



Land Use Assumptions For Impact Fees

2019 ROADWAY &
WATER/WASTEWATER
FEE UPDATE

CITY OF ROCKWALL
PLANNING & ZONING DEPARTMENT

JANUARY 2019

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FORWARD

What are *Impact Fees*? *Impact Fees* are charges that are imposed by local governments against new development for the purpose of generating revenue for or to recoup the cost of capital facilities (*i.e. infrastructure*) that are necessitated by and attributable to new development. These fees are generally implemented to reduce the economic burden of a municipality and its taxpayers when addressing the need for adequate capital improvements to accommodate growth. Impact fees are typically paid to a municipality in advance of the completion of a particular development project, and are based on a defined methodology and calculation that is derived from the cost of the facility and the scope/impact of the development.

PURPOSE

Chapter 395, *Financing Capital Improvements Required by New Development in Municipalities, Counties, and Certain Other Local Governments*, of the Texas Local Government Code outlines the process for adopting and updating impact fees for political subdivisions. On October 20, 2014, the City of Rockwall adopted roadway and water/wastewater impact fees through *Ordinance No. 14-47*. According to the statutory requirements stipulated by the Texas Local Government Code impact fees are required to be updated at a minimum of every five (5) years [§395.052].

In approaching an update to existing impact fees it is important for a city to assess its growth and employment potential, and establish land use assumptions that will guide development for a ten (10) year planning period (*i.e. 2019-2029*) [§395.001(5)]. These land use assumptions form the basis for the preparation of the *Impact Fee Capital Improvement Plan* for water, wastewater, and roadway facilities.

In order to determine the need and timing of capital improvements to serve future development, a rational estimate of the future growth of the City is required. The purpose of this report is to formulate growth and employment projections based upon assumptions pertaining to the type, location, quantity and timing of future development within the City, and to establish and document the methodology used for preparing these land use assumptions.

ELEMENTS OF THE LAND USE ASSUMPTIONS REPORT

This report contains the following components:

- Methodology: This component of the report contains the systematic and theoretical analysis of the methods and

principals used to prepare the projections and land use assumptions contain within this report.

- Data Collection Zones and Service Areas: This component provides an explanation of the data collection zones (*i.e. Land Use Districts established in the OURHometown 2040 Comprehensive Plan*) and the Roadway, Water and Wastewater Impact Fee Service Areas for capital facilities.
- Base Year Data: This component provides information on population, housing and employment in the City of Rockwall as of January 1, 2019 for each capital facility service area.
- Ten-Year Growth Projections: This component provides assumptions with respect to the population, housing and employment data for the City of Rockwall in ten (10) years (*i.e. 2029*). This information is broken out by the capital facility service area.
- Build Out Analysis: This component provides projections for population, housing and employment under the assumption that the City and its Extraterritorial Jurisdiction (ETJ) are developed to their carrying capacity, or their *Built Out*.
- Summary: This component provides a synopsis of the land use assumptions contained within this report.
- Appendices: This component contains information that was important in deriving the population, housing and employment projections for 2019-2029.



METHODOLOGY

Building off the base year and build out projections contained in the OURHometown Vision 2040 Comprehensive Plan, and the growth assumptions and capital improvement needs estimated to support future growth, it is possible to develop an impact fee structure that fairly allocates improvement cost to growing areas of the City with relation to the growths' potential impact on the entire infrastructure system. The data contained in this report has been formulated using reasonable and generally accepted planning principles.

These land use assumptions and future growth projections take into consideration several factors influencing development patterns, including:

- The character, type, density and quantity of existing development.
- The current zoning patterns as documented on the City's zoning map and the anticipated future land uses as established in the OURHometown Vision 2040 Comprehensive Plan, which contains the City's Future Land Use Plan.
- The availability of land and infrastructure to support future expansion of development.
- The current and historical growth trends of both population and employment within the City.
- The location and configuration of vacant parcels of land and their ability to support development.
- The growth of employment utilizing previously established and generally accepted data from ESRI's *ArcGIS Business Analyst*.
- Local knowledge concerning future development projects or anticipated development within the city.

LAND USE ASSUMPTIONS REPORT METHODOLOGY

The following is the general methodology that was used for the preparation of this report:

- (1) Population, housing and employment data was collected from the United States Census Bureau, North Central Texas Council of Governments (NCTCOG), the City of Rockwall's Geographic Information Systems (GIS) Division, the City of Rockwall's Building Inspection Department and other acceptable sources. This information was then analyzed and used to provide base information for all service areas from which projections

could be extrapolated [see *Service Areas and Data Collection Zones*].

- (2) The base year (*i.e. January 1, 2019*) estimates for housing, population and employment were calculated based on the information collected [see *Base Year Data*].
- (3) From the base year and the information gathered from various sources a growth rate was established by examining recent growth trends experienced by the City over the last ten (10) years. This growth rate was then applied to each of the impact fee service areas to project the base year data over the ten (10) year planning period (*i.e. 2019-2029*) [see *Ten Year Growth Assumptions*].
- (4) After the projections for housing, population and employment were prepared for the ten (10) year planning period, city staff made adjustments to account for known or anticipated development activity within the planning periods. In making these adjustments city staff took into consideration the recommendations made within the newly adopted OURHometown Vision 2040 Comprehensive Plan, existing public works data, and demographic information provided by the GIS Division and the Building Inspections Department.
- (5) Finally, the City's *Build Out* projections for housing, population and employment were calculated by establishing the City's carrying capacity in terms of developable acres and projecting population forward using the previously established Compound Annual Growth Rate (CAGR) to establish a *Build Out Year*. The housing and employment information were then projected to the *Build Out Year* [see *Build Out Projections*].



