

**B A S E L I N E
A N A L Y S I S**

Section Two

Comprehensive Plan 2009

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A “CONTEXT” FOR PLANNING

The *Baseline Analysis* section of this *Comprehensive Plan 2009* is intended to provide a context of facts and documentation of the physical and socioeconomic (or demographic) characteristics of the City of Bee Cave. The following sections are designed to facilitate the formulation of goals and objectives, and eventually the recommendations, of this plan:

- Historical Background
- Relationship to the Region
- Physical Factors Influencing Development
- Existing Land Use
- Existing Population and Housing Characteristics
- Existing Zoning Characteristics

Each section contains information pertaining to the subject matter as well as graphic support, as appropriate. The *Baseline Analysis* provides documentation of basic information about the community, which then forms the context for the comprehensive planning process in the City. It presents an overview of the area’s physical, social and economic characteristics, as well as general insight into the community’s urban pattern. The primary objective of the *Baseline Analysis* is to document current conditions, and to identify opportunities and constraints that the community must consider in addressing and shaping its future form and character. The secondary objective of the *Baseline Analysis* is to ensure that the information being used in the planning process accurately portrays the community and its needs.

HISTORICAL BACKGROUND²⁻¹

The City of Bee Cave is rich in history. The City, as we know it today, did not exist until 1987, but the idea of an area where people could live without the influence of "big city" government has been the area's "calling card" for over 140 years.

As early as the 1850s, Dietrich Bohls moved from Austin to his new home at the confluence of Barton Creek and Little Barton Creek. The population of Austin had reached 900 people, and Mr. Bohls was looking for a place to raise his family away from the confines of the city and its influence. At the time, the land west of Austin still had Native American inhabitants, and therefore, other settlers in the area

2-1 This information was obtained from the City of Bee Cave website.

were scarce. The Bohls family was one of the first families to settle on the land that would become the Village of Bee Cave. Some of the original structures still exist today.

In the 1860s, western Travis County was booming; it was becoming a popular place for families to establish their home. They cleared the land with a lot of hard work and sweat. The rocky cedar breaks beneath the Hill Country soil was not the best for farming. Most of the settlers, however, were proud, friendly people who wanted to be left alone on the quiet of their farms to raise their children. As more and more settlers like the Freitags, Ottens, and the Pechts moved to the region, it became known as "the Bee Caves area". The area derived its name from the colonies of Mexican honeybees that lived in the banks of Barton Creek and Little Barton Creek that encompassed a large area of Western Travis County.

In the early 1870s, Mr. Carl Beck arrived in the area and opened his general store at the crossroads of what are now State Highway 71 and Hamilton Pool Road. Settlers and travelers would stop in the Beck Store to buy supplies, mill their cotton, exchange news, and collect their mail. He also built a cigar factory and cotton gin. In 1873, Mr. Beck became postmaster and opened the post office in his store. Needing a name for his post office, Mr. Beck thought about the bees in the banks of the creek behind his property, and of the bee hives (or caves) that the bees would build in the eaves of local buildings. As a lark, he named the post office for the surrounding area he called "Bee Cave".

Local people worked together to build a school building on land given to the Bee Cave community by the Freitag family. The area families were a close-knit group, and if a family needed help, the people were eager to assist their neighbor.

As the years passed and more families moved to the area, the Wallace Store was built across from the school, and later the Johnson Store was built to the south of the school. The core of the Bee Cave community was confined to a two-mile section of crossroads that provided connections to Marble Falls, Teck, the Hudson Bend area and several communities to the west. Over one hundred years later, in the 1980s, the community still retained its slow pace and friendly atmosphere.

In the 1980s, the City of Austin began to attempt numerous annexations. In order to avoid being annexed by Austin, several communities in outlying areas, areas such as Creedmoor, Bertram and Mustang Ridge, voted to become incorporated.

Many people who lived in the Bee Cave area were also concerned about possible annexation, and therefore, a group of local citizens formed a board known as the Concerned Landowners and Citizens Organization (CLACO). The five founding members were Judy Figer Allen, Gilbert Wallace, Kenneth Spell, Robert Baldwin, Sr. and Rodney Bohls. The board had to overcome many obstacles that were impeding the process of incorporation, including entities such as Travis County, the City of Austin, the Sierra Club, as well as several other environmentalist groups, but eventually, the Village of Bee Cave incorporated in 1987.

With key support from State Representative Terrell Smith and State Senator Gonzalos Barrientos, the Village was allocated one-mile of extraterritorial jurisdiction, instead of the standard one-half mile extraterritorial jurisdiction (ETJ; explained in future detail in later sections) that incorporated areas equal in size to the Village are allowed by state law. The additional ETJ area prevented the division of four old land grants. In 1987, the Village of Bee Cave administration had its humble, but proud, beginning in a nondescript portable building. The Village encompassed a two-square-mile area with 8,800 acres of extraterritorial jurisdiction. The 1990 population was approximately 214 people, and the establishment of the Village of Bee Cave was official. By 2000, the Village had grown to 656 people.

In 2006, the “Village of Bee Cave” changed its official name to “City of Bee Cave.”

RELATIONSHIP TO THE REGION

The City is located in the region of Texas known as the Texas Hill Country, approximately 20 miles west of the City of Austin²⁻², which allows local residents to live outside of the “big city”, but at the same time to benefit from the amenities that a larger city can provide -- amenities like diversified employment opportunities, cultural opportunities, and major healthcare facilities. The fact that Bee Cave is located at the center of three major traffic corridors (R.M. 620, State Highway 71, and Bee Cave Road [or F.M. 2244]) also provides local citizens with easy access to such amenities, as well as to other surrounding communities.

Lake Travis is also a significant regional feature of the City. Located approximately 30 miles northwest of Austin, it was formed as a by-product of the Joseph J. Mansfield Dam, which was completed in 1942. This lake, which is the fifth lake in the chain of Highland Lakes on the Colorado River, is monitored and managed by the Lower Colorado River Authority. The Colorado River, which borders the City of Bee Cave’s ETJ to the north, is the main water source which feeds Lake Travis. Starting in Austin, Lake Travis winds northwest through the central Texas Hill Country for over 60 miles. It is the longest of the seven Highland Lakes, and at its widest point is 4.5 miles wide. Lake Travis provides various recreational opportunities for local residents and visitors, including fishing, sailing, water skiing, jet skiing, and camping.

Little Barton Creek and Barton Creek are also considered significant regional features. Little Barton Creek is a critical natural resource due to its role as a feeder stream for both Barton Creek and Barton Springs. Watershed protection for this creek and the surrounding area is a significant environmental consideration for Bee Cave, as well as for the entire region. Barton Creek has significant presence in the area as an important source of habitat for many species, as well as an important water source for the Edwards Aquifer.

2-2 The distance between the City of Austin and the City of Bee Cave varies depending upon the points from which the distance is calculated.

PHYSICAL FACTORS INFLUENCING DEVELOPMENT

Several of the physical factors in the City of Bee Cave that have the potential to limit development are shown on the Physical Factors Map, **Plate 2-1**.

