaces. For example, the required number of travel lanes during peak hours may be reduced (due to a reduction in peak hour vehicle volume) which could create more space for pedestrian activity. Additionally, the need for large parking lots on every commercial parcel may not be necessary. It will become increasingly important to reassess roadway design and signalization, parking minimums and design requirements, and general guidelines for site development as AVs are introduced to the general market.

Ridesharing

Rideshare companies, such as Uber and Lyft were early examples of technology that transformed the use of transit for many Americans. In Grand Prairie, ridesharing presents two opportunities - leveraging technology to improve transit and utilizing the data from such technology to better understand transportation needs and trends in the City.

Analytics

As of 2017, Uber has begun making available its Big Data collected in select cities. While Grand Prairie is not one of those cities at this time, the data still exists and could be make available in the future. This information sharing is being done with the hope of helping transportation officials understand how ridesharing modifies traffic and transit patterns.

Coordination

Cities are increasingly coordinating with ridesharing companies to streamline pickup and drop-off locations for special events and high traffic areas. This coordination ranges from designated pickoff/dropoff lanes (i.e. Love Field) to notifying ridesharing companies about anticipated high-traffic events, such as concerts, conferences, and sporting events.

Emerging Trends

Ridesharing companies have tested, and in some cases implemented, ridesharing options that more closely mimic carpooling or mass transit. One example, which is available through several companies in the Metroplex, is pooling. Pooling offers reduced rates for users willing to share their ride with other riders travelling in the same direction. This rendition of carpooling makes ridesharing more financially accessible to the public and lowers the number of single-passenger trips. Other rideshare companies have implemented a pooling option along set routes which allows ridesharing to function more like a bus service. Some of these companies even use higher capacity vehicles such as small passenger vans to transport commuters. These kinds of services are not available everywhere because their cost and time-effectiveness rely on a minimum concentration of users. However, they may provide additional transportation options and increase Equitable Access as discussed in Chapter 4 | Healthy Community; as well as foster social sustainability as discussed in Chapter 6 | Sustainable Community.

Neighborhood Revitalization, Rehabilitation, and Maintenance

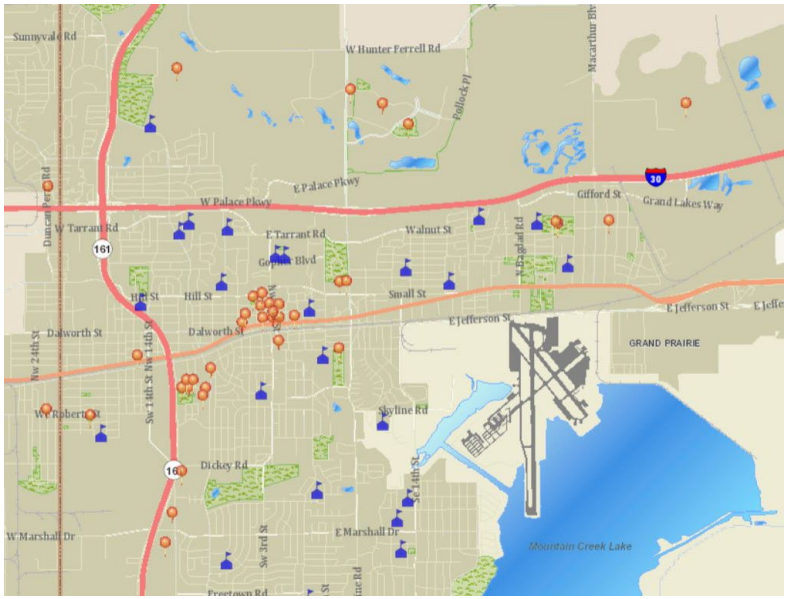
Quantifying Need

Big Data has become increasingly useful in community and neighborhood development, specifically because of its ability to quantify how people use and move through public spaces. Using sensors, cities can now benchmark before and after conditions for certain infrastructure and systems; which can help justify public improvements.

Identifying Conditions

Cities throughout the U.S. have turned to interactive mapping to address issues such as blight, code violations, maintenance issues, and safety concerns. Using GIS mapping linked to smartphone apps, it is now possible for Grand Prairie citizens to document and report issues in their community in real-time. With the creation and maintenance of an issues database the City could establish customized neighborhood assistance programs that specifically address issues with the highest occurrence.

Figure 18. Grand Prairie Interactive Map



Economic Development

Big Data's potential to understand the preferences and habits of consumers means that there are huge opportunities to leverage technology for economic development. As these opportunities are being recognized, some financial institutions have begun working with technology companies to create consumer pattern tools for their client communities. Today, some companies offer sensors capable of measuring the volume of pedestrian and vehicle traffic, walking directions, store visits, and wait times inside of businesses.

In addition to leveraging technology, there is also a huge opportunity to attract technology companies associated with Smart Community related sectors. Grand Prairie contains several Light Industrial and Commercial/Office/Retail tracts (reference Map 4. Future Land Use Map) that could be marketed to companies that specialize in data collection and storage, system management, cybersecurity, or autonomous vehicle research and development. The City should investigate technology sectors to market and possibly incentivize.

Did You Know

Consumer Pattern Sharing

In 2015, Mastercard began compiling "billions of pieces of purchase data, to find relationships between how people travel, what they buy, and how this information can build better cities." The goal of the partnership was to help shape decision-making by providing localized, market data to cities. According to MasterCard "the project can model transaction data to find gaps in public services, transit, shopping habits, home location, and job growth in cities." (MasterCard 2015).

Autonomous Vehicle R&D

The University of Michigan has built a 32 acre simulated city for the testing of self-driving vehicles. The city, called "M City", replicates real life scenarios for self-driving vehicles to respond to common traffic situations. The State of Texas has passed bills to allow autonomous vehicle testing; thus, promoting the state as a hub for AV companies to conduct research and development.

Smart Community Strategies

- Establish and maintain GIS mapping databases to use as benchmark tools to proactively identify community maintenance and assistance needs.
- Develop economic development strategies to attract new technology sector companies.
- Pursue public-private partnerships with data analytics, data sharing, ridesharing, and other related companies.
- Evaluate and prioritize projects to integrate new IoT technologies into municipal facilities/roadways/infrastructure/services for more efficient operations.
- Facilitate and incentivize the installation of data transmission infrastructure across the City.

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Chapter 6 | Sustainable Community

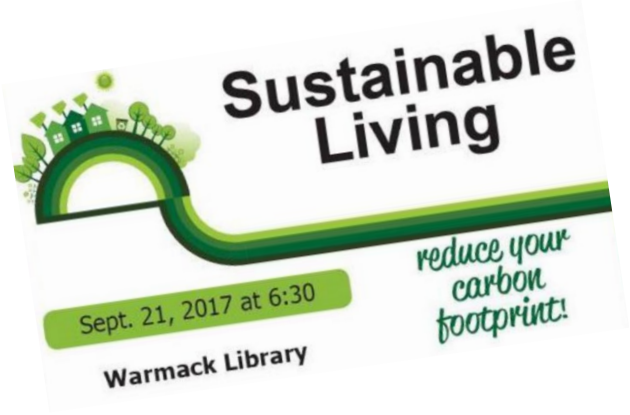
Sustainability is defined as the ability of a community to provide for the current population while preserving resources for the next generation. The way cities use manmade and natural resources determines how long it can continue to thrive. Closely related to sustainability is resiliency which is the ability of a community to respond to and recover from adversity. Today's communities must prepare for natural disasters as well as manmade disasters, hacking and cybersecurity breaches, and economic instability. Essentially the key to a sustainable community is maintaining it in such a way to handle any situation so that is will there for years to come. Divided into three areas (environmental, social, and economic), sustainability is long-range in scope and proactive in nature.

Input topics addressed in this chapter:

- **Transportation**
- **Neighborhoods and Quality of Life**
- **Development and Land Use**
- **Finance**
- **Environment**

Applicable 2010 Goals

- **Encourage resource conservation and renewable energy**
- **Promote and adopt "sustainable growth practices"**
- **Achieve a broad housing selection for a diverse population**
- **Maintain and upgrade the city's transportation infrastructure**
- **Investigate opportunities for intergovernmental cooperation**
- **Maintain and improve drainage through watershed planning and floodplain management**
- **Promote and enhance economic development strengths, like entertainment venues**
- **Use sound land use and urban design principles to optimize city land resources**



Environmental Sustainability

Most commonly associated with the concept of sustainability, environmental sustainability aims to preserve and protect natural resources.

Area-Level Sustainability

When considered at the Area-level, sustainability is largely a "20,000-foot view". It takes into consideration where sites are placed and how they fit into the environment. Methods like "designing with nature", floodplain preservation, and cluster development can be used to ensure the minimal impact of growth and development on the environment.

Design with Nature

The concept of designing with nature was presented in the 1970s. The concept considers all aspects of the environment in designing the human habitat. The following actions describe how this can effectively be achieved in Grand Prairie.

Low Impact Design

Low impact design (LID) is a development and engineering design approach intended to maintain the pre-development hydrology of an area even after the area has developed. In the natural environment, most water is absorbed into the ground when it rains; the water then flows uninhibited into aquifers, creeks, rivers, and lakes. Development often interferes with this process - paving and roofs block water from being absorbed (resulting in runoff) which contributes to flooding, soil erosion, water pollution, and depleted aquifers. The following strategies are high-level practices that can make development more compatible with the natural environment:

- Permeable concrete and pavers;
- Green roofs;
- Rain Garden/Bioretention;
- Vegetated Bioswale;
- Rainwater Harvesting; and
- Preserved open space and drainage-ways throughout developments.

Natural/Greenspace Preservation

Natural and greenspace takes many forms in a community. Oftentimes preservation of these areas must be coordinated at the neighborhood level or higher if communities desire a connected, well-distributed network of natural areas. Two of the biggest ways communities coordinate these efforts are to:

- Encourage land development practices that minimize the total amount of land being improved/developed, and
- Identify and protect key areas, linkages, and features that can be added to the network of natural and open space.

Cluster Developments

Clustering preserves open space by allowing developments around greenspace to be concentrated. This is done by allowing for a higher density of residential lots or multiple commercial buildings in a concentrated area. This maintains density goals while freeing valuable greenspace for public use. The land that is freed by clustering makes available valuable greenspace for community use that would otherwise be developed.

Floodplain Preservation

In every community, there are areas that are unable to be developed because of environmental constraints. Possibly the most common example is the floodplain area because it detains and discharges stormwater. As discussed in Chapter 3 | Future Land Use and Thoroughfares, floodplains are located along creeks and streams throughout the City. Grand Prairie development generally should not be planned in the floodplain area, as it can be challenging, expensive, and possibly detrimental to downstream development. The most suitable uses for floodplain areas are parkland, trails, and open space.

With 16,220 acres of floodplain in the City, the amount of developable land is limited. Although development in the floodplain should be discouraged, in certain circumstances, there is an opportunity to regain use of these areas through floodplain reclamation. Floodplain reclamation is the process of re-designating areas previously within floodplain. The City has conducted engineering assessments to evaluate development opportunities within floodplain. One such study, conducted by Halff Associates in 2015, identified areas north of IH 30 that may be suitable for floodplain reclamation. Map 13 on page 107 shows one of the results of that study. Since that time, several acres have been reclaimed. Other potential areas are reflected on Map 4. Future Land Use Map. Examples of properties that have been successfully reclaimed through the reclamation process are shown on the following page.

The following guidelines should be considered when making policy decisions regarding floodplain preservation:

- When feasible, locate trails within floodplain areas. This will ensure that the floodplain network become areas that significantly contribute to the open space and parkland within the City.
- Establish a reasonable distance from creek edges to platted lots. Ideally, roadways should be created as buffers between creeks and homes. This will allow for trails to be created next to creeks and help preserve banks and slopes from erosion.
- When reclamation is possible, floodplain preservation can still be encouraged through regulation adjustments such as the allowance of increased densities, heights, etc.

Figure 19. Successful Floodplain Reclamation – Central Park (SW Corner of Arkansas Ln. and SH 161)

Before

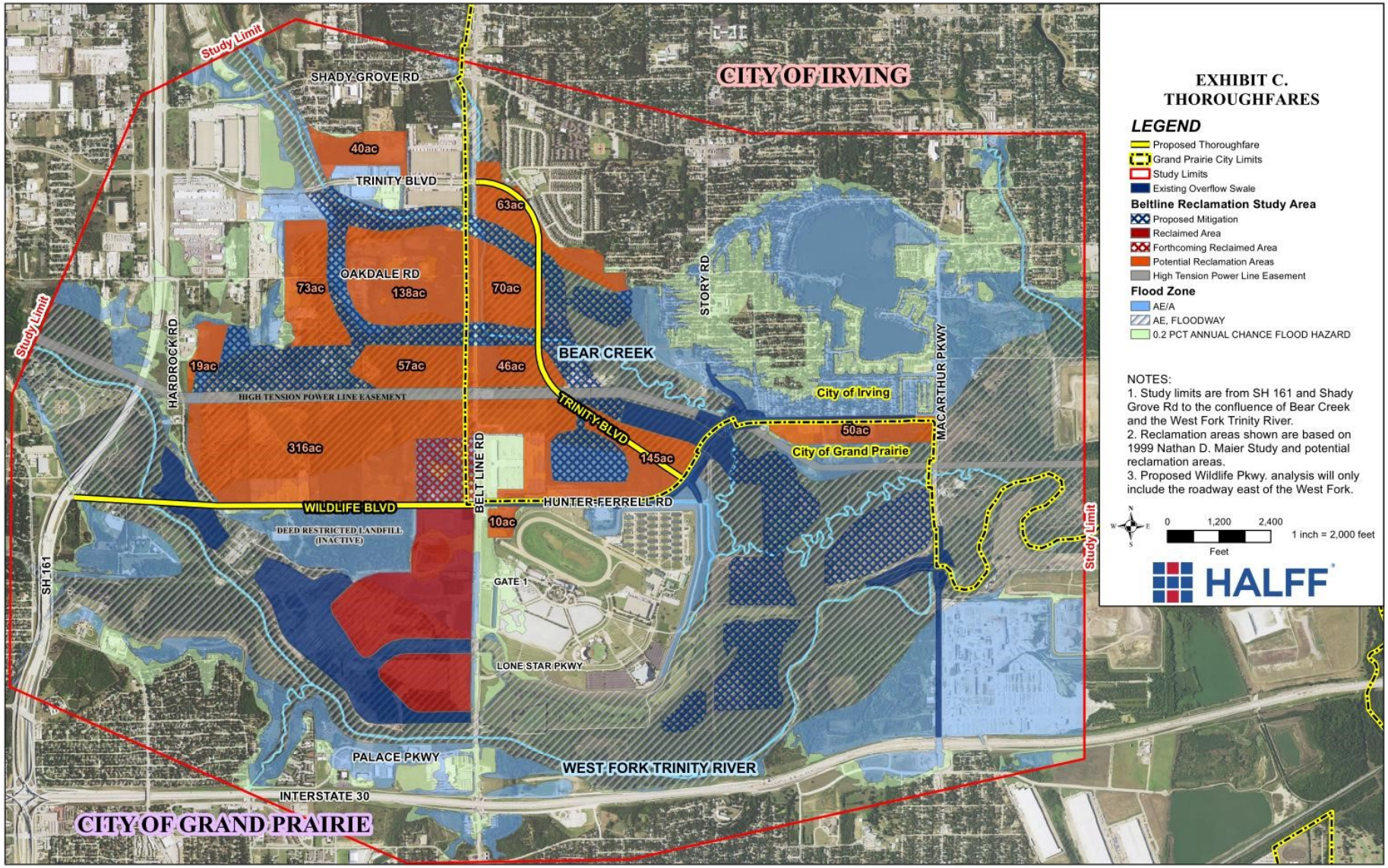
After

Figure 20. Successful Floodplain Reclamation – Grand Lakes Business Park (Grand Lakes Blvd. South of IH 30 near Macarthur Blvd.)

Before

After

Map 13. Floodplain Reclamation Map



Source: Halff Associates

Parcel-Level and Operational-Level Sustainability

When considered at the Parcel-level, sustainability considers the design, composition, and construction of individual buildings and/or parcels. This level also includes Operational-level sustainability; the day-to-day operations and maintenance of buildings and properties. The most common parcel and operational level sustainability practices are implemented through green building standards.

Green Building Standards

A sustainable building or site is one in which the design, construction, occupancy, maintenance, and deconstruction are performed in ways that promote energy, water and material efficiencies; while providing healthy, productive, and comfortable indoor environments with long-term benefits to owners, occupants, and society as a whole.

The term "green building" describes a way in which buildings and sites can be constructed and utilized to be more environmentally friendly on various levels, including energy conservation, water usage, and building materials. A variety of green building and infrastructure programs are in existence today – such as LEED (Leadership in Energy and Environmental Design), Envision, and Sustainable Sites among others. Green building standards have been adopted by many municipalities, school districts, and commercial developers to enhance sustainability of their buildings. The following principles are examples of sustainable building development:

Institute for Sustainable Infrastructure

U.S. GREEN BUILDING COUNCIL USGBC

Water conservation (different from LID)

- Irrigation: Drip system, soaker hose, or harvested rainwater
- Landscaping: Native and/or drought with limited amounts of turf grass
- Plumbing: Low flow fixtures

Energy conservation

- Energy sources: Local or on-site alternative sources
- Energy savings: Cool roofs (green or white), solar orientation of structures,
- Energy savings: Use of highly-insulated building materials to minimize use of heating and cooling systems; and, when necessary, use of energy efficient heating and cooling systems
- Heat reduction: Require parking lots and new streets to have trees that shade paved areas

Waste reuse, reduction, and recycling

- Property reuse: Bonus incentives for infill development
- Soil reuse: One-site or local reuse of excavated soil
- Material reuse: Use of recycled building or pavement materials
- Participation in local recycling and "green" initiative programs

Existing Codes

Several of the existing codes within the City's ordinances promote sustainable development by requiring or encouraging many of the policies above. The Unified Development Code permits the utilization of reclaimed water sources for required irrigation and requires the installation of rain shut-off sensors to conserve water. Trees are required to be planted in parking lots; which reduce heat islands. Mixed Use zoning districts are permitted within the zoning code; which promotes more sustainable building patterns.

The City has also amended the residential development standards to incorporate a menu-style list of options to make multi-family developments more sustainable. This method requires the developer to choose from a list of sustainable features to include in the development. This effort strongly incentivizes sustainable design for residential development and is a step towards incorporating similar regulations for commercial developments. To expand these efforts, the City may wish to amend the development guidelines, engineering standards, and/or building codes to integrate additional sustainable design elements. Additionally, the City could amend other zoning districts or zoning land use classifications to encourage sustainable design by requiring a certain number of sustainable design techniques (selected from a menu-style listing) to be integrated throughout the development similar to the residential development standards for multiple-family.

Environmental Resilience

While the City cannot prevent natural catastrophic events, it does have the ability to ensure that people and structures are not put in unnecessary danger. Through codes and ordinances, the City can play a role in "disaster-proofing" the community. The City already has several plans in place, including the Floodplain Management ordinance, Disaster Debris Management Plan, and Water Conservation Plan. Additional regulatory controls that could help minimize the impact of disasters include:

- Review of plans: Conduct periodic reviews and updates of weather-related emergency response plans; including whether existing plans adequately address all possible risks to the community.
- Severe weather: Review and revision of building codes relating to storm, fire, earthquake, and flood-resistant design. Establish minimum mandatory standards for public buildings
- Fire: Establish guidelines on drought and fire-resistant vegetation. Conduct routine brush clearing
- Emergency response: Consider emergency response capabilities of closest fire station when establishing development height and density standards

Social Sustainability

Social sustainability is concerned with the level of well-being of a community. It refers to the ability to provide for the existing and future needs of citizens to ensure a high quality of life. This section discusses three aspects of social sustainability; healthy and vibrant neighborhoods, equitable access, and social and cultural connections.

Healthy and Vibrant Neighborhoods

Maintaining Vibrant Neighborhoods

Grand Prairie has many neighborhoods that are rich in character and appeal to a wide range of demographics. There are neighborhoods both large and small, some master planned, and others that have grown individually and organically. While new communities are important for meeting new demand and providing housing options; rehabilitation of existing neighborhoods is also vital. Older neighborhoods offer a character, created by elements such as scale and mature vegetation, that is often hard to achieve in new developments. Targeted revitalization of aging neighborhoods is a widely expressed desire by Grand Prairie residents. Continuously investing in existing neighborhoods is one way maintain a vibrant community.

A neighborhood with aging housing stock needs support mechanisms in place to help keep its housing stock strong, unique, and active. As neighborhoods continue to age, it will be important to maintain and expand programs and initiatives focused on housing maintenance and/or improvement. It will be particularly important to implement strategies for older neighborhoods in central and northern Grand Prairie.

Code Compliance and Homeowner Assistance

Code compliance is a critical tool to maintain existing neighborhood quality, improve neighborhood image, sustain occupancy, and build community between neighbors. As neighborhoods begin to age, the homes within a neighborhood begin to show signs of wear and tear. The Code Compliance Department serves as a resource to monitor and initiate necessary repairs for general upkeep in neighborhoods such as litter, debris, high grass and larger issues like graffiti, junk vehicles, and dangerous buildings. By addressing smaller issues before they become dangerous and educating residents about the benefits of property maintenance, aging communities sustain a longer life cycle.

Another critical tool to maintaining existing neighborhood quality is homeowner assistance programs. These programs provide support for homeowners to maintain their homes. Grand Prairie has multiple programs in place, to include the housing rehabilitation program, reconstruct program, and emergency home repair program. These programs should continue to be funded and expanded. My GPTX, the mobile application described in Crowdsourcing on page 96, gives residents the ability to report issues to the Code Compliance Department. A potential expansion of the City's homeowner assistance programs would be the incorporation of capabilities for residents to request assistance through My GPTX.

Community Improvements

Creating a sense of place is another method to maintain the quality of neighborhoods and improve the overall quality of life. This can be achieved through beautifying major community centers. This type of improvement acts as a catalyst for other areas within the City and inspires residents to take ownership of their community. This can be accomplished through creating engaging public spaces and incorporating interactive art work in public locations like Main Street in downtown.

Community improvement may take the form of murals on the side of buildings, installation of art pieces across the City, distinct district signage, and integration of public seating in entertainment districts. Implementation of such initiatives are difficult to achieve due to regulatory barriers or public support. A method of trying out potential improvements is to conduct what is known as "tactical urbanism". This

method is a way to install temporary elements into a space to see how they are received prior to implementation. Often times, the installation area interactive such as temporary bike lanes, cafes, and outdoor games to encourage the community to engage in the experience. Following the trial, some elements may become permanent part of the streetscape. A number of the recommendations from Downtown Task Force reflect these types of initiatives. Recommendations include painting murals on walls that have been identified in the downtown area, pop-up events to engage residents, and decorating crosswalks.

Lifecycle Housing

As the demographics of the community change, the housing needs will also change. Life cycle housing is an inclusive way of describing housing options that serve the needs of the population throughout the stages of their lives—from young singles to senior citizens. Many residents want to stay in Grand Prairie for as long as possible and having an adequate mix of housing options available gives them that opportunity.

Rather than following the model of traditional suburban design where housing types are segregated, a distinct benefit of incorporating life cycle housing is the ability of families to put down roots in their neighborhood, children to stay in the same schools, social networks and bonds to remain in place, and seniors to live close to family and friends. Several residential developments that meet the this need in Grand Prairie are already being developed. The Mira Lagos Townhomes are partially age restricted and provide some of the advantages of a single family home in a smaller footprint, which may be desirable for older residents. The Avilla Heritage residential development, which is a neighborhood of single family homes for lease, which provides families with the opportunity to live in a single family home with the flexibility of leasing. This is desirable for young families who may not be able to afford to purchase a home yet.

Mira Lagos Townhomes Rendering

Avilla Heritage Residential Development

In order to achieve these benefits, the appropriate mix of housing options should be considered. The following list identifies types of lifecycle housing:

- Apartments
- Small / Medium / Large Single Family
- Duplex Homes
- Townhomes
- Live-Work / Loft Units
- Mixed Use Residential
- Senior Living

Equitable Access

A socially sustainable community is one in which access to and availability of resources, amenities, and opportunities that improve the overall quality of life is equally offered to all residents. Access to neighborhoods and destinations, services, recreational amenities, and healthy foods have been discussed in Chapter 4 | Healthy Community. The availability of transportation options is directly correlated with this level of access. A multimodal transportation network offers a means of equitable access by offering transportation options to those less likely to have access to a car.

Transit

Mass transit provides a means for groups of people to travel throughout the community. While mass transit is typically associated with bus transportation, mass transit is any system capable of transporting masses of people such as buses, light rail, or trolleys that typically run on a fixed route and get people to places they need to go. The Grand Prairie is not currently integrated into a mass transit system, such as the Dallas Area Rapid Transit (DART) system, and therefore other options to transport masses of people through the City should be explored. In areas where mass transit is not available, other modes of transportation like ridesharing, discussed in Chapter 5 | Smart Community, can supplement this need by providing vehicular transportation throughout the City. This type of transportation can also be used as a compliment to public transportation systems by acting as a connector to other available transportation systems. A local rideshare system can provide transportation to places of interest and reduce stress on parking. In some cities, local rideshare systems have been developed as a small scale transportation network to get from one part of a district to another without using traditional buses.

Additionally, a local on-demand circulator system can be a quality option to circulate residents through the City; especially in areas with lower incomes. A circulator type service can run on a fixed route to major locations around the City and over time, expand to serve more areas of the City. As a transit service exclusively for the elderly residents, the Grand Connection fills a part of the need for equitable transportation and is a start to developing a cost effective city-wide transportation service.

Bikeability

Bicycle transportation provides an economical alternative to vehicular travel, while having lower travel times than that of walking. Creating a bikeable community also has the potential to reduce strain on current roadway networks and promote healthier choices. The first step in fostering bikeability is to create quality bicycle facilities. Safe bicycle facilities which connect neighborhoods to major commercial areas and places of interest create a network of usable routes which benefit all income levels. The City's current Parks

and Trail network shown on Map 10. Parks and Trails Map on page 89 shows an existing network of on and off-street bike facilities to connect different parts of the City.

Walkability

Sidewalks are a simple amenity that make a significant impact on the health, safety, and equity of the City. Pedestrian amenities such as wide paths, lighting, and benches greatly improve the usability of sidewalks for users. People are more likely to take advantage of sidewalks if they are safe to use in terms of visibility at night and proximity from vehicular traffic. By making simple improvements, residents have another option for transportation that is safe and functional.

Pedestrian amenities are important elements of ADA (Americans with Disabilities Act)-friendly communities. When provided by a developer, elements such as sidewalks and crosswalk features should be ADA compliant. All public buildings are currently ADA compliant and the city should continue to incorporate ADA accessibility elements in public and semi-public investments.

Social and Cultural Connections

Social Connections

The City showcases its historic pride and local culture in a number of different ways—including community gatherings, holiday celebrations, volunteer opportunities, fundraisers, and partnerships with numerous local organizations, non-profit groups, and civic organizations. Local businesses are encouraged to participate in and sponsor community events throughout the year, such as the annual Main Street Fest, Crawfish Boil, Flight of the Monarch, Big Event, Prairie Lights, Holiday Market in downtown, and Lone Stars & Stripes Celebration, and many other community-centered events throughout the year.

Cultural Connections

Grand Prairie's social and cultural diversity is unique to the character and identity of the community. The recognition of Grand Prairie's diversity strengthens the City's social capital, fosters community resiliency, and generates a positive community appearance through the display of community unification and pride. The City has achieved many great successes in displaying this unification and pride through its partnerships with local businesses, community partners, and civic groups. The City's success also lies in the programming of recreation areas such as indoor and outdoor recreational facilities, the promotion of public art displays, and hosting City-sponsored community events. These initiatives help to build the identity for the community and the overall image of the community pictured by visitors.

Economic Sustainability

Economic sustainability is a community's ability to continuously support an established level of economic production. It provides a sound economic environment by incorporating a variety of services and a diversity of industries into its economic base; thus, maintaining long term economic vitality. Economic sustainability can be achieved through thoughtful organization of land uses, fiscally responsible use of resources, and quality land use standards.

Land Use

Land use planning is pivotal to the economic sustainability of a community. This section details the intricacies and importance of balanced land use planning.

Residential

Residential land uses are the backbone of a city. Local residents define a city's identity and the number of housing units in an area (or rooftops) is one of the principle factors that retailers and businesses consider when looking for areas to locate. Despite its importance, residential development by itself does not generate the revenue a city needs in order to service and support its residents. This is particularly true of low density single family development. A mix of residential densities offers the City opportunities to attract and retain businesses as well as generate higher ad valorem tax revenues than through low density residential alone.

Additionally, a mix of densities typically represents a variety of housing products. This housing variety improves resiliency to fluctuations in the housing market and helps ensure the housing needs for all City residents (to include varying demographics, income levels, and lifestyles) are met.

Nonresidential Uses

Nonresidential development is important for two key reasons: it (generally) generates sales tax revenue and it provides services and amenities to the community. The sales tax revenue generated by nonresidential uses gives them a much higher return on investment (ROI) than most residential uses, and cities rely on this revenue as a significant source of funding for city programs and services.

The inclusion of nonresidential uses also helps prevent sales leakage; which occurs when residents spend their money in another city because the goods or services are not provided locally. Sales leakage can amount to millions of dollars in lost revenue for a community annually. Like residential diversity, nonresidential diversity is an important component for economic sustainability. Inclusion of a range of nonresidential land uses provides jobs and amenities that can help the City withstand volatility in the economic market.

Balancing Land Uses

Residential and nonresidential uses are both essential to the creation a successful city. However, having too much of one or the other could hinder the community. Balancing land uses is necessary for a community to ensure there is enough residential to support the commercial and enough commercial to serve the surrounding residential. Mixing land uses is encouraged to create more inclusive, sustainable, and healthier development patterns. At the same time, organization of land uses should be based on suitability to ensure the uses are appropriate in relation to each other. The Future Land Use Plan is intended to reflect a balanced development pattern that includes a diversity of housing, businesses, offices, and amenities to serve residents and maintain the City's vibrancy.

Development Standards

Many cities struggle to balance their desire for high quality development with pressure to remain business and developer-friendly. While it might seem counterintuitive, creating and enforcing high-quality design guidelines creates stability and appearance that is highly desirable to developers and citizens. One way to do this is by attracting development and redevelopment through financial incentives; requiring higher quality investment from those accepting public funds. Many cities, including Grand Prairie, use a targeted approach by establishing design guidelines for properties along major corridors. This is important because the conditions along major corridors, often without context, are the first and last images visitors, developers, and business owners see and remember.

Growth Management

As discussed in City Limits and Extraterritorial Jurisdiction on page 34, Grand Prairie has the option of incorporating more land in the future, subject to the current annexation laws. Annexation, if done correctly, can be cost-effective and a win-win for the City and local residents by opening up new areas for development and amenities. However, haphazard annexation can have the opposite impact - leaving the City with an area of land that is not cost-effective to service relative to its eventual development. The City should conduct annexation assessments for areas of interest, coupled with small area planning, to determine the viability of extending infrastructure and utilities.

Sustainable Community Strategies

- Review existing development guidelines, building codes, and engineering standards and identify necessary policy changes to integrate low-impact-development, energy conservation, open space preservation, and other environmental sustainability principles.
- Identify and protect key areas, linkages, and features that can be added to the network of natural and open space.
- Conduct periodic reviews and updates of emergency response plans.
- Continue to identify and pursue funding sources and tools to expand homeowner assistance programs.
- Expand the services and routes for the Grand Connection to serve additional residents.
- Collaborate with non-profit and community organizations to maintain an active database of community resources.
- Continue to support community outreach programs and cultural events.
- Reference the Future Land Use Plan when making land use decisions to organize land uses in a sustainable pattern.
- Reference the Future Land Use Plan when making development decisions.
- Periodically conduct market assessments to identify and recruit emerging markets and industries.
- Develop strategic marketing material for potential developers and tenants in targeted commercial areas such as Downtown and the IH 30 and SH 161 corridors.
- Conduct annexation assessments for targeted areas in the ETJ to determine infrastructure and utility needs and timing.
- Establish development plans for the ETJ to be prepared for sustainable future development after annexation.
- Encourage infill development in areas with existing infrastructure.
- Work with downtown businesses to ensure the future vitality of downtown.
- Encourage development around natural features, such as slopes, embankments, wetlands and tree stands rather than developing through them.

