CHAPTER 2: LAND USE ELEMENT

2.1 Introduction

The Land Use Element has two primary purposes:

1. To establish the general location of various land uses in the commnity, including residential, commercial, industrial, public and open spaces (including agricultural land). The Element also establishes building intensities and population densities within the planning area.

2. To establish goals, objectives and policies the City will use to guide the character and future development in the community. These policies will pertain to a variety of issues, including residential, commercial, industrial and public land uses.

The General Plan has sometimes been called the "blueprint" for the development of a city. The goals, objectives and policies of each element are considered to be "instructions" for how to carry out the blueprint.

The Land Use Element is typically the most prominent of the seven mandatory elements of the General Plan. More so than any other element, it has the most significant effect on existing and future residents of the City of Firebaugh.

The Land Use Element consists of six sections:

1. Existing land use patterns and population trends;
2. Population and land use projections through the year 2030;
3. Land use designations and population densities;
4. Future and existing land use map;
5. Planning goals, objectives and policies; and
6. Land use designation/zoning matrix

Existing Land Use Patterns and Population Trends

The townsite of Firebaugh was originally established within the area bounded by 13th Street on the south, Highway 33 on the west, 7th Street/Poso Canal on the

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In A Sentence:

The Land Use Element determines where future land uses will be developed in Firebaugh and provides policies to guide the form those land uses will take.

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north, and Q Street and San Joaquin River on the east. This area includes Firebaugh's commercial downtown area primarily situated along O Streets as well as governmental facilities such as City Hall, Police and Fire stations, Post Office, County Courthouse, library and public works yard, among others. West Hills College also maintains a branch campus at O and 9th Street. Residential uses in the core area include single family homes mixed with several multi-family complexes – duplex, triplex and fourplex units. There is one school and one park located in the central area.

Southern area

South of 13th Street Firebaugh is characterized by a mix of commercial and residential uses along Highway 33, single family homes, four school campuses and a park. The grid of streets immediately south of 13th Street is marked with single family homes fronting onto attractive tree lined streets. Schools in this portion of the City include Firebaugh High School, Firebaugh Middle School, Hazel Bailey Elementary School all operated by Firebaugh Las-Deltas Unified School District, and privately operated St. Joseph's Parochial School. South of the High School is situated Firebaugh's Wastewater Treatment Plant. This plant is situated on approximately 80 acres.
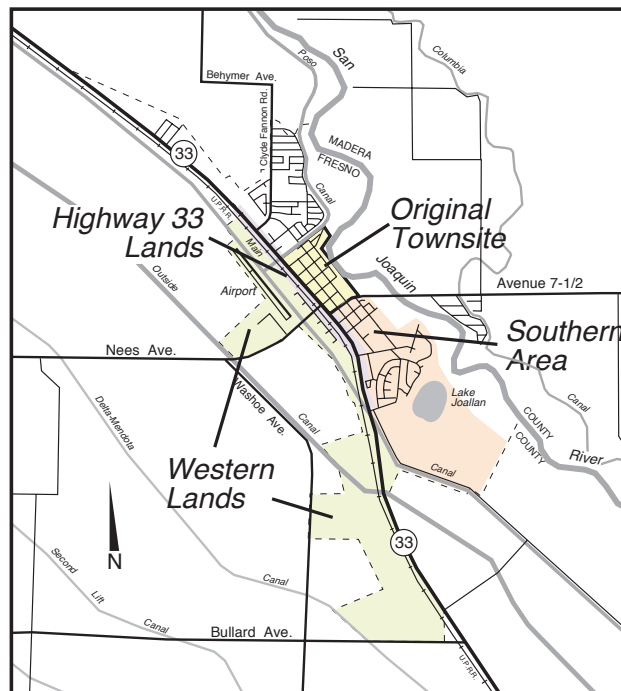
Highway 33 Corridor

State Highway 33 runs from the southeast to northwest through the western portion of Firebaugh. A number of service-oriented type businesses front onto the highway, including service stations, auto repair, tire shops and restaurants, among other uses. For better or worse, Highway 33 is Firebaugh's "front porch" to the world.

Western Lands

Lands west of the Union Pacific Railroad tracks (which parallels Highway 33) are the site of most of Firebaugh's industrial businesses, as well as the Firebaugh Municipal Airport. The City's largest employer is Toma-Tek, located near the southern-most part of the city limits, west of Highway 33. This area of the City is almost completely without residential uses, except for several

Map 2-1
*Southern Area, Highway 33
Lands, Western Lands*

residential dwellings located on M Street, south of 12th Street.