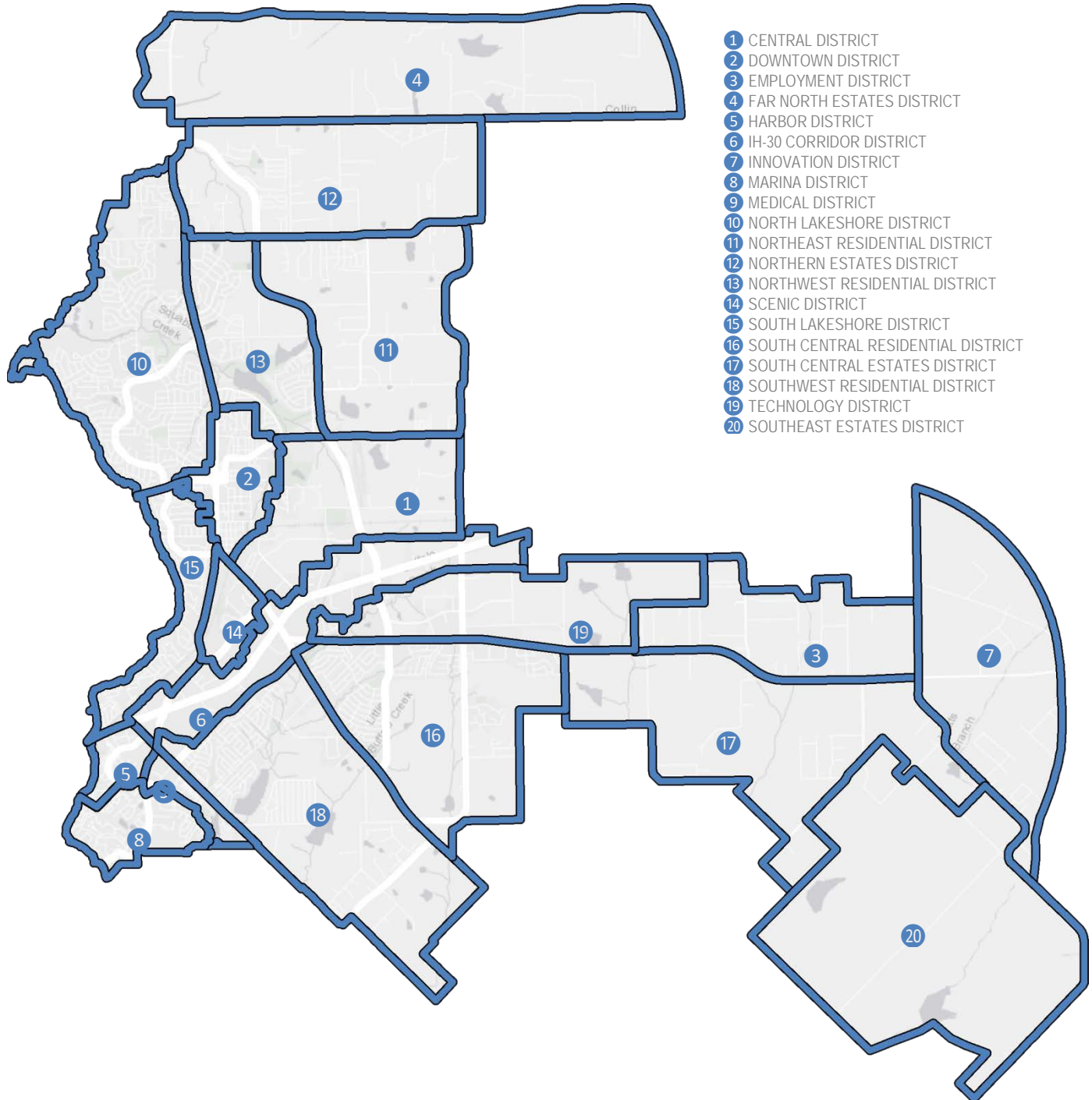
DATA COLLECTION ZONES AND SERVICE AREAS

DATA COLLECTION ZONES

The *Data Collection Zones* used for this study were taken from the OURHometown Vision 2040 Comprehensive Plan, which breaks the City down into 20 *Land Use Districts* (see Figure 1). These districts were created as a way of breaking down the overall *Future Land Use Plan* to create strategies to help manage growth and land uses in the future. They were also intended to be used as a tool by the City's various boards, commissions and the City Council when contemplating policy changes that could affect certain areas of the City.

FIGURE 1: DATA COLLECTION ZONES

NOTE: The Data Collection Zones are the Land Use Districts contained in the OURHometown Vision 2040 Comprehensive Plan.





SERVICE AREAS

The Texas Local Government Code (TLGC) requires that service areas be established within the corporate boundaries of a political subdivision for the purpose of ensuring that capital improvements service the areas generating need. The boundaries for impact fees are defined as follows:

- Roadway Impact Fees refers to a service area that is limited to the corporate boundaries of a political subdivision or city, and cannot extend into the Extraterritorial Jurisdiction (ETJ) or for a distance exceeding more than six (6) miles. The City of Rockwall is divided into four (4) service areas that are depicted in Figure 3.
- Water and Wastewater Impact Fees refers to a service area that includes a city's corporate boundaries and Extraterritorial Jurisdiction (ETJ), which is depicted in Figure 2. This service area is depicted in Figure 4.

SUMMARY OF DATA

As opposed to the databases calculated in 2007 and 2013 -- which utilized Traffic Survey Zones (TSZ) as the data collection zones -- the current database utilizes the following geographic areas:

- Land Use Districts from the OURHometown Vision 2040 Comprehensive Plan. These geographic areas better conformed to the City's corporate boundaries, and were drafted with the OURHometown Vision 2040 Comprehensive Plan as the geographic regions intended to be used for all future long-range planning/data collection exercises.
- Service Areas. The Service Areas correlate to the Water, Wastewater and Roadway Service Areas identified in Figures 3 & 4. As previously stated, the corporate boundaries of the City of Rockwall serve as the limits for the Roadway Service Areas and the Water and Waste Water Service Areas include the corporate boundaries and the Extraterritorial Jurisdiction (ETJ) of the City.

Additionally, all databases and projections utilized the following variables:

- Households (2019). The *Residential Address Point* feature class in the City's Geographic Information Systems (GIS) software includes all residential addresses (i.e. *single-family, duplex, multi-family, group home/quarters, etc.*) existing as of January 1, 2019. The total number of residential address points (i.e. *households*) was queried from this layer to establish the base years' numbers.

FIGURE 2: CITY OF ROCKWALL CITY LIMITS AND EXTRATERRITORIAL JURISDICTION (ETJ)

NOTE: The City Limits of Rockwall are depicted in RED. The Extraterritorial Jurisdiction (ETJ) is depicted in BLUE.