Chapter 7 | Focus Areas

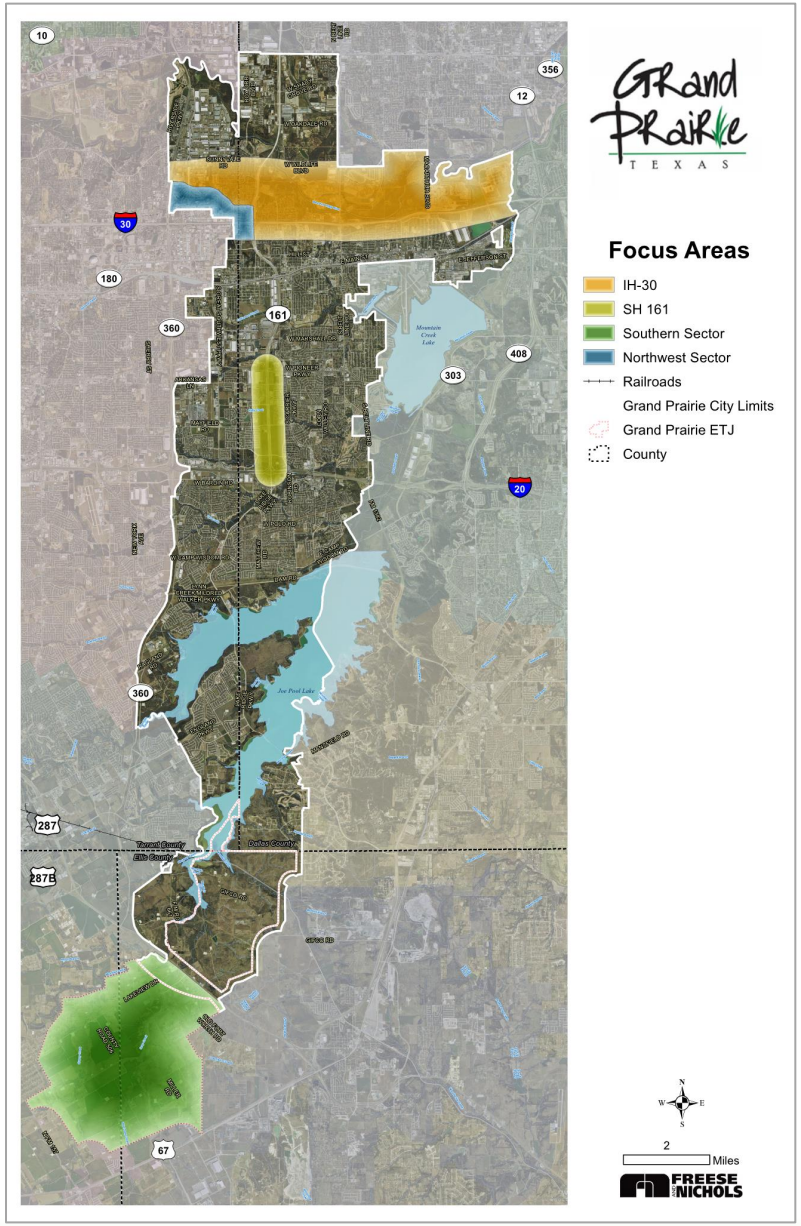
Special areas within the City were identified for focused planning efforts, known as Focus Areas. These areas were chosen based on the opportunities for economic development and the need to assess changing traffic conditions. The following areas, shown in Map 14, were designated as Focus Areas:

- **IH 30 Corridor** from the eastern to western city limits
- **Northwest Sector** of the IH 30 Corridor
- **SH 161 Corridor** from Pioneer Parkway to IH 20
- **Southern Sector** in the ETJ

This chapter assesses existing conditions of land uses and transportation connections, identifies the major issues affecting the focus area, establishes the desired character for the area, and lists appropriate implementation strategies to meet the vision for the area.

Issues have been identified using the input received from public outreach regarding each individual Focus Area and the analysis of existing conditions. The implementation strategies listed in this chapter are based on the strategies described in Chapter 4 | Healthy Community, Chapter 5 | Smart Community, and Chapter 6 | Sustainable Community.

Map 14. Focus Areas Location Map



IH 30 Focus Area

Existing Conditions

Area Description

The limits of the IH 30 Focus Area used in the analysis are shown in Map 15. This focus area generally encompasses land within the city limits and along the north and south side of IH 30, extending from Mountain Creek on the east end to SH 360 on the west. The analysis also includes IH 30 frontage roads within the city limits as well as north-south roadways of SH 161 frontage roads, N. Carrier Parkway, NW 7th Street, Belt Line Road, and Macarthur Boulevard. Additional minor roadways connecting to existing and proposed IH 30 frontage roads were also included in the evaluation of traffic circulation and access.

Map 15. IH 30 Focus Area Location Map

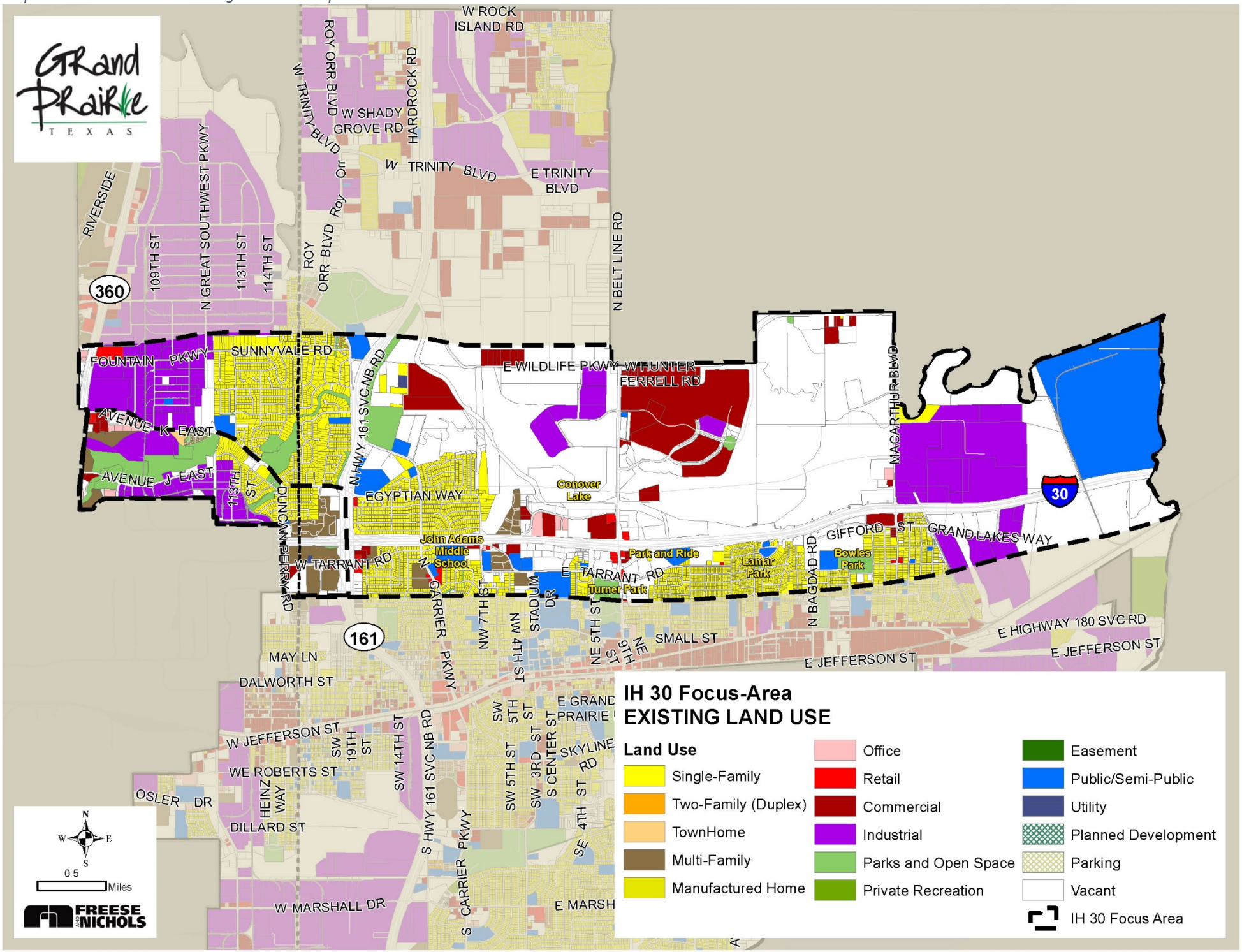
Physical Features

A prominent limiting physical feature in the focus area is the Trinity River. The river winds along the north side of IH 30. The boundaries of the floodplain extend even further along the waterway; thus, encumbering a large amount of land in the focus area.

Existing Land Use

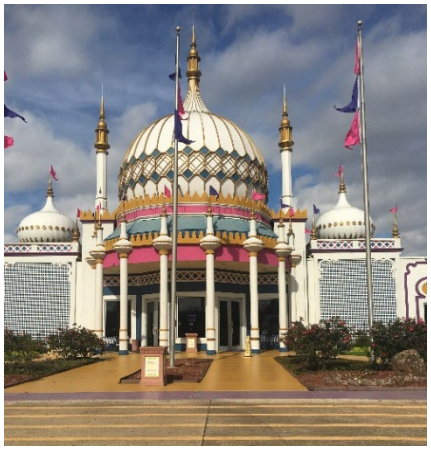
The existing land uses are shown on Map 16. The properties northeast of Macarthur Boulevard and IH 30 are predominantly large industrial uses. The central section of this area includes a mix of single family residential and commercial to the south of IH 30; to the north, there are regional entertainment venues, other commercial uses, and a large amount of vacant land along the Trinity River. The western section of the focus area is primarily made of single family neighborhoods, industrial park, and small pockets of office, retail and commercial uses north of IH 30 within the city limits.

Map 16. IH 30 Focus Area Existing Land Use Map



Current Zoning

The current zoning for this area is shown on Map 17. The eastern and western boundaries are both zoned industrial. Single family residential zoning is the predominant zoning south of IH 30 and north of IH 30, east and west of SH 161. There are multiple Planned Developments (PD-217, PD-170 and PD-41) in the central section of the focus area and north of IH 30. These PDs have established the character for this portion of the focus area. For example, PD-217 (located at the intersection of Belt Line Road and IH 30) was created to promote the development of mixed uses such as Entertainment, Retail, and Offices while complimenting Lone Star Park and open spaces.



There are also two existing overlay districts within the focus area. The IH 30 Overlay District establishes the corridor as a gateway to the Belt Line Corridor Overlay District with development standards and design criteria. The Belt Line Corridor Overlay District is intended to create a family oriented recreational and entertainment district by seamlessly blending the existing entertainment venues to the north of IH 30 at Belt Line Road with the existing open spaces to create recreationally focused park-like environment. The overlay fostered the development of a Park and Ride Facility to the south of IH 30 that was completed in 2015. The district outlines the desired aesthetic for the area termed as Spanish Prairie Modern, with simple lines, earthen berms, and natural indigenous stones.

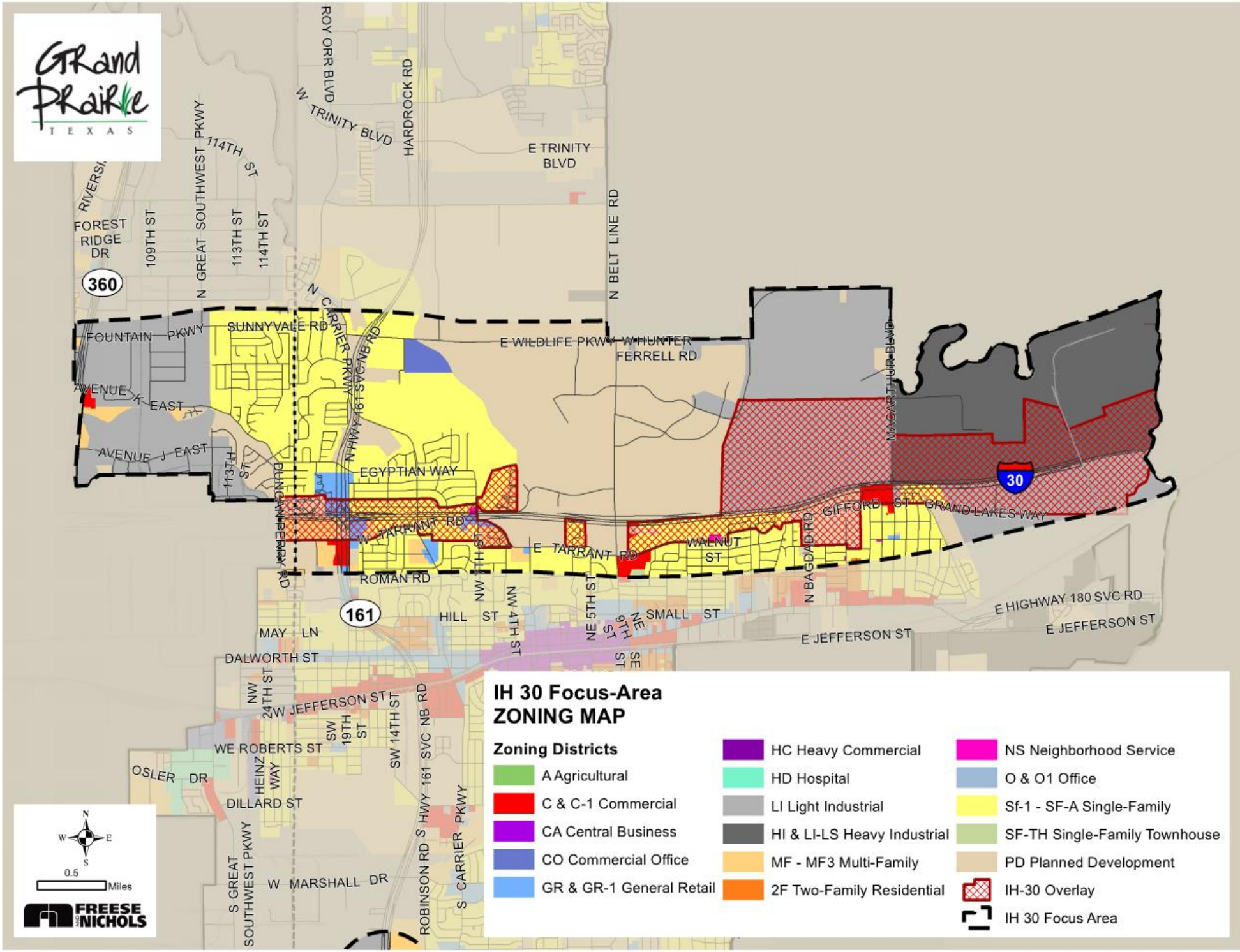
Potential Economic Activity Generators

Potential activity and development generators in the area are primarily centered around the intersection of IH 30 and Belt Line Road. Ripley's Believe It or Not, Lone Star Park, QuikTrip Baseball Park, and Verizon Theatre all bring visitors to the area and have the potential to bring new development to the area.

Traffic Conditions

IH 30 does not currently have continuous frontage roads throughout the city limits. However, as part of TxDOT's IH 30 improvement plans, frontage roads will be constructed along both sides of IH 30. Currently, frontage roads are under construction between Belt Line Road and Macarthur Boulevard. In addition, frontage roads are planned between SH 161 and Belt Line Road. Related improvements within this corridor illustrated in the TxDOT schematics are discussed later within this section.

Map 17. IH 30 Focus Area Current Zoning Map



Issues and Opportunities

What We Heard

The key takeaways from the public input regarding the IH 30 Corridor included:

- Traffic congestion in the area
- Flooding along IH 30
- Lack of Frontage Roads on IH 30
- Lack of grocery stores, neighborhood services, and retail
- Need for more residential (add more housing stock and promote commercial activity)
- Opportunities and desire for general office and entertainment oriented commercial development
- Opportunities for more regional commercial

Major Issues

Based on the analysis of existing conditions and public input the following major issues have been identified:

- Traffic congestion and poor connectivity
- Need for more commercial and residential development to take advantage of IH 30 access
- Balance new commercial and floodplain preservation

Traffic Congestion and Poor Connectivity

There is currently traffic congestion along the IH 30 service roads and sparse connections to other roadways. Continuous frontage roads along the highway and other proposed connections from existing roads are needed to improve access and circulation. Frontage roads also improve the ability to develop hotels, retail, commercial, and office along the corridor beyond the interchanges. The City is currently in coordination with TxDOT for the construction of frontage roads within city limits along the IH 30 corridor which will improve some of these conditions.

Need for More Commercial and Residential Development

There is currently a lack of commercial development along the highway. Development along the corridor should cater to commuter traffic and correspond with nearby attractions in Arlington and Dallas; while still serving the local residents. The addition of new residential development would support the location of restaurants, retail, and personal services to the corridor. The addition of commercial, retail, and neighborhood services would also benefit the existing neighborhoods where there is limited access to these amenities.

Balance New Commercial and Floodplain Preservation

Floodplain to the north of IH 30 serves as open space and the practical purpose of providing a buffer of permeable land for the Trinity River. It also limits possible development for valuable property adjacent to IH 30 that lies within the floodplain. Reclamation of the land should be studied in order to balance the reintegration of the land as viable for development with floodplain preservation.

IH 30 Assessment

Area Vision

The corridor should capitalize on new IH 30 frontage roads, new roadway improvements, and the existing zoning and overlay districts to create an entertainment corridor with mixed use, retail, and commercial development. An additional initiative should be to connect residential neighborhoods to commercial areas, while preserving the integrity of the neighborhoods and the natural areas along the Trinity River.

Future Land Use

Map 18 is an enlargement of the Future Land Use Plan that focuses on the IH 30 corridor. The Future Land Use designations for the area has not changed much from the 2010 Plan, as a large portion is already developed. Vacant parcels from the 2010 Plan were assigned land use designations to help achieve the vision of the corridor.

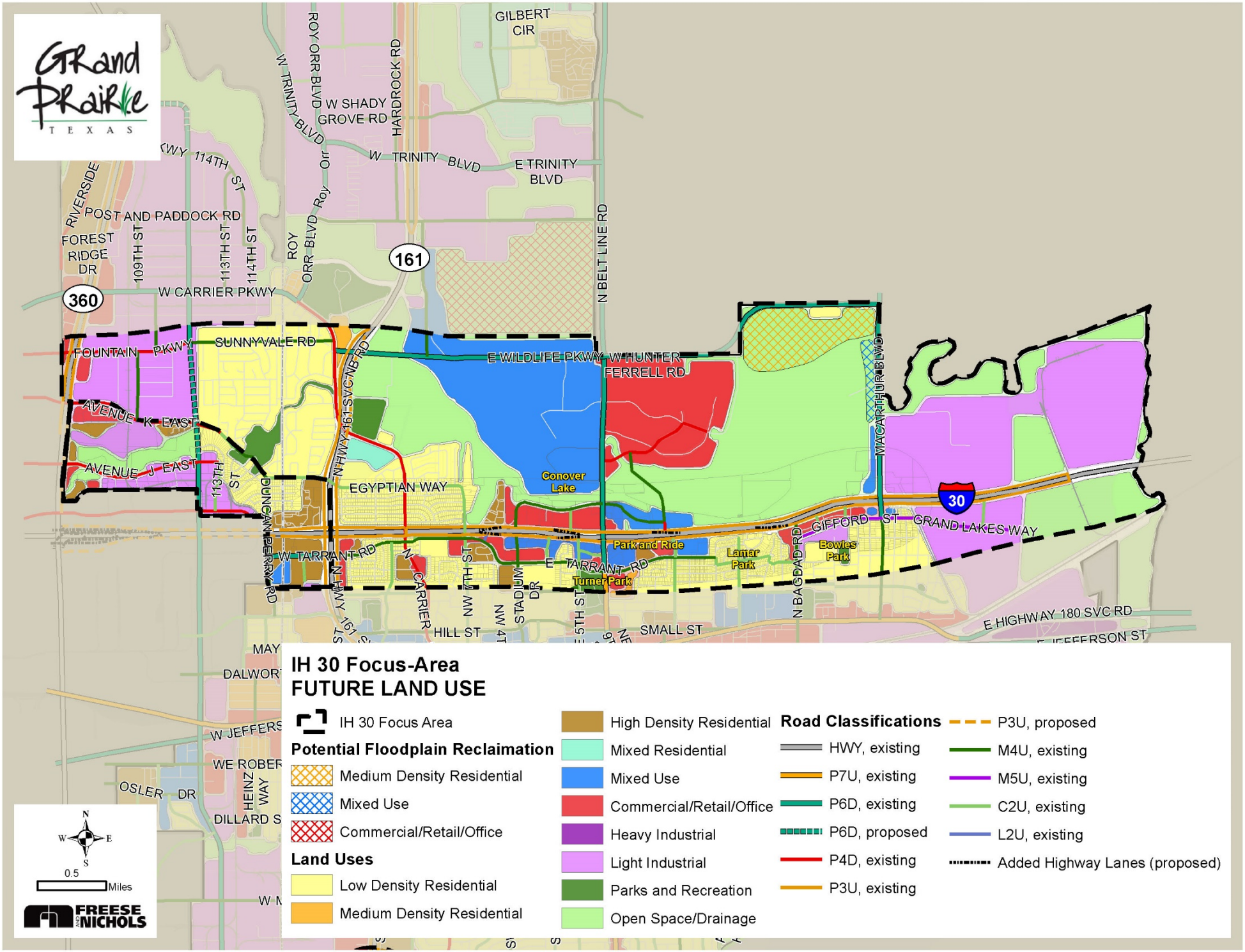
The western end of the corridor remains predominantly Light Industrial. The land uses east of SH 161 have also remained the same; with a large amount of Low Density Single Family on both the north and south side of IH 30. Smaller parcels of Commercial/Retail/Office are located south of IH 30 - along SH 161 on the west end and along NW 7th Street on the east end. These Commercial/Retail/Office locations will help to provide neighborhood service type uses in close proximity to the residential areas.

The Future Land Use designations from NW 7th Street to Macarthur Boulevard are intended to promote an entertainment oriented commercial area with a mix of residential and commercial uses. Commercial/Retail/Office and Mixed Use are located directly along IH 30. Mixed Use is added along Belt Line Road – west of Lone Star Park and the Verizon Center. There is also potential for added Mixed Use and Medium Density Residential development along Macarthur Boulevard north of IH 30 with floodplain reclamation.

The eastern end of the corridor also remains predominantly Light Industrial to account for the pipe and precast manufacturing facility (located at the northeast corner of Macarthur Boulevard and IH 30) and the Trinity River Authority Regional Wastewater System (located at the eastern city limits and north of IH 30).

The Open Space shown on the Future Land Use Plan is designated to accommodate the Trinity River floodplain.

Map 18. IH 30 Focus Area Future Land Use Map



Gateways

A city identity establishes a special sense of place and creates a strong identifiable image of the community. IH 30 is a key location to establish gateways at both the eastern and western entrance to the city and present the city identity through gateway signage, enhanced landscaping and city branding elements. The design of the gateway signage should showcase the existing city character, incorporate city branding and include native landscaping.

There are two types of gateway signage: major and minor gateways. Major gateways are located along the highway and designate the entrance to large areas such as a city. Such gateways could include monument signs, large-scale landscaping, and other features to define the area. Minor Gateways are a smaller version of major gateways that designate smaller community areas with a district character or feature and located at lower capacity roadways. These gateways are smaller than their major counterparts because they are located where vehicular trips are more local and traffic is slower moving. This type of signage would be appropriate for neighborhoods, commercial shopping areas, and industrial districts. Both major and minor gateways may have lighting, artwork, landscaping, or other features that highlight the local flavor of the city. The location for gateway signage along the corridor are identified on Map 19.

Major Gateway Example

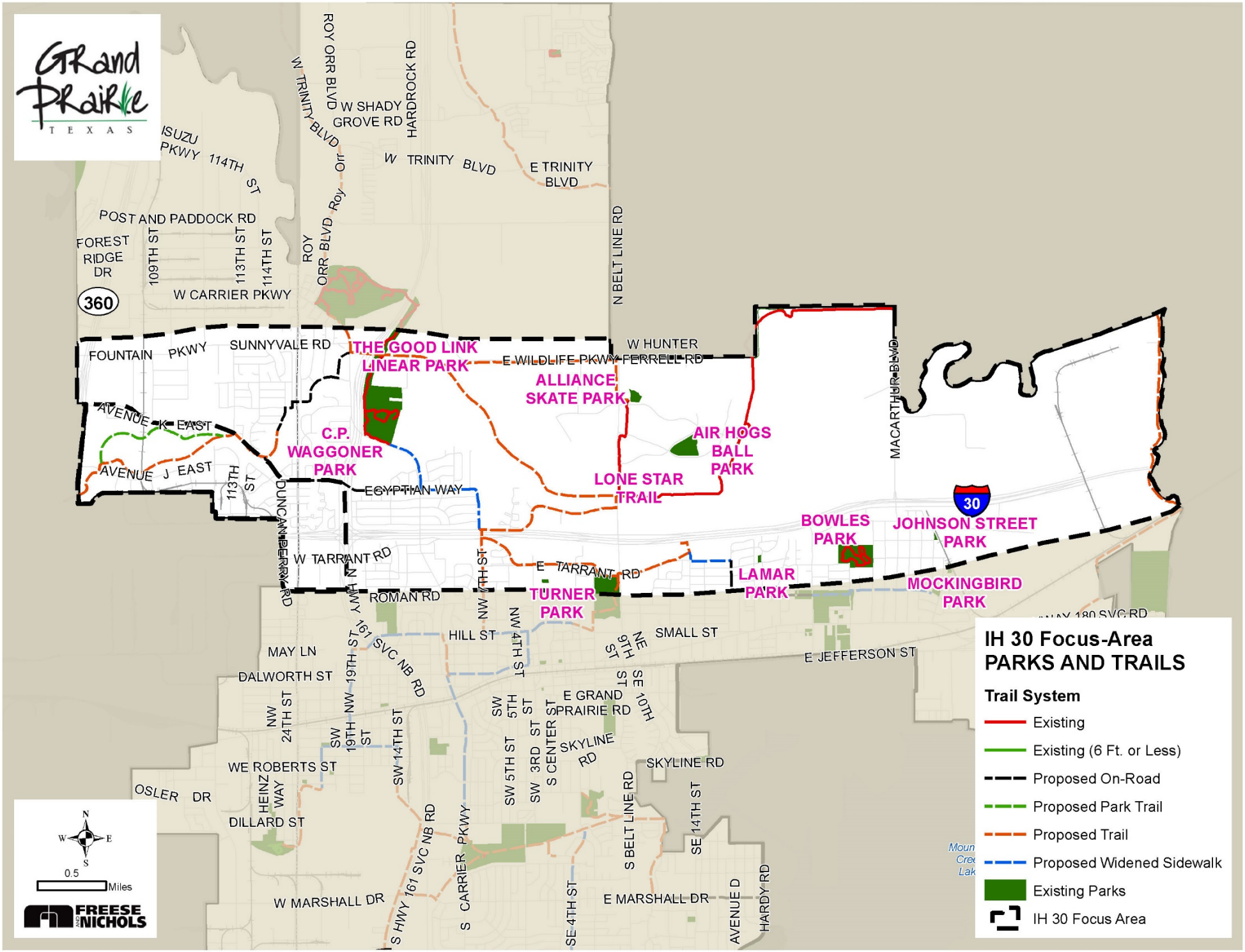
Minor Gateway Example

Multi-modal Connectivity

Connectivity throughout the corridor is provided by access from IH 30 to the local street networks, frontage roads, and existing and future trails. Trails are primarily located in existing neighborhoods and along the Trinity River. The trails provide access from residential areas to commercial areas south of IH 30 and to future commercial and mixed use areas along Belt Line Road. Additionally, frontage roads are planned along IH 30 in the future which will also increase connectivity throughout the corridor. Each sub-area section goes into more detail about multi-modal connectivity.

Map 19. IH 30 Focus Area Gateway Map

Map 20. IH 30 Focus Area Existing Parks and Trails Map



IH 30 Sub-Areas

The development pattern has established different characters along the IH 30 corridor. This section discusses the development character of each sub-area.

West Sub-Area [West City Limit to NW 7th Street]

Map 21. IH 30 Focus Area West Sub-Area Map

West Sub-Area Character

The character for this sub-area includes two distinct areas: light industrial west of Great Southwest Parkway, and predominantly residential to the east of the street. East of Great Southwest Parkway there is single family development on both the north and south side of IH 30 with little or no commercial buffer between residential and the service roads of IH 30 and SH 161. Improvements in this area should revolve around revitalizing existing commercial and residential to ensure a high quality of development. Providing neighborhood services close to the residential would also enhance the viability of the area. Specifically, an appropriate location for a grocery store should be identified to serve the local community.

Gateways

Gateways should be located in this area to designate the western entrance of the City and the smaller community areas. A major gateway located on IH 30 at the western city limits, and on SH 161 at the northern city limits, will welcome commuters to the City. Smaller minor gateways would be appropriate at Duncan Perry Road/Avenue K to designate the industrial district and at N. Carrier Parkway to identify the entrances of the neighborhoods.

Figure 22. Major Gateway Sign

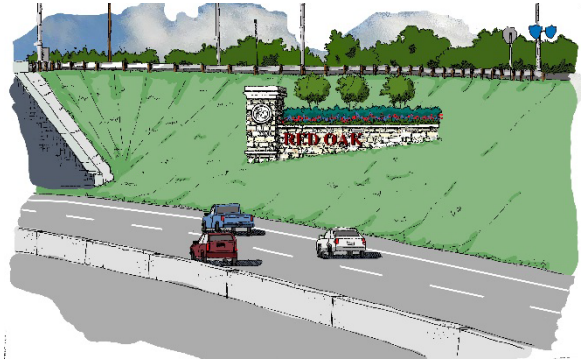
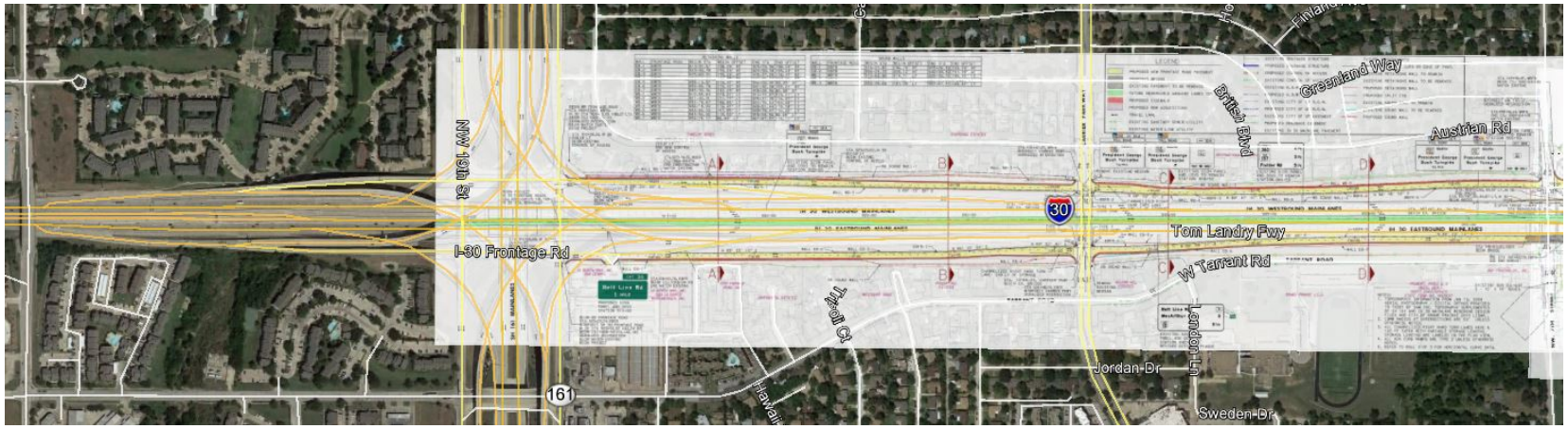


Figure 21. Minor Gateway Sign

West Sub-Area Traffic Circulation and Access

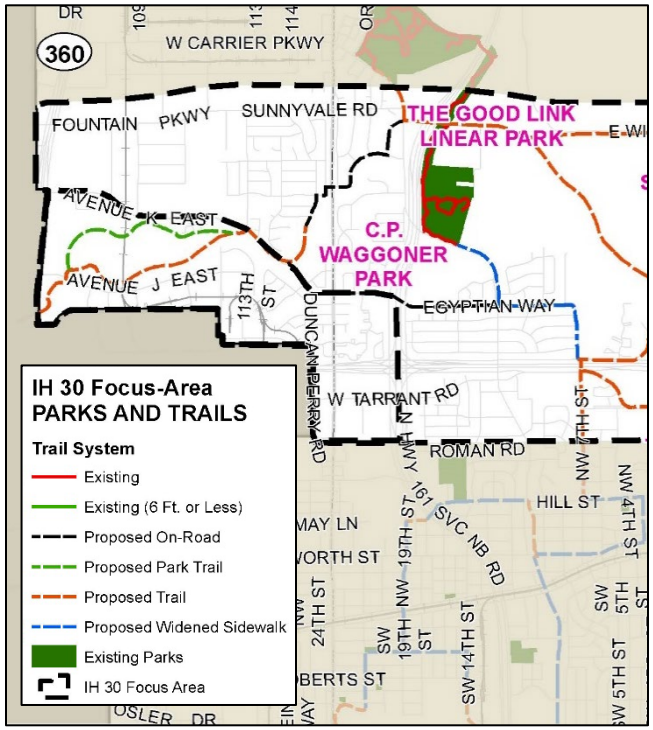
The roadway network within this section is well developed around IH 30 and includes a fully directional interchange at SH 161. There are also proposed frontage roads for IH 30 east of SH 161, shown in Figure 23. The existing land use along both sides of IH 30 is predominantly residential with single family development east of SH 161 and multi-family residential to the west. The multi-family developments have access through Tarrant Parkway and Duncan Perry Road; with only one access point along southbound SH 161/NW 19th Street. Both the proposed eastbound and westbound frontage roads, east of SH 161, would intersect with N Carrier Parkway. The proposed westbound frontage road would intersect with NW 7th Street. However, the proposed frontage roads would not provide any new direct access points for the existing development.

Figure 23. Proposed Roadway Improvements – West City Limit to NW 7th Street



West Sub-Area Pedestrian Connectivity

The residential neighborhoods are not in close proximity to the commercial areas along SH 161 and IH 30; which means there are no neighborhood services in close proximity to these neighborhoods. As shown in Map 20, there are future on- and off-street trail connections planned along the Johnson Creek. Additional on-street facilities are also planned on Egyptian Way to NW 7th Street where the trail relocates off-street. The trail system will provide connections to the nearby parks and commercial areas.



Mid-View IH 30 Sub-Area [NW 7th Street to Macarthur Boulevard]

Map 22. IH 30 Focus Area Mid-View Sub-Area Map

Mid IH 30 Sub-Area Character

The vacant parcels near the intersection of Belt Line Road and IH 30 present the most opportunity to establish this part of Grand Prairie as a regional commercial center with specialty retail, entertainment, and recreation venues as described by the IH 30 Overlay. The goal for IH 30 is to promote new development and cater to commuter traffic while still serving the local residents. New mixed use development and added commercial development will create a more comprehensive entertainment corridor.

Belt Line Road Development

Development around Lone Star Park should build off the success of the entertainment park that has been created. New retail and restaurant development as well as pedestrian friendly elements integrated into the design along Belt Line Road will allow the district to grant a unique experience to patrons when visiting the entertainment venues. A mix of residential types ranging from upscale apartments and townhomes to small single-family lots to the west of Belt Line Road (designated as Mixed Use) would be appropriate in the area. A mixed-use destination with apartments above and retail below - featuring public spaces and outdoor seating - will help to enhance the pedestrian oriented entertainment district. Mixed use development would be more appropriate along Belt Line Road while stand-alone residential may be more appropriate along Wildlife Parkway.