Northern Area

The portion of the community north of the original townsite has witnessed significant residential growth over the past thirty years. In particular a number of large multi-family residential complexes have been developed here. Fresno County Housing Authority also maintains a large complex of units east of Clyde Fannon Road around P Street. The City's most recent single family residential subdivision has been developed on the east side of Clyde Fannon Road, north of Rabe Avenue.

A partially developed recreational site known as Maldonado Park is located on the east side of Clyde Fannon Road north of Thomas Comboy Avenue. Firebaugh's Senior Citiezens Center is located within Maldonado Park.
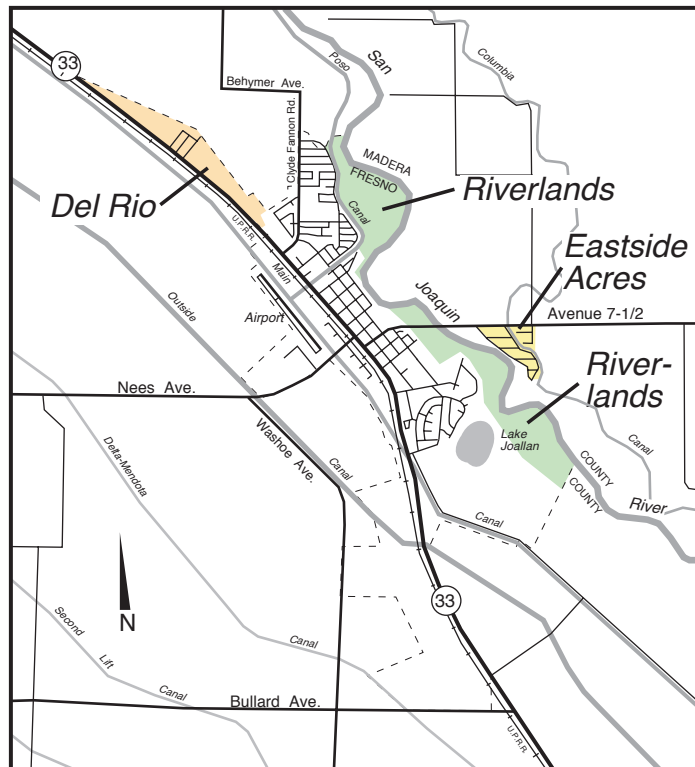
Del Rio

The Del Rio area includes approximately 94 acres in a narrow strip of land along the east side of Highway 33, north of Clyde Fannon Road. This area was recently annexed into the City after being under County jurisdiction. The area is characterized by a variety of uses, primarily single family residential, with several churches and two industrial operations. Through a cooperative effort between the City and County, water and sewer lines were extended to properties within Del Rio along with limited storm drainage improvements. Three streets within the area were also paved.

Riverlands

One of Firebaugh's most appealing features is its frontage onto the San Joaquin River. Originally the river provided an avenue of travel via riverboat through central California and Firebaugh was established as a point of crossing for land travelers. A significant portion of the land along the river is characterized by open space and some of the lands support stands of riparian vegegation, including trees, shrubs and grasses. Several sand and gravel mining pits and excavations are found, in particular Lake Joallan on the southern edge of

Map 2-2
Del Rio, Riverlands and Eastside Acres Areas

the community and Twin Lakes in the northeastern portion of town. The City has been capitalizing on the scenic/recreational aspects of the river and has established a walking and cycling trail along a 1/2 mile portion of the frontage of the river.