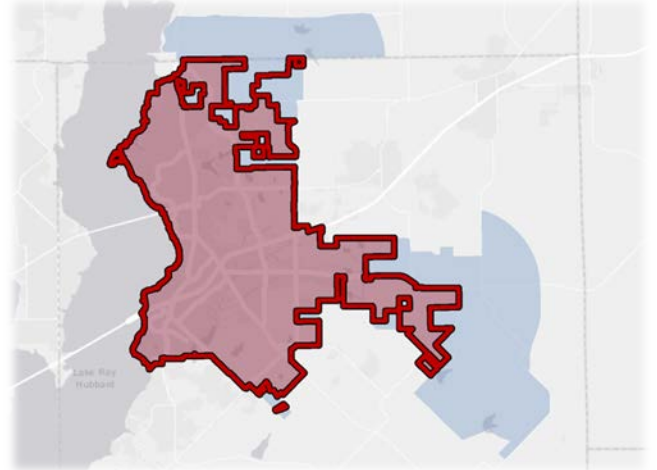


FIGURE 3: ROADWAY SERVICE AREAS

This is the derived service area structure for roadway facilities. These service areas conform to the current city limits of the City of Rockwall and are divided by John King Boulevard and Interstate Highway 30.

NOTE: RED: Service Area 1; BLUE: Service Area 2; GREEN: Service Area 3; YELLOW: Service Area 4

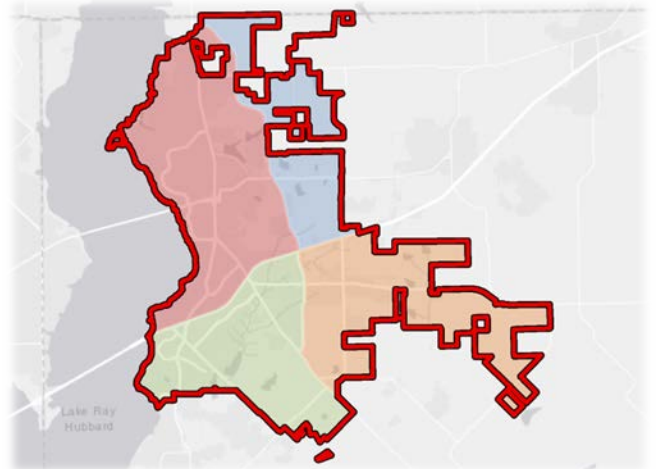
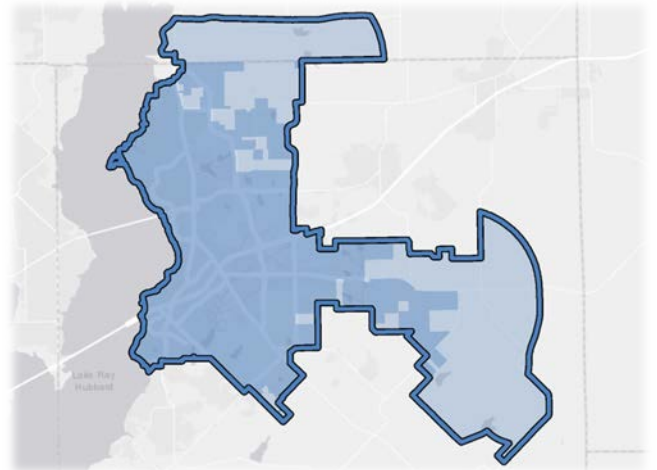


FIGURE 4: WATER/WASTE WATER SERVICE AREAS

This is the derived service area structure for water/wastewater facilities. These service areas conform to the current city limits and Extraterritorial Jurisdiction (ETJ).

NOTE: BLUE: Service Area





- *Households (2029)*. This is the projected household data by service area for the year 2029, which represents a ten (10) year growth projection. This information was derived by staff using the stated databases and proper projection techniques.
- *Population (2019)*. This is the existing population for the base year (i.e. 2019). This information was calculated utilizing the number of households existing as of January 1, 2019, the occupancy, rate and the average household size as established by the United States Census Bureau for each Census Block.
- *Population (2029)*. This is the projected population by service area for the year 2029, which represents a ten (10) year growth projection. This information was derived by staff using the stated databases and proper projection techniques.
- *Employment (2019)*. Employment data was aggregated to three (3) employment sectors, which include *Basic*, *Retail* and *Service* as provided by the Business Analyst tool available from ESRI (*the City's provider for its geospatial database software*). These service sectors serve as the basis for non-residential trip generation. The following is a summary of these employment sectors followed by corresponding North American Industry Classification System (NAICS) code:
 - *Basic*. Land use activities that produce goods and services such as those that are exported outside the local economy. These include manufacturing, construction, transportation, wholesale trade, warehousing and other industrial uses (NAICS Code: #210000 - #422999).
 - *Retail*. Land use activities that provide for the retail sale of goods that primarily serve households and whose location choice is oriented toward the residential sector. These include uses such as grocery stores, restaurants, etc. (NAICS Code: #440000 - #454390).
 - *Service*. Land use activities that provide personal and professional services. These include such uses as financial, insurance, government, and other professional and administrative offices (NAICS Code #520000 - #928199).
- *Employment (2029)*. The projected employment data was aggregated to three (3) employment sectors, which include *Basic*, *Retail* and *Service* as provided by the Business Analyst tool available from ESRI. These service sectors were then projected by service

area to the year 2029, which represents a ten (10) year growth projection. This information was derived by staff using the stated databases and proper projection techniques.



BASE YEAR DATA

This section documents the methods used to derive the base year data for the City of Rockwall as of January 1, 2019. This *benchmark* information provides data for the corporate limits and Extraterritorial Jurisdiction (ETJ) of the City, and creates a starting point in which to extrapolate the ten (10) year growth projections that are depicted in the following section (see *Ten-Year Growth Projections*). This information was initially developed with the OURHometown Vision 2040 Comprehensive Plan, but has been updated to include the additional growth that has taken place since the original numbers were derived and the numbers for January 1, 2019.

HOUSEHOLDS

Utilizing the City's Geographic Information System (GIS) software, the residential addresses for each data collection zone (i.e. *Land Use Districts*) were queried. This provided the raw housing data that was then reviewed to remove any vacant lots or anomalies in the data set. Based on this process, the City of Rockwall was shown to have 16,690 households inside the City's corporate limits and 1,700 households in the City's Extraterritorial Jurisdiction (ETJ) as of January 1, 2019. The total number of households is 18,390. Staff should note that this query included all residential housing types (i.e. *multi-family, single-family, and group homes*) from the data sets.