Highway Oriented Development

Restaurants, retail, and hotels incorporated into the highway frontage capitalizes on tourist traffic visiting attractions in Grand Prairie as well as those in Arlington and Dallas. Providing lodging, restaurant choices, and retail selections will allow visitors and tourist more options when visiting attractions in neighboring cities. It will also provide residents within the City additional options in the IH 30 corridor that were not previously available. Specific design requirements for commercial development within the corridor should be created, especially for highway-oriented development. Design requirements for this area should include specifications for signage, landscaping, and facades.

Floodplain

A large area east of Belt Line Road is in the floodplain. As discussed on page 105, floodplain reclamation is a good option to create more development opportunities in this area. Reclaiming floodplain is an option to redesignate land previously undevelopable due to the potential for flooding. By reclaiming the land for development, the City will regain valuable land and beneficial tax dollars. The floodplain reclamation process does not guarantee reuse of the land, but is an option that should be explored; particularly in the areas shown on Map 23 along Belt Line Road. A portion of the land west of Belt Line Road, north of IH 30, has already been reclaimed through this process and development has already occurred on the site. Further assessments have been conducted to identify other potential areas within this section of the corridor.

Figure 24. Successful Floodplain Reclamation – Wildlife Commerce Park (SW Corner of Wildlife Pkwy. and Belt Line Rd.)

Before

After

Gateways

Minor gateways are most applicable in this sub-area. Minor gateway signage is currently located at the entrance of the current Entertainment District (north of IH 30 at Belt Line Road). Signage is also located at each of the entrances of the venues within the Entertainment District. The signage serves as a welcome to the City as well as signaling the entrance to the district and as advertisement for events in the area.

Additional opportunities to create gateways for this area are available at the northern entrance (at Belt Line Road and Wildlife Parkway) and southern entrance (at Belt Line Road and Tarrant Road). Signage located south of IH 30 could also serve as directional signage to identify the route to downtown Grand Prairie; which serves as another destination location in close proximity to this sub-area.

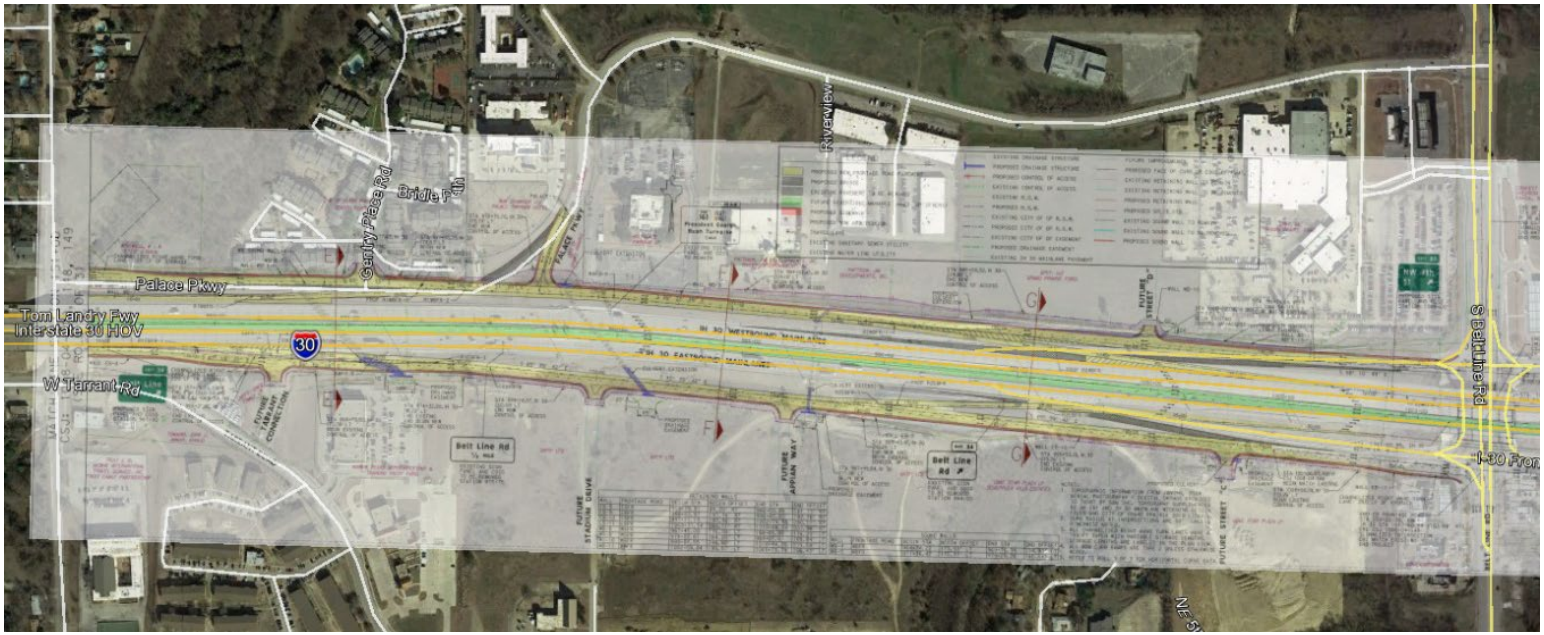
Mid-View IH 30 Sub-Area Traffic Circulation and Access

NW 7th Street to Belt Line Road

The designated land uses within this section are predominantly retail/commercial with new multi-family, and existing multi-family and single-family development. The existing developments currently only have access through Palace Parkway (north of IH 30) and E Tarrant Road (south of IH 30). Most of the parcels along the southern end of IH 30 and a few parcels along the northern end of IH 30 are currently undeveloped. The zoning overlay for Belt Line Road and IH 30 area will need to be updated in the near future.

The construction of frontage roads and the proposed new connections from existing roads to these frontage roads would enhance access and circulation for existing and future development in this sub-area. Under the existing roadway configuration, the development along the north side of IH 30 utilizes Palace Parkway and Belt Line Road to access to/from IH 30. The construction of frontage roads, and ramp reversals west of Belt Line Road, would improve vehicle access from westbound IH 30 to Palace Parkway (via the new off-ramp), as well as from Palace Parkway to westbound IH 30 (via a new on-ramp). This would also benefit Belt Line Road, by reducing traffic demand. The proposed roadway improvements for IH 30 from NW 7th Street to Belt Line Road are shown in Figure 25.

Figure 25. Proposed Roadway Improvements – NW 7th Street to Belt Line Road



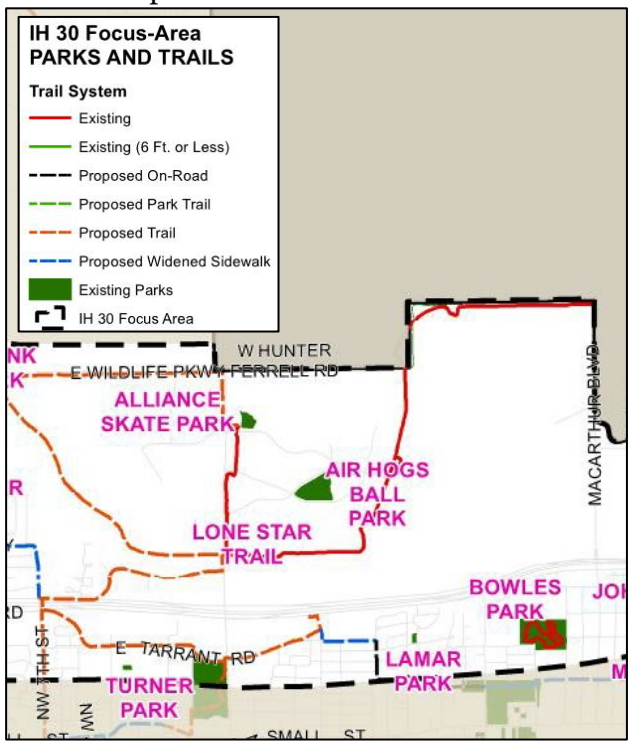
Along the south side of IH 30, the proposed Tarrant Connection (just east of NW 7th Street) would provide easy access to IH 30 via the frontage road and new on-ramp. The extension of Stadium Drive to the proposed frontage road would also allow direct access between IH 30 and the High School/stadium via new ramps. Two additional connections between Tarrant Road and the proposed frontage road would provide needed access and circulation for future commercial development.

Belt Line Road to Macarthur Boulevard

The parcels along both sides of IH 30 within this section are mostly undeveloped. Most of the land along the north side is designated as open space/drainage due to proximity to West Fork Trinity River, except for the parcels at the northeast corner of Belt Line and IH 30. These parcels are designated for commercial and mixed uses and would have access from the westbound frontage road, as well as from the future extension of Palace Parkway (east of Belt Line Road). These improvements would enhance traffic circulation.

The Palace Parkway extension would tie into the proposed north-south connector between the westbound frontage road and Lone Star Parkway. This connector would serve as an additional access point to Lone Star Park, especially from traffic to/from east, and help reduce traffic demand on Belt Line Road. The missing section of westbound frontage road between Belt Line Road and MacArthur Boulevard is currently under construction.

Along the south side, the parcels along the eastbound frontage road (between Belt Line Road and NE 15th Street) are also designated for commercial and mixed uses. Existing development in this section include commercial/retail development (near the southeast corner of the eastbound frontage road and Belt Line Road), and a park and ride lot west of NE 15th Street. The park and ride lot is accessible via the frontage road. However, due to the terrain, no other existing or future development would be accessible from this section of the frontage road. The mixed use designated parcels located between NE 15th Street and the existing residential development to the east would able to access IH 30 via NE 15th street as well as Tarrant Road. However, the existing residential development (between NE 15th Street and N Baghdad Road) would not have any new connections to the new eastbound frontage road.



Future development located between N Baghdad Road and Macarthur Boulevard (south of IH 30) would have access via Gifford Street; which runs parallel to the frontage road serving as a back access road. Additionally, there are two access connections between the frontage road and Gifford Street to serve future traffic circulation needs. Proposed improvements to IH 30 from Belt Line Road to Macarthur Boulevard discussed in this section are shown in Figure 26 and Figure 27 on page 139.

Mid-View Sub-Area Connectivity

The existing Trinity River waterway should continue to serve as an amenity for visitors and residents. A portion of trail is constructed from Macarthur Boulevard to Belt Line Road, circumventing the entertainment park. Completing planned connections from Belt Line Road to SH 161 both along Wildlife Parkway and the Trinity River would increase accessibility to the area and provide an additional amenity for residents.

Figure 26. Proposed Roadway Improvements – Belt Line Road to Macarthur Boulevard (1 of 2)

Figure 27. Proposed Roadway Improvements – Belt Line Road to Macarthur Boulevard (2 of 2)

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East Sub-Area [Macarthur Boulevard to East City Limit]

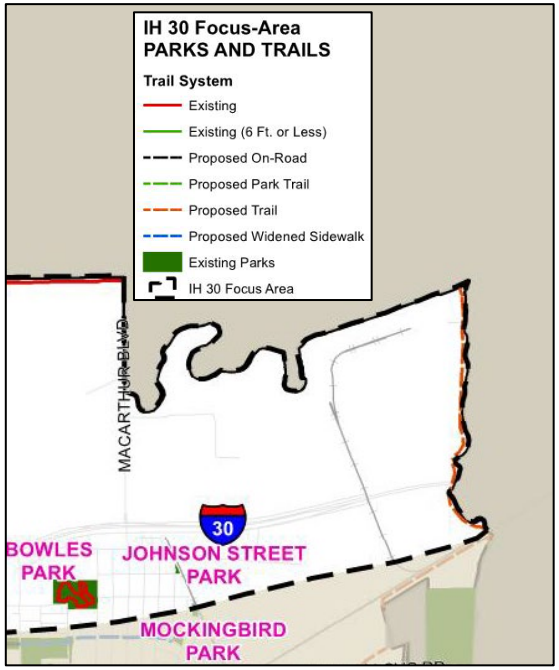
Map 24. IH 30 Focus Area East Section Map

East Sub-Area Character

The character for this area is primarily industrial oriented. Much of the existing development does not promote a pedestrian friendly or commercial entertainment environment. New industrial development in this area should incorporate high quality materials, landscaping and screening, and ensure the building design and aesthetics meet the goals of the IH 30 Corridor Overlay.

East Sub-Area Traffic Circulation and Access

The existing and future industrial area south of IH 30 is accessible via the existing eastbound frontage road and Gifford Street/Grand Lake Boulevard. Area further to the east, to the city limit, is floodplain designated as open space/drainage. North of IH 30, a large light industrial area is located along and accessible via Macarthur Blvd. TRA's Central Regional Wastewater System facility is located within the city limits, but is only accessible via Singleton Boulevard from Loop 12/Walton Walker Boulevard. No known future developments or roadway improvements are planned in this section.



East Sub-Area Connectivity

There is very little connectivity in this area. That may be due in part by the lack of existing development and the current industrial uses in the area. There is a future connection planned along Mountain Creek. When new developments are constructed in the vacant Light Industrial parcels east of the residential areas, additional connections should be considered.

IH 30 Strategies

The following table identifies strategies that can be utilized to achieve the vision for the IH 30 corridor and the correlating Guiding Principles.

Table 16. IH 30 Focus Area Strategies

Strategies			
Prioritize funding for proposed trail connections in the IH 30 Focus Area.	✚		
Coordinate with the economic development community to attract and introduce grocery stores into the IH 30 Focus Area.	✚		▲
Increase the overall and neighborhood-specific Walk Scores in the IH 30 Focus Area by encouraging the integration of pedestrian amenities closer to existing neighborhoods and within future Mixed Use and residential developments.	✚	▭	▲
Implement adaptive traffic signal controls on significant arterial streets crossing IH 30 to mitigate congestion at the approaches to IH 30 service roads.		▭	
Continue to coordinate with TxDOT for the construction of frontage roads along IH 30.			▲
Amend the existing IH 30 Overlay District to establish design and gateway criteria for each sub-area.			▲
Consider options to reclaim floodplain in the IH 30 Focus Area based on the existing floodplain reclamation study identifying potential opportunities for reclamation and development.			▲

Strategies	
Identify tech-related transportation, infrastructure, and community development projects specifically in the IH 30 Focus Area and work with the respective entities and departments to develop strategic plans to implement new technologies.	
Prioritize and implement multimodal transportation projects along major thoroughfares such as Belt Line Road, Wildlife Parkway, Macarthur Boulevard, and Tarrant Road.	
Identify sustainable design elements to incorporate into overlay standards.	

Northwest Sector Focus Area

Existing Conditions

Area Description

The Northwest Sector focus area is east of SH 360 and west of SH 161, north of IH 30 to Carrier Parkway and south of IH 30 to Avenue E. This area has been highlighted as an area for focused planning because of truck access and circulation on some of the area roadways that pass through the residential development, as well as pending changes to access to and from SH 360 and IH 30 as a result of improvements to the highways being implemented by TxDOT.

Figure 28. Existing Highway Access Conditions near the interchange of SH 360 @ IH 30

Land Use and Zoning

Existing Land Use

The focus area is mostly built out with the majority as light industrial and warehousing but with a significant cluster of residential land uses in the eastern portion of the focus area.

Future Land Use

The area shown on the map as a golf course has been re-developed as light industrial. A traffic impact assessment that was prepared for the redevelopment in 2015 indicates the anticipated additional traffic generated by the new land uses and the expected traffic distribution onto the local roadways to get to SH 360 and IH 30 and

does not distribute traffic directly onto SH 161. The Traffic Impact Study considers the improvements to SH 360 at the IH 30 interchange in its Year 2020 assessment.

Traffic Analysis

The changes in ramp configurations will impact existing as well as planned development in this sector of Grand Prairie.

TxDOT Schematic Design

The TxDOT schematic design for improvements to the interchange of SH 360 and IH 30 change the on and off ramp configurations between Avenue H and Avenue K to allow the introduction of direct connect ramps at the interchange. Specifically:

- The northbound onramp between Avenue H and Avenue J is eliminated
- The northbound offramp between Avenue J and Avenue K is reversed to be an onramp.
- The southbound offramp between Avenue H and Avenue J is eliminated
- The southbound onramp between Avenue J and Avenue K is reversed to be an offramp

In addition, the improvements to IH 30 will add an exit to a new westbound service road, eliminating the loop exit and replacing it with a more traditional diamond interchange with connection to Avenue H to the north at 107th Street and thus to Avenue J; to the south it connects into Six Flags Drive with access to Avenue E. Thus, a new north-south arterial roadway crossing of IH 30 is created as a product of this TxDOT improvement project on IH 30. The existing crossings of IH 30 at Great Southwest Parkway and at Duncan Perry Road are retained in the programmed improvements to IH 30.

Implications on Circulation and Access for Development in Northwest Grand Prairie

A review and evaluation of traffic access and circulation around the Northwest Sector focus area was conducted utilizing information from the Future Land Use Plan, Master Thoroughfare Plan, TxDOT schematics for IH 30 improvements, and available plans for future development. The changes in ramp configurations will impact existing as well as planned development in this sector of Grand Prairie. The discussion is divided into two sections described below.

Grand Prairie Access Modifications to/from SH 360

Access to and from SH 360 for Avenues J and K are changed due to the ramp modifications:

- The onramp to northbound SH 360 is moved from north of Avenue H to North of Avenue J. This change will push more traffic from development along Avenue H onto the northbound service road through the Avenue J intersection. It will also remove the need for Avenue J traffic to go along the service road through the Avenue K intersection to get on northbound SH 360.
- The elimination of the northbound offramp at Avenue K/Brown Boulevard will displace traffic headed for Avenue K and Fountain Parkway. One alternative route would be to exit at Carrier Parkway and U-turn to the southbound service road to proceed to Fountain Parkway and then to Avenue K/Brown Boulevard. Another alternative route would be to exit in advance of Avenue H and travel along the northbound service road and pass through the intersections at Avenue H and Avenue J to access Avenue K/Brown Boulevard and Fountain Parkway.
- Traffic from development along Avenue K/Brown Boulevard that currently has an immediate onramp to southbound SH 360 will need to travel along the southbound service road and pass through the intersections at Avenue J and Avenue H to access the southbound onramp to SH 360. This would cause motorists along Avenue K to seek out alternative routes. One alternative route would be to travel north on the service road to Carrier Parkway and U-turn to the southbound entry ramp to SH 360. Traffic from Fountain Parkway than formerly would have used the onramp south of Avenue K would also choose this alternative routing.
- The southbound offramp to Avenue H/Lamar Boulevard is moved from north of Avenue H to north of Avenue J. This change will place more traffic from development along Lamar Boulevard onto the southbound service road through the Avenue J intersection. It will also remove the need for Avenue J traffic to exit southbound SH 360 at Avenue K and go along the southbound service road through the Avenue K intersection to get to Avenue J.

Overall, there will be more traffic travelling along the service roads of SH 360 between Avenue H/Lamar Boulevard and Carrier Parkway after the ramp modifications. The implications of these movement displacements should be monitored for any needed intersection modifications. Some performance degradation of the service road intersections at Avenue H, Avenue J, Avenue K, Fountain Parkway and the U-turn at Carrier Parkway can be expected. However, some of the expected performance issues, especially at Avenue H, may be offset by the improved access to and across IH 30 at 107th Street.

Grand Prairie Access Modifications to/from IH 30

The IH 30 ramp and service road reconfiguration of the former toll plaza loop ramp creates a more traditional diamond interchange that will be beneficial to the access and circulation of development on the north and south sides of IH 30 between SH 360 and SH 161. The creation of a service road intersection at 107th Street creates a significant arterial roadway connection between Avenues J and H north of IH 30 and six Flags Drive and Avenue E south of IH 30. The existing crossings of IH 30 at Great Southwest Parkway and at Duncan Perry Road are retained in the programmed improvements to IH 30.

Traffic between IH 30 and SH 161 through Grand Prairie Residential Areas

An interchange with SH 161 is provided at Egyptian Way, which creates a useful passageway for motor vehicles along Avenue K/Duncan Perry Road/Egyptian Way between SH 360 and SH 161. Duncan Perry Road and Egyptian Way pass through predominantly residential development and are fronted with single family homes. This passageway already attracts truck traffic, and truck usage is anticipated to increase as the golf course is redeveloped with additional commercial buildings and with the ramps modified along SH 360. The extension of Great Southwest Parkway as a north-south roadway to Avenue K and Fountain Parkway could serve to give the commercial development a functional alternative to using the passage along Duncan Perry Road and Egyptian Way through the residential area.

Improvement Needs

1. The extension of Great Southwest Parkway will be important for the attraction of industrial traffic along Avenue K and Fountain Parkway away from use of Egyptian Parkway and Sunnyvale Road through the residential areas. The most critical part of the extension of Great Southwest Parkway is to connect northward to Avenue K. With the development of the golf course without any provisions for roadways connecting Avenue J to Avenue K, a passage to and from Avenue K to Avenue H along Great Southwest Parkway will be important for access to and from IH 30 as well as SH 161 via the 107th Street crossing of IH 30.
2. Once the extension of the southern section of Great Southwest parkway to Avenue K is accomplished, it may then be feasible to designate Great Southwest as the preferred truck route and consider restricting truck movements along Egyptian Way. A similar truck route designation to Carrier Parkway and restriction along Sunnyvale Road may be considered once Great Southwest Parkway is extended to Fountain Boulevard.
3. There is anticipated to be a significant volume of displaced traffic that will want to make a U-turn movement from northbound service road to the southbound service road of SH 360 due to the ramp modifications. Examine ways to enhance the accommodation of U-turns on the Carrier Parkway bridge over SH 360. The most straightforward, but expensive treatment would be to widen the Carrier Parkway bridge to add a U-Turn lane.

Northwest Sector Focus Area Strategies

The following table identifies strategies that can be utilized to achieve the vision for Northwest Sector Focus Area and the correlating Guiding Principles.

Table 17. Northwest Sector Focus Area Strategies

Strategies	
Extend Great Southwest Parkway to attract industrial traffic/development along Avenue K and Fountain Parkway.	
Designate Great Southwest Parkway as a preferred truck route.	
Examine ways to enhance the accommodation of U-turns on the Carrier Parkway bridge over SH 360.	

SH 161 Focus Area

Existing Conditions

Area Description

The SH 161 Focus Area is located in the mid-section of the City with large tracts of vacant property on both sides of SH 161. The boundaries, shown in Map 25, generally encompass both sides of the roadway and stretch from Pioneer Parkway (as the northern boundary) to IH 20 (as the southern boundary). Major north-south roadways within this focus area include the SH 161 frontage roads, Robinson Road, and Esplanade Drive (both existing and proposed). East-west roadways include Pioneer Parkway, Arkansas Lane, Warrior Trail, Mayfield Road and Forum Drive. This area was chosen as a focus area for the availability of vacant parcels for development, current traffic conditions along SH 161, proximity to IH 20, and desire to build upon the synergy of current development activity.

Map 25. SH 161 Focus Area Location Map

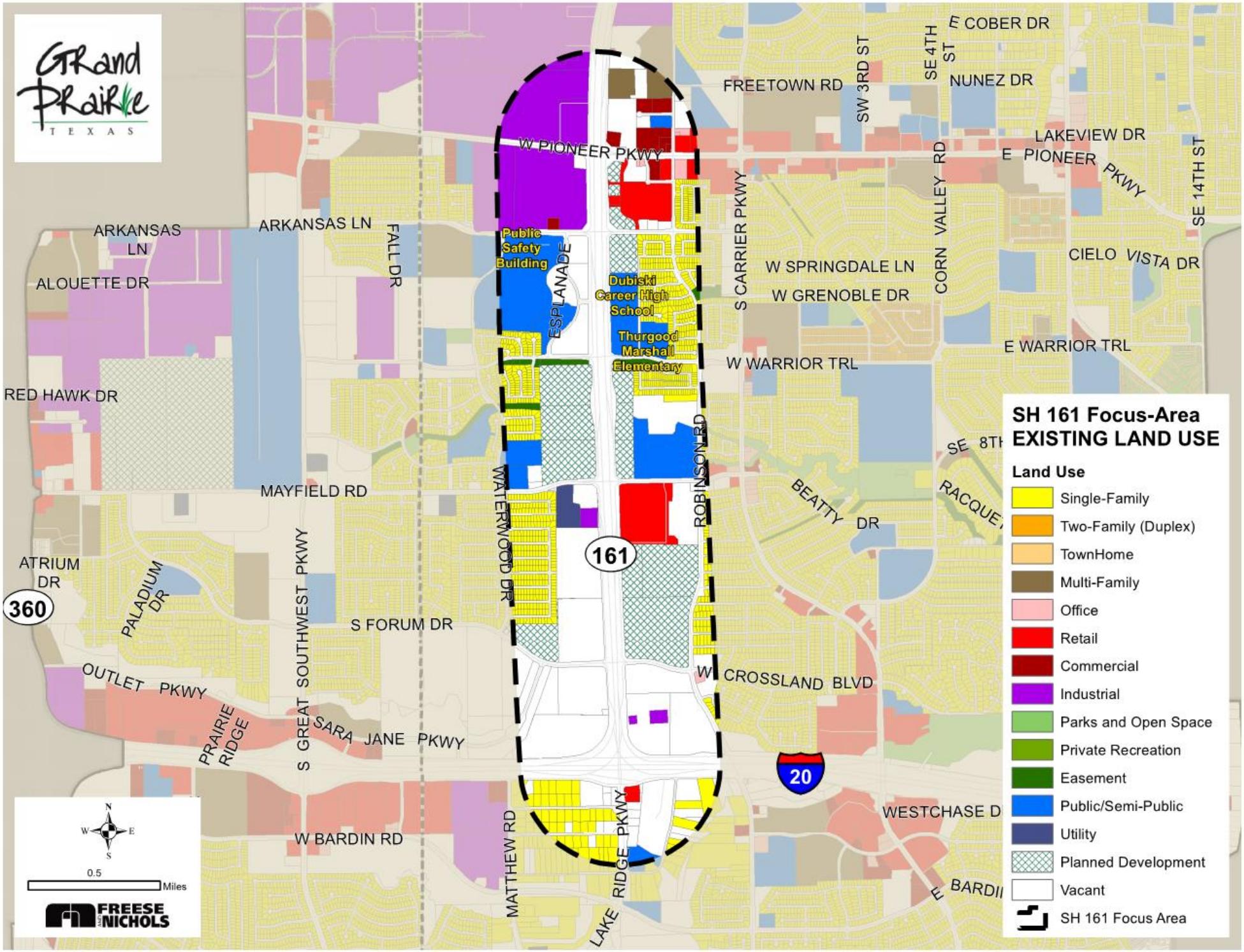
Physical Features

There are two waterways cutting horizontally through the corridor. Kirby Creek is located at the northern end of the area and a smaller creek at the southern end (along IH 20). Central Park is also located at the northern end of the district and incorporates Kirby Creek into the design of the park.

Existing Land Use

As shown on Map 26, there are industrial land uses in the northwestern part of the focus area, single-family development near the outer-edge of the area boundary, and a significant number of vacant lots within the boundary. Developments have been proposed for majority of these vacant lots. IKEA is located on a large commercial lot along SH 161 in the central section of this area and The Epic Waters Indoor Water Park is located on one of the vacant lots south of the Arkansas Lane. There are several public and semi-public facilities in this area, mostly located on the northern end. The area south of the SH 161/IH 20 intersection is currently developed as single-family lots.

Map 26. SH 161 Focus Area Existing Land Use Map

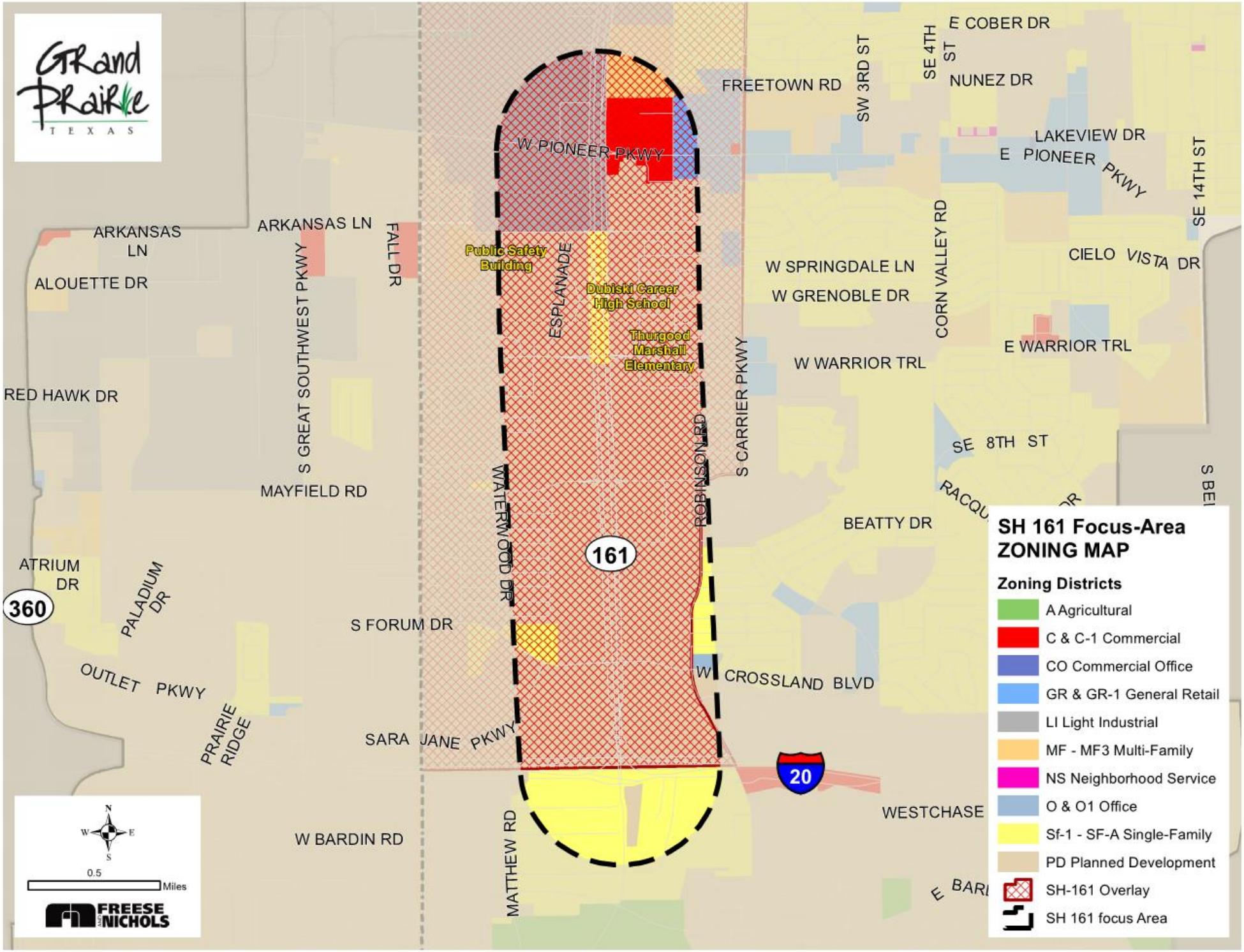


Current Zoning

This area is predominantly zoned with Planned Developments as opposed to stand alone zoning districts. Planned Development Districts: PD-351, PD-299, PD-187, PD-266, PD-143, PD-294, PD-331, PD-288, PD-294, PD-294 (D), PD-266, PD-91, PD-144, PD-273A and PD-299 fall completely or partially within this area. The PD districts generally allow for commercial and retail shopping centers. A majority of the new proposed developments, as depicted in Map 27, are being zoned as Planned Developments. The multiple Planned Developments along the corridor will have a significant impact on the how the area will be developed and what options are available.

Of the existing PD districts, two of them have plans being reviewed or under construction. PD-351 will be a big box retailer with commercial outparcels. IKEA is the newest constructed store within PD-294. This development will act as one of the anchors for the Epic Town Crossing; which is a collection of shopping centers that stretch on both sides of SH 161. The Epic Waters Indoor Water Park is a major anchor within PD-187. The PD also allows a mix of residential and commercial uses; including Grand Central Crossing across SH 161.

Map 27. SH 161 Focus Area Current Zoning Map



Economic Activity Generators

There are several significant projects under construction or proposed in vacant parcels which will drive activity in the corridor. A brief summary detailing some of the major developments is listed below. A map showing these and other programmed development within the study area is presented in Map 28.

IKEA

- Located southeast corner of SH 161 and Mayfield Road.
- Opened in December 2017.
- 333,000 SF store expected to generate 372 trips in PM peak hour on weekdays and 686 trips on Saturday peak hour.
- New traffic signal added on Mayfield at IKEA Place.

Walmart

- Located on the southeast corner of SH 161 NBFR and Pioneer Parkway (SH 303).
- 190,000 SF retail center, 8 out parcels with a range of fast food restaurants, banking, retail, and gas stations.
- Opened in 2017.
- Expected to generate 824 trips in PM peak hour on weekdays and 982 trips on Saturday peak hour (including pad sites).
- Access through 6 driveways including 2 existing.

Epic Towne Crossing- East

- Located on the northeast corner of SH 161 and Mayfield Road.
- 102,500 SF shopping center, 35,065 SF of restaurant, and a 12 fueling position gas station.
- The site is expected to be built out by 2018.
- Expected to generate 519 trips in PM peak hour on weekdays and 693 trips on Saturday peak hour.
- No new roadways other than driveways are expected to be added.

Epic Towne Crossing- West

- Located west of SH 161 between Mayfield Road and Warrior Drive.
- 275,683 SF of shopping center, 47,750 SF of restaurant, a 33,912 SF movie theater, and a 20 fueling position gas station.
- The site is expected to be built out by 2018.
- Expected to generate 1229 trips in PM peak hour on weekdays and 1602 trips on Saturday peak hour.
- SH 161 SBFR at Mayfield: Addition of SBRT lane to accommodate background plus IKEA traffic. In addition, signal retiming is needed to accommodate site traffic.
- A signal is warranted at Esplanade Drive at Mayfield Road.

Grand Central

- Located along west side of SH 161 between Arkansas Lane and Warrior Trail; site access via proposed extension of Waterwood Drive.