Madera County

A small portion of Firebaugh's Sphere of Influence extends across the San Joaquin River to include lands within Madera County. Eastside Acres is a neighborhood of single family homes, one business and a church located south of Avenue 7-1/2 east of the river. The City provides sewer service to this neighborhood by agreement with Madera County. North of Avenue 7-1/2 the City maintains a portion of its water system and has established a series of water wells along the San Joaquin River.
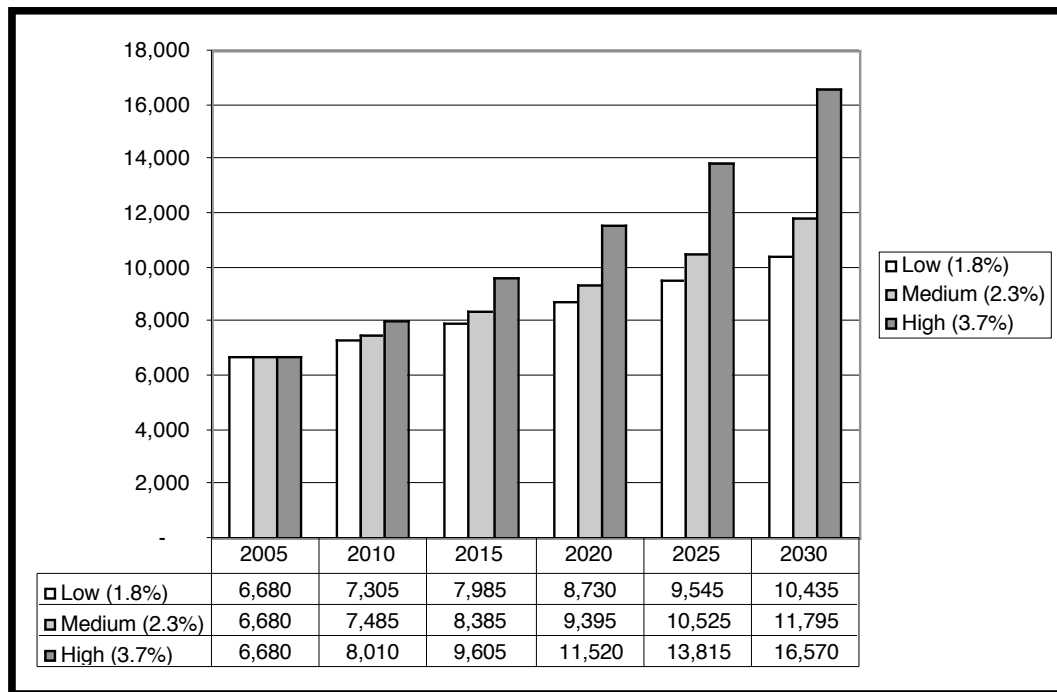
Population and Land Use Projections

In order to determine the amount of land needed for urban development in Firebaugh through the year 2030, population projections are required.

Three population growth scenarios are provided in the plan:

- Low (1.8%) This rate is based on Firebaugh's growth rate from 1980 to 1990;
- Medium (2.3%) This rate is based on Firebaugh's annual growth rate from 1990 to 2000);
- High (3.7%). This growth rate is based on Firebaugh's annual growth rate from 2000 to 2005.

These projections are provided starting from the base year of 2005. The resulting projections are shown in Chart 2-1.

Table 2-1
Population Projections
2005 – 2030

	2005	2010	2015	2020	2025	2030
□ Low (1.8%)	6,680	7,305	7,985	8,730	9,545	10,435
▨ Medium (2.3%)	6,680	7,485	8,385	9,395	10,525	11,795
■ High (3.7%)	6,680	8,010	9,605	11,520	13,815	16,570

The projections shown in Chart 2-1 show that Firebaugh is expected to grow to figures ranging from 10,500 to 16,500 by the year 2030 – depending on which growth rate occurs. The "medium" growth projection results in a population of about 11,800 persons by 2030. This represents nearly a doubling of the community's current population. It should be stressed that population projections are just that – estimates of how much a community will grow. Any number of unforeseen factors could occur to slow or accelerate population growth, including changes in the local and national economy, new residential development and whether the State constructs the new Highway 180 expressway through Firebaugh, among others.

In order to strike a balance between potential low and high growth scenarios, the "Medium" growth rate of 2.3%

per year is utilized in the following land demand projections.

How Much Land Will Be Needed to Accommodate Expected Growth?

This section establishes land demand projections. The "Medium" growth rate of 2.3% per year used in population projections in the previous section is used as the basis for the land demand projections. Land demand projections are provided for the following land use types:

- Residential (including single and multi-family residential)
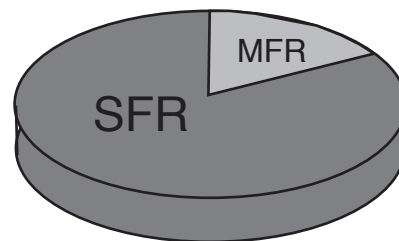- Commercial
- Industrial
- Parks
- Schools

1. Residential Land Demand Projections

In order to provide residential land demand projections the following assumptions are established:

- The number of persons per dwelling will be 3.45 persons per dwelling. This is based on 2005 California Department of Finance figures for the City of Firebaugh.
- Future dwelling types are expected to be similar to existing dwelling type ratios and densities:

  - 82% of units will be single family homes averaging four units per acre
  - 18 % of units will be multi family dwellings averaging 12 units per acre

- Firebaugh currently has approximately 60 acres of vacant land inside city limits zoned for single family residential and approximately one acre of vacant land zoned for multiple family residential.
- The land demand projection will be increased by 40% in order to account for unexepected high growth rates and to ensure that local land supply is not artificially constrained.