POPULATION

The City of Rockwall generally uses the North Central Texas Council of Government's (NCTCOG) population estimates as the City's official population; however, for the purposes of this planning study it was necessary to calculate a baseline population that was specific to January 1, 2019. This was also necessary in order to estimate the population of the City's Extraterritorial Jurisdiction (ETJ).

To calculate the population as of January 1, 2019, the City's Geographic Information Systems (GIS) Division utilized the following formula to derive the population estimate for each of the data collection zones:

$$\sum_{d=1}^{20} POP = ((a * o) * f)$$

Where:

POP = Population as of January 1, 2019

d = Land Use District

a = Number of Residential Address Points in Each District

o = Occupancy Rate [per U.S. Census Bureau]

f = Density Factor per Census Block [U.S. Census Bureau]

Using this methodology the base year population as of January 1, 2019 was established to be 44,575 residents inside the corporate limits and 5,041 people residing in the Extraterritorial Jurisdiction (ETJ).

EMPLOYMENT

The base employment data was calculated using ArcGIS *Business Analyst*, which is software that provides location-based market information. Utilizing this tool, the City's Geographic Information Systems (GIS) Division was able to query employment and business information relating to each data collection zone (i.e. *Land Use District*). This information was then broken down into one (1) of the three (3) employment categories (i.e. *Basic, Service, or Retail*). Based on the analysis, the City's corporate limits were shown to have a total employment of 24,083 jobs on January 1, 2019. Of the total employment 2,505 jobs were classified as *Basic*, 12,403 jobs were classified as *Service*, and 9,175 jobs were classified as *Retail*. The Extraterritorial Jurisdiction (ETJ) was shown to have an additional 643 jobs, with 535 jobs being classified as *Service* and 108 jobs being classified as *Retail*. In addition, the GIS Division calculated the total non-residential building square footages (i.e. *improvements*) relating to all of these employment types at ~14,444,596 SF inside the City's corporate boundaries and Extraterritorial Jurisdiction (ETJ), with ~3,209,401 SF being classified as *Basic*, ~5,374,068 SF being classified as *Service*, and ~5,861,127 SF being classified as *Retail*. The total non-residential square footage of land area 139,424,433.67 (or 3,200.74-acres), with 11,967,581.81 SF being classified as *Basic*, 58,451,896.18 SF being classified as *Service*, and 69,004,955.68 SF being classified as *Retail*.



TEN-YEAR GROWTH PROJECTIONS

GROWTH ASSUMPTIONS

In this planning study, growth is characterized in two (2) forms: 1) Population (*i.e. residential land use*), and 2) Employment (*i.e. non-residential land use*). To calculate a reasonable growth rate for population and employment it was necessary for staff to make a series of assumptions on which to base the ten (10) year growth projections. These assumptions are summarized as follows:

- Future growth identified within this study will conform to the *Future Land Use Plan* depicted in the *OURHometown Vision 2040 Comprehensive Plan*.
- Infrastructure will continue to be development driven, and the City will continue to be able to finance any other necessary improvements needed to accommodate future growth.
- School facilities will continue to be sufficient to accommodate any increases in population.
- Densities will generally conform to the land classifications and *District Strategies* identified within the *OURHometown Vision 2040 Comprehensive Plan*, and as depicted on the *Future Land Use Map*.
- The residential and non-residential carrying capacity for the City or its *build out* will occur simultaneously.

The ten (10) year projections for population are based on the growth rate, which was previously discussed and staff's consideration of past development trends. The ten (10) year projections for employment are based on the overall carrying capacity for non-residential development compared to the current non-residential development in the City. *Tables 1 & 2* detail the ten (10) year projections for households, population and employment for the service areas associated with roadway and water/wastewater impact fees.

POPULATION GROWTH RATE ANALYSIS

The City of Rockwall has experienced steady residential population growth (*see Figure 5*) over the last 18-years and -- *with the City being ~48.29% vacant and taking into account the City's current availability of water and wastewater infrastructure* -- staff anticipates that the population growth will continue to be fairly steady. It should be noted, however, that the City has seen a slight decline in the population growth percentage over the last five (5) years. From 2000 to 2018, the population growth percentage was 5.08%, but when looking at the last five (5) years this number drops to 1.79% (*see Table 3*).

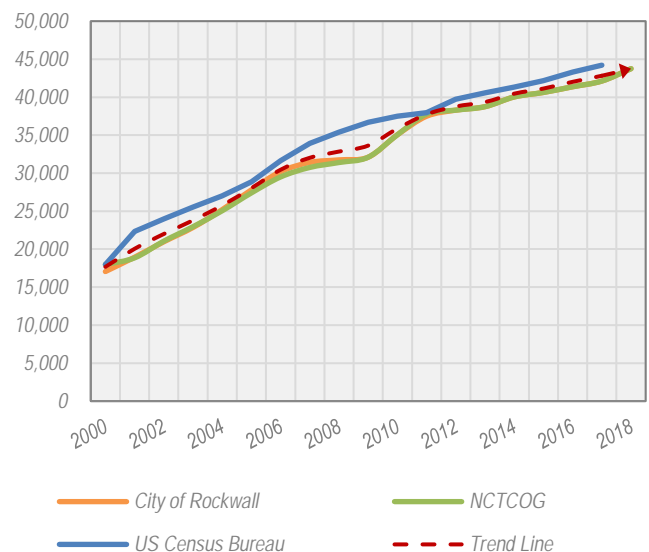
TABLE 1: SUMMARY OF TEN-YEAR GROWTH (ALL ROADWAY SERVICE AREAS)

	2019	2029	Increase
Households	16,690	22,135	24.60%
Population	44,575	59,898	25.58%
Total Employment	24,083	32,366	25.59%
Basic	2,505	3,367	25.60%
Service	12,403	16,669	25.59%
Retail	9,175	12,330	25.59%

TABLE 2: SUMMARY OF TEN-YEAR GROWTH (WATER/WASTE WATER SERVICE AREA)

	2019	2029	Increase
Households	18,390	26,609	30.89%
Population	49,616	73,228	32.24%
Total Employment	25,369	34,065	25.53%
Basic	2,505	3,367	25.60%
Service	13,473	18,082	25.49%
Retail	9,391	12,616	25.56%