NATURAL FEATURES

SURFACE GEOLOGY²⁻³

Names exist for the various geologic chapters of the earth's history. The area in which the City exists is characterized by underlying marine limestone and clay formed during the Cretaceous period. Specifically, the Glen Rose Formation provides the basis for the vast majority of the area in and around Bee Cave, and the Fredericksburg Group underlies several small areas in the vicinity of the City.

Glen Rose Formation

This formation is classified as the oldest and most extensive rock unit, and most of the outcrops in the City of Bee Cave are Glen Rose. The formation consists of approximately 380 feet of mostly thinly interbedded hard and soft limestone, dolomite, and marl. These alternating beds vary in their resistance to erosion, and form a distinctive, stair-step topography. The upper and middle members of the formation are highly dolomitic relative to the others. The oldest member outcrops are located in the steep ravines that lead to the Colorado River, and the younger members occupy areas that are successively higher in elevation. Soils developed on this formation are primarily thin, brownish-gray, gravelly clay loams and lesser amounts of yellowish brown, porous, fine-grained dolomite.

Fredericksburg Group

This group consists primarily of Edwards Limestone and Bee Cave Marl. The Edwards Limestone is characterized by limestone, dolomite and chert, and is described as being fine-grained and porous. Chert can be found in varied amounts throughout the formation, and is described as "honeycombed" and mostly white to light gray. The thickness of the Fredericksburg Group can be anywhere from 60 feet to 350 feet. Bee Cave Marl is characterized by being soft and white, with a tendency to exhibit marine megafossils. Its average thickness varies, but is usually between 25 feet and 40 feet.

²⁻³ All data in this section was obtained from the [Geologic Atlas of Texas](#)' Austin Sheet, prepared by the University of Texas, Bureau of Economic Geology (reprinted in 1981), as well as from information in the City of Bee Cave Comprehensive Plan, prepared by students in the Community and Regional Planning Program in the School of Architecture at the University of Texas at Austin in September of 1988.

SOILS²⁻⁴

The soils in and around the City of Bee Cave can generally be described as shallow, calcareous, and moderately alkaline, and are shown on the Soil Survey Map, **Plate 2-1**. The most prevalent soil types in the area are of the Brackett and Tarrant Series, but others include Volente complex, mixed alluvial land, Purves silty clay, Speck clay loam, and Crawford clay.

Brackett Series

This soil series consists of shallow, well-drained soils with a mostly gravelly surface layer. These soils develop over imbedded limestone and marl, and occupy large areas of gently rolling to steep topography. The texture of the surface layer is gravelly clay loam, gravelly loam, loam, or clay loam. Permeability is moderately slow, and the available water capacity is low. These soils are not well suited for crops, and are better utilized for ranging or wildlife habitat.

Tarrant Series

This soil series consists of shallow, well-drained, stony, clay-like soils overlying limestone. Large limestone rocks cover 25 to 85 percent of the surface. The Tarrant Series occupies primarily nearly level to gently sloping ridges, rolling side slopes, and steep, hilly breaks. Slopes are complex and range from a slight slope of one percent to an extreme slope of 40 percent. The depth of this series ranges from four to 14 inches. Texture of the surface layer is clay loam, silty clay loam, clay, or silty clay. Permeability, like that of the Brackett Series, is slow, and the available water capacity is low. Suitable land uses are the same as those for the Brackett Series soils.

Volente Complex

This soil series consists of deep, well-drained soils that developed in slope alluvium, mainly in valleys. Slopes are concave and are predominately two to seven percent, with the thickness ranging from 34 to 50 inches. Permeability is slow and moderate, and the available water capacity is high. Volente soils are only marginally suitable for crops because of their high erosion factor. More suitable uses are improved pasture or range land.

2-4 Data in this section was obtained primarily from information in the City of Bee Cave Comprehensive Plan, prepared by students in the Community and Regional Planning Program in the School of Architecture at the University of Texas at Austin in September of 1988.

Soil Types	
BLD - Bracket soils, rolling	MD - Mixed alluvial land
BRF - Bracket soils and Rock outcrop, steep	PMC - Parick soils, 2 to 5 percent slopes
CRB - Cracked clay, 1 to 2 percent slope	PTC - Purves siltly clay, 1 to 5 percent slopes
LN - Lincoln loamy fine sand	SAB - San Saba clay, 1 to 2 percent slopes
	SAC - Spack sandy clay loam, 1 to 5 percent slopes
	TMD - Tarrant soils, rolling
	TCA - Tarrant and Spack soils, 0 to 2 percent slopes
	TDF - Tarrant soils and Rock outcrop, steep
	VOD - Valente complex, 1 to 8 percent slopes

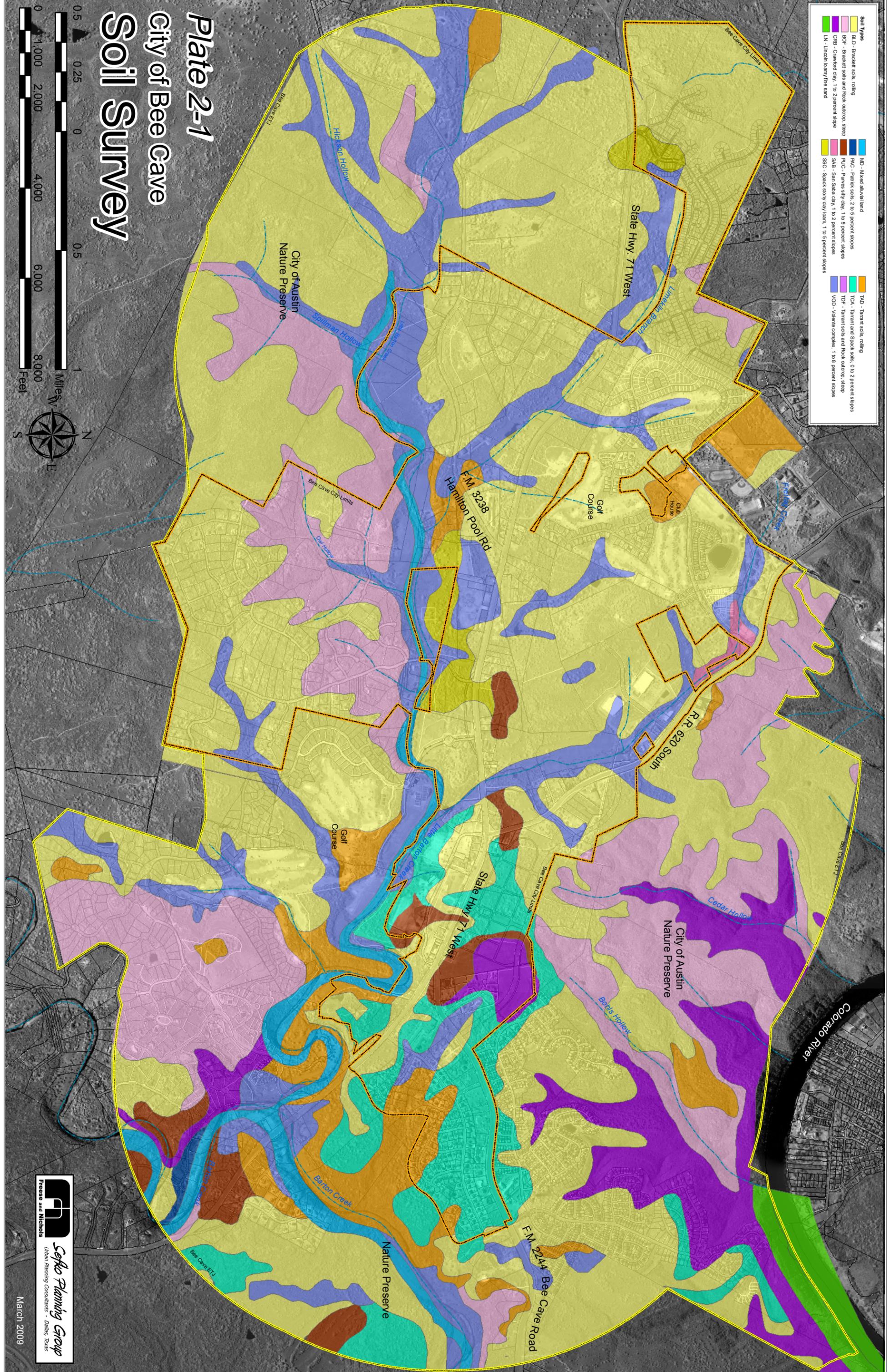
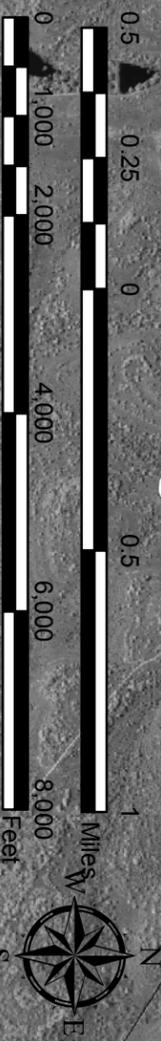