3.45 persons per dwelling

MFR

SFR

- 82% of dwellings will be single family residential
- 18% of dwellings will be multi-family residential

Projection:

11,795 (2030 projected population) – 6,680 (2005 population) =

> 5,115 persons (future residents)

Housing Units Needed

5,515 persons ÷ 3.45 persons per dwelling =

> 1,482 dwelling units needed

Expected Housing Types

Single Family Residential (82% of 1,482 units) =

> 1,215 single family units needed by 2030

Land Demand

1,215 units x 4 units per acre =

> 305 acres needed

Flexibility Factor

The foregoing projection is increased by 40% to ensure that the supply of land is not overly constrained, thereby artificially limiting the supply of land and potentially increasing housing costs:

> 305 x 40% = 122 acres
> 305 + 122 = 427 acres

Subtract Existing Undeveloped Land

There are 60 acres of undeveloped land within Firebaugh city limits that are zoned for single family residential development.

> 427 – 60 = 367 acres

367 acres of additional undeveloped land are required for single family residential development through the year 2030.

By the Numbers…

<u>Single Family Residential Land Demand</u>

Firebaugh will grow by

5,115

residents by the year 2030

5,115 ÷ 3.45* persons per dwelling =

1,482 future dwellings needed

82% of future homes will be single family residential =

1,215 single family homes

at 4 units per acre =
305 acres needed

This amount is increased by 40% to ensure adequate supply and to prevent artificially constraining land availability

305 x 40% = 427 acres

There are 60 acres of existing undeveloped land zoned for single family residential development, in Firebaugh's city limits

427 – 60 = 367 acres

367 acres of undeveloped land will be needed for single family residential development through the year 2030.

* = persons per dwelling (average) from 2000 US Census

Multiple Family Residential (18% of 1,482 units) =

267 multi-family units needed by 2030

Land Demand

267 units ÷ 12 units per acre = 25 acres needed

Flexibility Factor

25 x 40% = 10 acres
25 + 10 = 35 acres

Subtract Existing Undeveloped Land

There is 1 acre of undeveloped land within Firebaugh city limits that is zoned for multi family residential development.

35 – 1 = 34 acres

34 acres of additional undeveloped land are required for multi family residential development through the year 2030.

Residential Land Demand Total:

401 acres of additional undeveloped land will be needed for single and multi-family residential development through the year 2030.

By the Numbers…

Multi Family Residential Land Demand

18% of future homes will be multi-family residential =

267 multi-family units

at 12 units per acre* =

25 acres needed

This amount is increased by 40% to ensure adequate supply and to prevent artificially constraining land availability

25 x 40% = 35 acres

There is 1 acre of existing undeveloped land zoned for single family residential development, in Firebaugh's city limits

35 – 1 = 34 acres

34 acres of undeveloped land will be needed for multi family residential development through the year 2030

* 12 units per acre is the average maximum density of Firebaugh's multi-family residential zones.

2.   *Commercial Land Demand Projections*

Commercial land demands are more difficult to forecast than are residential demands. Whereas residential land demands correspond directly to the number of units needed to house a given population, commercial land demands can vary widely depending on a given business. For example a 40,000 square foot store may employ 15 persons, while a 4,000 square foot restaurant may employ the same number. A generally accepted method is to develop a ratio of the acres of existing commercial land uses and apply those to the future expected population.

The following assumptions are made for commercial development expected in Firebaugh through 2030:

- Future commercial development will consist of a variety of uses including retail and service commercial, restaurants and offices. Other institutional uses will include medical clinics and similar uses. These uses will tend to intermix in the community
- Firebaugh has 36 acres of existing commercial development
- Firebaugh has 8 acres of existing vacant land zoned for commercial development
- Compared to other area cities, Firebaugh is under-developed with commercial uses