FIGURE 5: POPULATION BY AGENCY, 2000-2018



To calculate the ten (10) year population projections, City staff utilized the *Compound Annual Growth Rate (CAGR)* method. CAGR allows for a general assessment of growth when considering periodic increases and decreases in residential



population growths that coincide with changing economic conditions. The formula for CAGR is as follows:

$$CAGR = \left(\frac{x}{y}\right)^{\left(\frac{1}{n}\right)} - 1$$

Where:

CAGR = Compound Annual Growth Rate

x = End Value

y = Beginning Value

n = Number of Years

In 2007, a CAGR of four (4) percent was used to calculate the ten (10) year population projections; however, based on the five (5) year annual growth rate and the number depicted in Table 3, staff utilized a more conservative three (3) percent annual growth rate. In assessing the past growth rates, staff used several sources including the North Central Texas Council of Governments (NCTCOG), the U.S. Census Bureau, and the City of Rockwall. Based on a three (3) percent CAGR, the following chart shows the anticipated population growth over the next ten (10) years:

TABLE 4: TEN (10) YEAR POPULATION GROWTH

This table shows the projected ten (10) year population growth at a three (3) percent Compound Annual Growth Rate (CAGR).

Year	Population
2019	44,575
2020	45,907
2021	47,284
2022	48,703
2023	50,164
2024	51,669
2025	53,219
2026	54,815
2027	56,460
2028	58,154
2029	59,898

FIGURE 6: TEN (10) YEAR POPULATION GROWTH

This chart shows the projected ten (10) year population growth at a three (3) percent Compound Annual Growth Rate (CAGR).

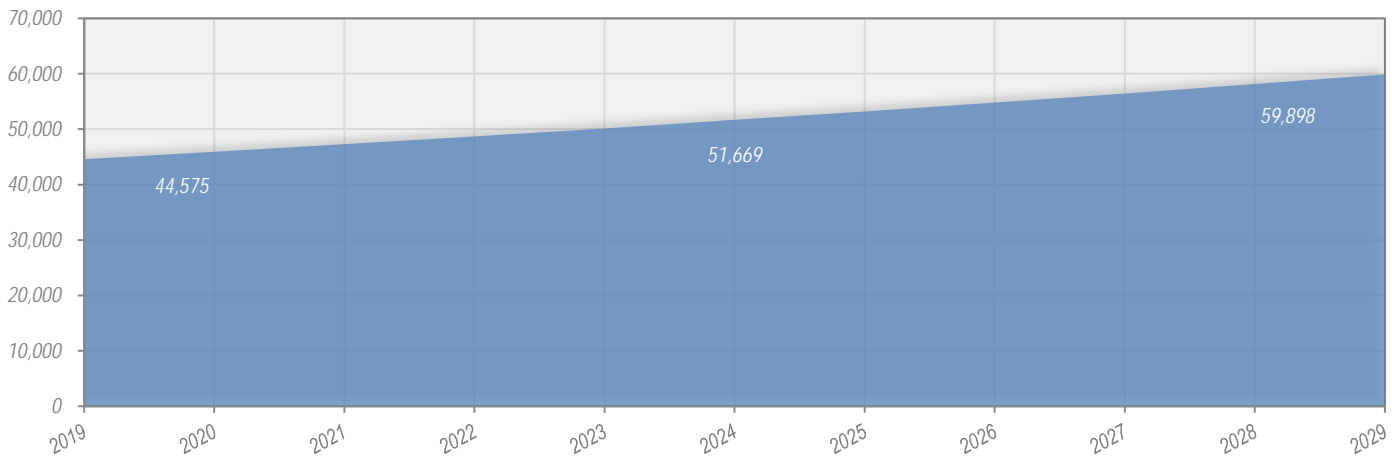


TABLE 3: CITY OF ROCKWALL GROWTH RATES

Data Source	Growth Rate
2014 – 2017 US Census	1.70%
2010 – 2017 US Census	2.08%
2000 – 2017 US Census	5.13%
2014 – 2018 Single Family Permits	1.82%
2010 – 2018 Single Family Permits	4.80%
2000 – 2018 Single Family Permits	-2.93%
Future Growth Projection	3.0%

PROJECTED POPULATION FOR 2029

Utilizing the three (3) percent Compound Annual Growth Rate (CAGR) established in the previous section, staff projects that the population for the City will be 59,898 in 2029 (see Table 4 and Figure 6). This estimate does appear to be consistent with trends that have been observed at the county and regional level (see Figure 7 for a comparison of the City's population growth versus the County's population growth). Although, the growth rate has slowed over the last five (5) years this is seen as a temporary trend and not a sign indicative of the City's future growth trend.

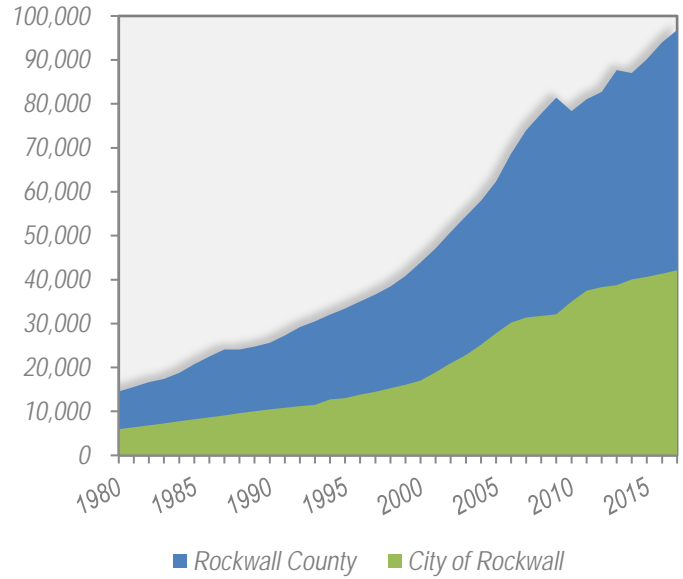
In determining this population projection, staff observed how this projection would relate to the City's projected building permits, and the additional population added to the City on an annual basis (see Table 5). Taking this into consideration, the estimated average annual building permits anticipated over this time period is approximately 522. This represents a decrease of approximately 121 permits annually from the estimates completed in 2014. This estimate -- while still likely high in some years due to shifts in market demand -- is a more conservative estimate than what was used in 2014. It should be noted that this estimate takes into consideration the type of development likely to occur in a given area (i.e. single-family or multi-family).