Plate 2-1

City of Bee Cave

Soil Survey



Mixed Alluvial Land

This soil type is characterized by gravelly alluvium, beds of gravel, and exposed limestone beds and boulders interspersed with moderately deep to very deep calcareous alluvial materials. Slopes can be up to approximately seven percent, and soil depth ranges from two to four feet. These types of soils are best suited for ranging and wildlife.

Purves Silty Clay

This type of soil is characterized by being shallow and well drained, with slopes ranging from one to five percent, and with depth ranges from 10 to 20 inches. It is best suited for improved pasture, hay, or rangeland.

Speck Stoney Clay Loam

This is a shallow, well-drained soil overlying limestone, and it is characterized by being located in areas of smooth, gently undulating topography. Slopes range from one to five percent, and depth ranges from 14 to 18 inches. It is slowly permeable and the available water capacity is low. This soil is best suited to native grass range.

Crawford Clay

This is a well-drained, moderately deep, non-calcareous soil that developed over hard limestone. Slopes are smooth, usually only one to two percent. Soil depth ranges from 24 to 32 inches. This clay is very slowly permeable, and the available water capacity is high. It is best suited to crops, improved pasture, or hay.

VEGETATION²⁻⁵

A region of vegetation known as the Edwards Plateau characterizes the area of Texas in which the City of Bee Cave is located. This region covers 24 million acres across the central to western central portion of Texas, from the middle of Travis County, northward approximately to Sterling County, and westward to Upton and Terrell Counties. The combination of grasses, weeds, and small trees is ideal for cattle, sheep, goats, and deer. This area, as aforementioned in the soils discussion, is well suited for rangeland.

2-5 The information for this section was obtained primarily from the [1998-1999 Texas Almanac](#), the Dallas Morning News.

The principal grasses of the clay soils found in this region include cane bluestem, silver bluestem, little bluestem, sideoats grama, Indiangrass, common curlymesquite, buffalograss, fall witchgrass, plains lovegrass, wildryes, and Texas wintergrass. Throughout the Edwards Plateau area, live oak, shinnery oak, mesquite and cedar dominate the tree vegetation. A large portion of the City of Bee Cave and its ETJ have an abundance of trees, and therefore, a mapping of tree clusters could be important in determining the proper locations for future development. These clusters can be seen in a generalized form on **Plate 2-2**, Tree Cover Map.

AQUIFERS

Major aquifers underlie about 80 percent of Texas. Approximately 56% of the water currently being used in the state is derived from underground sources that occupy nine major and 20 minor aquifers. There are two aquifers that affect Travis County, and therefore the City of Bee Cave, and they are the Edwards (Balcones Fault Zone) Aquifer and the Trinity Aquifer.

The Edwards (Balcones Fault Zone) Aquifer

The Edwards Aquifer forms a narrow belt extending through nine counties from a ground-water divide in Kinney County through the San Antonio area northeastward to the Leon River in Bell County. A groundwater divide in Hays County hydrologically separates the aquifer into the San Antonio and Austin regions. Water in the aquifer occurs in fractures, honeycomb zones and solution channels in the Edwards Aquifer. Nearly 25 percent of the water from the aquifer is used for municipal and military purposes, supplying 1.5 million people in San Antonio and the surrounding area with water. However, irrigation is the primary use in the western segment. The aquifer also feeds several well-known recreational springs and underlies some of the most environmentally sensitive areas in Texas. The Edwards Aquifer underlies Travis County in a thin band (in a north-south direction) across the central portion of the county. Barton Springs discharges into Barton Creek near its confluence with the Colorado River; this is a significant recharge zone for the Edwards Aquifer.