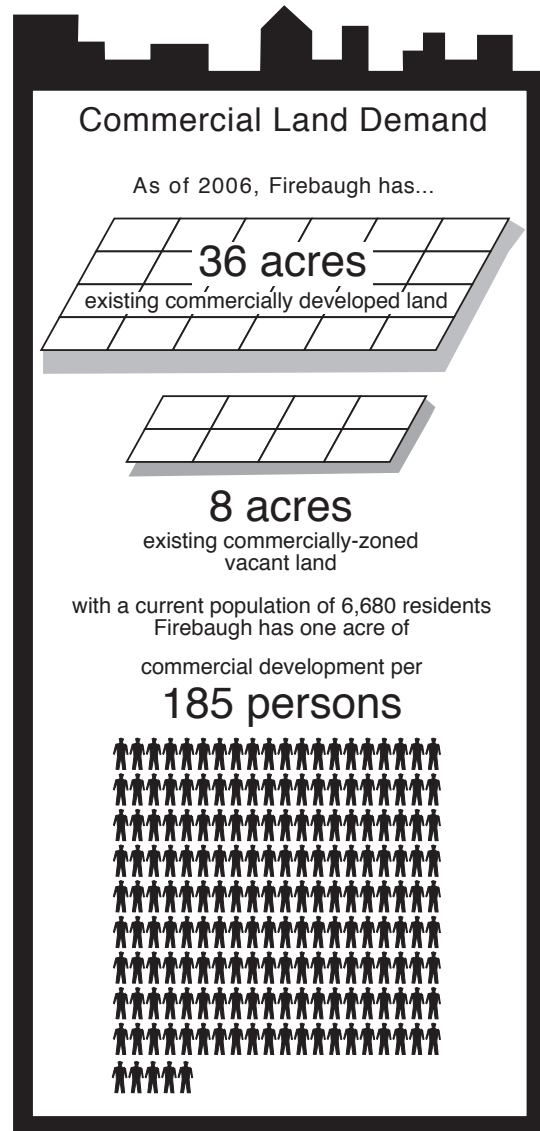**STEP 1:   Ratio of Existing Commercial Land to Population**

6,680 (2005 population) ÷ 36 acres of existing commercial development =

   1 acre of commercial land per 185 persons

STEP 2:   Future Commercial Land Demand

1 acre of commercial land per 185 persons ÷ 5,115 persons (additional population by 2030) = 28 acres

   28 acres of commercial land needed through the year 2030.

Commercial Land Demand

As of 2006, Firebaugh has...

36 acres
existing commercially developed land

8 acres
existing commercially-zoned vacant land

with a current population of 6,680 residents Firebaugh has one acre of

commercial development per

185 persons

STEP 3: 40% Flexibility Factor

The foregoing land demand projection is increased by 40% to ensure that the supply of land is not overly constrained, thereby artificially limiting the supply of land and potentially increasing development costs:

$$28 \times 40\% = 11 \text{ acres}$$
$$28 + 11 = 39 \text{ acres}$$

STEP 3: Subtract Existing Vacant Land

39 acres - 8 acres of existing vacant/undeveloped land zoned for commercial use = 31 acres

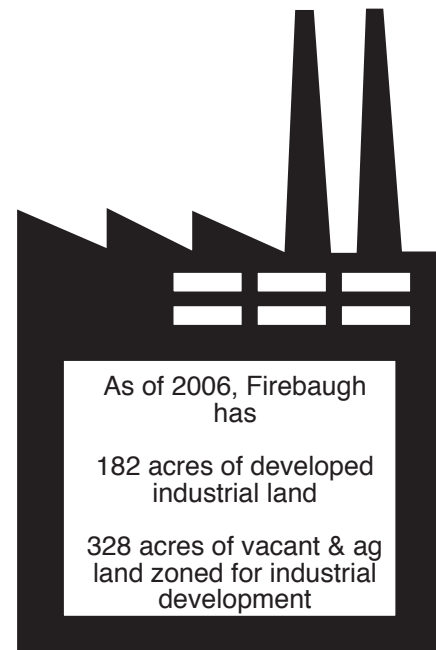31 acres of additional commercial land needed through 2030

The foregoing analysis shows that Firebaugh has a need for at least 31 acres of additional commercially-designated land through the year 2030. If the City's commercial development level were forecasted to be on a par with other area cities, this total could be higher.

3.   *Industrial Land Demand Projections*

Similar to the land demand projections for commercial uses, projections for industrial uses can be difficult. For example a very large plant may be staffed with only a few workers. On the other hand, a plant like Toma-Tek can employ up to 700 workers at peak times. A generally accepted method for projecting future industrial land demand is to develop a ratio between existing developed industrial acreage and future population.

The following assumptions are made regarding future industrial development:

- Industrial uses do not require the high visibility that retail commercial uses require;
- Firebaugh has approximately 182 acres of existing industrial development;
- Firebaugh has 328 acres of vacant and agricultural land zoned for industrial development
- Firebaugh has two industrial zones. The M-1 zone is for "light" industrial uses; The M-2 zone is intended for more intensive industrial uses.

As of 2006, Firebaugh has

182 acres of developed industrial land

328 acres of vacant & ag land zoned for industrial development

STEP 1: Ratio of Existing Industrial Land to Population

6,680 (2005 population) ÷ 182 aces of existing industrial development =

Firebaugh currently has 1 acre of industrial land per 37 persons

STEP 2: Future Industrial Land Demand

1 acre industrial land per 37 persons ÷ 5,115 persons (additional population by 2030) = 138 acres

138 acres of commercial land needed through the year 2030.