The Epic

- A 120,000 SF recreation center/wellness/library/enrichment center
- Under construction and expected to open in Spring of 2018.

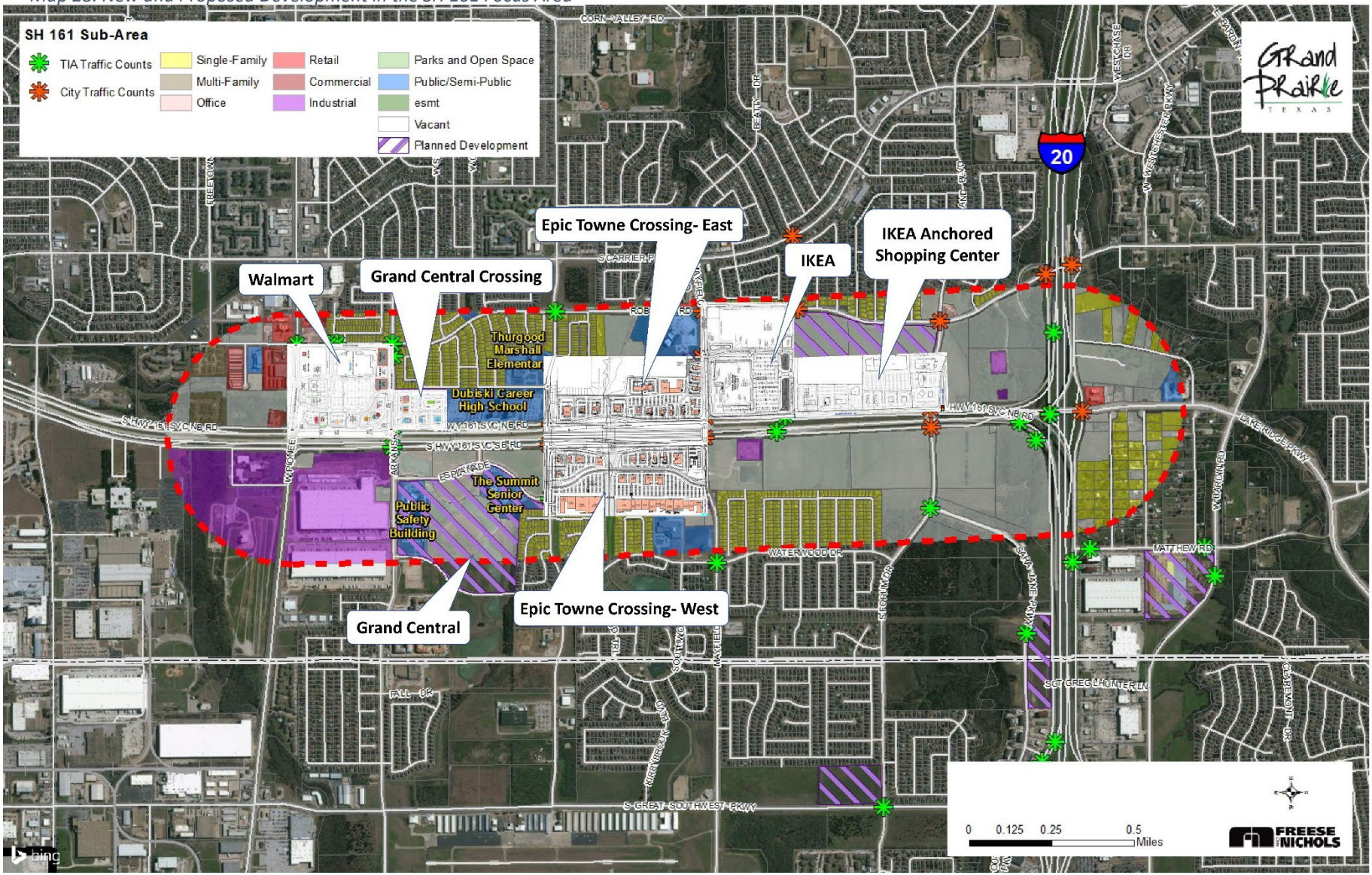
Epic Waters Indoor Waterpark

- An 80,000 SF indoor water park
- Opened in January 2018.

PlayGrand Adventures

- A 5-acre playground for all ages and abilities.
- Phase One is anticipated to be completed in Summer 2018.

Map 28. New and Proposed Development in the SH 161 Focus Area



Issues and Opportunities

What We Heard

The key takeaways from the public input regarding the SH 161 Corridor included:

- Traffic congestion in the area
- Opportunities for retail and entertainment
- Need for sound barriers in older neighborhoods adjacent to SH 161
- Concern about traffic cutting through neighborhoods to get to SH 161

Additionally, the public input identified opportunities and desires for recreational amenities and upscale retail/commercial including sit-down restaurants and entertainment venues.

Major Issues

Based on the analysis of existing conditions and public input, the following major issues have been identified:

- Traffic Congestion
- Desire for Entertainment Options
- Neighborhood Concerns

Traffic Congestion

There is currently traffic congestion in the corridor and anticipated growth, due to the addition of trips from future development in the area, will cause an increase in intersection delays along SH 161.

Desire for Entertainment Options

There is a desire for more recreation, restaurant and entertainment options in the corridor. Much of the land is currently vacant and there are limited retail and entertainment options currently available on this section of SH 161 and IH 20. The development plans that are in process will address this issue.

Neighborhood Concerns

Concerns were raised by citizens about existing traffic and noise in the corridor. As the corridor continues to develop, it is anticipated that the issues will only be exacerbated.

SH 161 Assessment

Area Vision

The vision for the corridor is to create a rich commercial district and recreation destination through high quality entertainment and commercial venues and retail services.

Area Character

The character envisioned for the SH 161 is a retail and entertainment corridor. In response to the desires of the community, and based on existing planned developments, uses in the district should be restaurants, retail, commercial, personal services, and entertainment venues. The existing Planned Developments have a significant impact on the development patterns in the corridor by establishing how the site will be organized and what type of uses are permitted. Any new developments in the corridor will need to be reviewed for consistency with the established character to ensure they meet the area vision.

As a retail and entertainment district, pedestrian friendly elements should be incorporated to allow visitors more ease of access from one part of the development to another. Protected pedestrian walkways through parking lots and wide sidewalks along the roadway are just some elements that can be included. The future trail connections along the corridor should be incorporated into any future development design as both access from the adjacent neighborhoods and an amenity.

The existing SH 161 Overlay District aims to preserve natural areas, create an aesthetically pleasing corridor, incorporate a mix of uses and provide direction for policy decisions. The overlay district does not give specific direction for the design of structures, landscaping density, and dimensional requirements other than that identified in the overall ordinance or in the PD. Amendments can be made to the overlay district to incorporate specific design standards.

Future Land Use

The existing industrial parks in the northwest section of this area are identified on the Future Land Use Map as shown on Map 29. The vacant lots along SH 161 are designated to have non-residential uses to create office, retail, and commercial developments. On the southern end, there is a strip of land designated to remain as Open Space. The single-family developments south of SH 161 and IH 20 intersection were initially envisioned to be developed as non-residential development in the Future Land Use Map of 2010 and remained designated for non-residential development in this update.


BJ's
RESTAURANT
TAKE OUT
DELIVERY

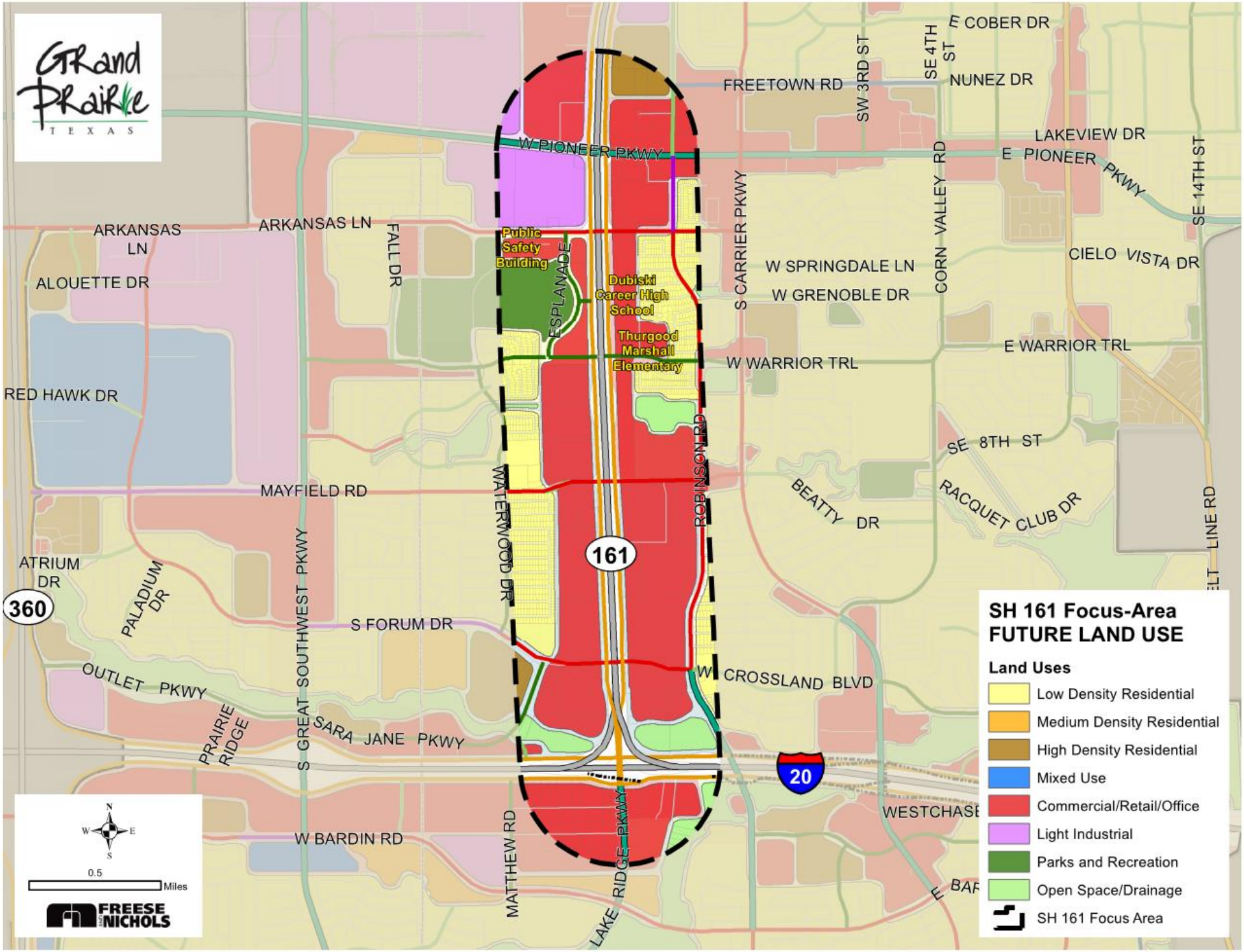

LONGHORN
STEAKHOUSE


FRIDAYS

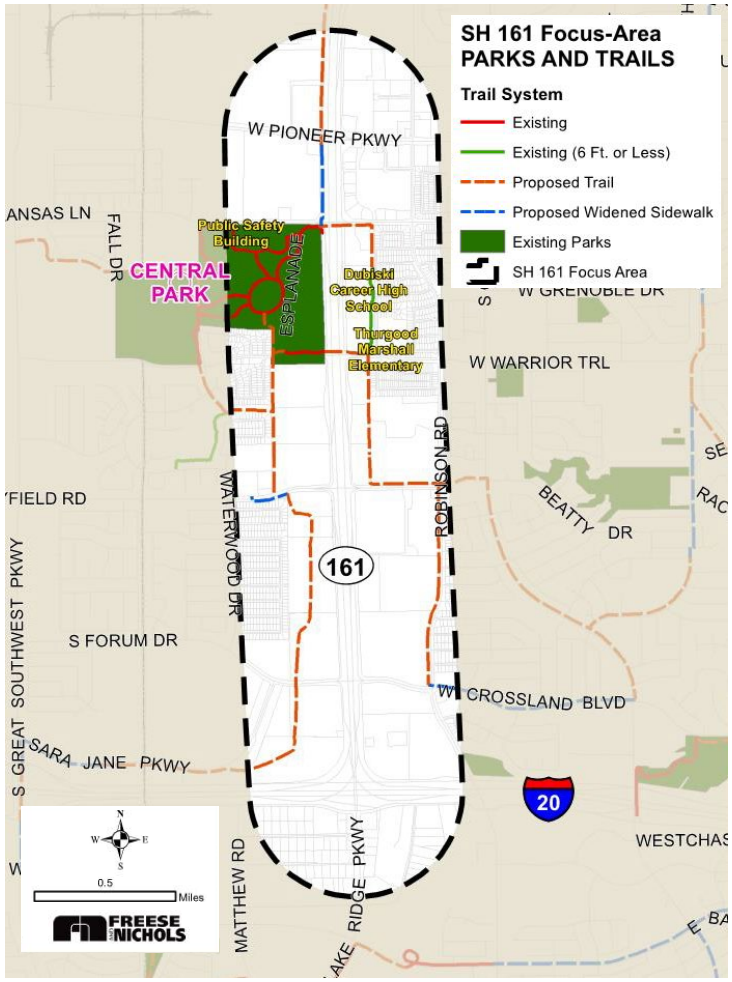

PHENIX CITY
RIVER
WALK
WEST
TRAIL
14TH STREET PLAZA


TARGET

Map 29. SH 161 Focus Area Future Land Use



Map 30. SH 161 Focus Area Parks and Trails



Area Pedestrian Connectivity

Existing trail connections, shown on Map 30 identifies trails located within Central Park, near the intersection of SH 161 and Arkansas Lane, at the northern end of the area. These connections provide pedestrian access from the nearby residential neighborhood (to the south) to the park and soon-to-be incorporated recreation venues. Additional north-south, off-street trail connections are planned on both sides of SH 161; where the residential neighborhoods meet the adjacent commercial areas. On the west side of SH 161, part of the trail is planned to be incorporated into the shopping center development. This will allow greater access to the commercial center from the neighboring residential and foster a more pedestrian friendly development although a highway bisects the corridor.

Area Gateways and Image Corridors

Initiating a minor gateway for the corridor will establish a front door for the district and let visitors know they have arrived. Gateway signage should be placed on SH 161 at the southern entrance of the focus area at IH 20. Secondary gateway signage and monumentation elements can also be located at the northern end. Standard signage, lighting, and landscaping along the corridor will make for a consistent aesthetic design across developments.

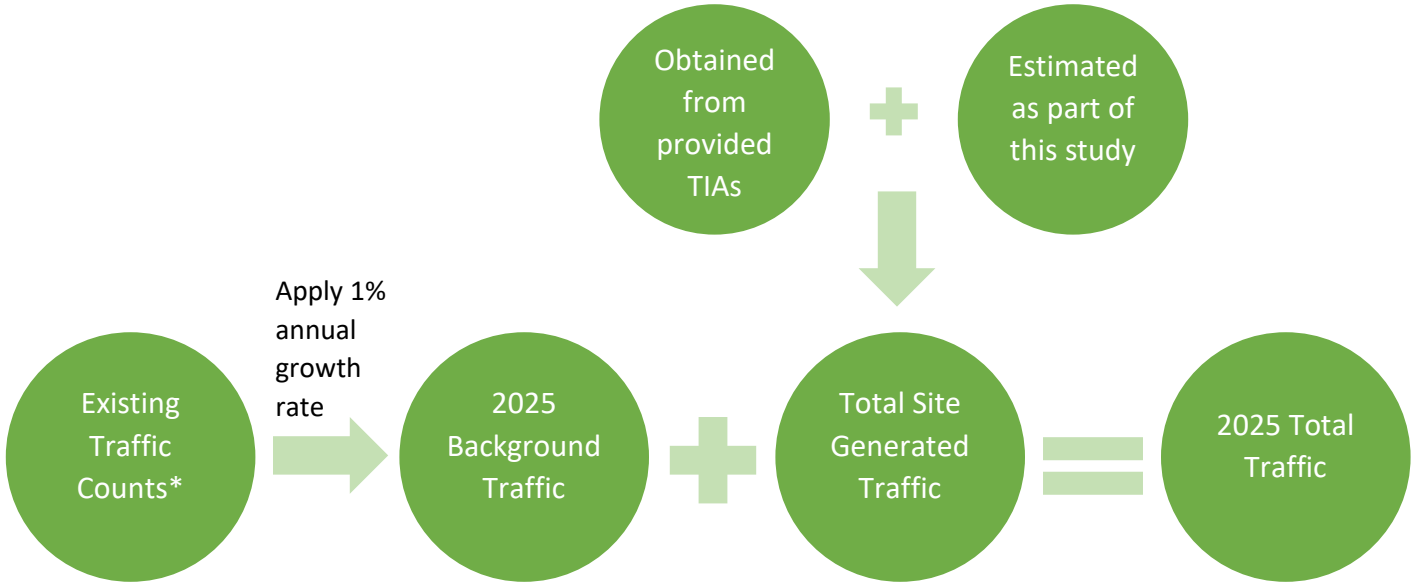
Area Traffic Analysis

A traffic analysis was conducted for the assessment of localized roadway needs. This assessment considered both the existing and planned roadway network for the area as well as planned development for undeveloped parcels within the study area. Traffic analysis tools were utilized to assess traffic impacts of planned development and evaluate options for needed roadway improvements and associated traffic control elements. The following sections describe the traffic volumes used in the analysis, analysis methodology, results, and proposed mitigation measures to improve the future intersection operations to acceptable levels.

Traffic Volumes for Analysis

Traffic volumes used in the analysis of the subarea intersection traffic operations used a methodology involving the use of available recent traffic counts, site generated traffic from available TIAs, estimates of site traffic onto intersections from proposed development in currently undeveloped parcels, and utilization of annual growth rates. The basic procedure used to develop the 2025 traffic volumes used in the analysis is summarized in Figure 29.

Figure 29. Procedure Used to Develop the 2025 Traffic Volumes for Intersection Analysis



*Obtained from the City and TIA Studies for Years 2014 and 2015

Existing Traffic Counts

The traffic counts provided by the city were collected as part of various traffic studies performed for the various proposed developments in the area. Traffic count data for some locations were provided in the form of raw counts while for other locations the data was extracted from TIA studies. Traffic counts for intersections along Pioneer Parkway and Arkansas Lane were collected in 2014 while all other counts were collected in 2015. These counts were grown to 2025 using an annual growth rate of 1% to develop the 2025 background traffic.

Site Generated Traffic

For sites with available TIA studies, the estimates of site generated traffic demand on to the study intersections were obtained from the study reports. These sites include IKEA, Walmart, Epic Towne Crossing-East, and Epic Towne Crossing-West.

There are several other development sites for which the estimates of site generated traffic were not available. These include development under construction, and several empty parcels where development is planned in the near future. The site generated traffic estimates for these sites onto the roadway network were developed as part of this analysis. The process involved estimating trip generation, trip distribution, and trip assignment onto the sub-area roadway network. These steps are described in the following paragraphs.

Trip Generation

The estimate of trips to be generated from the proposed land uses was developed based on its size and applying the recommended trip generation rates published in the Trip Generation Handbook, 9th Edition, published by the Institute of Transportation Engineers (ITE). The land use type and size of various parcels within each development area were either obtained from the available site plans, conceptual layouts, or obtained based on discussions from the planning staff. For some parcels where the building area was not available, estimates were developed by applying the site acreage to building area ratios calculated for other similar land uses located nearby. Table 18 summarizes the trip generation estimates developed as part of this analysis for development parcels for which a TIA study was not available.

Trip Distribution

The directional distribution of the site generated traffic was developed based on the land use patterns in the area and further referring to the estimates from approved TIAs.

Trip Assignment

Based on the directional distribution, the site generated traffic was assigned to the roadway network based on the most logical paths of access and egress between the trip origins and destinations.

The resulting accumulated site generated traffic volumes at the intersections were then added to the site generated traffic obtained from various TIAs to obtain the total site generated traffic from all new and proposed sites at the study intersections.

Total 2025 Traffic

The total site-generated traffic was then combined with the 2025 background traffic to obtain the total traffic volumes anticipated in 2025 for use in the analysis.

Table 18. Trip Generation Estimates for Proposed Development in the Study Area

Site No.	Development	Land Use	ITE Code	Size	Unit	ITE Rate	Weekday PM Peak		Weekday PM Peak	
							In	Out	In	Out
1	EPIC/Grand Central	Recreation Center	495	122,000	Square Feet	2.74	49%	51%	164	170
		Water Park	414	80,000	Square Feet	1.92	51%	49%	78	75
		Park	411	5	Acres	3.5	57%	43%	10	8
2	EPIC SE Parcel (7 acres)	Quality Restaurant	931	21,197	Square Feet	7.49	67%	33%	61	30
		Hotel	310	120	Rooms	0.6	51%	49%	37	35
3	EPIC NE Parcel (2.5 acres)	Quality Restaurant	931	8,712	Square Feet	7.49	67%	33%	44	22
4	Grand Central Crossing	Quality Restaurant	931	6,300	Square Feet	7.49	67%	33%	32	16
		QSR (FF w/ Drive Thru)	934	2,900	Square Feet	32.65	52%	48%	49	45
		QSR (FF w/ Drive Thru)	934	3.308	Square Feet	32.65	52%	48%	56	52
		QSR (HTO Sit-Down)	932	5.550	Square Feet	9.85	60%	40%	33	22
		Retail	820	8,100	Square Feet	3.71	48%	52%	14	16
		Hotel	310	120	Rooms	0.6	51%	49%	37	35
5	IKEA Centered Shopping Center	Retail (Lot1-4)	820	54,500	Square Feet	3.71	48%	52%	97	105
		QSR (Lot 5-6)	934	6,200	Square Feet	32.65	52%	48%	105	97
		Big Box Retail (Lot 7)	815	134,360	Square Feet	4.98	50%	50%	335	335
		Restaurant (Lot 7-8)	931	24,000	Square Feet	7.49	67%	33%	120	59
		Hotel (Lot 11-12)	310	200	Rooms	0.6	51%	49%	61	59
6	Commercial Development Along SB SH 161 Between Mayfield Rd. and Forum Dr.	Retail	820	465,00	Square Feet	3.71	48%	52%	828	897
		Retail	820	37,244	Square Feet	3.71	48%	52%	66	72
		Restaurant	931	24,829	Square Feet	7.49	67%	33%	125	61
7	Multi-family at NW Corner of Forum Dr. and Robinson Rd.	Multi-family	220	500	Dwelling Units	0.62	65%	35%	202	109
8	Big Box Retail SE of IKEA Along Robinson Rd.	Big Box Retail	815	258,746	Square Feet	4.98	50%	50%	644	644

Note: The trip generation estimates for IKEA, Walmart, Epic Towne-East and West are obtained from the TIA studies.

Analysis Methodology

A traffic operations analysis of major intersections within the sub-area was conducted using Synchro 10 software. The Levels of Service (LOS) results are based on control delay, measured in seconds per vehicle (sec/veh), and the LOS criteria per the Highway Capacity Manual (HCM 2010) methodology. The *HCM 2010 - Chapter 18: Signalized Intersections* describes the methodologies for estimating delay and defines the LOS criteria shown in Table 19.

Table 19. Intersection Level of Service Criteria

Signalized Intersections		Unsignalized Intersections	
Control Delay (Sec/Veh)	LOS	Control Delay (Sec/Veh)	LOS
<=10	A	<=10	A
>10-20	B	>10-15	B
>20-35	C	>15-25	C
>35-55	D	>25-35	D
>55-80	E	>35-50	E
>80	F	>50	F

Source: HCM 2010, Exhibit 18-4

For signalized intersections, control delay can be computed for each directional movement, approach and the intersection as a whole using HCM equations to assess critical elements of the signalized intersection that need enhancement or reconfiguration. The methodologies of HCM 2010 are incorporated in the traffic modeling software, Synchro developed by Trafficware, which is used in the analyses for this effort.

Based on the discussions with the city officials, the analysis focused on the critical PM peak hour in 2025, when the majority of the proposed developments in the sub-area would be operational.

Analysis Results

The control delay in seconds per vehicle and levels of service for intersections analyzed within the SH 161 study area are shown in Table 20. The results represent the expected traffic operations at the intersections in year 2025 PM peak hour if no improvements are made to the existing roadway network other than the planned extension of Esplanade Drive as part of the proposed Epic Towne-West development.

The results of the analysis indicate that with growth in existing traffic and addition of trips from the proposed development in the area, intersection delay along the SH 161 frontage roads would increase. While most frontage road intersections would operate at LOS D or better, the southbound frontage road intersections at Pioneer Parkway and Mayfield Road are expected to operate at LOS F. Pioneer Parkway and Mayfield Road already experience heavy traffic demand along the southbound frontage road during the PM peak hour, which is expected to further increase due to the addition of significant commercial development along the frontage roads. Intersections along Robinson Road and Esplanade Drive are expected to operate at LOS C or better.

Table 20. Intersection Analysis Results (2025 No-build Condition)

Street	Intersection	2025 No-Build	
		Control Delay (Sec/Veh)	LOS
Pioneer Parkway	SH 161 SBFR	90.8	F
	SH 161 NBFR	39.8	D
	Robinson Road	34.5	C
Arkansas Lane	SH 161 SBFR	35.1	D
	SH 161 NBFR	22.9	C
	Robinson Road	16.2	B
Warrior Trail	Esplanade Drive*	12.8	B
	SH 161 SBFR	37.7	D
	SH 161 NBFR	20.2	C
	Robinson Road	15.8	B
Mayfield Road	Esplanade Drive	11.4	B
	SH 161 SBFR	133.0	F
	SH 161 NBFR	48.5	D
	IKEA Place	12.8	B
	Robinson Road	17.8	B
Forum Drive	SH 161 SBFR	42.4	D
	SH 161 NBFR	18.8	B
	Robinson Road	17.1	B

**Two-way stop controlled intersection*

Improvement Needs

Once the expected traffic operations and LOS at the intersections for 2025 were determined, proposed mitigation measures were developed to improve the operations. Based on the discussions with the Grand Prairie City Staff, LOS D may be tolerated (when approved by the Director of Transportation Services) for constrained conditions, but LOS C is the acceptable intersection Level of Service. Therefore, two sets of mitigation measures were developed - measures to improve to LOS D, and additional measures to improve to LOS C. Table 21 presents the proposed improvements and the resulting intersection LOS for the two scenarios.

Mitigations to Achieve LOS D or Better

Pioneer Parkway at SH 161 southbound frontage road would experience about 2-minute delay per vehicle under the no-build condition. Adding a southbound right turn lane would help reduce this delay and the overall intersection would improve from LOS F to LOS D. Also, since both the frontage road intersections operate under one controller, the northbound frontage road intersection would also improve from LOS D to LOS C after optimization of timing splits to re-balance approach capacity while retaining the current 4-phase interchange operation.

Mayfield Road at SH 161 southbound frontage road would also benefit by addition of a southbound right turn lane. The intersection delay would reduce by about 60%, and the intersection LOS would improve from LOS F to LOS D. The northbound frontage road intersection would also experience minor reduction in delay, but would continue to operate at LOS D.

Mitigations to achieve LOS C or better

Mitigations to improve the 2025 intersection LOS to C would require additional improvements at several intersections.

Table 21. Proposed Mitigation Measures to Improve 2025 Intersection LOS

Street	Intersection	2025 No-Build		2025 Mitigation to LOS D			2025 Mitigation to LOS C		
		Delay#	LOS	Delay#	LOS	Proposed Improvement	Delay#	LOS	Proposed Improvement
Pioneer Parkway	SH 161 SBFR	90.8	F	54.3	D	Add SBRT	33.6	C	Add SBRT & SBLT
	SH 161 NBFR	39.8	D	28.4	C		28.6	C	
	Robinson Road	34.5	C						
Arkansas Lane	SH 161 SBFR	35.1	D				28.6	C	Add SBRT
	SH 161 NBFR	22.9	C				23.0	C	
	Robinson Road	16.2	B						
Warrior Trail	Esplanade Drive*	12.8	B						
	SH 161 SBFR	37.7	D				28.5	C	Add SBRT
	SH 161 NBFR	20.2	C				23.0	C	
	Robinson Road	15.8	B						
Mayfield Road	Esplanade Drive	11.4	B						
	SH 161 SBFR	133.0	F	35.4	D	Add SBRT	32.4	C	Add SBRT & SBT
	SH 161 NBFR	48.5	D	41.5	D		24.9	C	
	IKEA Place	12.8	B						
	Robinson Road	17.8	B						
Forum Drive	SH 161 SBFR	42.4	D				26.0	C	Add SBRT
	SH 161 NBFR	18.8	B				18.6	B	
	Robinson Road	17.1	B						

**Two-way stop controlled intersection.*
#Control Delay in Seconds per Vehicle

Pioneer Parkway at SH 161 southbound frontage Road. To further improve the intersection operations from LOS D to LOS C, a southbound left turn lane would need to be added along the frontage road, in addition to the right turn lane. This would significantly reduce the delay and both frontage road intersections would operate at LOS C.

Arkansas Lane and Warrior Trail at SH 161 southbound frontage road. Without improvements, both intersections would operate at LOS D, however, just above the LOS C threshold. Addition of a southbound right turn lane at each intersection would help reduce some delay allowing the intersections to operate at LOS C.

Mayfield Road at SH 161 southbound frontage road. In addition to the proposed southbound right turn lane, a southbound through lane along the frontage road would further reduce the delay allowing the intersection to operate at LOS C. Optimizing the 4-phase splits would also help reduce delay for the northbound frontage road intersection, and would improve from LOS D to LOS C.

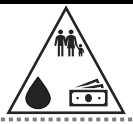
Forum Drive at SH 161 southbound frontage road. Without improvements, this intersection would operate at LOS D. Addition of a southbound right turn lane would improve the intersection operation to LOS C.

SH 161 Strategies

The following table identifies strategies that can be utilized to achieve the vision for the SH 161 corridor and the correlating Guiding Principles.

Table 22. SH 161 Focus Area Strategies

Strategies			
Amend existing SH 161 Overlay District ordinance to achieve vision of focus area by adding specific development design standards.			
Initiate recommendations for roadway improvements made in this SH 161 Focus Area Plan.			
Establish minor gateway signage on SH 161.			
Prioritize funding for proposed trail connections in the SH 161 Focus Area.			
Coordinate with the economic development community to attract and introduce grocery stores into the SH 161 Focus Area.			
Identify sustainable design elements to incorporate into overlay standards and roadway projects.			
Attract high-quality restaurant or hotel-anchored development in front of The Epic development.			

Strategies	
To mitigate anticipated poor level of service at the intersection of Pioneer Pkwy at southbound SH 161 frontage road, add a southbound right turn lane.	
To mitigate anticipated poor level of service at the intersection of Mayfield Road at southbound SH 161 frontage road, add a southbound right turn lane.	

Southern Sector Focus Area

Existing Conditions

Area Description

The Southern Sector is a primarily vacant area of land located just outside the southern border of the City in the Extra-Territorial Jurisdiction (ETJ). The area is generally situated south of US-287 between Midlothian and Mansfield.

Physical Features

The major physical features running through the area is Soap Creek and Grassy Creek; which are branches of Mountain Creek (south of Joe Pool Lake). Soap Creek bisects the Southern Sector while Grassy Creek generally aligns with the northern border of the area. These two creeks and the associated floodplain limit the available land for development. Alternatively, the creeks can be utilized as an amenity for future development by featuring an extension of the parks and trail system.

Existing Land Use

The area consists of mostly large parcels of vacant land. Among the small percentage of developed land, manufactured homes are the most prominent. There are also small pockets of single-family lots, industrial parks and commercial lots. All the existing developments are scattered throughout the area.

Current Zoning

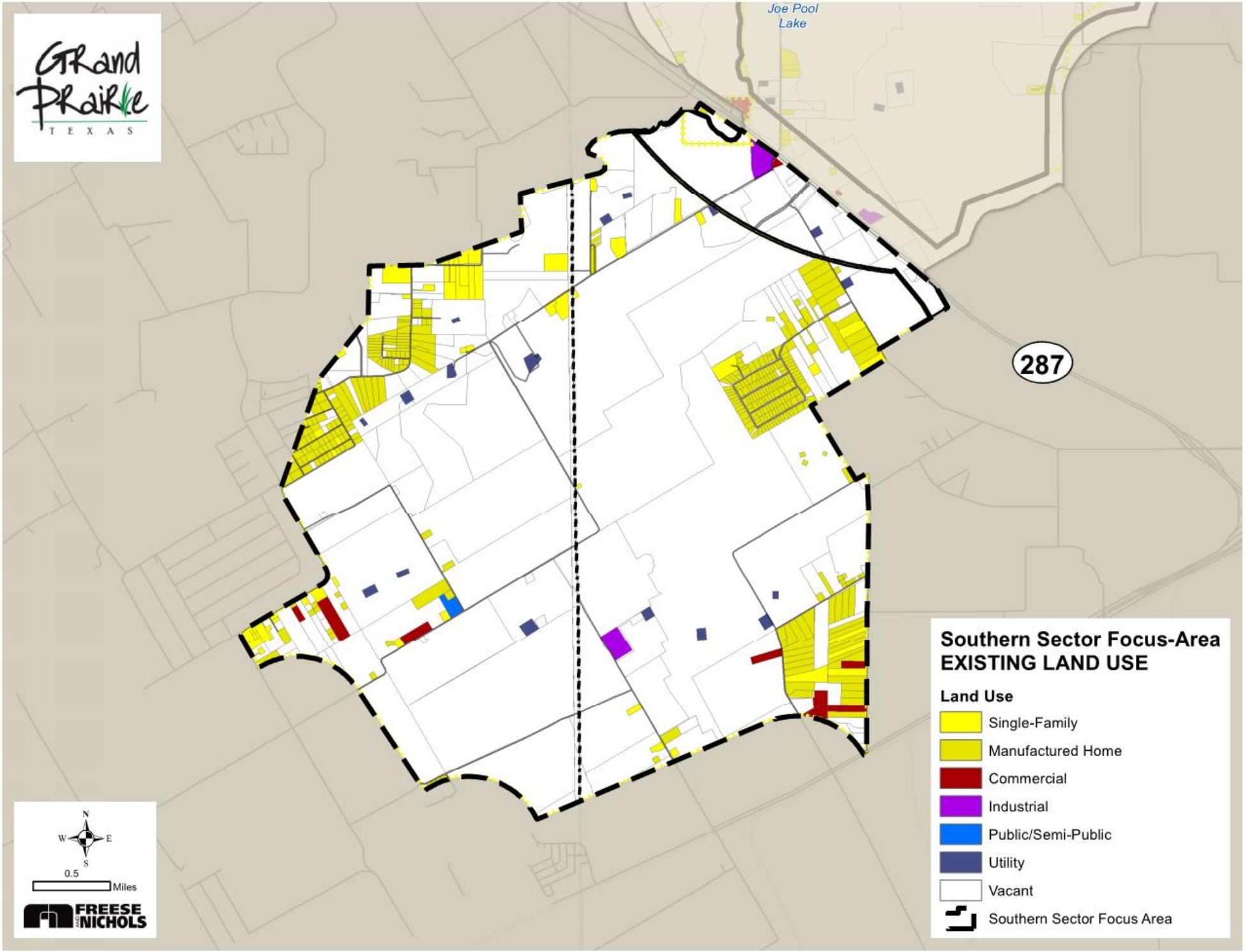
Since this area is located in the ETJ of the City, there is no current zoning in this area.