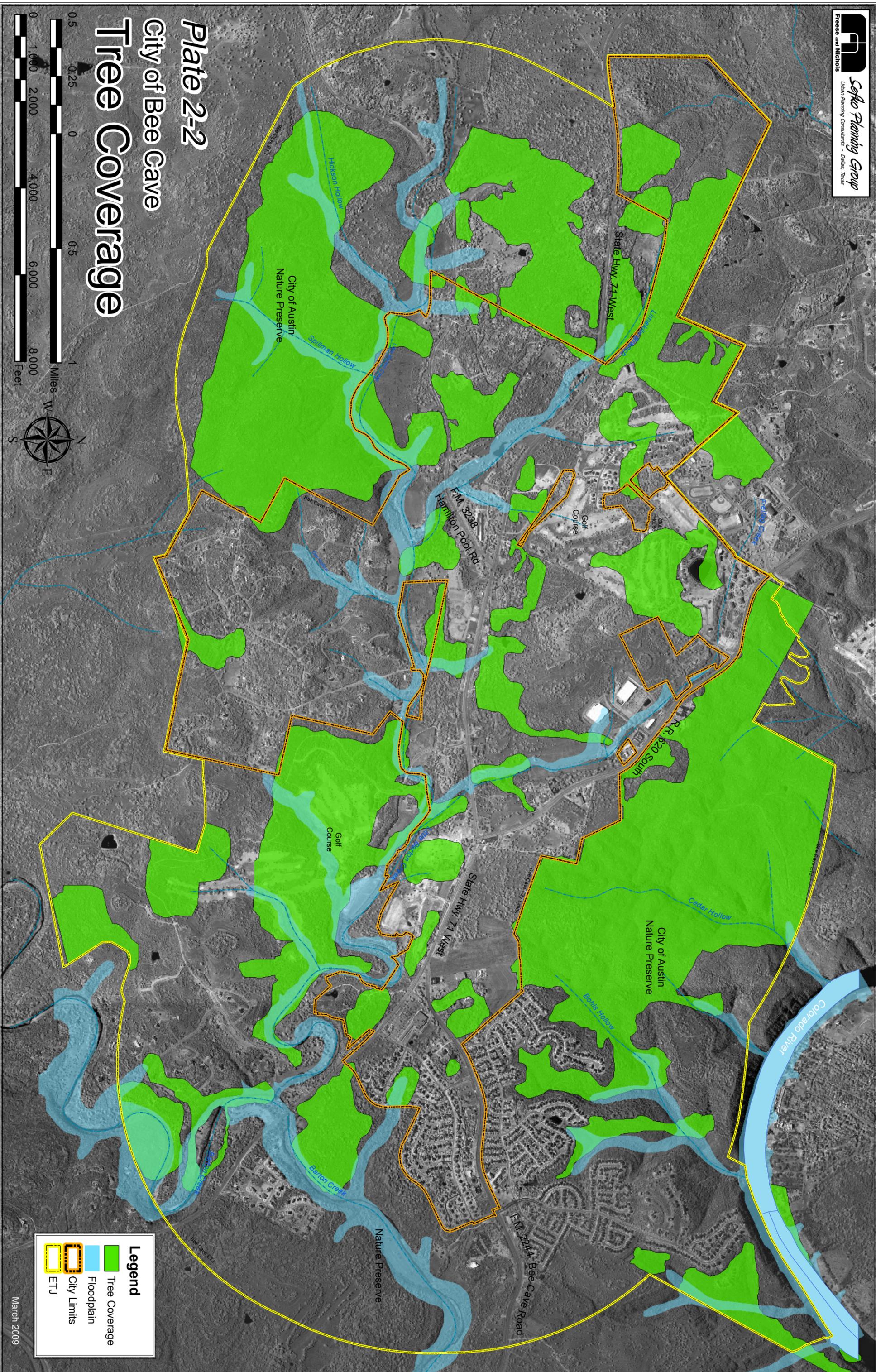
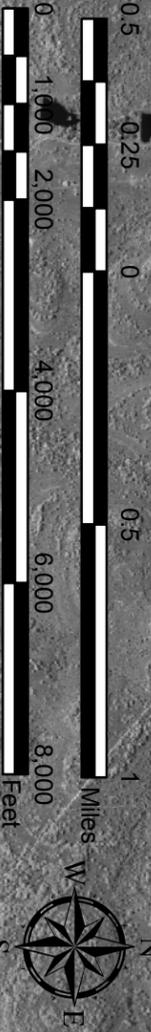
The Trinity Aquifer

This aquifer consists of formations that extend from the Red River in north Texas to the Hill Country of central Texas. Water from the Trinity Aquifer is used for multiple purposes, including irrigation in north and central Texas, and domestic and municipal supply in other parts of the state. This aquifer underlies a large portion of Travis County, and therefore could impact growth in the City of Bee Cave in the future.

Plate 2-2

City of Bee Cave

Tree Coverage



Legend

- Tree Coverage
- Floodplain
- City Limits
- ETJ

SIGNIFICANT WATER BODIES

Each of the following bodies of water could have significant future land use implications for the City of Bee Cave, and therefore, warrant discussion.

Barton Creek²⁻⁶

Barton Creek rises in western Travis County and flows eastward for about 35 miles to become a tributary of the Colorado River. The creek is normally an intermittent stream. However, during periods of heavy rainfall it has become considerably larger. Barton Creek flows through the City of Bee Cave's ETJ in the nature preserve located to the east of the City. As aforementioned, this creek has significant presence in the area as an important source of habitat for many species, as well as an important water source for the Edwards Aquifer.

Little Barton Creek

This small creek is located to the south of the Bee Cave primarily in the City's ETJ, with a small portion of the creek within the City limits. Little Barton Creek is a critical natural resource due to its role as a feeder stream for both Barton Creek and Barton Springs. Watershed protection for this creek and the surrounding area is a significant environmental consideration for Bee Cave, as well as for the entire region.

The Colorado River

The Colorado River is one of the principal rivers of Texas. It is the longest river in the United States that flows solely through one state, and is approximately 862 miles (1,390 km) long. Rising in the Llano Estacado region of northwestern Texas, the river flows across the state in a generally southeastern direction, through several counties, including San Saba, Llano, Burnet, Travis, Bastrop, Fayette, Colorado, Wharton, and Matagorda. Eventually, the Colorado River empties into the Gulf of Mexico at Matagorda Bay. The northernmost border of the City's ETJ is actually a small piece of the southern edge of the Colorado River. Such proximity to a major regional water body could have significant land use impacts on the City of Bee Cave.

2-6 Information for this section was obtained through the Texas Parks and Wildlife Department.

TOPOGRAPHY AND SLOPE ANALYSIS

An important factor to consider when making development decisions is the degree of variance in the topography of the land. The City of Bee Cave, as aforementioned, is located in the Texas Hill Country. This part of Texas is known for its hilly terrain, and the area in and around Bee Cave is no exception. The topography varies greatly throughout the City, from a low of approximately 740 feet above sea level along Little Barton Creek in the southeast area of the City to a high of approximately 1100 feet above sea level in the northwestern part of Bee Cave. The terrain in the ETJ of the City varies greatly near the Colorado River in the far northeastern corner of the ETJ. The steep declines are from approximately 860 feet above sea level to approximately 500 feet above sea level, where the land is directly adjacent to the Colorado River. There is an abundance of undeveloped land in the City and in the ETJ, but whether portions of the remaining land can be developed at all may be dependent upon their topography. The City of Bee Cave should establish guidelines relating to development that vary based on differing degrees of slope. This will be discussed further in the *Livability* element; however, it is important to note that development on slopes greater than 20% should be discouraged.