STEP 3: 40% Flexibility Factor

The foregoing land demand projection is increased by 40% to ensure that the supply of land is not overly constrained, thereby artificially limiting the supply of land and potentially increasing development costs:

138 x 40% = 55 acres
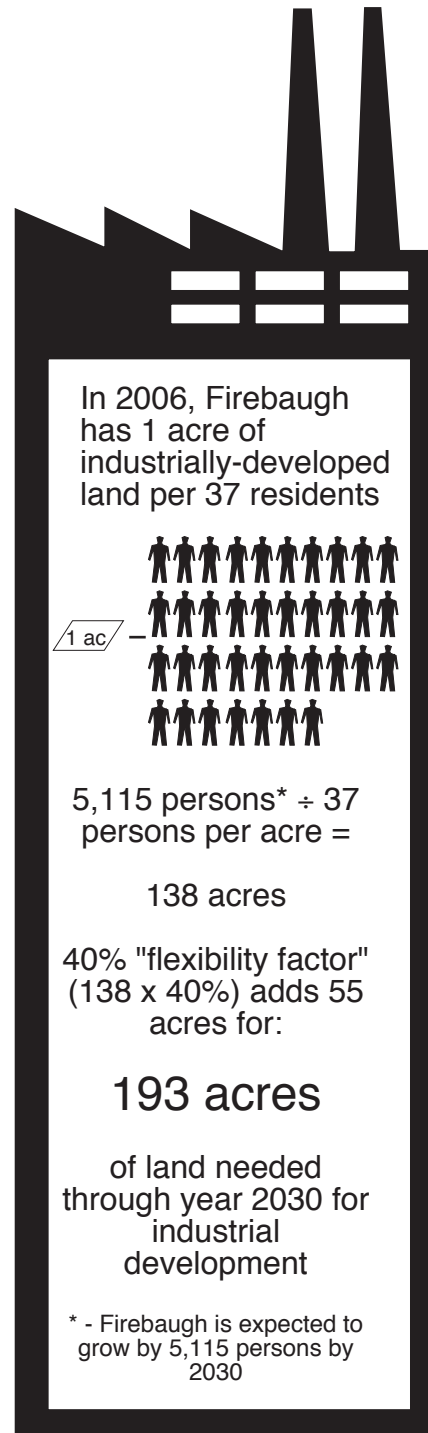138 + 55 = 193 acres

STEP 4: Subtract existing vacant land

193 acres - 328 acres of existing vacant/undeveloped land zoned for commercial use =

0 new acres of additional industrial land needed through 2030

The foregoing analysis indicates that Firebaugh has a sufficient amount of industrially-zoned land to accommodate expected population growth by the year 2030. Similar to commercial uses, the City considers itself under-developed with industrial businesses.

In 2006, Firebaugh has 1 acre of industrially-developed land per 37 residents

1 ac

5,115 persons* ÷ 37 persons per acre =

138 acres

40% "flexibility factor" (138 x 40%) adds 55 acres for:

193 acres

of land needed through year 2030 for industrial development

* - Firebaugh is expected to grow by 5,115 persons by 2030

3.   Park Land Demand Projections

Parks are a critical part of making cities livable. They provide an open space balance to the dense urban development that characterizes the community. Park land demand projections are based on population growth. Firebaugh currently has a requirement that residential developers dedicate 3-1/2 acres of land per 1,000 residents in new subdivisions. There is interest in increasing this requirement to 5 acres per 1,000 residents.

The following assumptions are made about park land demands:

•   Firebaugh has historically had a standard of setting aside one 3.5 acres of park land for every 1,000 new residents. The City currently has three existing parks totalling 26 acres. Based on the ratio of 3.5 acres per 1,000 residents, the current population of 6,680 persons has a "demand" of 23.4 acres of park land

            (6.68 x 3.5 = 23.4 acres).

       From this perspective, the City has an adequate stock of park land.

•   Open space facilities on school property will not be counted as park land.

•   Recently approved subdivisions will be adding approximately 14.7 acres of park land to the City.

STEP 1: Park Land Demand

Firebaugh is projected to grow by 5,115 persons by the year 2030. There is interest in the community in increasing the current park land ratio from 3-1/2 acres per thousand residents to five acres per thousand residents. Table 2-2 in the right margin shows park land demand calculations for both 3-1/2 and 5 acre per 1,000 residents.