Potential Economic Activity Generators

In 2017, the City examined potential Southern Sector Development Scenarios for the eastern portion of this focus area. The analysis revealed that an optimized net cost benefit would be attained by combining a recommended mix of single family residential, commercial, and office uses in the ETJ. This land use mix is reflected on the Southern Sector Future Land Use Map.

Map 31. Southern Sector Focus Area Location Map

Map 32. Southern Sector Focus Area Existing Land Use Map



Issues and Opportunities

What We Heard

The key takeaways from the public input regarding the Southern Sector included:

- Openness to higher density and mix of uses
- City needs vision for area to ensure quality development
- Potential economic zone with tech industries
- Need for branding for the Southern Sector
- More residential development is desired however it must be supported by commercial and retail
- Infrastructure needs of Southern Sector need to be identified

Major Issues

Based on the analysis of existing conditions and public input the following major issues have been identified:

- No clear vision for Southern Sector
- Need to prepare for future infrastructure
- No control on development in ETJ

No Clear Vision for Southern Sector

Currently, the Southern Sector is largely undeveloped. While there is great potential for new development, there is no vision to direct development in the area. Additionally, there are very little mechanism to regulate development in the ETJ; which means there is no way to guarantee a high quality of development.

Need to prepare for future infrastructure

For any new development in the Southern Sector to occur, infrastructure will need to be planned. Expansion of the existing infrastructure can put a strain on the City's ability to maintain its existing infrastructure as well as the new extensions.

No Control on Development in ETJ

Since the Southern Sector is located in the ETJ, the City has little control over the overall development that occurs in this area. To gain control over future development, the area would need to be annexed into the City. However, at this time extending services to the area cannot be supported due to the lack of development.

Southern Sector Assessment

Area Vision

The southern sector is envisioned as a primarily destination location anchored by a mixed-use town center and supported by multiple housing types and commercial areas. The land uses within this focus area are strategically located within linear park and open space to create distinct districts.

Area Character

Residential Development Districts

Residential development is the most predominant land use identified for the southern sector. The focus area will house a variety of housing densities and types to foster growth of commercial development in the area. Residential development should be a mix of dwelling types to accommodate different levels of affordability - from single family lots to multi-family development.

Commercial Development Districts

Commercial development should serve the local residents and support the destination experience intended for the area. Commercial development should consist of retail, neighborhood services, offices, and low intensity industrial facilities (such as office/showroom/warehouse or research/development/testing). This focus area is intended to develop into an additional employment and economic center for the City.

Mixed Use/Town Center Districts

The Southern Sector is currently located between two cities and far from other commercial districts in the City of Grand Prairie. To draw visitors to the area and to provide commercial services to the local neighborhoods, a major commercial center should be incorporated. Mixed use development is intended to flank the SH 360 extension. The anchor feature for the area should be a mixed-use town center located near US-287. The town center will act as a commercial center and community gathering place for the southern region of the City. The mixed-use center will feature a mix of restaurants, retail, public art, and high density residential in three to four story structures. The town center should also incorporate green space for community events and festivals and general leisure.

Future Land Use

The Future Land Use Map of 2010 envisioned a mix of single family residential, multi-family residential, commercial, and light industrial uses; buffered with open space. The updated Future Land Use Map redistributes these land uses into a development pattern that considers density compatibility, a positive net fiscal impact, a sustainable balance of residential and commercial uses, and preservation of Soap and Grassy Creeks. Small area planning should be considered to establish the character and general design standards for each district within the focus area.

Annexation

The City currently does not have zoning jurisdiction in the ETJ. In order to have influence on how the area develops, annexation must be initiated. Once incorporated into the City, the area will be subject to zoning regulations. Annexation is not an immediate need since there is little development in the area. Issues may also arise concerning extending infrastructure services to the area. A development agreement for development in the ETJ should be considered to influence the area even before it is annexed into the City. Additionally, annexation assessments should be completed to determine the capital/operation and maintenance costs associated with the extension of roadways and utilities into the area.

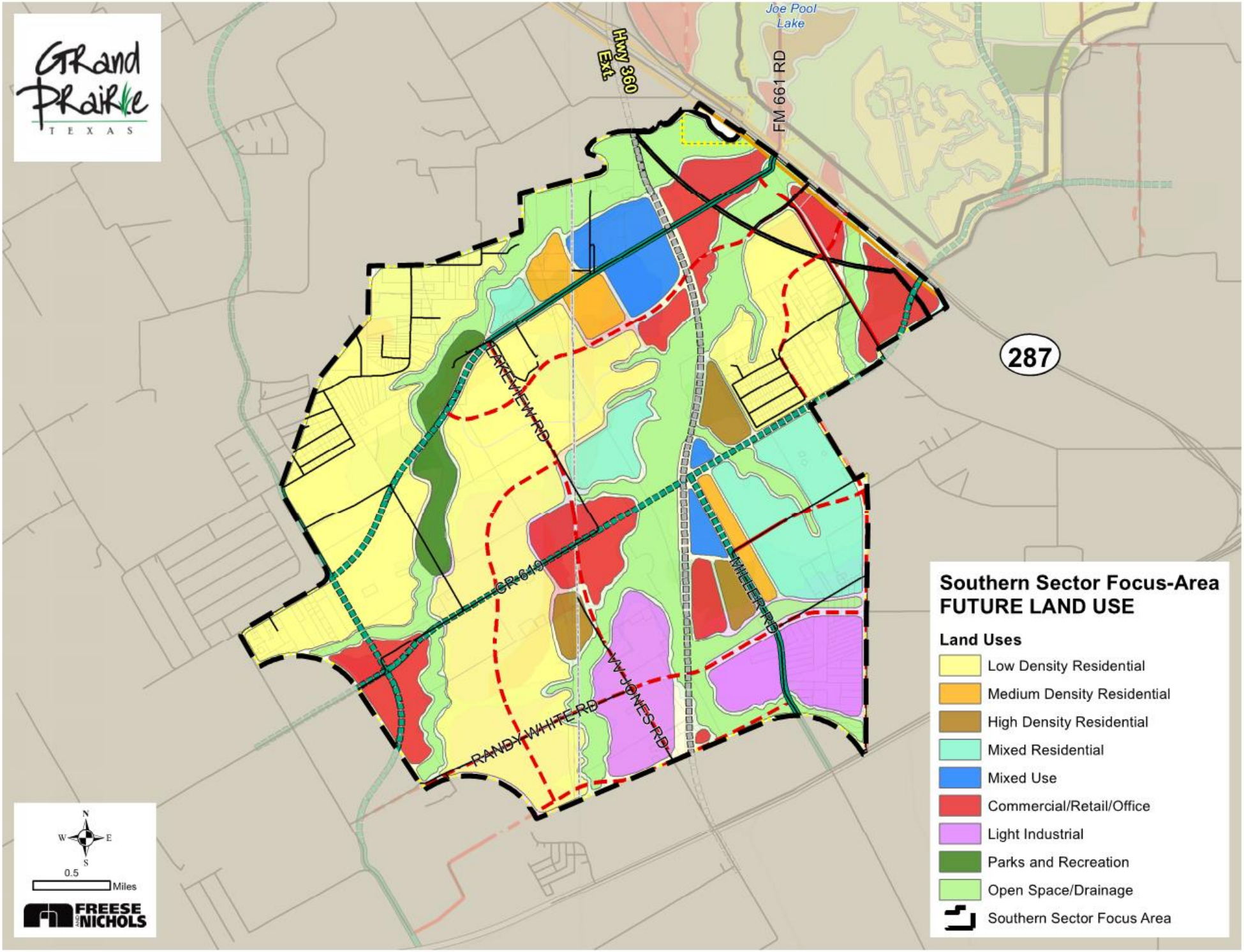
Circulation and Access

The Thoroughfare Plan shows future roadway connections in the area to improve circulation and access. There are existing roadways in the area that are currently sufficient for the low density of development. As new development occurs, plans for the future roadway network need to be in place to better organize development and allow better access. This roadway network should be multimodal, and integrate sustainable design elements and new technologies. The future extension of SH 360 into the Southern Sector will also have a significant impact on when, where, and how development occurs. The future alignment of SH 360 is projected to bisect the Southern Sector from US-287 to US-67.

Connectivity

Creating connectivity throughout the area will be an essential element. Future trail connections are not currently planned for the area since the Southern Sector is located in the ETJ, however a linear park and open space have been designated by the Future Land Use Plan. Future on- and off-street trail connections must be incorporated into the design of roadways, sidewalks, and new residential or commercial development. The trail system should capitalize on the existing creeks for the alignment of recreational paths. Connections should also be made from residential areas to commercial areas to ensure connectivity for all users. Expanding the trail system is key way to encourage a healthier lifestyle and allow better access to different areas within the Southern Sector.

Map 33. Southern Sector Focus Area Future Land Use Map



Southern Sector Strategies

The following table identifies strategies that can be utilized to achieve the vision for Southern Sector and the correlating Guiding Principles.

Table 23. Southern Sector Focus Area Strategies

Strategies			
Develop small area plans for the various districts within the Southern Sector.			
Conduct annexation assessments to determine the capital/operation and maintenance costs associated with the extension of roadways and utilities.			
Create economic development strategies to market the Southern Sector to technology sector industries.			
Integrate sustainable design elements into roadway and utility extension projects.			
Identify technology related improvements to integrate into roadway and utility extension projects.			


1
CENTRAL
FIRE STATION
AIR AND LIGHT
AIR 1

Chapter 8 | Implementation

Introduction

This implementation chapter describes ways in which Grand Prairie can take the recommendations of this update from vision to reality. The importance of planning cannot be overstated—planning provides for the protection of private property and ensures future development occurs in a coordinated and organized fashion. The future of the City will be shaped using the strategies and recommendations developed in this Plan. The success of this plan will be influenced by the implementation of the Plan's strategies.

The Plan's policies and recommendations will be implemented through development regulations, such as the zoning and subdivision ordinances, through capital improvement programs, innovative projects, plans and partnerships. Many recommendations within the plan may be implemented through simple refinement of existing regulations or processes, while others may require the establishment of new regulations, programs, or processes. Some recommendations will require additional community input and the continued support of local organizations and private partnerships.

As this is an update to the 2010 comprehensive plan, this implementation chapter does not serve to replace the recommendations, and implementation tools of the original plan. It provides additional strategies and resources to achieve the guiding principles.

Proactive and Reactive Implementation

There are two primary methods of plan implementation: proactive and reactive methods. To successfully implement the plan and fully realize its benefits, both methods must be used in an effective manner. Both proactive and reactive actions that could be used by Grand Prairie are described below.

Examples of **proactive methods** include:

- Developing a capital improvements program (CIP), by which the City expends funds to finance public improvements to meet strategies cited within the Plan;
- Updating zoning regulations;
- Updating subdivision regulations;
- Incentivizing businesses to locate in Grand Prairie;
- Developing strategies to increase community health and mobility;
- Make the City more connected digitally and physically; and
- Implementing new technological systems.

Examples of **reactive methods** include:

- Approving a rezoning application submitted by a property owner consistent with the Comprehensive Plan;
- Site plan review;
- Subdivision review;
- Amending code to address demand for business or service not contemplated by the current code; and
- Responding to data gathered from citizen or business surveys.

The Strategy Implemention Matrix

The strategy implementation matrix is a tool to identify, track and monitor the progress of the recommended strategies. These strategies can only be achieved through a collection of stakeholders and partnerships, working together to promote the health and welfare of the community. The following plan consolidates the recommended strategies from the chapters if this plan in a comprehensive list. The implementation matrices are organized by Guiding Principles and. For each strategy listed, the icon for the associated guiding principle and projected time frame for the strategy to be implemented is shown. Each strategy is also color coded to correspond with the guiding principle from which the strategy originated as provided to the right.

Strategies

The list of strategies is derived directly from the from the guiding principles. They have been curated to achieve specific goals for the City while still promoting the guiding principles. They are also used to show how the strategies can be used to achieve the vision for the Focus Areas.

Guiding Principles

The guiding principles provide direction for development in the future. For each strategy, the icon for an applicable associated guiding principle is shown. As stated previously, the guiding principles are not independent, so an individual strategy may further the initiatives of one or more guiding principles.

Timeframe

To assist with planning and implementation, the strategies are assigned a projected time frame for implementation to commence. The approximate established time frames are as follows:

Short Range (0-5 years)

Implementation of these strategies can begin soon after plan adoption. These strategies are considered "low hanging fruit" because they are more attainable and do not require large amounts of funding or special consulting.

Mid-Range (5-10 years)

Implementation of these strategies will likely be just as important as Short-Range Strategies, but are not as attainable within the first five years. They require planning to prepare, but should be implemented in a five to ten-year time frame.

Long-Range (On-going)

These strategies have no specific time frame, but should be continually addressed by City leadership. Long-Range projects may be further defined to identify interim Short- and Mid-Range projects to facilitate ultimate implementation. As conditions change, the status of these long-term projects should be adjusted.

City-wide Implementation Matrix

Table 24. City-wide Implementation Matrix

Strategies		Timeframe
Create a sidewalk conditions database to monitor improvement needs and identify priority projects.	✚ ▭	Short-Range
Align the Parks Master Plan and Parks and Trails Map with the Future Land Use Plan.	✚ ▲	Short-Range
Prioritize and implement the multi-modal transportation recommendations within the Master Thoroughfare Plan.	✚ ▲	Mid-Range
Conduct a walkability and connectivity assessment on proposed new developments when development applications are submitted.	✚ ▲	Short-Range
Perform a diagnostic of the zoning and subdivision ordinances to ensure pedestrian oriented design elements are incorporated into new development projects.	✚ ▲	Short-Range
Coordinate with government entities, non-profit and community groups, and private organizations to expand access to healthcare and social services where needed. Such entities could include school districts, on-demand transportation providers, local churches, hospital systems, and clinics.	✚	Short-Range

Strategies		Timeframe
Develop economic development strategies to attract grocery/specialty food stores to targeted locations that are near or within food desert designated neighborhoods.		Mid-Range
Continue to support farmers markets and community gardens.		Long-Range
Create a database of community health indicators and set annual goals to address priority locations.		Mid-Range
Establish and maintain GIS mapping databases to use as benchmark tools to proactively identify community maintenance and assistance needs.		Short-Range
Develop economic development strategies to attract new technology sector companies.		Mid-Range
Pursue public-private partnerships with data analytics, data sharing, ridesharing, and other related companies.		Short-Range
Evaluate and prioritize projects to integrate new IoT technologies into municipal facilities/roadways/ infrastructure/services for more efficient operations.		Long-Range
Facilitate and incentivize the installation of data transmission infrastructure across the City.		Short-Range

Strategies		Timeframe
Review existing development guidelines, building codes, and engineering standards and identify necessary policy changes to integrate low-impact-development, energy conservation, open space preservation, and other environmental sustainability principles.		Short-Range
Identify and protect key areas, linkages, and features that can be added to the network of natural and open space.		Short-Range
Conduct periodic reviews and updates of emergency response plans.		Long-Range
Continue to identify and pursue funding sources and tools to expand homeowner assistance programs.		Long-Range
Expand the services and routes for the Grand Connection to serve additional residents.		Short-Range
Collaborate with non-profit and community organizations to maintain an active database of community resources.		Short-Range
Continue to support community outreach programs and cultural events.		Long-Range
Reference the Future Land Use Plan when making land use decisions to organize land uses in a sustainable pattern.		Long-Range

Strategies		Timeframe
Reference the Future Land Use Plan when making development decisions.		Long-Range
Periodically conduct market assessments to identify and recruit emerging markets and industries.		Mid-Range
Develop strategic marketing material for potential developers and tenants in targeted commercial areas such as Downtown and the IH 30 and SH 161 corridors.		Short-Range
Conduct annexation assessments for targeted areas in the ETJ to determine infrastructure and utility needs and timing.		Mid-Range
Establish development plans for the ETJ to be prepared for sustainable future development after annexation.		Long-Range
Encourage infill development in areas with existing infrastructure.		Short-Range
Work with downtown businesses to ensure the future vitality of downtown.		Short-Range
Encourage development around natural features, such as slopes, embankments, wetlands and tree stands rather than developing through them.		Long-Range

Focus Area Implementation Matrix

Table 25. Focus Area Implementation Matrix

Strategies		Timeframe
IH 30		
Prioritize funding for proposed trail connections in the IH 30 Focus Area.		Short-Range
Coordinate with the economic development community to attract and introduce grocery stores into the IH 30 Focus Area.		Short-Range
Increase the overall and neighborhood-specific Walk Scores in the IH 30 Focus Area by encouraging the integration of pedestrian amenities closer to existing neighborhoods and within future Mixed Use and residential developments.		Mid-Range
Implement adaptive traffic signal controls on significant arterial streets crossing IH 30 to mitigate congestion at the approaches to IH 30 service roads.		Long-Range
Continue to coordinate with TxDOT for the construction of frontage roads along IH 30.		Long-Range
Amend the existing IH 30 Overlay District to establish design and gateway criteria for each sub-area.		Short-Range

Strategies		Timeframe
Consider options to reclaim floodplain in the IH 30 Focus Area based on the existing floodplain reclamation study identifying potential opportunities for reclamation and development.		Mid-Range
Identify transportation, infrastructure, and community development projects specifically in the IH 30 Focus Area and work with the respective entities and departments to develop strategic plans to implement traffic-adaptive and other advanced technologies.		Mid-Range
Prioritize and implement non-motorized transportation projects along major thoroughfares such as Belt Line Road, Wildlife Parkway, Macarthur Boulevard, and Tarrant Road.		Mid-Range
Identify sustainable design elements to incorporate into overlay standards.		Short-Range
Northwest Sector Focus Area		
Extend Great Southwest Parkway to attract industrial along Avenue K and Fountain Parkway.		Short-Range
Designate Great Southwest Parkway a preferred truck route.		Short-Range
Examine ways to enhance the accommodation of northbound to southbound SH 360 service road U-turns on the Carrier Parkway bridge over SH 360.		Short-Range

Strategies		Timeframe
SH 161		
Amend existing SH 161 Overlay District ordinance to achieve vision of focus area by adding specific development design standards.		Short-Range
Initiate recommendations for roadway operational and connectivity improvements made in this SH 161 Focus Area Plan.		Mid-Range
Establish minor gateway signage on SH 161.		Short-Range
Prioritize funding for proposed trail connections in the SH 161 Focus Area.		Short-Range
Coordinate with the economic development community to attract and introduce grocery stores into the SH 161 Focus Area.		Mid-Range
Identify sustainable design elements to incorporate into overlay standards and roadway projects.		Short-Range
Attract high-quality restaurant or hotel-anchored development in front of The Epic development.		Short-Range
To mitigate anticipated poor level of service at the intersection of Pioneer Pkwy at southbound SH 161 frontage road, add a southbound right turn lane.		Short-Range

Strategies		Timeframe
To mitigate anticipated poor level of service at the intersection of Mayfield Road at southbound SH 161 frontage road, add a southbound right turn lane.		Short-Range
Southern Sector		
Develop small area plans for the various districts within the Southern Sector.		Mid-Range
Conduct annexation assessments to determine the capital/operation and maintenance costs associated with the extension of roadways and utilities.		Long-Range
Create economic development strategies to market the Southern Sector to technology sector industries.		Mid-Range
Integrate sustainable design elements into roadway and utility extension projects.		Long-Range
Identify technology related improvements to integrate into roadway and utility extension projects.		Short-Range

Master Transportation Plan Implementation Matrix

Table 26. Master Transportation Plan Implementation Matrix

Roadway Improvement Needs		Timeframe
Duncan Perry Road (Avenue K to Egyptian Way) Improve 2-lane (24') to M4U Class		Mid-Range
Duncan Perry Road (Egyptian Way to Avenue H) Improve 2-lane (34') to M4U Class, with off-peak parking		Mid-Range
Egyptian Way (Duncan Perry to SH 161 SR) Improve 2-lane road to M3U Class		Mid-Range
N. Great Southwest Pkwy (Avenue J to Avenue K) Improve 2 lane only to creek to P4D Class		Short-Range
N. Great Southwest Pkwy (Avenue J to Avenue H) Improve 2-lane divided to P4D Class		Short-Range
N. Great Southwest Pkwy (Avenue K to Fountain Pkwy) Construct new P4D Class		Short-Range
N. Great Southwest Pkwy (Conn. To SH 360 at Riverside Pkwy) Construct new P4D Class		Short-Range
Belt Line Road (North City Limits to Pioneer Pkwy) Improve P6D operations with ITS & Access Management		Mid-Range

Roadway Improvement Needs		Timeframe
Carrier Parkway (SH 161 to Pioneer Pkwy) Improve P4D operations with ITS & Access Management		Mid-Range
Great Southwest Parkway (Main/Division St to Marshall Dr) Improve P4D to P6D, enhance intersection capacity		Mid-Range
Camp Wisdom Road (Robinson Rd to east city limit) Improve 2 lanes to P6D Class		Mid-Range
Lake Ridge Pkwy (Lynn Cr/Mildred Walker Pkwy to N. Grand Peninsula Dr) Improve P4D Class to P6D Class		Mid-Range
Lake Ridge Pkwy (England Pkwy to south city Limit) Improve P4D Class to P6D Class		Mid-Range
Lakeview Dr (FM 661) (Heritage Pkwy to US 287) Improve 2 lanes to P4D Class		Long-Range
Lakeview Dr (FM 661) (US 287 to south city limit) Realign and Improve 2 lanes to P4D Class		Long-Range
FM 506 Extension (south city limit to US 287/Windsor Hills) Realign and Improve 2 lanes to P4D Class		Long-Range
Kimble Road (Windsor Hills) (US 287 to east city limit) Construct P4D and M4U Class		Long-Range

Next Steps

In one of the most competitive regions in the US, Grand Prairie has emerged as a world class community with rich diversity, economic opportunity, state-of-the-art amenities, and an innovative vision for the future. Reflecting back on Grand Prairie's history, this success can be attributed to the steady commitment from City leaders and staff to implement strategies in prior plans and studies that reflect a unified vision. Implementation of this updated Comprehensive Plan into physical changes will require continued commitment from City leaders and staff, strong public/private sector cooperation, and cooperation with business and property owners, residents, and various agencies.

Not all elements of this Plan can be implemented at once. Therefore, ongoing implementation will need to be phased incrementally over the short and long-term. Many recommendations within the plan can be implemented through the refinement of existing City regulations, programs, or processes. Other recommendations, such as major projects, will require capital improvement planning and programming. The following list contains recommendations to help the City realize its future success over the next 20 years and achieve the vision set forth in the Plan.

- Prioritize the Recommended Strategies and Projects
  - Analyze the recommended strategies and projects based on the needs and desires of the community
  - Choose projects that strategically meet community goals
  - Use this prioritization to plan implementation of projects
- Appoint a Comprehensive Plan Standing Committee
  - Meet quarterly or semi-annually to review Plan implementation
  - Outline responsibilities for continuing updates to the Plan as community conditions change
  - Schedule annual review of the Plan
- Appoint a Capital Improvements Task Force
  - Consider major projects or actions identified in the Plan as well as other capital projects needed citywide
  - Identify funding mechanisms for implementing major projects
- Explore the necessary staff resources to oversee implementation of the Plan
  - Identify staffing needs to update the Zoning Ordinance, Zoning Map, and development regulations to align with the Plan
  - Identify staffing needs to review, update, and maintain economic development, housing and development/redevelopment incentives
- Align policy and development decisions with the Plan
  - Utilize the framework of the Guiding Principles when conducting future planning, visioning, and public engagement
  - Issue a quarterly or semiannual newsletter that reports the planned, ongoing, and/or completed projects for each Guiding Principle
- Celebrate outcomes and achievements of the Comprehensive Plan as they occur
  - Display "Your Comp Plan at Work" as projects, actions, and implementation items are achieved
  - Communicate regularly with the community about the status of the plan
  - Post online a project completion status bar for recommendations outlined in the Plan


110-109 SECTIONS
109-101 SECTIONS
TEAM STORE
ATM $
FAN ASSISTANCE
FIRST AID/SECURITY
109-108 SECTIONS
FAN ASSISTANCE
FIRST AID/SECURITY
RESTROOMS
CONCESSIONS

Appendix A | Public Input Summary

From June to September 2017 and June to September 2018, FNI worked with the City of Grand Prairie to collect public input in preparation for the Master Transportation Plan and Comprehensive Plan update. This input serves as a base understanding for the needs, desires, and values of Grand Prairie residents. Sources of this input included feedback collected at community events and meetings, stakeholder interviews, and an online opinion survey posted on the City's website.

Input Snapshot

05 | community events

12 | stakeholder interviews

30 | comment cards

1,566 | online survey responses

01 | town hall meeting

01 | community meeting

16,733 | social media followers

201 | event/meeting participants

Methodology

Community Events and Meetings

FNI used interactive boards and comment cards to collect input at programmed community events and input meetings. These input tools provided opportunities for participants to reflect on what makes their community great, identify locations with land use, traffic, and congestion issues, and submit comments that could not be captured through the other input exercises.

Online Engagement

An online opinion survey was made available to residents of Grand Prairie from June to September 2017 and June to September 2018. Participants were asked 18 questions related to demographics, community aesthetics, land use, mobility, and transportation. People were also directed to the online survey on the City's website through social media sources such as Facebook, Twitter, and Grand Prairie Pipeline.

Stakeholder Interviews

FNI facilitated interviews with community stakeholders representing elected officials, City staff, various ISDs, and City boards and committees. The interviews focused specifically on the key sector areas that were identified as priority initiatives in the early stages of the planning process. Regarding the sector areas, stakeholders were asked to outline their vision, key issues, land use recommendations, and transportation/mobility concerns.

Community Event Recaps

FNI attended a range of public events to reach out to as many members of the Grand Prairie community as possible. The goal was to acquire input in settings that were convenient and accessible for citizens.

Community Event | Big Ideas

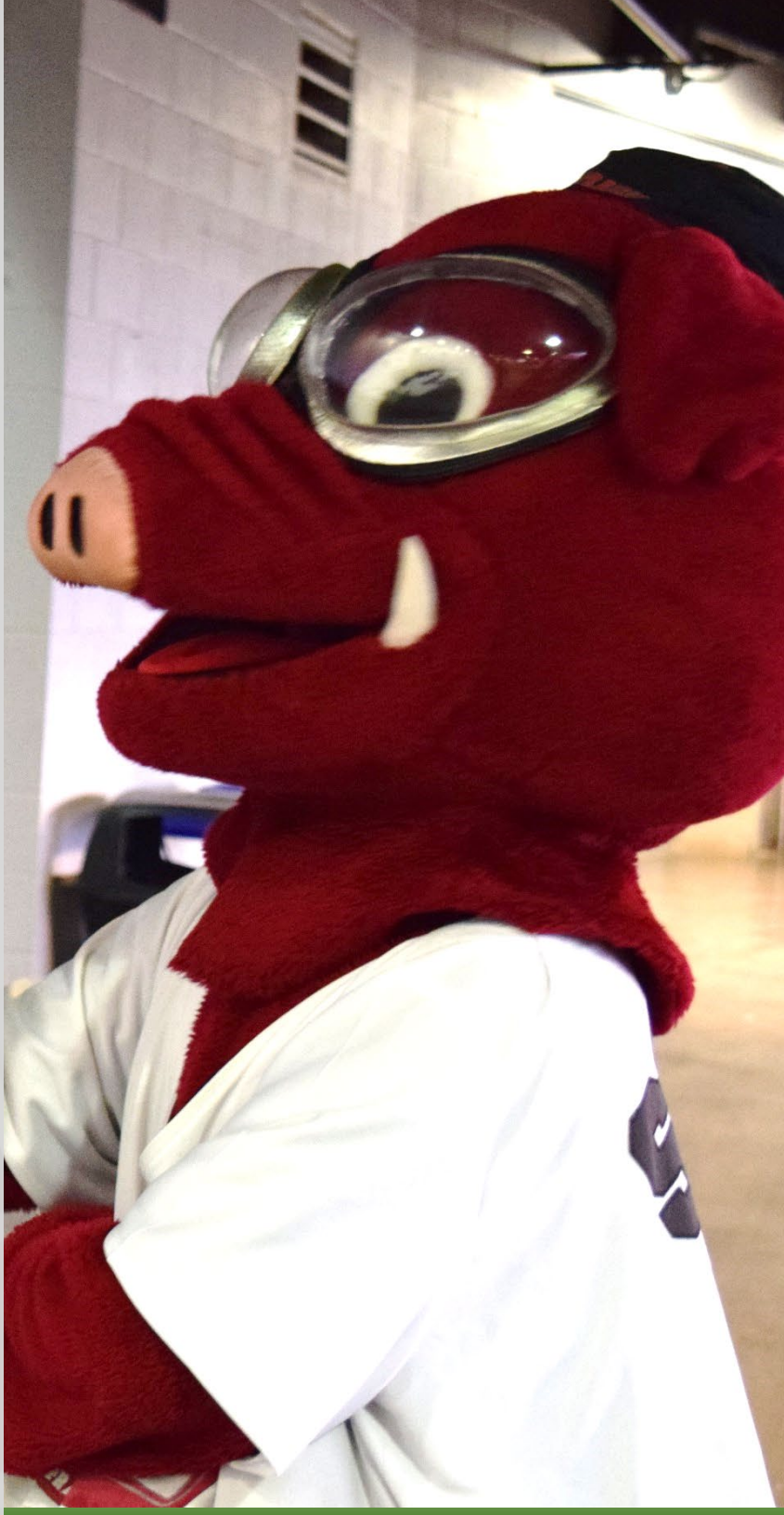
transit | public transportation is a top desire among many residents; traffic congestion is a concern among many

parks | residents enjoy the park and recreational amenities and would like to see more of them

neighborhoods | many residents would like to see targeted revitalization efforts in aging neighborhoods, including housing options, jobs, and local retail and services

development | many residents see recent growth and development as a good thing for the City, though many residents differ on where additional growth is needed

services | residents are happy with the City's leadership and provision of public services and amenities



Summer Reading Kickoff

June 3, 2017 | At the Grand Prairie Public Library's Summer Reading Kickoff event, there were 2,500 citizens in attendances and 83 people, many of them youth, participated by providing input. The purpose of attending this event was to collect input from individuals that do not typically have the opportunity to participate in a community meeting, such as citizens with work schedule constraints, family activities, etc.

Favorites Board

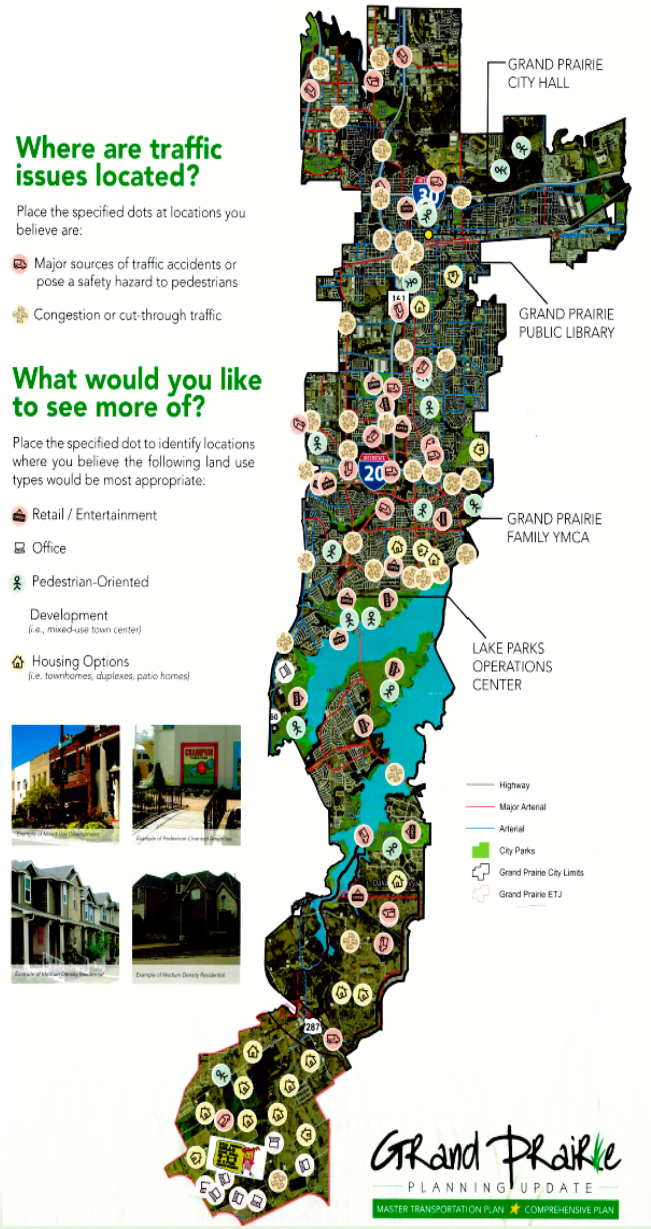
- Libraries and parks were mentioned by more than two thirds of the respondents; libraries were mentioned by over half of the respondents
- Other frequently referenced topics included schools/GPISD and retail amenities

Issue Identification Board

- IH 20, IH 30, SH 360, and SH 161 were identified as significant sources of traffic congestion and accidents
- Areas north of IH 30 were identified as significant sources of traffic congestion
- Vacant areas south of Joe Pool Lake were identified as opportune for residential and office development
- Land surrounding Joe Pool Lake was identified as opportune for additional retail and entertainment amenities

Comment Cards

- Alternative routes to IH 20 are needed; one possibility could be extending Bardin Road to Matlock
- There is a desire for sit-down dining along IH 20 beyond existing fast food options
- There is a desire for additional housing options and price ranges, though high quality still needs to be maintained



My favorite part of Grand Prairie is...