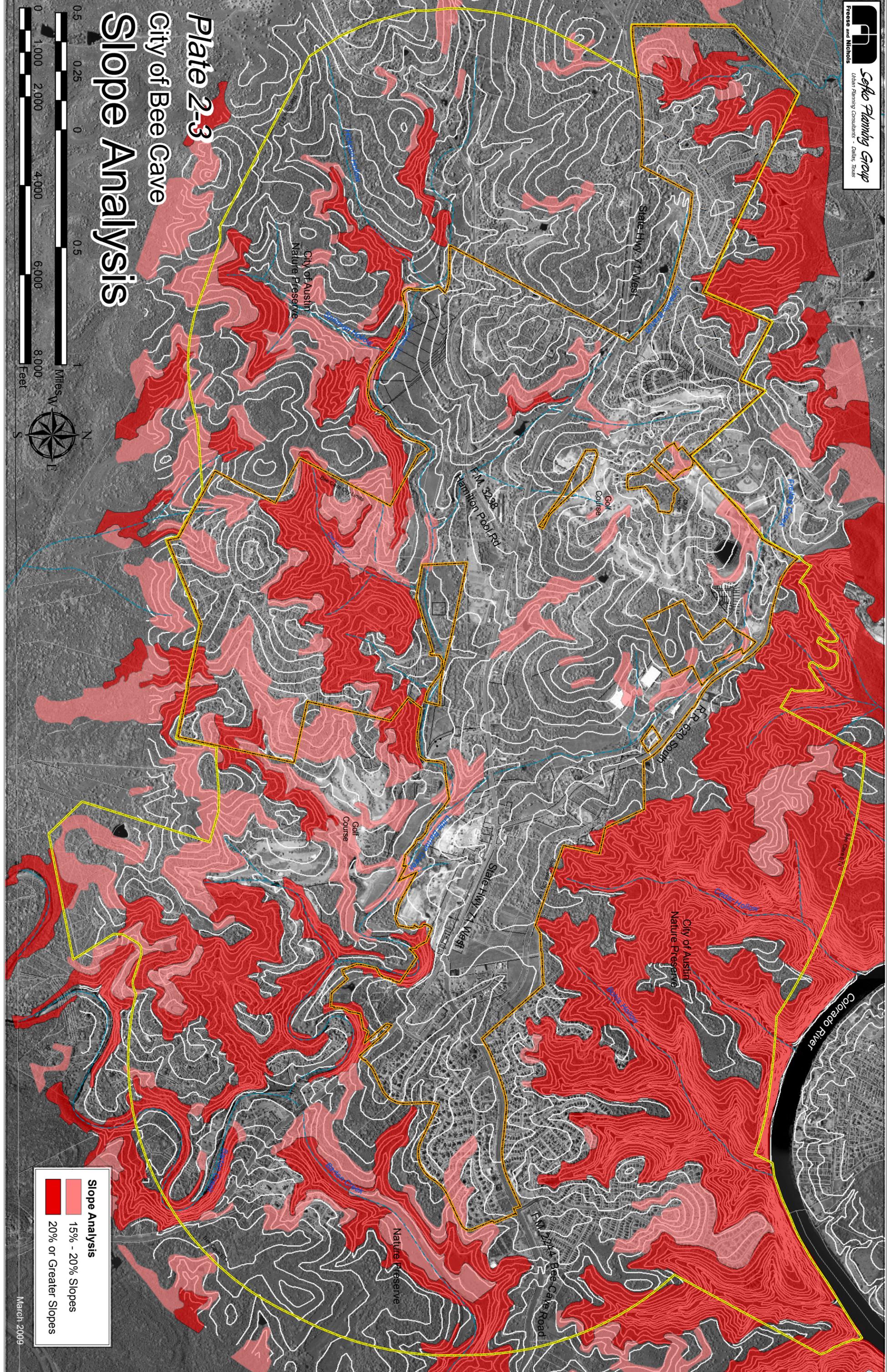
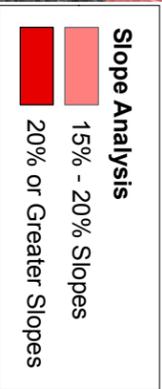
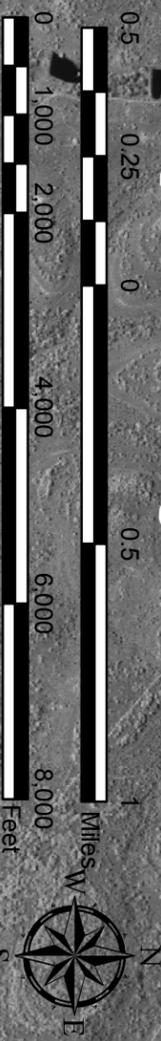
The amount of vacant land remaining within the City limits is approximately 1,134 acres, and within the ETJ is approximately 1,950 acres -- a total of 3,084 vacant acres. **Plate 2-3** shows a slope analysis of the remaining vacant land, and is meant to provide a visual representation of the amount of land that is developable within the City of Bee Cave and its surrounding ETJ area. As shown, this remaining developable land is located sporadically throughout the City of Bee Cave and its ETJ, but a concentrated area of extreme slope is located along the northern portion of the ETJ along the Colorado River.

The amount of vacant residential land with a slope ratio of less than 20%, the recommended maximum allowable slope for residential development, is approximately 903 acres. Taken as a percentage of the total amount of vacant residential land, approximately 90% of the remaining vacant land is developable, compared to about 10% that would be difficult to develop due to its topography. Residential land will be examined in further detail in the *Future Land Use Plan* element.

Floodplain

Another factor to consider when assessing the acceptability of a certain parcel of land for development is the history of flooding on and around that property. The Federal Emergency Management Agency (FEMA) has established areas throughout the United States that are flood-prone. In general, the designation of such areas can help municipalities to determine whether additional development restrictions are necessary to ensure the health, safety and welfare of local citizens.