Table 2-2
Park Land Demand Projections

	3.5 acres per 1,000	5 acres per 1,000
5,115 "future" residents	5.115 x 3.5 = 18 acres	5.115 x 5 = 25.6 acres
Increase by 40% "flexibility" factor	18 + 40% = 25.2 acres	25.6 + 40% = 35.8 acres
Subtract 14.7 acres of parks in approved subdivisions	25.2 - 14.7 = 10.5 acres	35.8 - 14.7 = 21.2 acres
	10.5 additional acres needed by 2030	21.2 additional acres needed by 2030

In 2006, Firebaugh has 26 acres of developed parkland

At a standard of 3.5 acres of parkland per 1,000 residents, Firebaugh will need to add 10.5 acres of park land by 2030

At a standard of 5 acres of park land per 1,000 residents, Firebaugh will need to add 21.2 acres of park land by 2030

<u>3.5 acres per 1,000</u>

Using the 3-1/2 acres per thousand standard indicates Firebaugh will need to add 18 acres of park land. Applying the General Plan's 40% flexibility factor increases this amount to 25 acres. Subtracting the 15 acres of park sites included with recently-approved subdivisions adjusts the figure to 10.5 acres. Approximately 10.5 additional acres of land will be needed for parks by the year 2030, using the standard of 3.5 acres per 1,000 residents.

<u>5 acres per 1,000</u>

Using the standard of 5 acres per 1,000 residents indicates Firebaugh will need to add 25.6 acres of park land. Applying the General Plan's 40% flexibility factor increases this amount to nearly 36 acres. Subtracting the 15 acres of park sites included with recently-approved subdivisions adjusts the figure to about 21 acres. Approximately 21 additional acres of land will be needed for parks by the year 2030, using the standard of 5 acres per 1,000 residents.

If the City adopts the standard of 5 acres per 1,000 residents, then Firebaugh will need to add 21 acres of park land by the year 2030. This figure adjusts for the General Plan's 40% flexibility factor and also for existing park land included with recently-approved subdivisions.

Table 2-3 *Park Acreage in Recently Approved Subdivisions:*	
Valle Del Sol:	2 acres
Lake Joallan:	1.1 acres
El Sendero Ranch:	11.6 acres
Total	14.7 acres

Firebaugh will need to add approximately 21 acres of park land by the year 2030, using the standard of 5 acres per 1,000 residents.

This figure accounts for park land in recently-approved subdivisions and the General Plan's 40% flexibility factor

5.   *School Land Demand Projections*

School land demands can be forecast using population projections developed for the General Plan. In addition, Firebaugh Las-Deltas Unified School District has prepared its own projections of future school needs. Those projections must be considered by the City in estimating the need for future school facilities.

School Land Demand Assumptions:

This analysis assumes the following general standards for optimal school enrollment and size:

Elementary schools: 600 –700 students
                     School site: 10 to 12 acres

Middle Schools: 750 – 900 students
                     18 – 20 acres

High Schools: 1,500 – 2,000 students
                     40+ acres

STEP 1: Determine Future School Population

Future population 2005-2030:

5,115 persons

Based on the year 2000 U.S. Census about 29% of Firebaugh's future population will be of school age (5-17 years old).

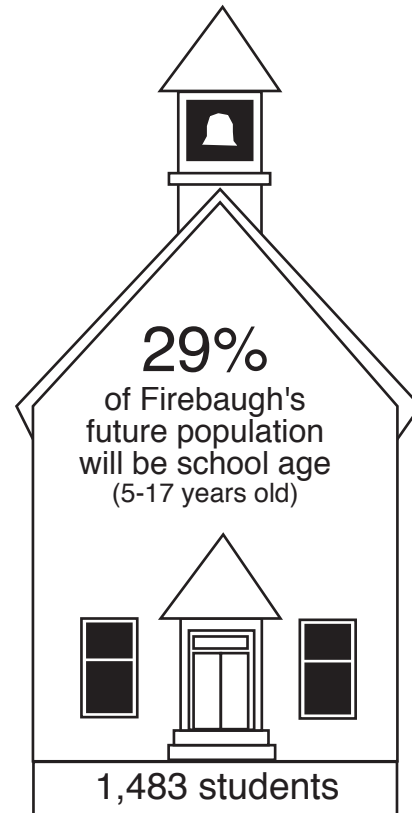$$5,115 \div 29\% = 1,483 \text{ students}$$

Based on census figures, this population will be distributed into the following age categories:

Elementary: 49% of future students will be elementary school age: 49% of 1,483 =

727 future elementary students

Middle: 23% of future students will be middle school age: 23% of 1,483 =

341 future middle school students

29%
of Firebaugh's future population will be school age
(5-17 years old)

1,483 students

High School: 28% of future students will be high school
age: 28% of 1,483 =

            415 future high school students

The foregoing projects indicate that Firebaugh will need
to plan to add at least one elementary school through the
year 2030. The school district has secured a 20-acre site
on the west side of Clyde Fannon Road north of Sablan
Avenue and expects to construct a new elementary school
in the next several years.