Write down your thoughts!

Disc Golf

161

The GPFD

Flight of the Monarch!

Parks & Libraries!
(Less appartments!!!)
PLEASE

Parks & libaries

We ♡ the Main Library!

Joe Pool Lake
- awesome w/ family events we have been here 2 years and love it keep up the good ideas guys

about Kids

The memorial library

Mason

Schools

Breakfast For all Students

Parks in the north side of Grand Prairie

The Good Link Park

Coolest thing

GFAA Jade

Loyd Park

Libraries

IKEA!

Game Stop

GPFFA

the lake

This is a family friendly area. I love it! GP is always thinking about family fun. The libraries activities are the BEST!!!

GPISD!

The Donuts store

The Schools (Powell)

The Libraries!

Kirby Creek

Target

Grand Prairie ISD!

Rebecca house

Chick-fil-a

Garner fine arts achader

Soeni also likes the Labeny

EPIC Project

Library events

Encouraging Children to Read!

5 Below

Park's

i will like to swims

Jamileth

Jack in the box

Friendship Park

libery & Nice firends

librey

the LiBenys

LONE STAR PARK

Parks + Rec

Library

MGM

161 & Target!

Library

GPPD!

GFAA Fine arts Academy

The Store

Wfaa (Whitt Fine Arts Ac. School)

Madison Lewis

Library

The Libars and GPPD

indoor

Library

Lynn Creek Park!

epic Waters Park

Brooklyn

Parks Libraries Soon to Be EPICWATERS!

Play soccer at the Park

Moseley School

David Daniels Elementary

The labeni

The Library!!

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Juneteenth Celebration

June 17, 2017 | FNI attended the City's annual Juneteenth Celebration held at Trye Park. Attending this event was part of the consultant team's goal to collect input that represents the northwestern sector of the City. At the event, 500 people were in attendance, 28 people participated, and 19 comment cards were collected. Several people provided their favorite thing about Grand Prairie and participated in the issue identification board.

Favorites Board

- Parks, recreational amenities, and the community garden
- The people
- Community events

Issue Identification Board

- The neighborhood around Tyre Park was identified as an opportune location for improved housing quality and availability. Neighborhoods east of SH 161 along Pioneer Parkway were also identified.
- Traffic congestion was an identified issue along SH 360
- Opportunities for nonresidential uses were identified in the following locations:
    - Retail/entertainment: Downtown
    - Office: IH 30 east of Lone Star Trail
    - Pedestrian-Oriented Development and Infrastructure: connecting both sides of SH 161/PGBT and along the Roy Orr Boulevard bridge.

Comment Cards

- Transportation was the top issue, with 58 percent of respondents mentioning need for public transportation or on-demand transit services, especially for seniors. Greater connectivity to regional transportation was also mentioned.
- Street and infrastructure improvements were the second most mentioned issue at 26 percent.
- 21 percent of respondents identified one of the following topics: social services and programs, housing (quality and affordability), and entertainment/amenities.
- The following topics were identified as missing or underprovided amenities: park facilities, school quality, availability of jobs, social justice, public facilities, and development.

Airhogs Baseball Game

June 21, 2017 | FNI attended the Guys Night Out event at Airhogs Stadium. 1,500 people were in attendance at the Airhogs baseball game and 32 people participated by writing on public input boards, or submitting comment cards.

Favorites Board

22 responses were received on the vision board; of those:

- More than a third of respondents mentioned parks, recreation, open space, and natural amenities
- More than a third mentioned City services and public amenities
- About one third mentioned new development, retail amenities, and entertainment

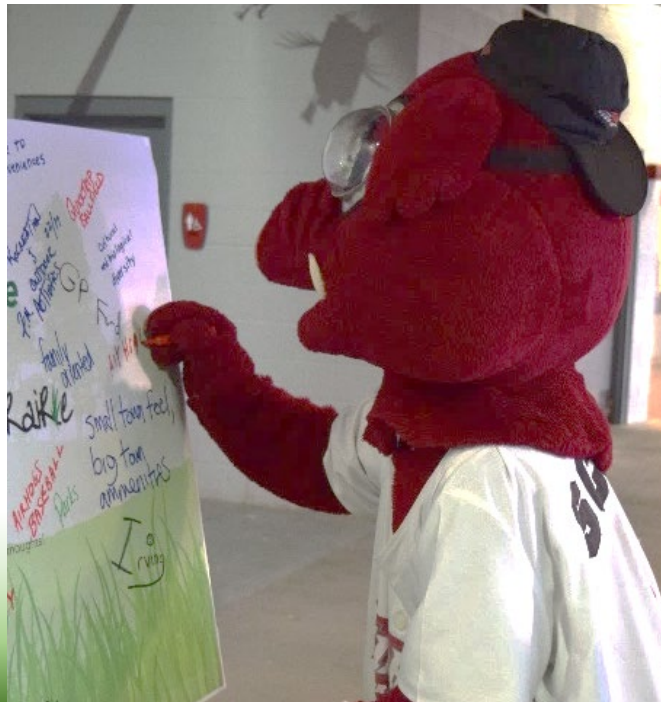
Comment Cards

10 comment cards were submitted during the event, and most respondents discussed multiple topics. The issues raised include the following:

- Concern about the distribution/direction of growth
- Satisfaction with a specific part of the City (downtown, parks, etc.)
- Concerns about an independent source of water in the future
- Desire for expanded rec center coverage
- Desire for an upscale hotel
- Concerns about traffic noise/congestion
- Desire for infrastructure improvements
- Desire for extended service roads along IH 30
- Satisfaction with the overall state of the City

Issue Identification Board

- Traffic congestion along SH 161, IH 20, and 360
- Opportunities for retail and entertainment along SH 161 and around Lone Star Park
- Opportunities for retail, entertainment, and pedestrian amenities along Main Street



My favorite part of GRand PRairie is...

Park (Grand) Central + Summit

Joe Pool Lake ✓ ✓ "

close to conveniences

fishing grounds

Utilities Services!

Recreation & Outdoor Activities 22/17

QUICKTRIP BALLFIELD

Cultural and biological diversity

GP Ford

Friendliness · Diversity

family oriented

AIR HOGS

Small town feel, big town ammenities

Beautiful Trees & Landscape

churches

AIRHOGS BASEBALL

Parks

WATER Park

Fish Creek Trail ✓

Write down your thoughts!

LIBRARY

Park's

Growth & Development w/ A small town feel!

Water Parks

GRand PRairie
PLANNING UPDATE
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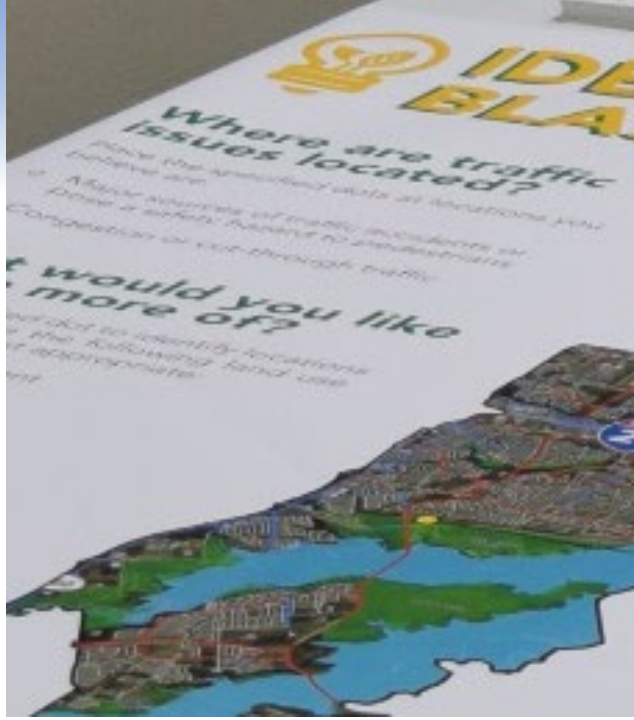
YMCA

July 25, 2017 | FNI set up an information and engagement booth at the YMCA. A total of 75 people were reached and 20 citizens stopped by the booth to provide feedback on the public input boards, or by submitting a comment card. The purpose of attending this event was to engage parents and residents within the southern sector in a convenient, informal setting.



Vision Board

- Effective, accessible City leadership
- Growing quickly; the City is now big enough to have its own identity
- The City still feels close to nature with lots of green
- Grand Prairie ISD
- Family-oriented community
- Low cost of living
- Recreational and entertainment amenities

Comment Cards

One comment card was submitted during this event. The citizen expressed the following comments:

- Need for more parks
- Desire for the City to focus efforts on maintaining and enhancing older neighborhoods
- Need for sound barriers in older neighborhoods adjacent to SH 161
- Concern about traffic cutting through neighborhoods to get to SH 161

Issue Identification Board

- Traffic congestion along SH 161, IH 20, and SH 360
- Opportunities for retail and entertainment along SH 161 and around Lone Star Park
- Opportunities for retail, entertainment, and pedestrian amenities along Main Street

Grand Prairie
COMPREHENSIVE PLAN UPDATE

Stakeholder Interviews

July 11, 2017 |FNI facilitated interviews with community stakeholders with the intent of identifying high-level issues and desires impacting the key sector areas as well as the City. Thirty-minute interviews were held with 12 community stakeholders who were preselected by City staff. During the interviews, the following questions were asked to initiate dialogue:

- What is your vision for these subareas? (Shown on Figure 1)
- What are the key issues in these subareas? (Shown on Figure 1)
- What is the most important thing for these plan updates to accomplish?

Stakeholders represented the following entities: Chamber of Commerce, City Council (various districts), and GPISD.

Stakeholders | Big Ideas

high quality | top priority for future development, regardless of land use

traffic | transportation needs to be considered, especially in high growth areas

balance | mix of land uses is needed to provide a strong tax base, adequate amenities, and demand for services

strategies | neighborhood revitalization will be important as existing neighborhoods age

catalyst | there is opportunity for major developments to transform the City

Vision Identification

The stakeholders identified their vision for the previously-identified priority subareas shown on Figure 1. Key themes from this portion of the interviews include:

- **Southern Sector** | High quality development is the top priority; area will need a balance of residential and nonresidential uses.
- **Highway 161/PGBT** | Upscale, destination nonresidential development is a top priority; traffic impacts are a concern.
- **Interstate 30** | Revitalization of northern neighborhoods is needed; there is also potential for entertainment-based development.
- **Highway 360** | The corridor needs to be considered as a key gateway into the City.

Southern Sector

- Hwy 287 to railroad: personal preference is for large lot single family, but would need to be supported by retail and commercial; City should be prepared for Southern Sector to be something totally different
- Residential development similar to England subdivision, Hanover, or Viridian (in Arlington)
- Open to higher density and mix of uses
- Development standards and timing will be key; no rush to develop is it is not the right quality
- Potential economic zone with tech industries
- Open to age-restricted higher density
- Need for branding
- High quality is paramount
- More rooftops could help the City attract more retail and commercial/keep sales tax dollars in the City

Highway 161/PGBT

- Only one chance to develop Hwy 161 – should be high quality
- Car dealerships are a particular concern
- Great Southwest Pkwy at IH 20 (Trader's Village) could be optimal site for more entertainment venues, though a traffic plan would be needed
- Upscale retail/commercial including sit-down restaurants and entertainment venues
- Consensus is needed about what to do around IKEA

Interstate 30

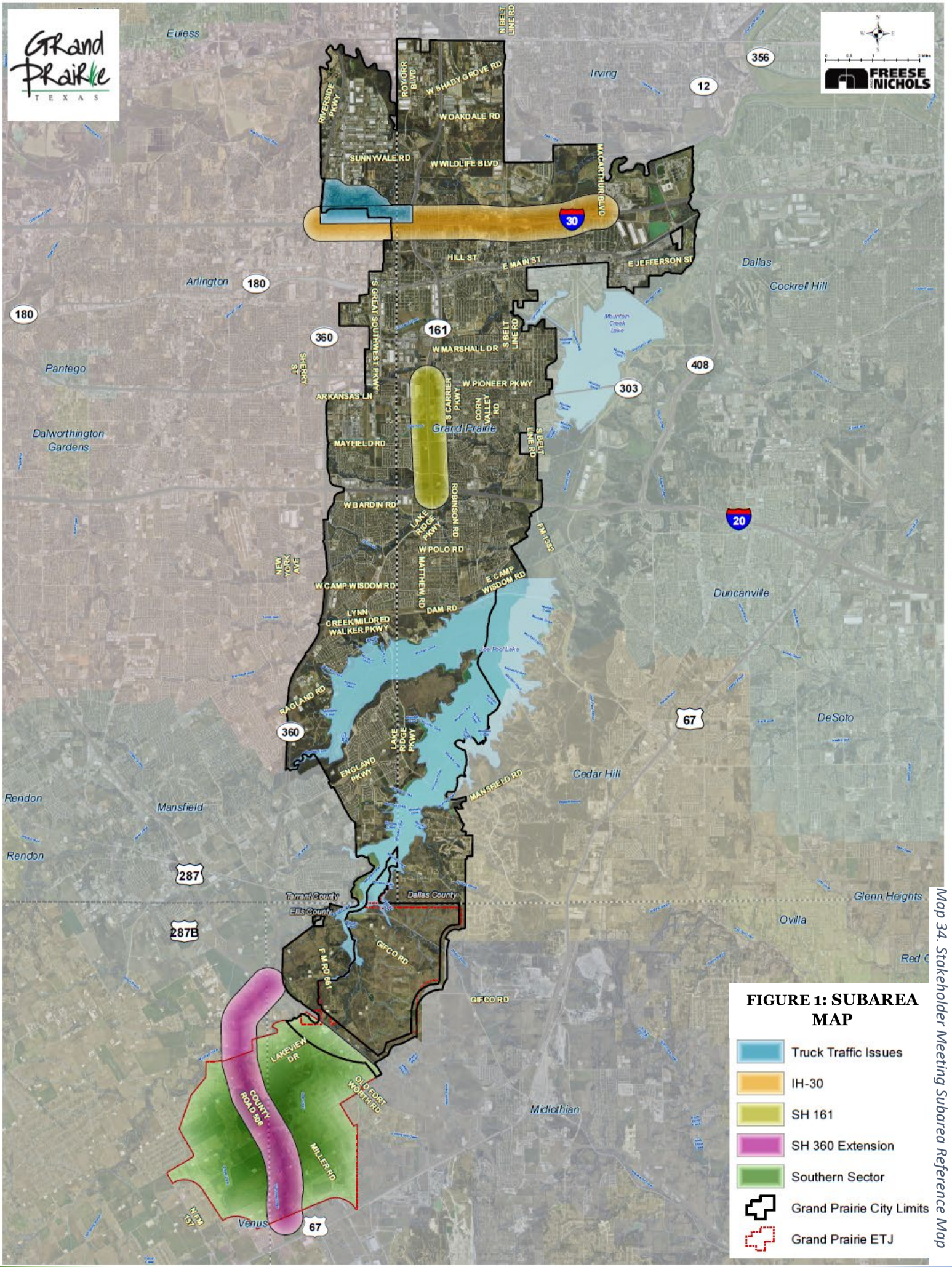
- Higher quality hotels along IH 30 should be considered
- Specialty and general retail needed in northern sector
- Consider relationship between IH 30 and Main
- Frontage roads on IH 30
- Needs grocery stores, neighborhood services, and retail
- Development should correspond with Arlington's entertainment district (hotels, restaurants)

Highway 360

- Higher quality hotels along Hwy 360 should be considered
- Needs to draw commercial development into the City

General/Other

- Wild Flower implementation
- Best use according to restaurants, not market forces
- Development similar to what is on the peninsula
- More density/rooftops to support retail
- Transportation considerations
- Consider expanding/strengthening overlay standards
- Understanding of adjacent City land uses is important
- Design guidelines for key areas



Map 34. Stakeholder Meeting Subarea Reference Map

Key Issues

In general, feedback received from the stakeholders about key issues in the subareas fell into four categories:

- Design, aesthetics, and quality of life;
- Economic development;
- Environment, and
- Traffic.

Design, Aesthetics, and Quality of life

- Concern about compatibility of land uses in adjacent areas
- Higher density is ok, but not at the expense of high quality
- Continue high quality single-family development
- Preserve bedroom community feel; neighborhood improvement study/initiatives are needed
- How does the City plan to control ETJ
- Promote unique, locally-owned development
- More recreation and high value housing around the lake

Economic Development

- ~10,000 multi-family units coming along Hwy 360
- Infrastructure needs of southern sector need to be identified
- Hwy 360 extension: could be 30 years before it is self-funded
- Lack of rooftops north of IH 30 for commercial development
- IH 20E could support more retail
- Address car lots on Jefferson
- Destination retail/commercial
- Owner-occupied townhomes
- Annexation/infrastructure strategies
- Entertainment/warehouse district could benefit the City

Environmental

- Maintaining natural feel along roadways, tree preservation
- Reclaim flood planes
- Flooding along Carrier/IH 20, IH 30
- Focus on parks and connectivity

Traffic

- Traffic congestion mitigation plans needed for Great Southwest Pkwy/IH 20, IH 20/161, IH 20/360, Mayfield/161
- Trader's Village/mall: Traffic queuing issues/congestion; traffic/wayfinding study needed
- GSW/Avenue K: expectation that traffic will get worse with cut through to Hwy 161
- Roadway conditions need to be considered; consider/review planned roadway expansions
- IH 20 will be the next pinch point: impact of waterpark and hotels
- IH 30/Hwy 360 to IH 30/Hwy 161 needs improvements (pending)
- No alignment for Hwy 360 extension south of US 287
- Increasing congestion along Carrier Parkway
- Significant neighborhood cut through issues (Robinson, Baghdad, Fish Creek Rds.)
- Lane modifications needed (Lake Ridge) for safety
- Potential for more traffic on Jefferson because of industrial uses
- Mass transit and connections to regional rail needed
- Opportunities for Safe Routes to School funding/partnerships
- Lake Ridge Parkway: Bike traffic safety issues
- Consider roundabouts at key intersections
- Train traffic is a connectivity factor to consider
- GPS navigation has been a problem for truck traffic

Other

- Improve coordination between City and ISDs

What is the most important thing for these plan updates to accomplish?

Stakeholders identified the following outcomes as their most important desire for the Plan:

- Provide retail and amenities for areas north of IH 30
- Identify public transit solutions
- Foster good relationships with adjacent cities
- Be creative/innovative and "shoot for the moon"
- Be realistic and feasible, including infrastructure and annexation planning
- Improve corridor aesthetics (including redevelopment)
- Increase tax revenues for the City
- Consider implications of current zoning
- Make Downtown "cool"

Chamber of Commerce Luncheon

June 28, 2017 | FNI met with the Grand Prairie Chamber of Commerce to inform members of the MTP and Comprehensive Planning update process and collect their input about what issues should be addressed in the update. At the luncheon, 100 people were in attendance and information was received from 30 participants. Members provided the following input:

- Support for the Mayor and City staff
- Support for trails and park system
- Desire for more dining options in place of fast food
- There is a strong sense of community

Issue Identification Board

Members identified the following issues on the issue identification board:

- Flooding issues along IH 20 and IH 30; need for frontage roads
- Need for more types of housing
- Desire for walking paths along Fish Creek
- Need for more restaurants and retail in the northern part of the City
- IH 20 is optimal for retail frontage
- Congestion in industrial areas and along IH 20
- Desire for park and open space enhancements

Online Opinion Survey

An online opinion survey was made available to residents of Grand Prairie from June to September 2017 and reopened from June to September 2018. This survey was not statistically valid, however it was attitudinal and provided information about what the community felt was most important. Participants were asked 18 questions related to demographics, community aesthetics, land use, mobility, and transportation.

Survey Questions

The survey asked the following questions:

1. Do you live or work in Grand Prairie?
2. What Council District do you live in?
3. How long have you lived in the City?
4. Which age group do you belong to?
5. Do you have children? If yes, to which age groups do they belong?
6. What is your favorite characteristic of Grand Prairie?
7. How would you rate the City in terms of overall appearance?
8. What was the most important factor for you when you decided to move to the City?
9. What types of jobs and businesses are most important for Grand Prairie's economy?
10. What makes Grand Prairie unique and distinguishable from surrounding communities?
11. How important or unimportant are the various land uses?
12. What is the number one item that would enhance the quality of life in Grand Prairie?
13. What would you consider the greatest single issue facing Grand Prairie today?
14. What one thing would you change about Grand Prairie?
15. How do you commute to work or school on most days?
16. How do you feel about your ability to get around town?
17. What is the number one transportation issue facing Grand Prairie?
18. Is there anything else you would like to add about the Master Transportation Plan or Comprehensive Plan update?

Opinion Survey | Big Ideas

76 | percent identify the City's appearance as 'excellent' or 'good'

90+ | percent ranked the following as **important**: parks and open space, an effective roadway network, and roadway enhancements

80+ | percent ranked the following as **important**: community centers and recreational facilities, employment opportunities, availability of single family homes, local retailers and specialty shops, and walkable destinations

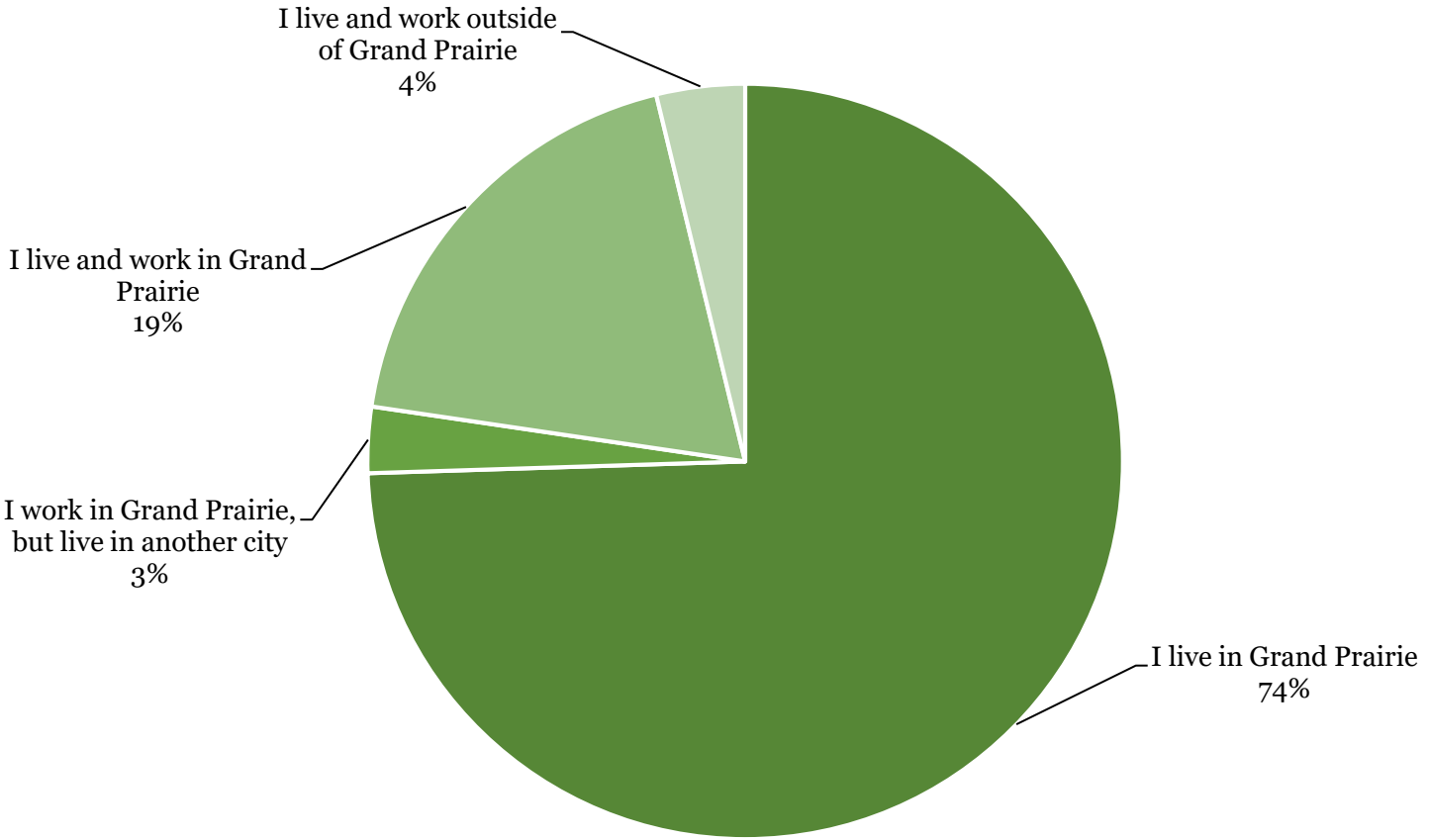
70+ | percent ranked the following as **important**: trail network, destination locations, and national retailers

65+ | percent ranked the following as **unimportant**: Availability of multifamily homes and townhomes/condos/duplexes.

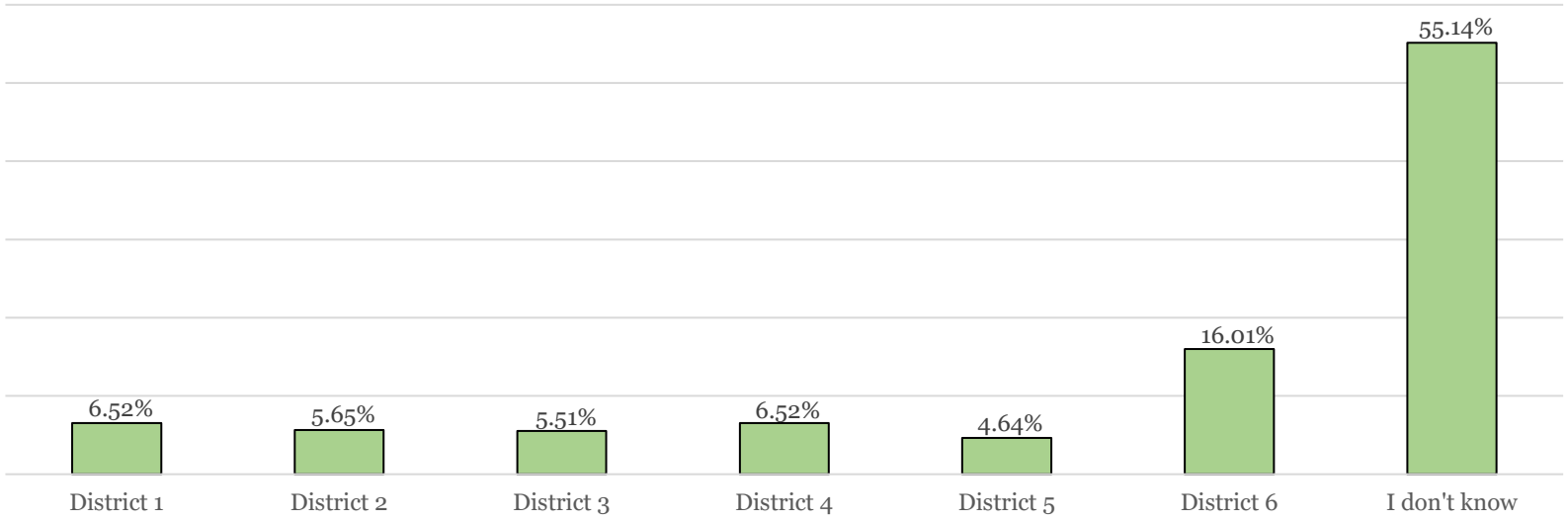
Survey Results

Note: Open ended questions are not included in the following charts.

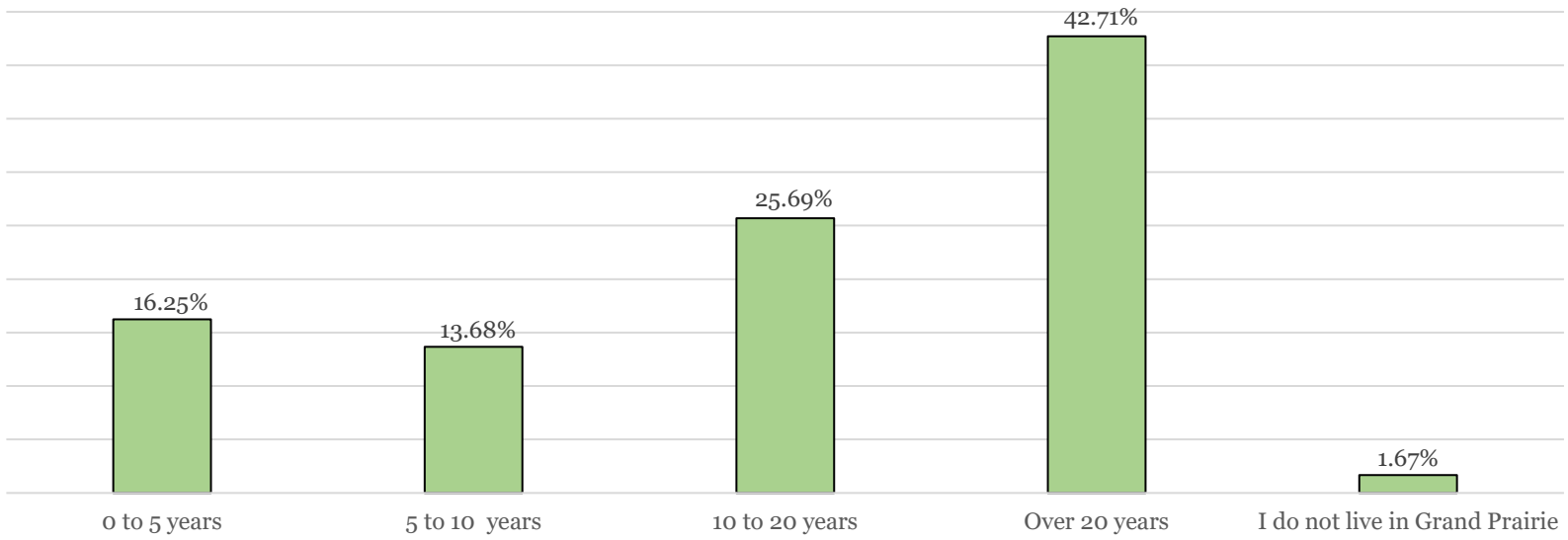
1. Do you live or work in Grand Prairie?



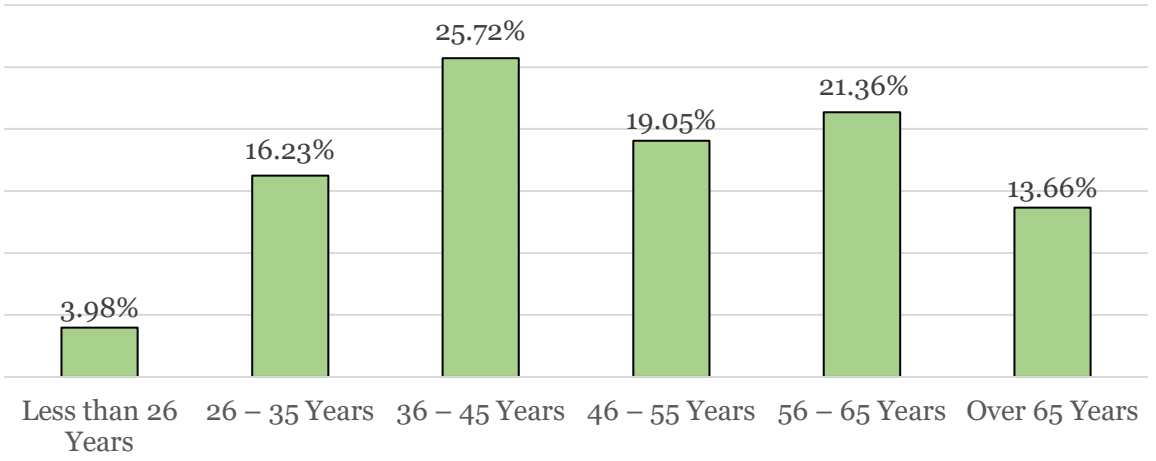
2. What Council District do you live in?



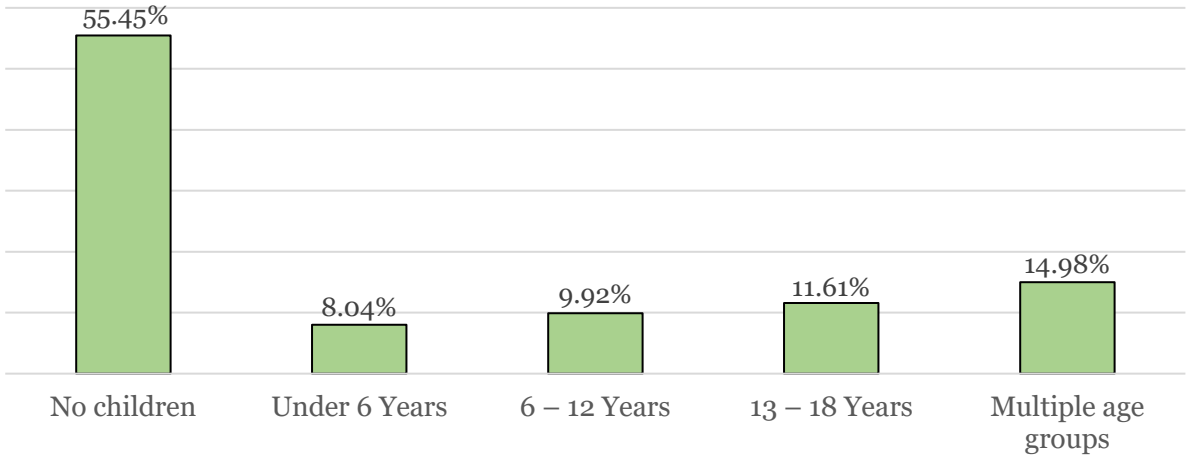
3. How long have you lived in the City?