Plate 2-3
 City of Bee Cave
Slope Analysis



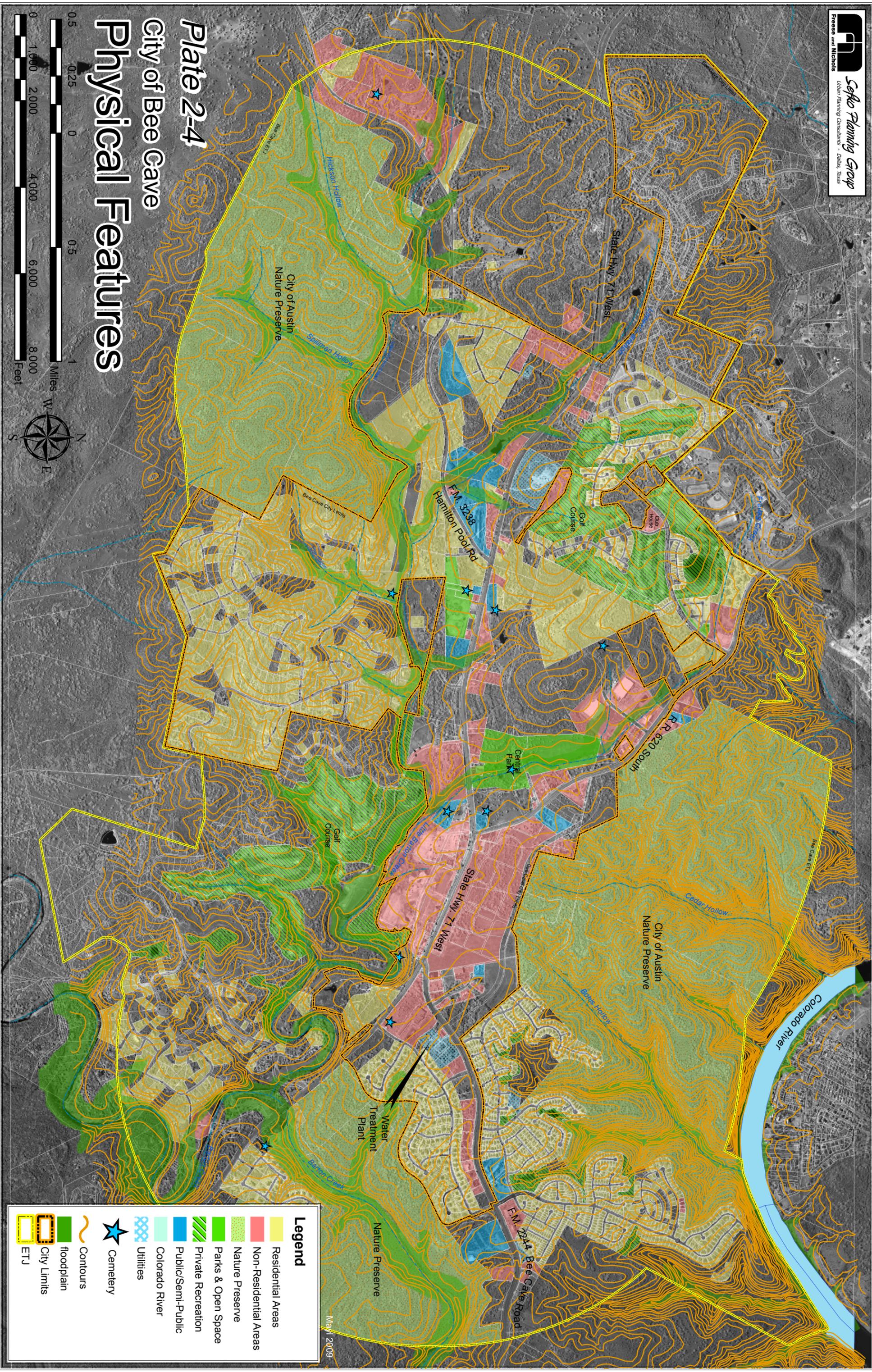
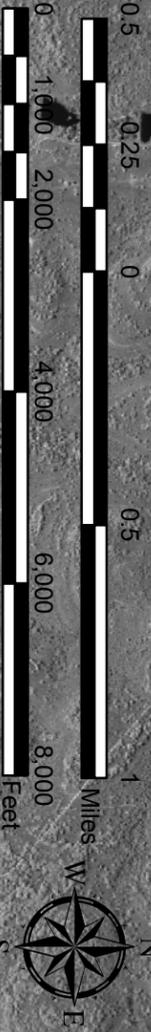
As **Plate 2-4**, the Physical Features Map, shows, the floodplain areas in Bee Cave occur intermittently throughout the City. One such area can be found in the northwestern corner of the City, and it continues southeast past Hamilton Pool Road. Another thin floodplain area occurs from the north central portion of the City to the south central portion, and then continues outside of the City limits into the ETJ.

The ETJ contains several areas of floodplain as well. One notable area, shown on **Plate 2-4**, is located along the Colorado River in the far northern portion of the ETJ, with multiple thin, arm-like areas of floodplain that stretch to the south toward the City. Another significant area of floodplain traverses the entire southern portion of the City ETJ. This area is long and thin, and follows Little Barton Creek. The primary floodplain has arm-like areas of floodplain (similar to the previously mentioned floodplain area) that stretch to the north, toward the City, as well as to the south. Approximately 192 acres in the City, and approximately 625 acres in the City ETJ, have been designated as 100-year floodplain. Development should be closely monitored in, as well as adjacent to, these areas.

Plate 2-4

City of Bee Cave

Physical Features



Legend

- Residential Areas
- Non-Residential Areas
- Nature Preserve
- Parks & Open Space
- Private Recreation
- Public/Semi-Public
- Colorado River
- Utilities
- Cemetery
- Contours
- floodplain
- City Limits
- ETJ

May 2009

Endangered Species

The following are rare, threatened, or endangered species for Travis County according to the Texas Parks and Wildlife Department as of February 2009 (*italicized* items have been added to the list since 1999):

Amphibians

Austin Blind Salamander
Barton Springs Salamander
Jollyville Plateau Salamander
Pedernales River Springs Salamander

Birds

American Peregrine Falcon
Arctic Peregrine Falcon
Bald Eagle
Black-Capped Vireo
Golden-Cheeked Warbler
Interior Least Tern
Mountain Plover
Peregrine Falcon
Western Burrowing Owl
Whooping Crane

Insects

Kretschmarr Cave Mold Beetle
Leonora's Dancer Damselfly
Rawson's Metalmark
Tooth Cave Blind Rove Beetle
Tooth Cave Ground Beetle

Plants

Basin Bellflower
Bracted Twistflower
Canyon Mock-Orange
Correll's False Dragon-Head
Texabama Croton
Warnock's Coral-Root

Arachnids

Bandit Cave Spider
Bone Cave Harvestman
Reddell Harvestman
Tooth Cave Pseudoscorpion
Tooth Cave Spider
Warton's Cave Meshweaver

Crustaceans

Amphipod
Balcones Cave Amphipod
Bifurcated Cave Amphipod

Fishes

Guadalupe Bass
Smalleye Shiner

Mammals

Cave Myotis Bat
Plains Spotted Skunk
Red Wolf

Mollusks

Creeper (Squawfoot)
False Spike Mussel
Pistolgrip
Rock Pocketbook
Smooth Pimpleback
Texas Fatmucket
Texas Fawnsfoot
Texas Pimpleback

Reptiles

Spot-Tailed Earless Lizard

Texas Garter Snake

Texas Horned Lizard

MAN-MADE FEATURES

MAJOR TRANSPORTATION ROUTES

Further discussion of transportation and thoroughfares will be included later in this plan; this brief summary is included for the purpose of providing a context for such later discussion.

State Highway 71

This highway traverses Texas beginning in the town of Brady, Texas in the central portion of the state. It continues in a southeastern direction through the communities of Llano, Bee Cave, Bastrop, La Grange, and ending near the far southeastern tip of Texas in Midfield.

R.M. 620

This highway provides City citizens with easy access not only to other surrounding communities like Lakeway and Jolleyville, but also to Interstate Highway 35. This thoroughfare begins in the City of Bee Cave and continues in a northeastern semi-loop to Interstate Highway 35 north of the City of Austin.

Bee Cave Road (F.M. 2244)

This is a relatively short road that serves mainly to provide local citizens with access to the City of Austin. Bee Cave Road has its origin in the City, as the name suggests, continues through the City of West Lake Hills to the east, and ends when it intersects with Loop 1, west of the City of Austin.

Hamilton Pool Road (F.M. 3238)

Hamilton Pool Road is the City of Bee Cave's connection to its southwestern neighbor, the town of Dripping Springs. It also serves the citizens of Bee Cave by providing a connection to U.S. Highway 290 to the south. Hamilton Pool Road intersects with Highway 71 from the south in the western portion of Bee Cave.

EXTRATERRITORIAL JURISDICTION

Extraterritorial jurisdiction (ETJ) can be defined as the land that an incorporated area may legally annex for the purpose of future development. The Texas State Legislature has established specific amounts of land for incorporated areas of various sizes. The vast majority of incorporated entities equal in size to the City of Bee Cave have a one-half-mile ETJ. However, the advocates for incorporation of the City of Bee Cave managed to secure a one-mile ETJ from the state legislature for the City during the process of incorporation in 1987.