In terms of middle school and high school enrollment
increases, the school district will need to monitor actual
enrollment and determine whether increases can be
accommodated on existing campuses or if the
construction of new campuses is warranted.

Land Use Demand Conclusions

The foregoing analyses show that Firebaugh will need the following amount of land to accommodate expected growth through the year 2030:

Residential: 401 acres
(367 acres for single family residential)
(34 acres for multi-family residential)

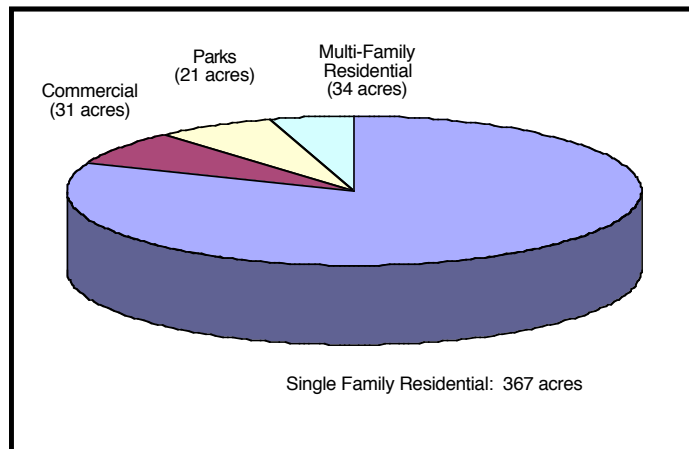Commercial: 31 acres

Industrial: 0 acres

Parks: 21 acres (at 5 acres per 1,000 residents)

Schools: 0 acres

Total: 453 acres

Chart 2-1
*Land Demand in Firebaugh
Through 2030*

The projections above indicate that a total of 453 acres of "undeveloped" land will be needed to accommodate expected growth of the City of Firebaugh through the year 2030 – based on the "medium" growth projection. As previously discussed, these projections reflect a 40% "flexibility factor" increase. The use of this type of increase is typical for small communities and is intended to preclude an artificial restriction in the availability of land for urban development.

Firebaugh's current city limits includes 2,309 acres. The current Sphere of Influence contains 3,410 acres. Therefore, the SOI is 1,101 acres larger than the city limits. While this simple calculation makes it appear the SOI has plenty of land to accommodate expected growth through the year 2030, the City may need to look at adjusting boundaries to accommodate specific uses.

For example, future residential development is severely constrained by boundaries such as the San Joaquin River as well as State Highway 33, railroad tracks, Firebaugh Airport and the wasetwater treatment plant. Locations for future commercial development are also constrained by shallow lots on Highway 33 – the city's main commercial district. These constraints may require the City to move or adjust certain land use designations.

Proposed Planning Boundaries

The above analysis shows that for the most part, Firebaugh has an adequate supply of land already within its existing Sphere of Influence to accommodate expected growth through the year 2030. In particular, there are approximately 452 acres of existing vacant/agricultural land designated "Low Density Residential": The projections indicate that Firebaugh will "only" need 367 acres for this land use category during the planning period. This "surplus" of acreage will also be able to accommodate parks expected to be needed to serve the new neighborhoods.

The only major land use for which Firebaugh is lacking an ample supply of vacant acreage is the "General Commercial" category. This is evidenced by the lack of a large-scale shopping facility that contains key "anchor" tenants such as a grocer store, and a pharmacy.

This lack of available general commercial space is largely due to the configuration of parcels along Highway 33. Virtually all existing parcels within the existing Sphere of Influence along Highway 33 are too small to accommodate a shopping center. This is due to a variety of constraints – the railroad parallels the west side of the highway a short distance to the west. Existing neighborhoods and the downtown have resulted in very shallow parcels on the east side of the highway.   Large irrigation canals further constrain the presence of large parcels along the highway

In order to provide Firebaugh with the ability to develop a large shopping facility, this General Plan designates approximately 38 acres on the east side of Highway 33, in the Del Rio area – where a future collector street will intersect with the highway (providing access east into the recently-approved El Sendero Ranch project. This land is mostly vacant.