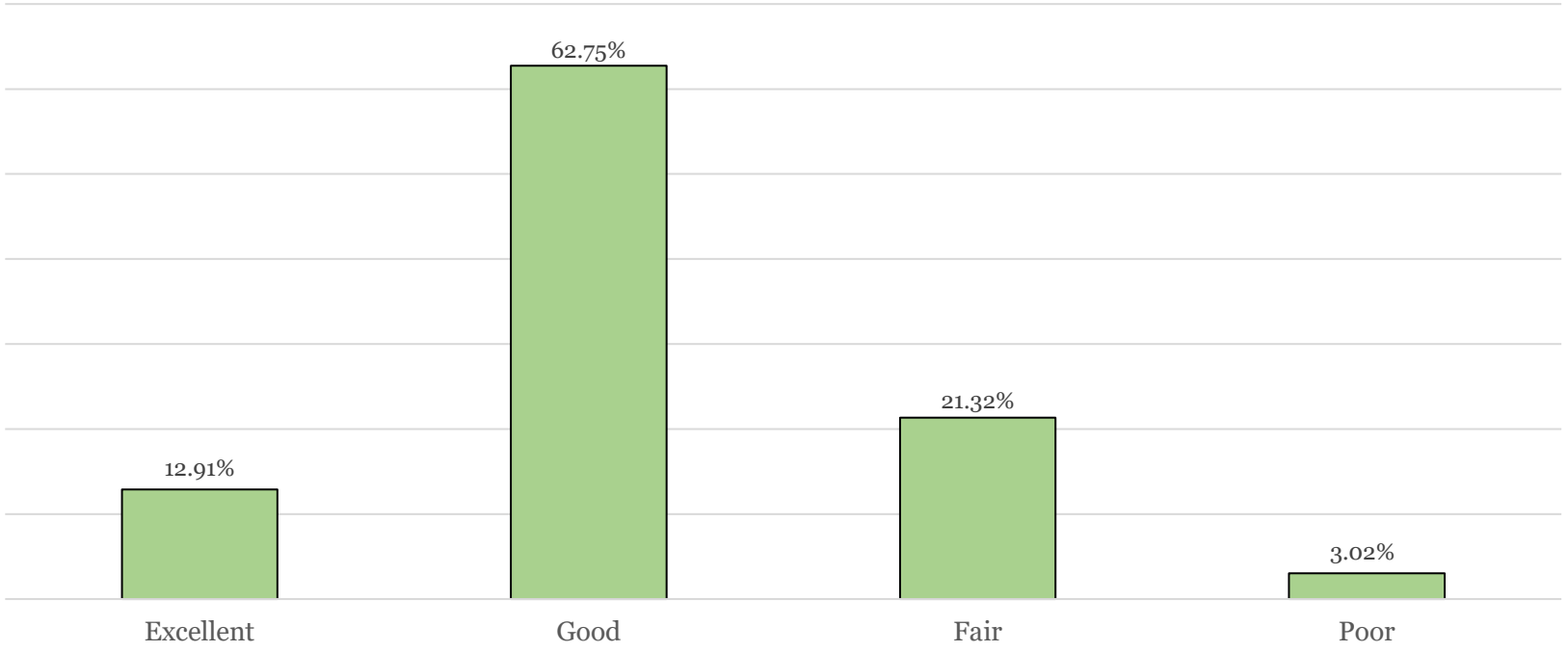
4. Which age groups do you belong to?



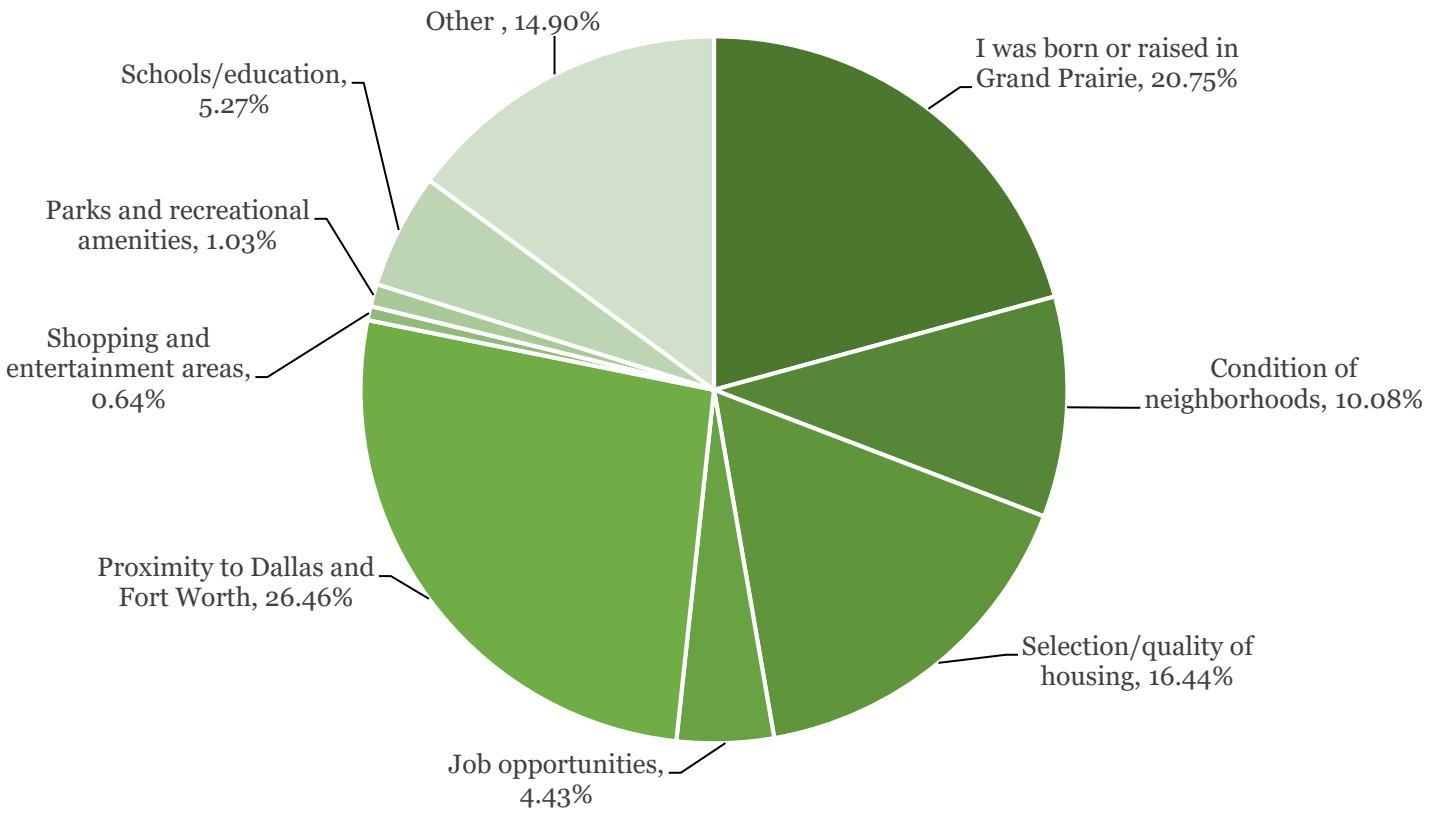
5. Do you have children? If yes, to which age groups do they belong?



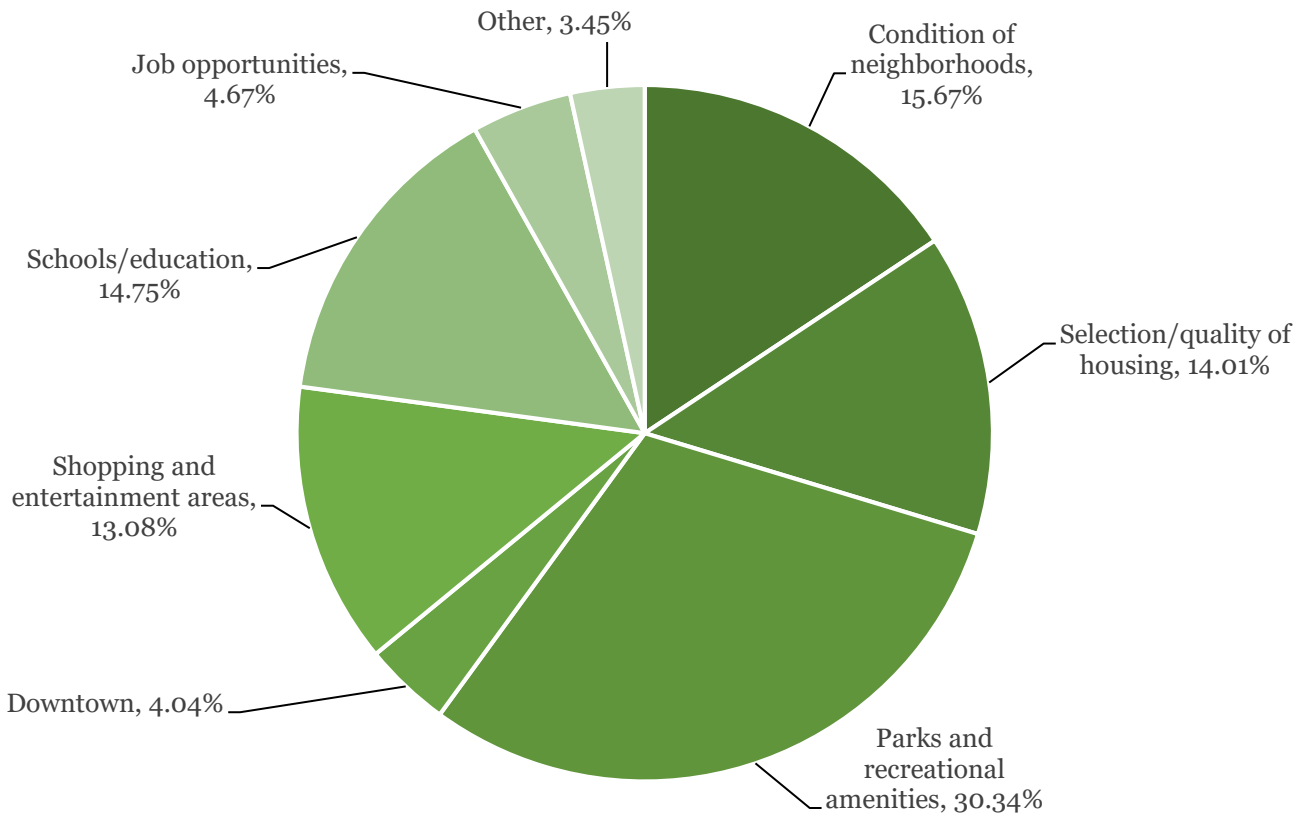
7. How would you rate the City in terms of overall appearance?



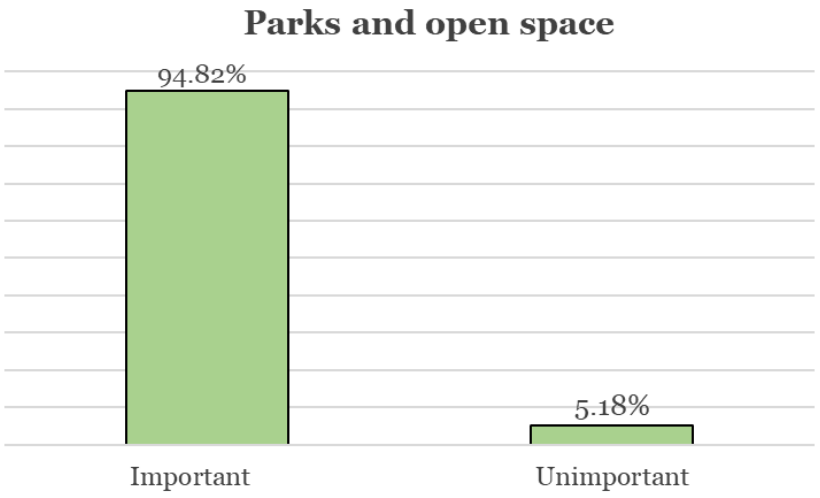
8. What was the most important factor for you when you decided to move to the City?

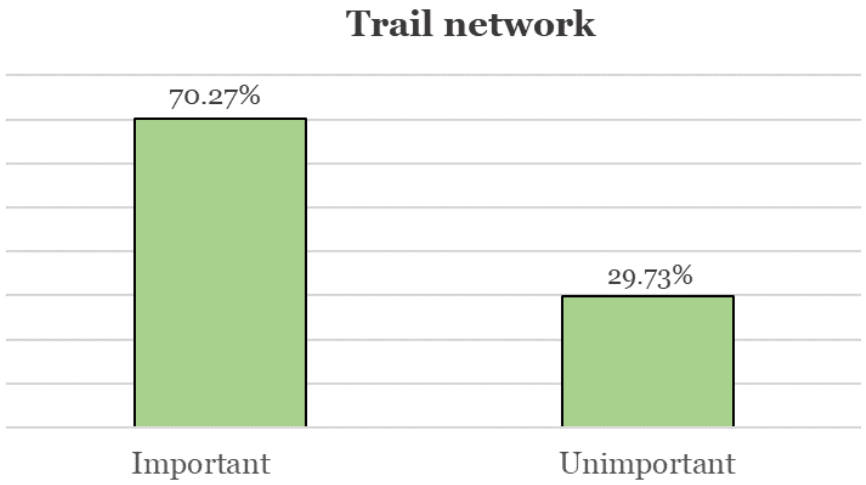


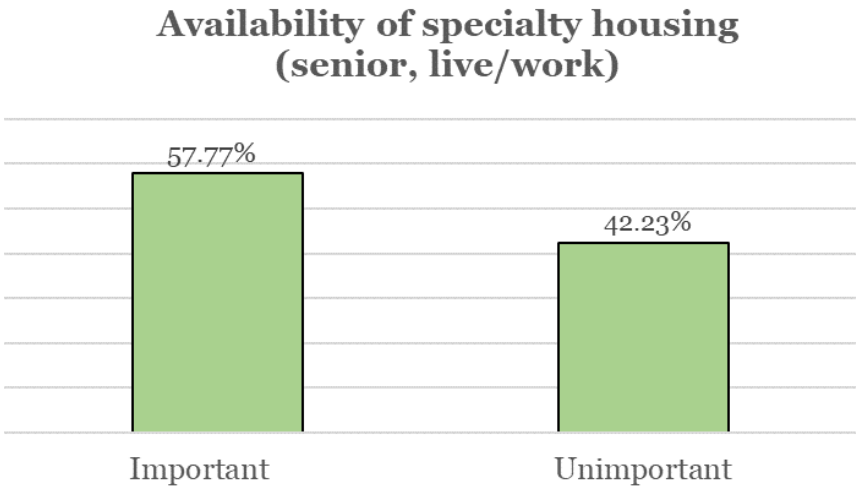
10. What makes Grand Prairie unique and distinguishable from surrounding communities?

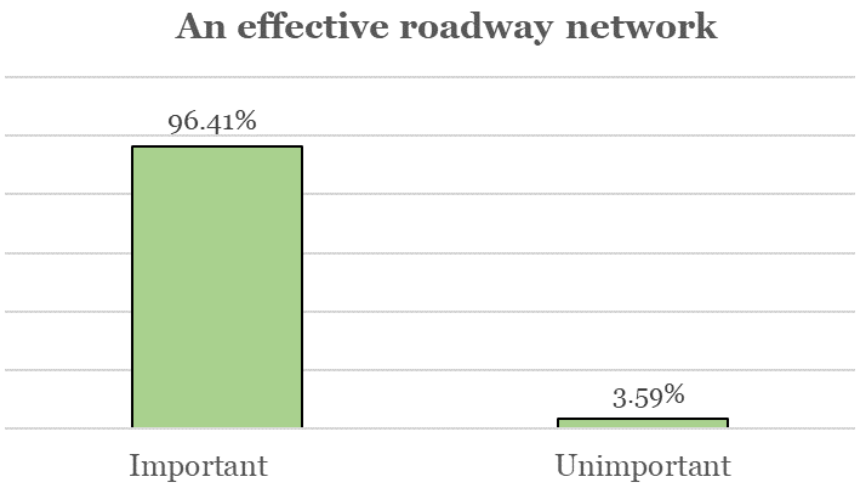


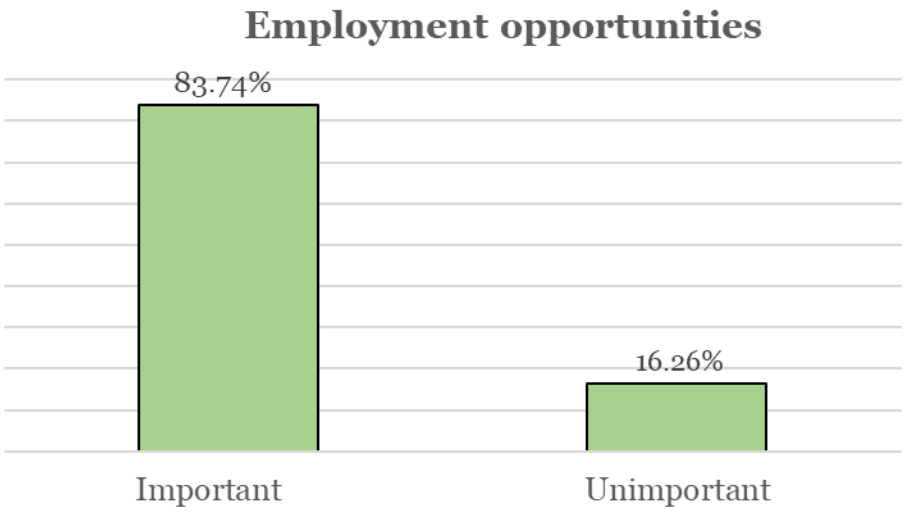
11. How important or unimportant are the various land uses?

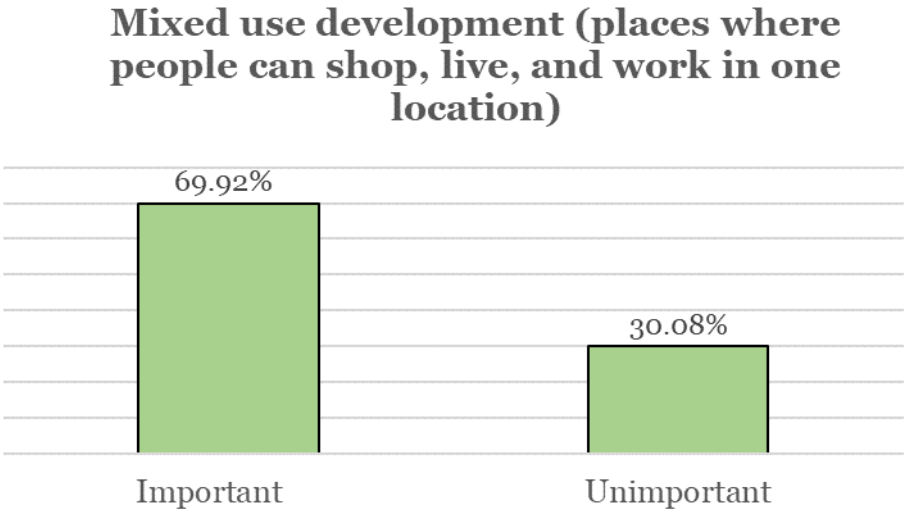


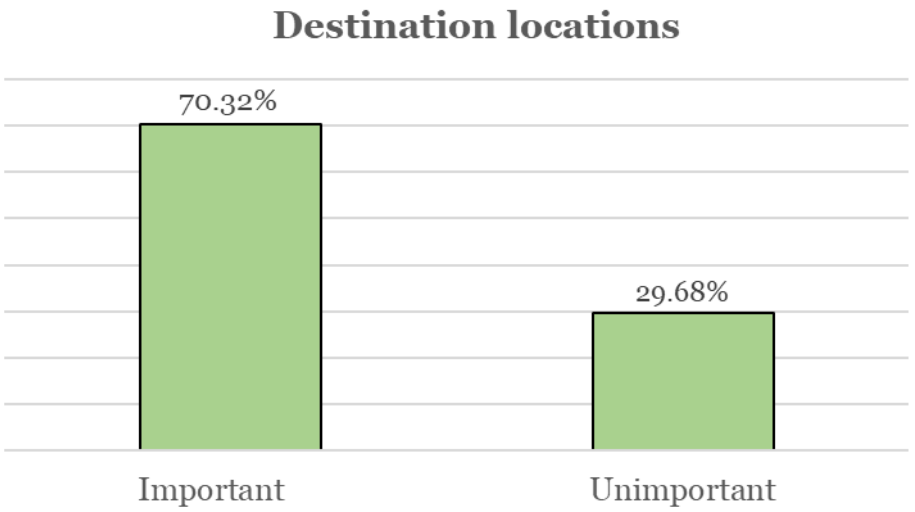


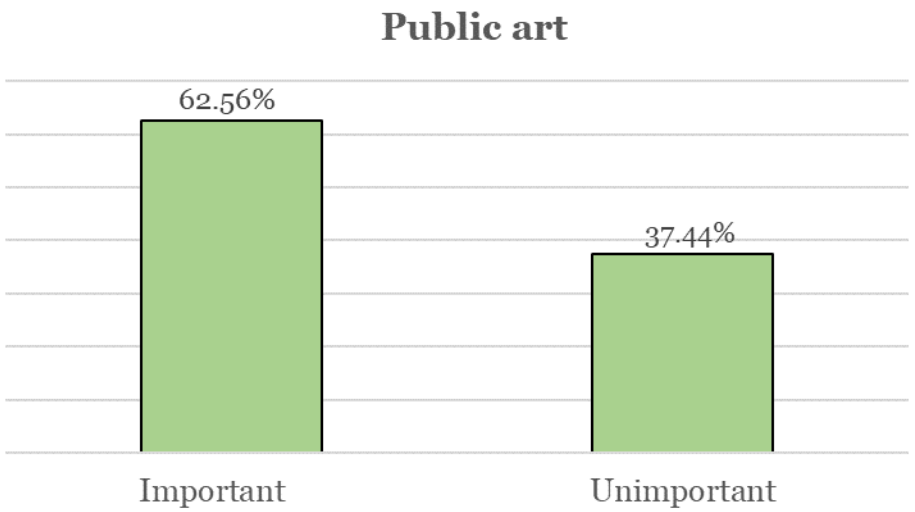

Availability of specialty housing (senior, live/work)
57.77%
42.23%
Important
Unimportant

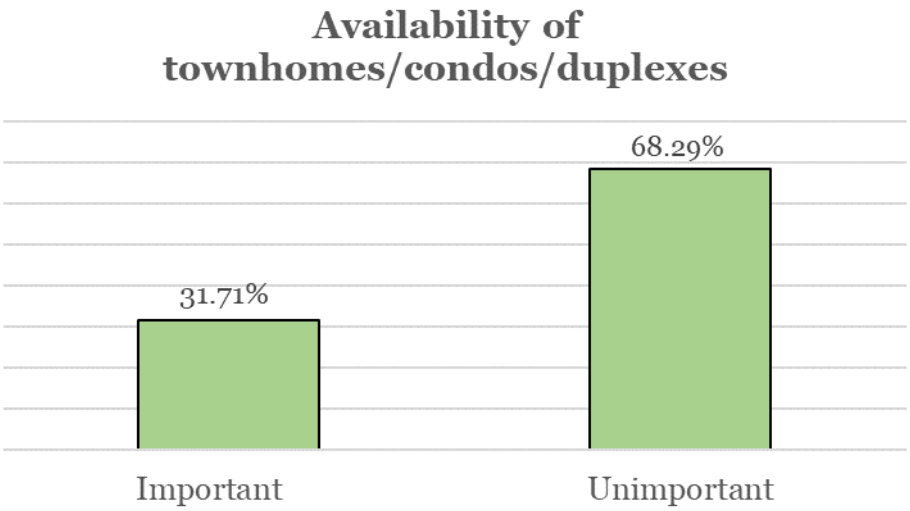

An effective roadway network
96.41%
3.59%
Important
Unimportant

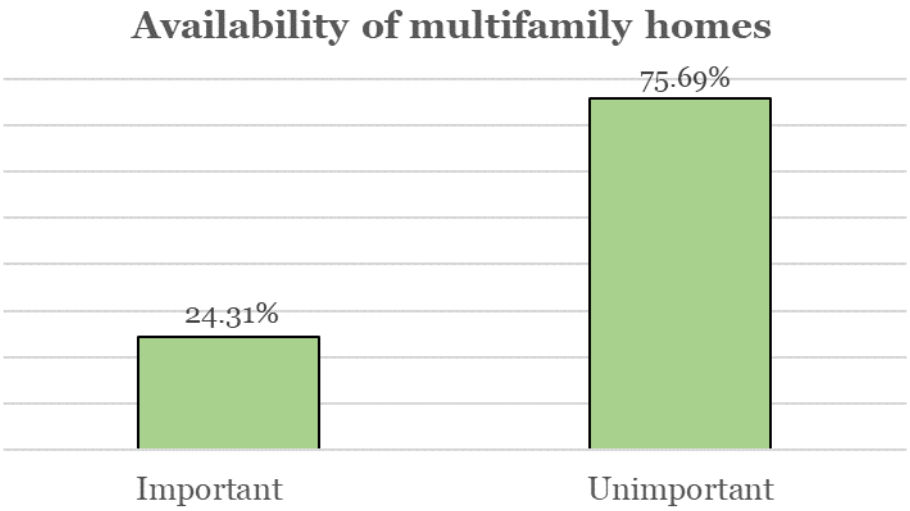

Employment opportunities
83.74%
16.26%
Important
Unimportant

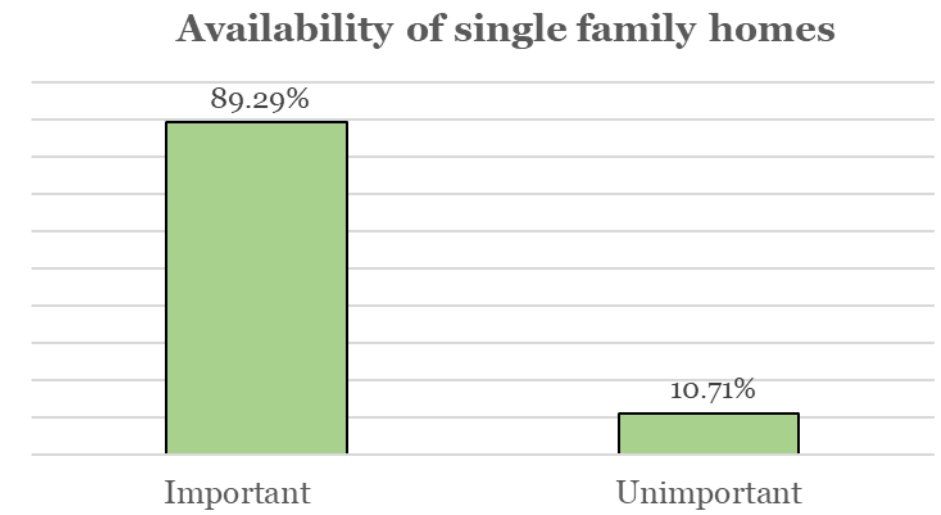

Mixed use development (places where people can shop, live, and work in one location)
69.92%
30.08%
Important
Unimportant

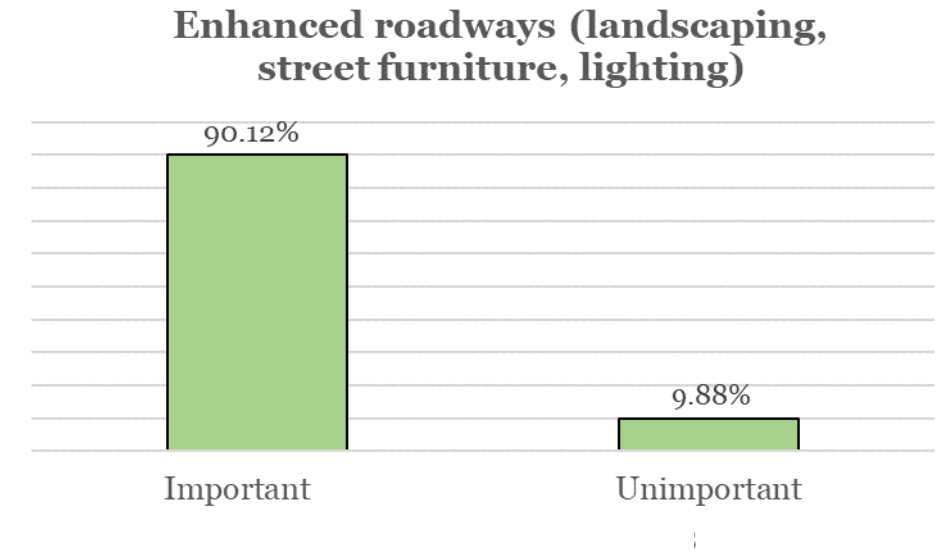

Destination locations
70.32%
29.68%
Important
Unimportant

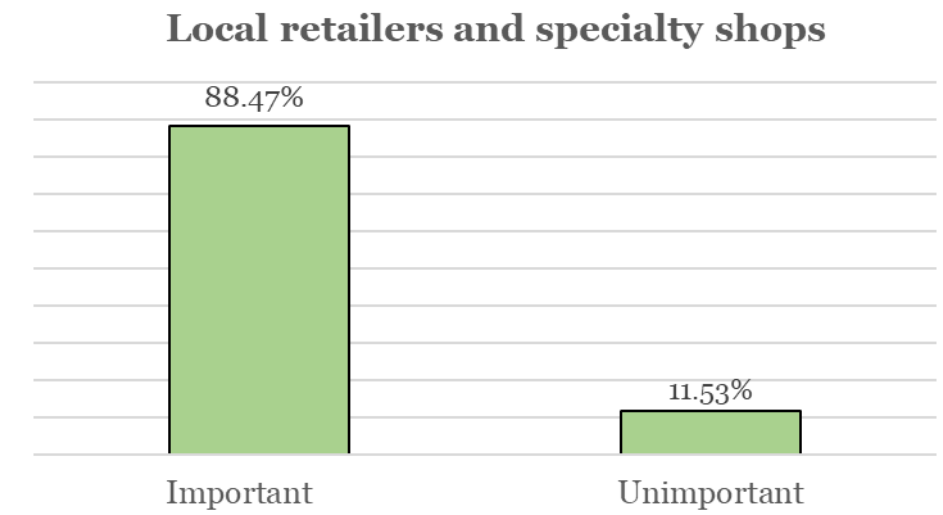

Public art
62.56%
37.44%
Important
Unimportant

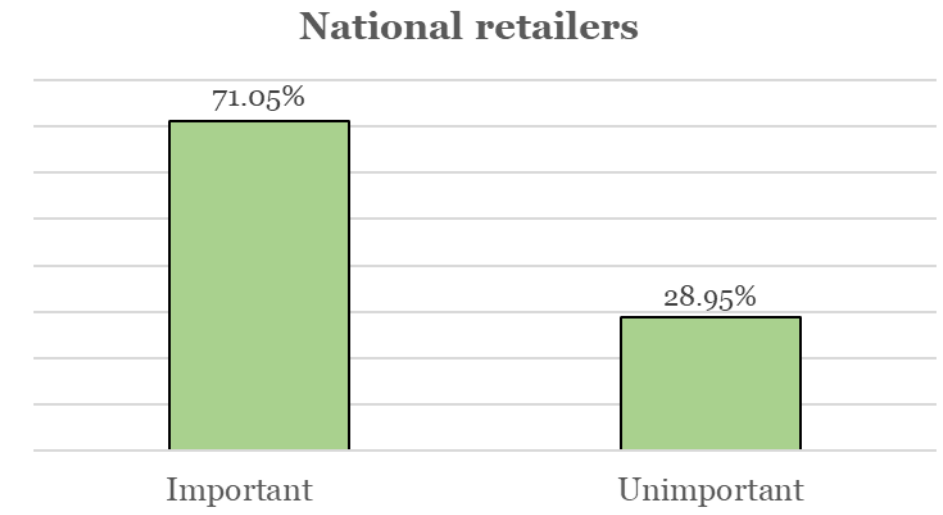

Availability of townhomes/condos/duplexes
68.29%
31.71%
Important
Unimportant

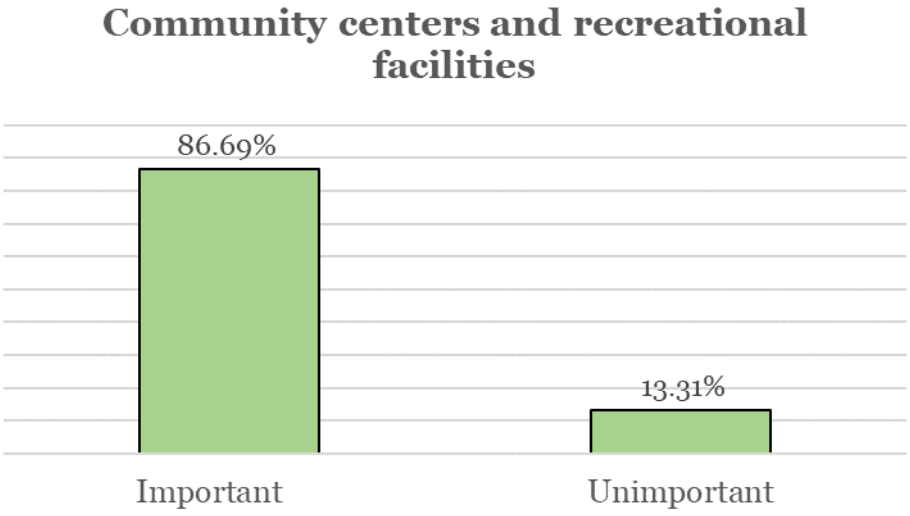

Availability of multifamily homes
75.69%
24.31%
Important
Unimportant

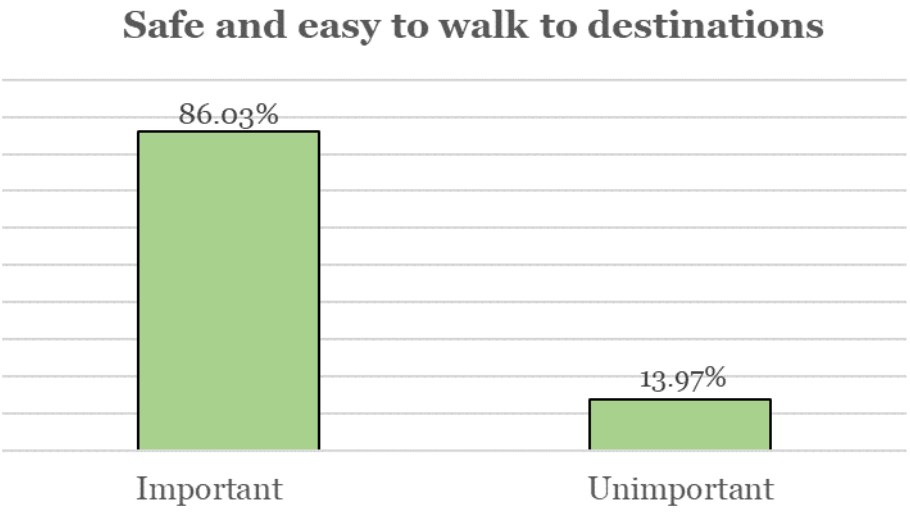

Availability of single family homes
89.29%
10.71%
Important
Unimportant


Enhanced roadways (landscaping, street furniture, lighting)
90.12%
9.88%
Important
Unimportant