Another unusual characteristic of the City's ETJ is that the City of Austin has set aside preservation land that borders the City on parts of both its northern and southern boundaries. Another entity, the Nature Conservancy, has also acquired some of the land to the east of the City of Bee Cave that is designated as preserve land. Due to these factors, much of the area surrounding the City of Bee Cave will remain permanent open space in the future.

EXISTING LAND USE

The pattern of land use that exists today within the City of Bee Cave has evolved to satisfy the requirements of a growing community. It is the result of the public/private decision-making processes integrated with the area's natural and physical attributes and constraints. The activities of the residents of a city create a need for residential, retail, commercial, recreational, and office areas, as well as an efficient thoroughfare system.

Bee Cave was incorporated in 1987 with approximately 1,280 acres, and has since grown to nearly 3,300 acres. This relatively rapid growth and development occurring within the area is likely to continue, and therefore, the future will require the conversion of vacant and agricultural land to more intensified urban uses, as well as the infilling of certain existing areas. The conversion process and how it occurs will be very important to the City and the surrounding area in that it is one of the factors that will determine the community's future urban form. It will not only have an impact upon how the area develops economically, but the relationships of existing and future land uses will shape the character and livability of the community for many years to come. Likewise, these relationships will have an impact on the provision of services and facilities throughout the community. An orderly and compatible land use arrangement can be served more easily and efficiently than a random and scattered association of unrelated uses. Providing for the orderly and efficient use of land should be a major planning consideration in the City of Bee Cave. To more accurately assess the City's future land use needs, an analysis of past land use trends and present land use patterns is very important.

LAND USE SURVEY METHODOLOGY

In order to analyze current land use trends within Bee Cave, a parcel-by-parcel land use survey was conducted in 1999 during the original preparation of this plan and updated via aerial photography in 2008. **Table 2-1** shows the results of the 1999 and 2008 existing land use survey. Each parcel was color-coded and documented according to the following categories:

RESIDENTIAL USES:

Single Family Residences:

One-family dwellings and related accessory buildings.

Multiple Family Residences:

Apartment dwellings and related accessory buildings.

Manufactured Homes:

A manufactured home located on a lot or parcel and used as a dwelling.

PUBLIC/SEMI-PUBLIC:

Schools, churches, cemeteries and public buildings.

PARKS AND OPEN SPACES:

Public parks, the nature preserve, playgrounds and public open space.

PRIVATE RECREATIONAL USES:

Golf course and private parks within subdivisions.

NATURE PRESERVE:

Preservation land set aside by the City of Austin and the Nature Conservancy that borders Bee Cave on parts of both its northern and southern boundaries within the City's ETJ area.

OFFICE USES:

Professional/administrative offices, including doctors, dentists, realtors, architects, accountants, secretarial services, etc.

RETAIL USES:

Uses which primarily provide goods, including clothing shops, shopping centers, service stations and any associated off-street parking facilities.

COMMERCIAL USES:

Uses which primarily provide services, including automotive repair shops, warehouses, wholesale establishments, and hotels.

INDUSTRIAL USES:

Manufacturing, warehousing, distributing, and assembling.

OPEN STORAGE:

Outside storage of equipment and materials on a permanent basis.

UTILITIES:

Land used for water towers, water treatment plant and sub-stations, electrical towers, etc.

RIGHTS-OF-WAY:

Land dedicated to public use, including roadways, sidewalks, and easements.

VACANT AND AGRICULTURAL USES:

Vacant land having no apparent use or land used for agricultural purposes (ranching or farming).

EXISTING LAND USE ANALYSIS

As in most communities, development has been dependent primarily on location. For example, the majority of the commercial land uses are located along State Highway 71 and R.M. 620, while the majority of the residential land uses are located away from such major thoroughfares. **Plate 2-5** shows a general representation of the existing land use pattern in the City of Bee Cave as of 2008.

The majority of the developed land within the City limits is used for residential purposes; this type of land use represents over 32% of the total acreage. Over 88% of the residential land use is comprised of single family units.

In 1999, retail uses represented the second-largest developed land use in the City at about 59 acres, or approximately 3.6% of the City's total land acreage. By 2008, retail acreage increased to 280 acres mainly due to the completion of the Hill Country Galleria and adjacent retail this year.

Land used for public/semi-public purposes accounts for approximately 81 acres, which is about 2.5% of the land within the City. Parks/open space and private recreation land uses combined total about 9.5% of the acreage within the City limits. The amount of land with commercial uses is about 113 acres, and approximately 3.4% percent of the acreage within Bee Cave. All other land uses, specifically the nature preserve, office, utilities and industrial land uses, each account for less than 2% of the total land acreage.

Perhaps most significant fact to consider is the substantial increase in total acreage since 1999 – 1,570 acres, as shown in **Table 2-1**. It is also important to note that the amount of developed land in 2008 is approximately 2,221 acres, or about 67.4% of the total land acreage in the City, and the amount of vacant land is 1,076 acres, or 32.6% percent of the total land acreage within Bee Cave.

Table 2-1
EXISTING LAND USE – 1999 & 2008
City of Bee Cave, Texas

Land Use Category	1999		2008		2008 Acres / 100 Persons
	Acres	Percent	Acres	Percent	
Residential Use	274	16.8%	1,075	32.6%	23.8
<i>Single Family</i>	259	94.5%	952	88.6%	21.1
<i>Multiple Family</i>			121	11.3%	2.7
<i>Manufactured Home</i>	15	5.5%	1	0.1%	0.0
Parks/Open Space	15	0.9%	85	2.6%	1.9
Private Recreation			228	6.9%	5.1
Nature Preserve			4	0.1%	0.1
Public/Semi-Public	43	2.6%	81	2.5%	1.8
Office	9	0.6%	29	0.9%	0.7
Retail	59	3.6%	280	8.5%	6.2
Commercial	42	2.6%	113	3.4%	2.5
Industrial			42	1.3%	0.9
Open Storage	11	0.7%			0.0
Utilities			36	1.1%	0.8
Rights-of-Way	139	8.5%	248	7.5%	5.5
Total Developed	593	36.3%	2,221	67.4%	49.3
Vacant	1,039	63.7%	1,076	32.6%	23.9
Within City Limits	1,632	100.0%	3,297	100.0%	73.1
Note: No entry means that land use was not included in the categories used that year. A City limits population of 4,509 persons was used to calculate Acres / 100 Persons. Source: Sefko Planning Group/Freese and Nichols, Inc.					

The number of vacant residential lots that are within previously subdivided neighborhoods in the City of Bee Cave is also significant to consider; currently that number is 133 lots. The acreage upon which these lots lie is also calculated within the vacant number of acres within the City limits. Due to the fact that these lots are already primed for the construction of residential structures, it can be assumed that development on these acres will eventually occur. However, there is a significant differentiation in topography on the remaining vacant acres throughout the City of Bee Cave, and therefore, all of the remaining vacant land may not be developable due to slope constraints. This will be discussed further in Section Eight, the *Future Land Use Plan* element.