TABLE 5: PROJECTED BUILDING PERMITS

Year	Population	New Residents	New Building Permits
2019	44,575	825	294
2020	45,907	1,332	474
2021	47,284	1,377	490
2022	48,703	1,419	505
2023	50,164	1,461	520
2024	51,669	1,505	536
2025	53,219	1,550	552
2026	54,815	1,597	568
2027	56,460	1,644	585
2028	58,154	1,694	603
2029	59,898	1,745	621
Average Number of Annual Permits:			522

FIGURE 7: CITY POPULATION VS COUNTY POPULATION, 1980-2017



PROJECTED EMPLOYMENT FOR 2029

Employment data for the year 2029 was calculated by taking the information established in the base year analysis -- which was obtained through the ArcGIS Business Analyst tool -- and the corresponding ratio of employment to population, and extrapolating this information out to January 1, 2029. These estimates are summarized in Appendix C, *Employment Breakdown by Roadway Service Area*, and Appendix D, *Employment Breakdown by Water/Wastewater Service Area*.



BUILD OUT ANALYSIS

A *Build Out Projection* for a city (also referred to as the city's *Carrying Capacity*) is an estimate of the location and density of all potential development, employment and population that a city can support within its future corporate boundaries.

ESTABLISHING HOUSEHOLDS AND POPULATION AT THE CITY'S BUILD OUT

As part of the newly adopted OURHometown Vision 2040 Comprehensive Plan, City staff calculated the number of households and residents at *Build Out*. In establishing the City's households and population at *Build Out* staff made the following assumptions:

- All vacant or undeveloped land within the City's corporate boundaries will develop with the maximum density permitted for the current zoning per the Unified Development Code (UDC).
- All Agricultural (AG) District property is assumed to be vacant or undeveloped and will develop at the maximum density permitted in accordance to the property's designation on the Future Land Use Map contained in the OURHometown Vision 2040 Comprehensive Plan.
- All property within the Extraterritorial Jurisdiction (ETJ) is assumed to be vacant and will be developed in conformance with the Future Land Use Map at the maximum density permitted by the OURHometown Vision 2040 Comprehensive Plan.
- The City's ETJ is fixed and will not increase in the future.

Taking these assumptions into consideration, staff utilized Geographical Information Systems (GIS) software to calculate all the undeveloped land within the city's corporate boundaries, including the ETJ. Once calculated the acreages were broken down by land use and multiplied by the maximum density permitted for each of the land uses as established within the Unified Development Code (UDC) and the Comprehensive Plan. These totals were then multiplied by the average people per household [*i.e. 2.81 per the US Census Bureau*] to establish the unadjusted population at *Build Out*. Staff then reviewed the projected densities coupled with current land use patterns, and adjusted the numbers to account for known or anticipated development activity. Based on the final *Build Out* population (*i.e. 149,525*), staff projected the population forward using the previously established three (3) percent Compound Annual Growth Rate (CAGR) [*see the Ten-Year Growth Assumptions section*] until the build out population was reached (*see Table 6*). This established a build out year of 2060. The following formula lays out the methodology used to calculate these numbers:

TABLE 6: PROJECTED POPULATION @ 3% COMPOUND ANNUAL GROWTH (CAGR)

Year	Population	New Residents
2018	43,750	1,630
2019	44,570	820
2020	45,907	1,337
2021	47,284	1,377
2022	48,703	1,419
2023	50,164	1,461
2024	51,669	1,505
2025	53,219	1,550
2026	54,815	1,597
2027	56,460	1,644
2028	58,154	1,694
2029	59,898	1,745
2030	61,695	1,797
2031	63,546	1,851
2032	65,453	1,906
2033	67,416	1,964
2034	69,439	2,022
2035	71,522	2,083
2036	73,667	2,146
2037	75,877	2,210
2038	78,154	2,276
2039	80,498	2,345
2040	82,913	2,415
2041	85,401	2,487
2042	87,963	2,562
2043	90,602	2,639
2044	93,320	2,718
2045	96,119	2,800
2046	99,003	2,884
2047	101,973	2,970
2048	105,032	3,059
2049	108,183	3,151
2050	111,429	3,245
2051	114,771	3,343
2052	118,215	3,443
2053	121,761	3,546
2054	125,414	3,653
2055	129,176	3,762
2056	133,052	3,875
2057	137,043	3,992
2058	141,154	4,111
2059	145,389	4,235
2060	149,751	BO: 149,525



$$BO = P + CP + EP$$

$$CP = \left(\sum [(LU_1 \times D_1) \dots (LU_x \times D_x)] \right) \times AHS$$

$$EP = (LDR \times 2.5) + (MDR \times 3.5) + (HDR \times 5)$$

Where:

BO = Build Out Population

P = Population as of January 1, 2019

CP = Population of Vacant or Undeveloped Land in the City Limits

EP = Population of Vacant or Undeveloped Land in the ETJ

LU = Vacant Available Land Inside the City Limits for a Land Use

D = Maximum Density Permitted for a Land Use per UDC

AHS = Average Household Size [2.81185 per US Census Bureau]

LDR = Low Density Residential Acreage Available in ETJ

MDR = Medium Density Residential Acreage Available in ETJ

HDR = High Density Residential Acreage Available in ETJ

ESTABLISHING EMPLOYMENT AT THE CITY'S BUILD OUT

To calculate employment at *Build Out*, staff utilized the employment numbers calculated with the base year analysis, and -- based on the estimated current year population -- calculated ratios between employment and population for the City and its Extraterritorial Jurisdiction (ETJ). These ratios were then used to extrapolate the number of employees for basic, service and retail sectors for the ten (10) year and build out projections.