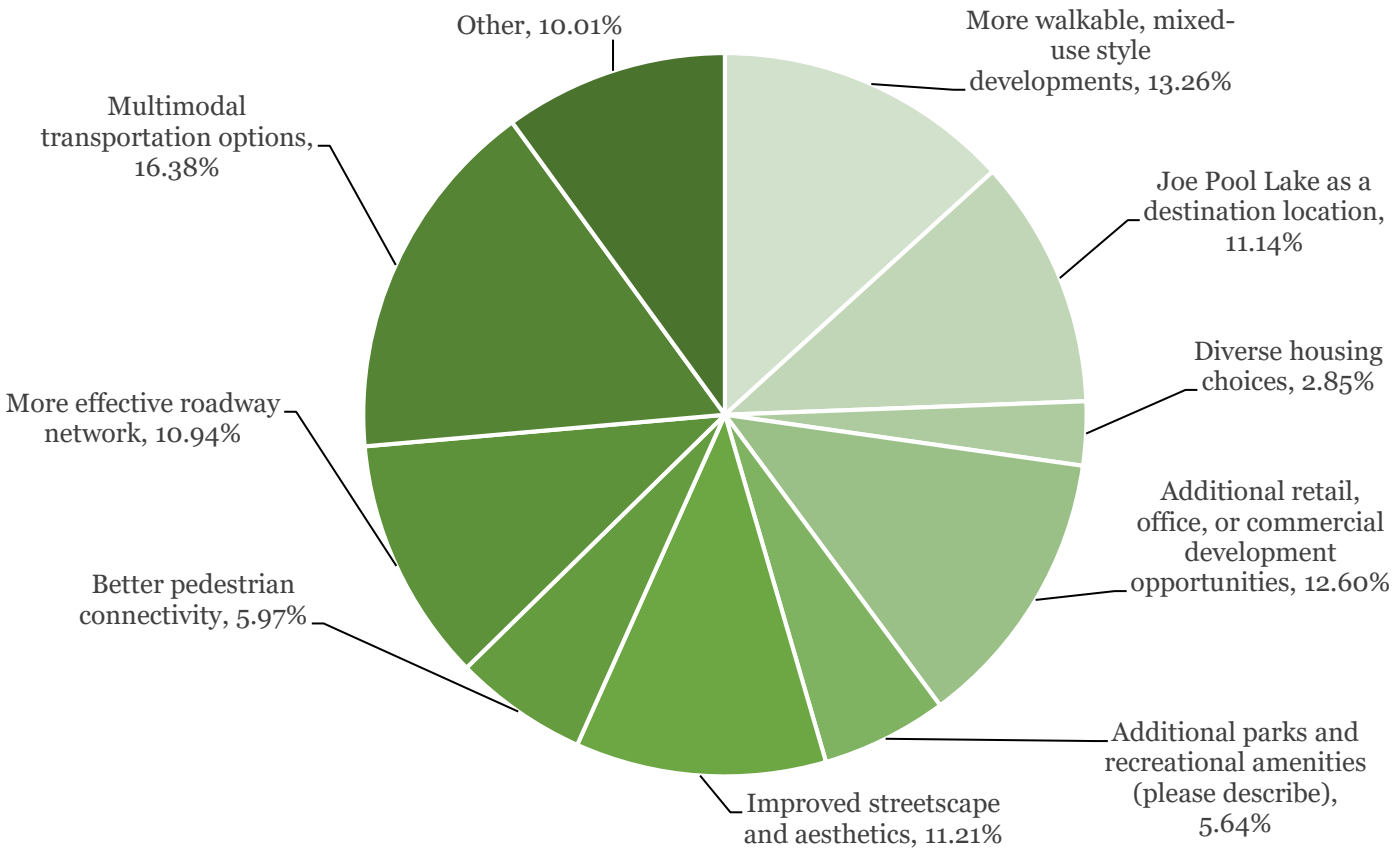

Local retailers and specialty shops
88.47%
11.53%
Important
Unimportant


National retailers
71.05%
28.95%
Important
Unimportant

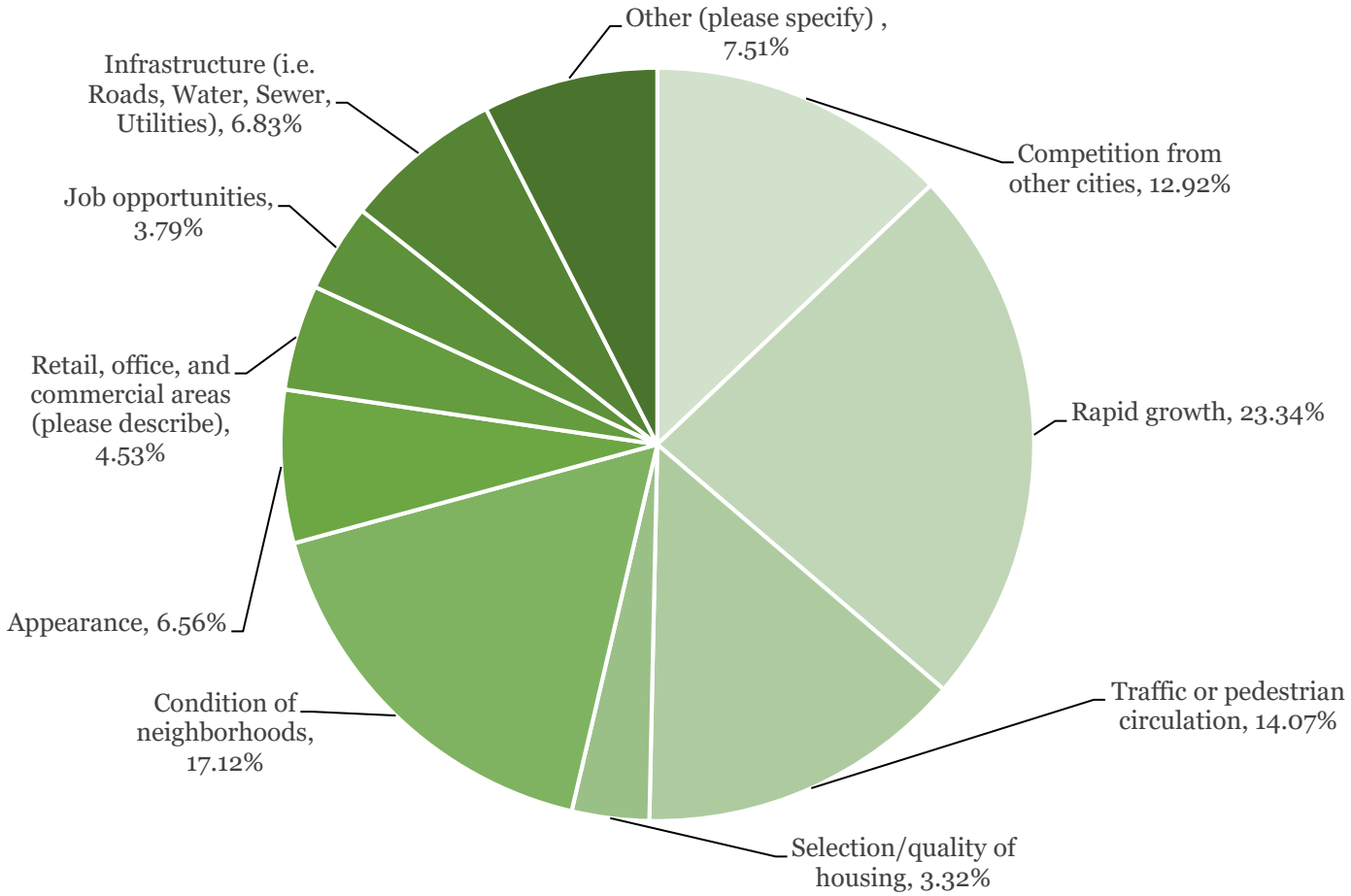

Community centers and recreational facilities
86.69%
13.31%
Important
Unimportant


Safe and easy to walk to destinations
86.03%
13.97%
Important
Unimportant

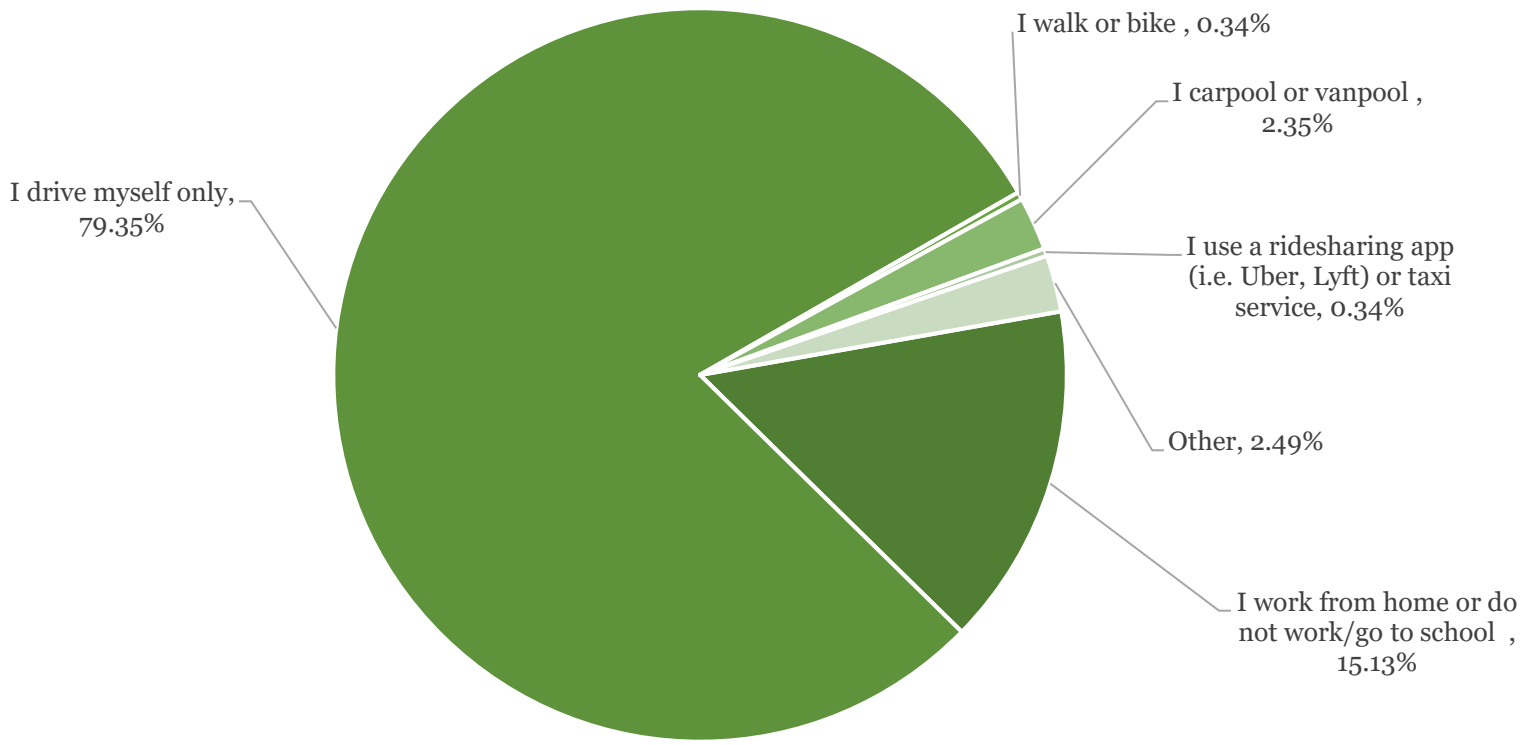
12. What is the number one item that would enhance the quality of life in Grand Prairie?



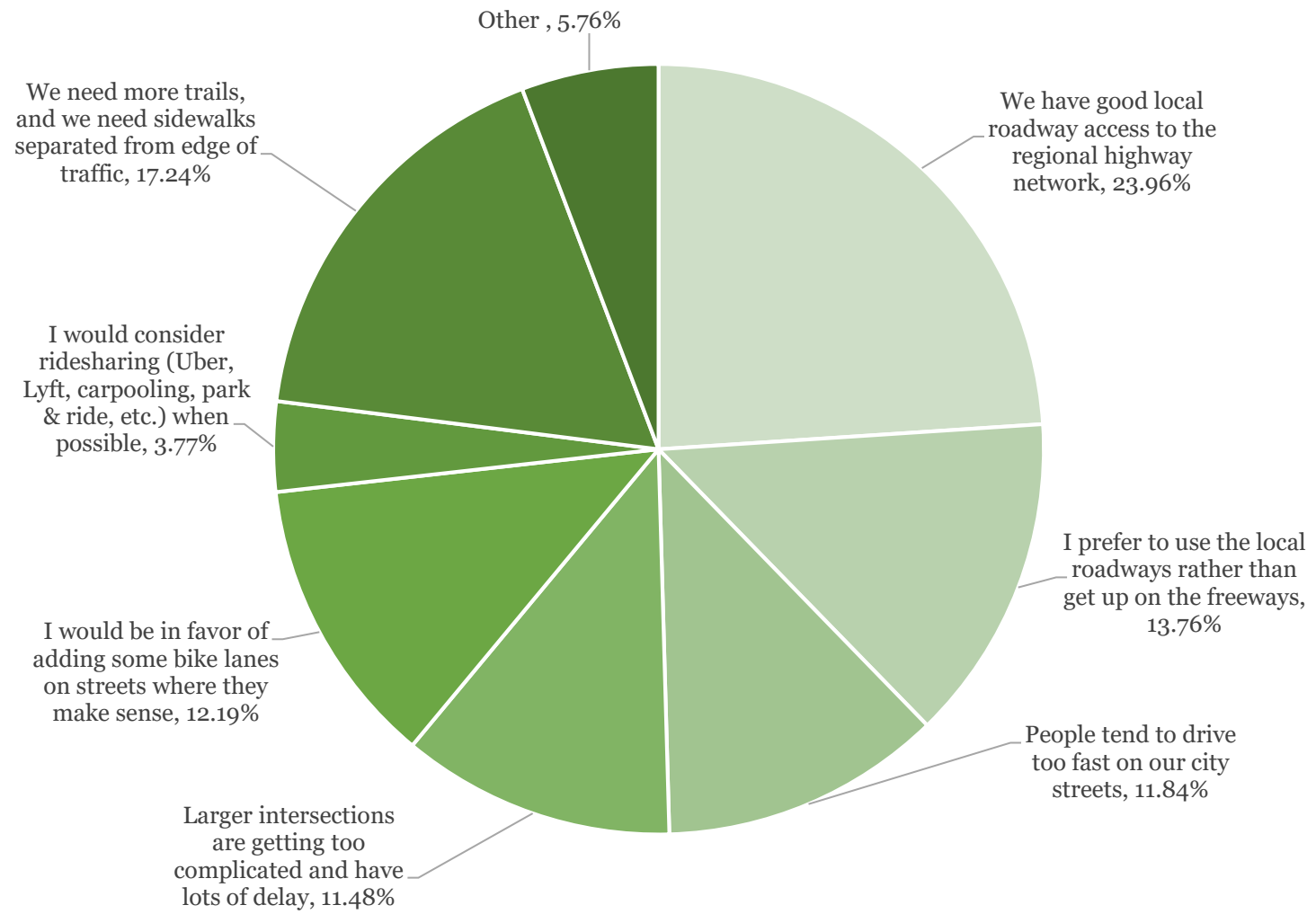
13. What would you consider the greatest single issue facing Grand Prairie today?



15. How do you commute to work or school on most days?



16. How do you feel about your ability to get around town?



Town Hall Meeting

August 8, 2017 | FNI attended a Town Hall meeting for Councilmember Del Bosque. The purpose of attending this event was to engage residents within the northeastern sector in a convenient, informal setting. At the event, 100 citizens were in attendance and input was gathered from 5 participants. During the meeting the following issues, related to the MTP and Comprehensive Plan update, were raised:

- Need for sidewalks, curbs, and gutters
- Question about whether tax revenue from retail development will go towards park and recreational facilities
- Need for a speedbump study to consider traffic calming on residential streets

Issue Identification Board

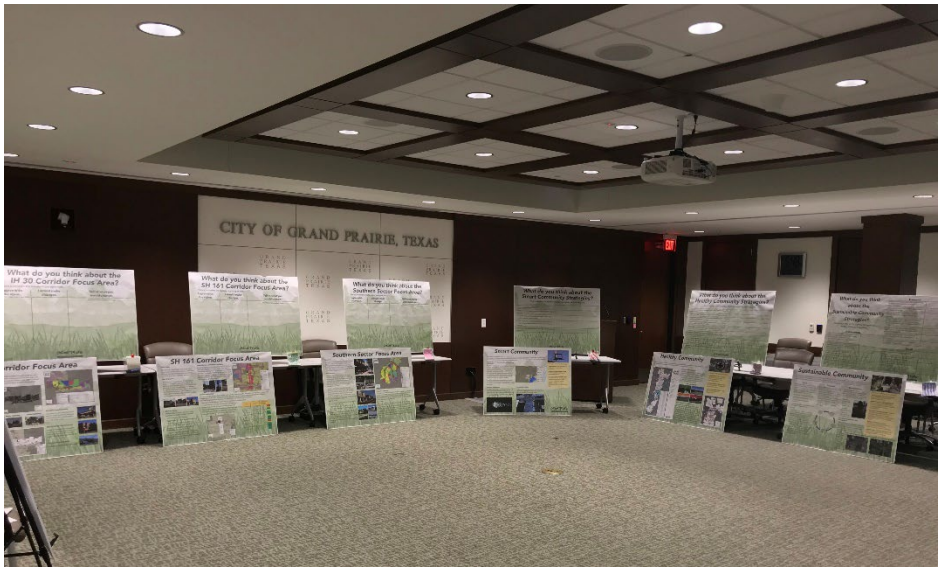
Attendees identified the following issues on the issue identification board:

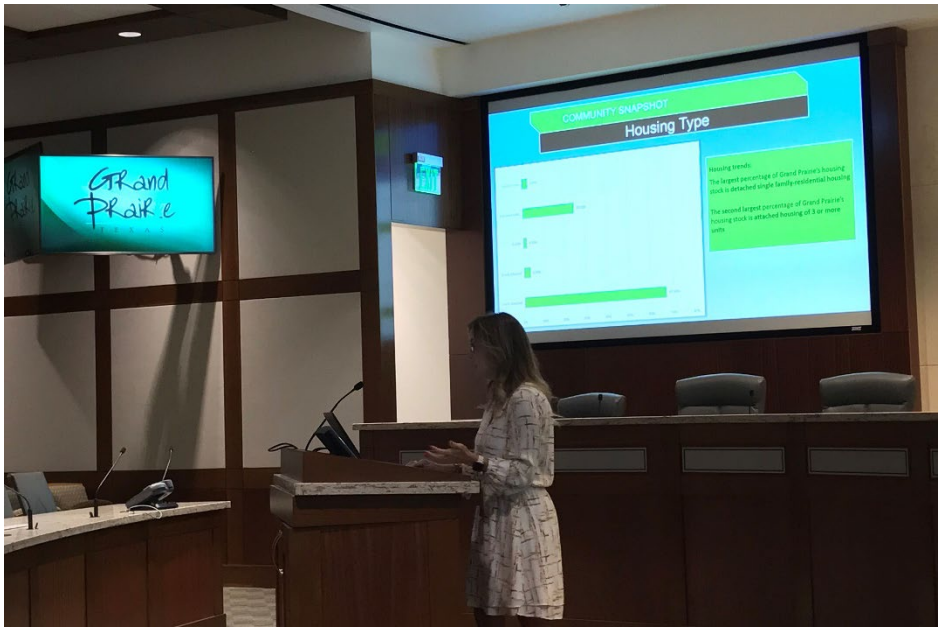
- Traffic accidents and congestion at the IH 30/Hwy 161, IH 20/Great Southwest Pkwy, and IH 20/Hwy 161 intersections

Community Meeting

August 30, 2018 | FNI facilitated a Community Meeting at City Hall. The purpose of this meeting was to present the draft plan to the community and garner feedback. During the meeting the following feedback was collected:

- Participants agreed with the plan visions.
- Aligning the Parks Master Plan and Parks and Trails Map with the Future Land Use Plan is the highest priority Healthy Community strategy.
- A Town Center development should be considered on Lake Ridge Parkway.
- DART participation should be re-evaluated.
- Integrating new IoT technologies into municipal facilities/roadways/infrastructure/services and facilitating the installation of data transmission infrastructure are the highest priority Smart Community strategies.
- The highest priority Sustainable Community strategies are as follows:
    - Integrating sustainable design elements into existing development guidelines, building codes, and engineering standards.
    - Working with Downtown businesses to ensure the vitality of Downtown.
    - Continuing to identify and pursue funding sources and tools to expand homeowner assistance programs.





Appendix B | Thoroughfare Plan Updates

Summary of Changes

North of Spur 303

Changes in this sector of Grand Prairie include adjustments to reflect redevelopment of the city golf course, enhanced land uses near the entertainment district, and the influence of the modifications to the service roads of IH 30. Thoroughfares were also modified in coordination with Thoroughfare Plan updates from Arlington, Irving, Dallas and Cedar Hill.

- Change #1 – Macarthur Blvd between Gifford St and Main St changed from pair of P3U to M4U
- Change #2- Collector removed between Deja Lan and SH 161 Service Rd

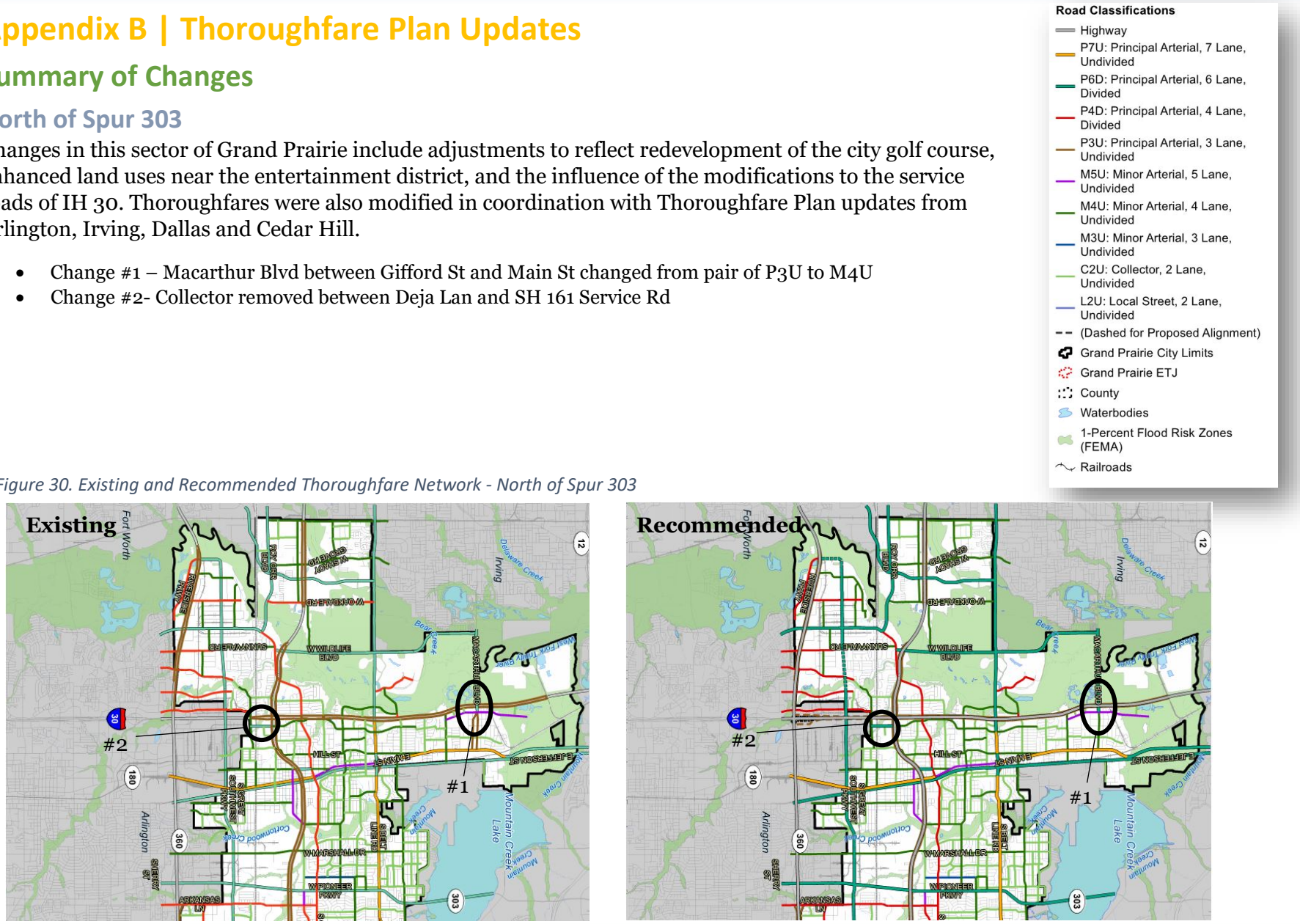


Figure 30. Existing and Recommended Thoroughfare Network - North of Spur 303

Between Spur 303 and Joe Pool Lake

Changes in this sector of Grand Prairie include minor adjustments to reflect localized development and the influence of the modifications to the service roads of IH 30 and IH 20. Thoroughfares were also modified in coordination with Thoroughfare Plan updates from Arlington and Cedar Hill.

- Change #1 – Removed collector street between Fall Drive and Great Southwest Pkwy

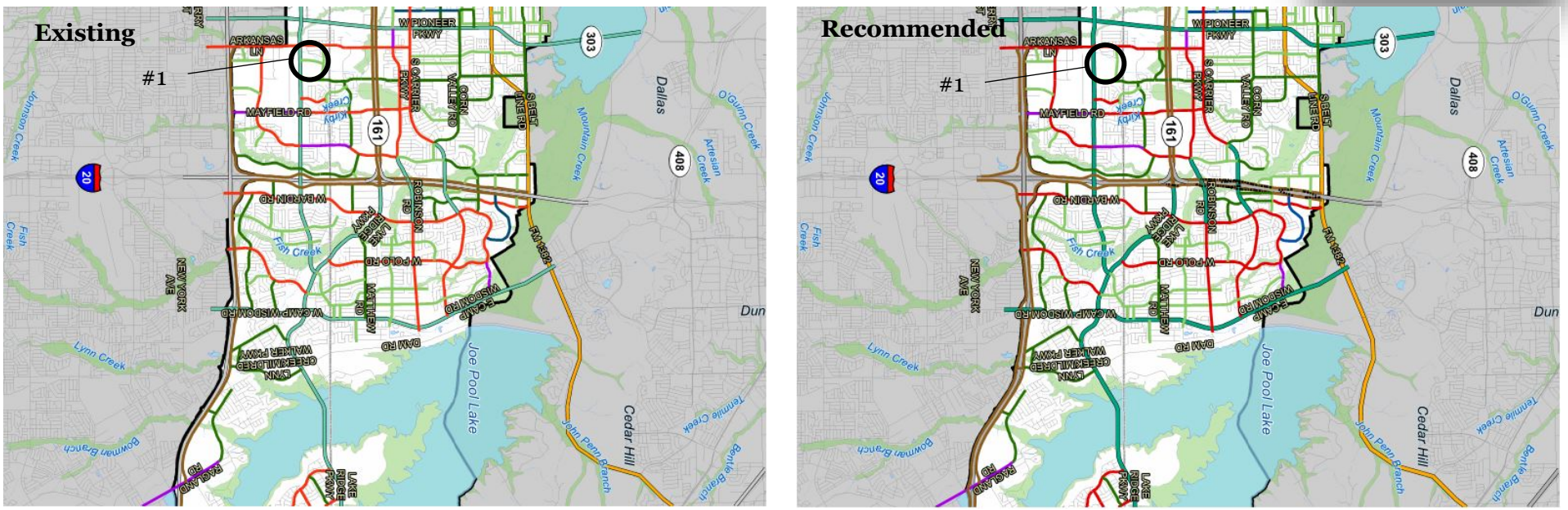


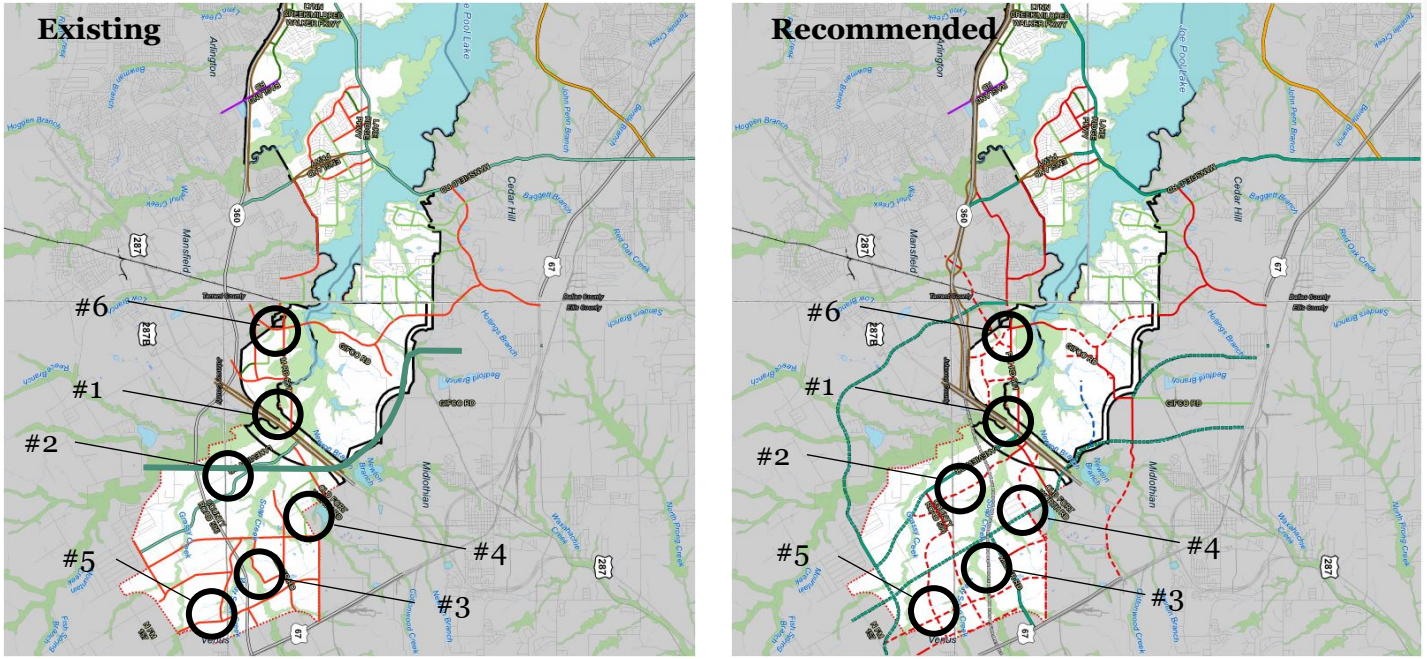
Figure 31. Existing and Recommended Thoroughfare Network - Between Spur 303 and Joe Pool Lake

South of Joe Pool Lake

Changes in this sector of Grand Prairie revolve around the completion of SH 360 as a toll road with frontage roads and the interchange at US 287 and the incorporation of the planned extension of SH 360 to US 67 that is included in the financially constrained 2040 Metropolitan Transportation Plan. Planned residential developments, such as the developments called Prairie Ridge, Windsor Hills and Lake View Hills, have proposed roadways that are considered in the proposed thoroughfare modifications. Thoroughfares were also modified in coordination with Thoroughfare Plan updates from Arlington, Mansfield, Cedar Hill and Midlothian.

- Change #1 – Stressed the continuity of Lakeview Dr (FM 661) on each side of US 287
- Change #2 – Reduced Prairie Ridge Blvd from P6D to P4D
- Change #3 – Shifted alignment of SH 360 extension
- Change #4 – Shifted alignment of Kimbal Rd extension south of Us 287 to run parallel to US 67
- Change #5 – Realigned other area future roadways to respond to changes 1 thru 5
- Change #6 – Extended Lakeview Dr (FM 661) to connect to Heritage Pkwy

Figure 32. Existing and Recommended Thoroughfare Network - South of Joe Pool Lake



FREESE AND NICHOLS