SUMMARY

The following is a summary of staff's findings when preparing the *Land Use Assumption Report* in preparation for the update of the Roadway, Water and Wastewater Impact Fees for 2019:

- The average annual growth rate as calculated by staff is three (3) percent. This growth rate was established based on data from the US Census, North Texas Council of Governments (NCTCOG), the City and County of Rockwall. Using this growth rate staff projected the following population numbers:
 - The population of the City of Rockwall as of January 1, 2019 was 44,691. This is expected to increase by 25.39% in the next ten (10) years to an estimated 59,898 by January 1, 2029.
 - The population for the City of Rockwall and its Extraterritorial Jurisdiction (ETJ) as of January 1, 2019 was 49,743. This is expected to increase by 32.07% in the next ten (10) years to an estimated 73,228 by January 1, 2029.
- The estimated employment for the City of Rockwall as of January 1, 2019 was 24,083 jobs, with another 1,286 jobs existing within its Extraterritorial Jurisdiction (ETJ). Staff estimates this number to climb to 32,366 jobs within the current city limits, and another 1,699 jobs within the current Extraterritorial Jurisdiction (ETJ) by January 1, 2029.
- Staff has established that there are currently 8,204.17 undeveloped acres of land within the city limits. This represents ~48.29% of the current land in the City. Additionally, the City of Rockwall has access to another 14,083.24-acres of land within its current Extraterritorial Jurisdiction (ETJ). Approximately 75.11% (10,577.67-acres) of the land within this area is vacant.
- According to staff's estimate, the City of Rockwall is expected to be built out in the year 2060, with a total population of 149,525.



APPENDIX A: SUMMARY OF ROADWAY SERVICE AREAS

SERVICE AREA 1

DISTRICTS	ESTIMATES (JANUARY 1, 2019)			PROJECTIONS (JANUARY 1, 2029)			BUILD OUT PROJECTIONS (2060)		
	HU	POP	EMP	HU	POP	EMP	HU	POP	EMP
Central District	216	455	2,332	427	899	3,134	816	1,714	4,331
Downtown District	971	2,332	3,105	1,056	2,519	4,173	1,060	2,531	5,767
IH-30 Corridor District	-	-	2,825	-	-	3,797	-	-	5,247
North Lakeshore District	3,884	11,081	944	4,318	12,324	1,269	4,326	12,350	1,753
Northern Estates District	3	9	4	12	34	5	184	513	7
Northwest Residential District	1,422	3,974	667	2,291	6,401	896	2,324	6,493	1,239
Scenic District	1,084	2,280	1,161	1,217	2,559	1,560	1,248	2,624	2,156
South Lakeshore District	1,578	3,317	968	1,578	3,317	1,301	1,595	3,352	1,798
	9,158	23,448	12,006	10,898	28,053	16,135	11,553	29,577	22,298

SERVICE AREA 2

DISTRICTS	ESTIMATES (JANUARY 1, 2019)			PROJECTIONS (JANUARY 1, 2029)			BUILD OUT PROJECTIONS (2060)		
	HU	POP	EMP	HU	POP	EMP	HU	POP	EMP
IH-30 Corridor District	1	3	205	-	-	276	-	-	381
South Central Estates District	37	112	122	148	448	164	2,504	7,611	227
South Central Residential District	795	2,417	-	1,487	4,522	-	2,399	7,293	-
Technology District	47	100	824	162	367	1,107	1,748	4,760	1,530
	880	2,632	1,151	1,797	5,336	1,547	6,651	19,664	2,138

SERVICE AREA 3

DISTRICTS	ESTIMATES (JANUARY 1, 2019)			PROJECTIONS (JANUARY 1, 2029)			BUILD OUT PROJECTIONS (2060)		
	HU	POP	EMP	HU	POP	EMP	HU	POP	EMP
Harbor District	552	1,255	2,766	1,040	2,364	3,717	1,713	3,893	5,137
IH-30 Corridor District	-	-	2,613	-	-	3,512	-	-	4,853
Marina District	1,423	3,441	630	1,525	3,702	847	1,537	3,734	1,170
Medical District	-	-	1,897	-	-	2,549	-	-	3,523
South Central Residential District	1,089	3,310	371	1,089	3,310	499	1,089	3,310	689
Southwest Residential District	2,257	7,260	1,900	3,695	11,847	2,553	3,943	12,509	3,529
Technology District	615	1,292	63	618	1,298	85	658	1,383	117
	5,936	16,558	10,240	7,966	22,520	13,762	8,940	24,829	19,018

SERVICE AREA 4

DISTRICTS	ESTIMATES (JANUARY 1, 2019)			PROJECTIONS (JANUARY 1, 2029)			BUILD OUT PROJECTIONS (2060)		
	HU	POP	EMP	HU	POP	EMP	HU	POP	EMP
Central District	92	193	167	182	382	224	349	735	310
IH-30 Corridor District	-	-	71	-	-	95	-	-	132
Northeast Residential	361	1,009	438	762	2,129	589	1,786	4,988	813
Northern Estates District	263	735	10	529	1,478	13	1,066	2,984	19
	716	1,937	686	1,473	3,990	922	3,201	8,707	1,274
GRAND TOTAL	16,690	44,575	24,083	22,135	59,898	32,366	30,345	82,777	44,728



APPENDIX B: SUMMARY OF WATER/WASTEWATER SERVICE AREA

DISTRICTS	ESTIMATES (JANUARY 1, 2019)			PROJECTIONS (JANUARY 1, 2029)			BUILD OUT PROJECTIONS (2060)		
	HU	POP	EMP	HU	POP	EMP	HU	POP	EMP
Central District	308	648	2,499	609	1,281	3,358	1,165	2,449	4,641
Downtown District	971	2,332	3,105	1,056	2,519	4,173	1,060	2,531	5,767
Employment District	314	971	880	532	1,645	1,162	630	1,952	5,538
Far North Estates District	230	674	96	676	1,980	127	4,426	12,950	-
Harbor District	552	1,255	2,766	1,040	2,364	3,717	1,713	3,893	5,741
IH-30 Corridor District	1	3	5,714	-	-	7,679	-	-	10,612
Innovation District	268	822	66	794	2,438	87	5,323	16,407	415
Marina District	1,423	3,441	630	1,525	3,701	847	1,537	3,734	1,170
Medical District	-	-	1,897	-	-	2,549	-	-	3,523
North Lakeshore District	3,884	11,081	944	4,317	12,324	1,269	4,326	12,350	1,753
Northeast Residential District	629	1,758	438	1,244	3,476	589	2,384	6,658	813
Northern Estates District	512	1,439	14	1,090	3,065	19	2,626	7,390	26
Northwest Residential District	1,422	3,974	667	2,291	6,401	896	2,324	6,493	1,239
Scenic District	1,084	2,280	1,161	1,217	2,558	1,560	1,248	2,624	2,156
South Lakeshore District	1,578	3,317	968	1,578	3,317	1,301	1,595	3,352	1,798
South Central Residential District	1,970	5,987	371	3,265	9,923	499	3,618	10,998	689
South Central Estates District	315	956	366	824	2,502	486	3,760	11,428	1,762
Southwest Residential District	2,267	7,286	1,900	3,772	12,068	2,553	4,229	13,344	3,529
Technology District	662	1,392	887	780	1,665	1,192	2,406	6,143	1,647
Southeast Estates District	-	-	-	-	-	-	8,168	24,829	441
	18,390	49,616	25,369	26,609	73,228	34,064	52,538	149,525	53,262



APPENDIX C: EMPLOYMENT BREAKDOWN BY ROADWAY SERVICE AREAS

SERVICE AREA 1

DISTRICTS	ESTIMATES (JANUARY 1, 2019)			PROJECTIONS (JANUARY 1, 2029)			BUILD OUT PROJECTIONS (2060)		
	BASIC	SERVICE	RETAIL	BASIC	SERVICE	RETAIL	BASIC	SERVICE	RETAIL
Central District	973	633	726	1,308	851	976	1,807	1,176	1,348
Downtown District	608	1,104	1,393	817	1,484	1,872	1,129	2,050	2,587
IH-30 Corridor District	599	916	1,310	805	1,231	1,761	1,112	1,701	2,433
North Lakeshore District	-	608	336	-	817	452	-	1,129	624
Northern Estates District	-	4	-	-	5	-	-	7	-
Northwest Residential District	-	531	136	-	714	183	-	986	253
Scenic District	-	650	511	-	874	687	-	1,207	949
South Lakeshore District	-	572	396	-	769	532	-	1,062	735
	2,180	5,018	4,808	2,930	6,744	6,462	4,049	9,320	8,930

SERVICE AREA 2

DISTRICTS	ESTIMATES (JANUARY 1, 2019)			PROJECTIONS (JANUARY 1, 2029)			BUILD OUT PROJECTIONS (2060)		
	BASIC	SERVICE	RETAIL	BASIC	SERVICE	RETAIL	BASIC	SERVICE	RETAIL
IH-30 Corridor District	-	-	205	-	-	276	-	-	381
South Central Estates District	-	94	28	-	126	38	-	175	52
South Central Residential District	-	-	-	-	-	-	-	-	-
Technology District	298	283	243	400	380	327	553	526	451
	298	377	476	400	507	640	553	700	884

SERVICE AREA 3

DISTRICTS	ESTIMATES (JANUARY 1, 2019)			PROJECTIONS (JANUARY 1, 2029)			BUILD OUT PROJECTIONS (2060)		
	BASIC	SERVICE	RETAIL	BASIC	SERVICE	RETAIL	BASIC	SERVICE	RETAIL
Harbor District	27	2,456	283	36	3,301	380	50	4,561	526
IH-30 Corridor District	-	845	1,768	-	1,136	2,376	-	1,569	3,284
Marina District	-	267	363	-	359	488	-	496	674
Medical District	-	1,651	246	-	2,219	331	-	3,066	457
South Central Residential District	-	331	40	-	445	54	-	615	74
Southwest Residential District	-	924	976	-	1,242	1,312	-	1,716	1,813
Technology District	-	44	19	-	59	26	-	82	35
	27	6,518	3,695	36	8,760	4,966	50	12,105	6,862

SERVICE AREA 4

DISTRICTS	ESTIMATES (JANUARY 1, 2019)			PROJECTIONS (JANUARY 1, 2029)			BUILD OUT PROJECTIONS (2060)		
	BASIC	SERVICE	RETAIL	BASIC	SERVICE	RETAIL	BASIC	SERVICE	RETAIL
Central District	-	167	-	-	224	-	-	310	-
IH-30 Corridor District	-	-	71	-	-	95	-	-	132
Northeast Residential	-	313	125	-	421	168	-	581	232
Northern Estates District	-	10	-	-	13	-	-	19	-
	-	490	196	-	659	263	-	910	364
GRAND TOTAL	2,505	12,403	9,175	3,367	16,669	12,330	4,652	23,035	17,040



APPENDIX D: EMPLOYMENT BREAKDOWN BY WATER/WASTEWATER SERVICE AREA

DISTRICTS	ESTIMATES (JANUARY 1, 2019)			ESTIMATES (JANUARY 1, 2029)			BUILD OUT (2060)		
	BASIC	SERVICE	RETAIL	BASIC	SERVICE	RETAIL	BASIC	SERVICE	RETAIL
Central District	973	800	726	1,308	1,075	976	1,807	1,486	1,348
Downtown District	608	1,104	1,393	817	1,484	1,872	1,129	2,050	2,587
Employment District	-	742	138	-	980	182	-	4,670	869
Far North Estates District	-	86	10	-	114	13	-	-	-
Harbor District	27	2,456	283	36	3,301	380	50	5,103	589
IH-30 Corridor District	599	1,761	3,354	805	2,367	4,507	1,112	3,271	6,229
Innovation District	-	54	12	-	71	16	-	340	76
Marina District	-	267	363	-	359	488	-	496	674
Medical District	-	1,651	246	-	2,219	331	-	3,066	457
North Lakeshore District	-	608	336	-	817	452	-	1,129	624
Northeast Residential District	-	313	125	-	421	168	-	581	232
Northern Estates District	-	14	-	-	19	-	-	26	-
Northwest Residential District	-	531	136	-	714	183	-	986	253
Scenic District	-	650	511	-	874	687	-	1,207	949
South Lakeshore District	-	572	396	-	769	532	-	1,062	735
South Central Residential District	-	331	40	-	445	54	-	615	74
South Central Estates District	-	282	84	-	375	112	-	1,358	404
Southwest Residential District	-	924	976	-	1,242	1,312	-	1,716	1,813
Technology District	298	327	262	400	439	352	553	607	487
Southeast Estates District	-	-	-	-	-	-	-	189	252
	2,505	13,473	9,391	3,367	18,082	12,616	4,652	29,958	18,651