Another method of analyzing land use is relating the number of acres used for each type of land use category to the population. **Table 2-1** also shows land use related to population by acres per 100 persons for the City of Bee Cave. By calculating the amount of acreage consumed by various land uses

and comparing it to the present population, projected in the City limits to be about 4,509 people²⁻⁵, insight can be gained into future land use demand. Assumptions can be made regarding the future consumption of land use based upon these relationships, balanced with the community's own desired goals and objectives. Especially noteworthy is the relationship of retail uses to the overall land use pattern. The majority of the developed land use in the City is residential, and therefore the amount of land used for retail is limited. In general, demand for retail land use ranges from 0.3 to 0.4 acres per 100 persons on the low end to 0.6 to 0.7 acres per 100 persons on the high end; 0.5 acres per 100 persons is generally accepted as average in the state of Texas. As **Table 2-1** shows, the amount of retail land use in Bee Cave's planning area is far above average at 6.2 acres per 100 persons.

The types of land uses that are occurring within the City's extraterritorial jurisdiction (ETJ) are also important to consider (refer to **Plate 2-5**). This is the land that the City of Bee Cave may legally annex for the purpose of future development. As previously mentioned, one significant factor that affects the City's ETJ is that the City of Austin has set aside preservation land that borders the City on parts of both its northern and southern boundaries. Another entity, the Nature Conservancy, has also acquired some of the land to the east of the City of Bee Cave that is designated as preserve land -- land that will likely never be developed. Referring to **Table 2-2**, it is apparent that the nature preserve category is the largest in the ETJ at over 2,600 acres, or nearly 46% of the total acreage within the ETJ.

Vacant land accounts for the second largest acreage within the ETJ, at 1,950 acres, or about 35%. Residential land uses comprise the third largest amount of land acreage in the ETJ, at 456 acres, or 8% of the land in the ETJ. Single family residential is the only residential land use that is currently occurring within the ETJ; no manufactured homes, duplexes, or multiple family dwelling units exist. Private recreation includes slightly less area, at 321 acres or about 6% of the ETJ. About 122 acres, or 2% of the ETJ, are dedicated to commercial uses. All other land uses, including public/semi-public, office, and retail land uses, each account for 0.5% or less of the acreage in the ETJ.

2-5 Sefko Planning Group/Freese and Nichols, Inc. estimate.

Table 2-2
 EXISTING LAND USE – 1999 & 2008
Extraterritorial Jurisdiction (ETJ) of the City of Bee Cave, Texas

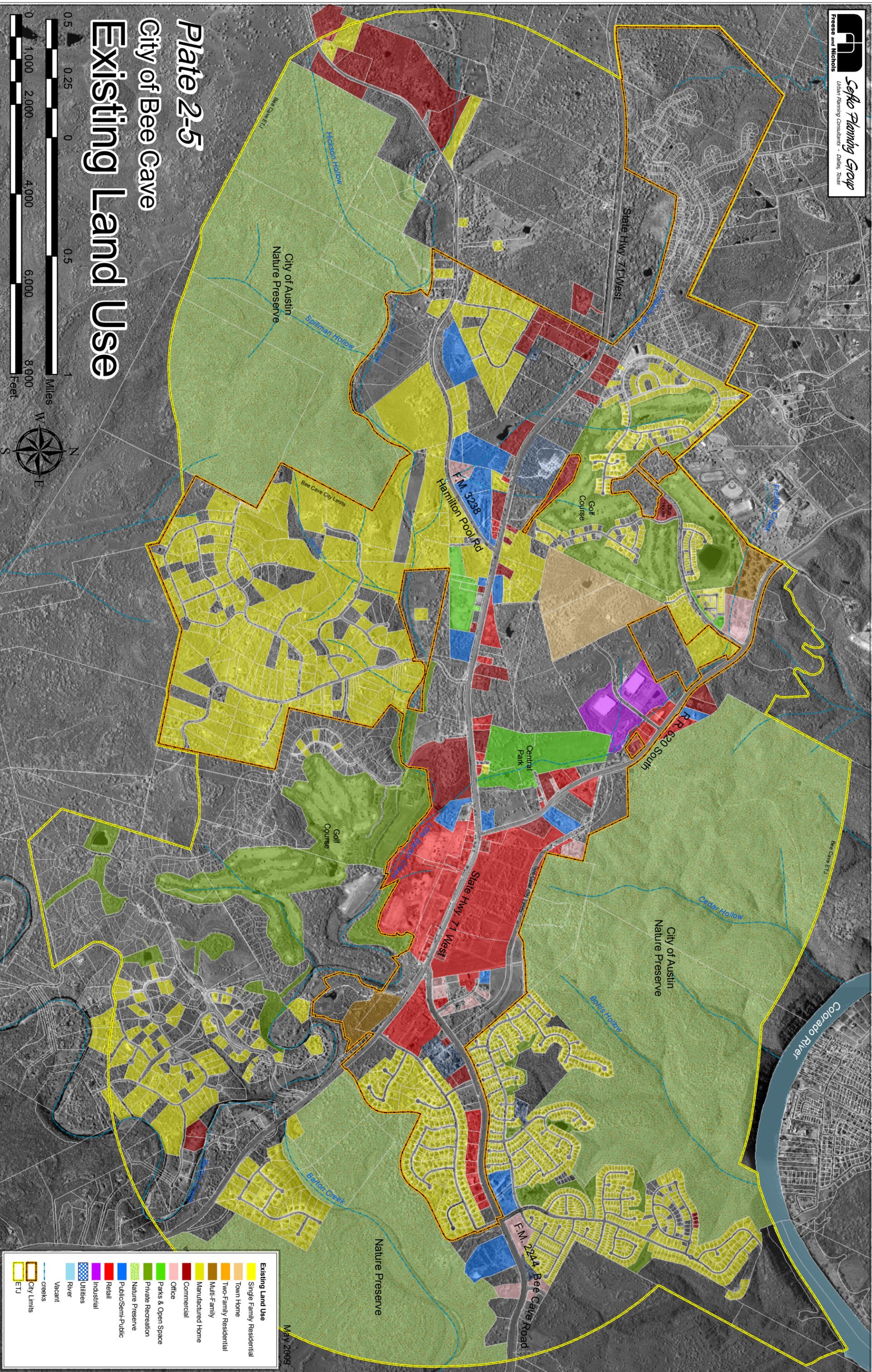
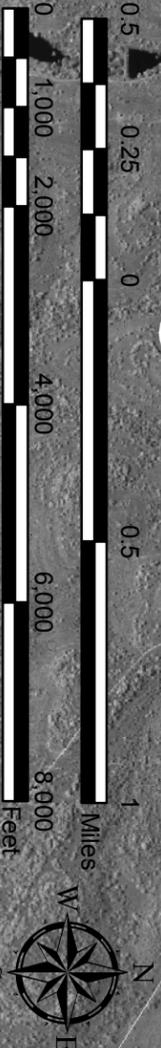
Land Use Category	1999		2008		2008 Planning Area Acres ⁽¹⁾
	Acres	Percent	Acres	Percent	
Residential Use	487	6.7%	456	8.0%	1,531
<i>Single Family</i>	487	100.0%	456	100.0%	1,409
<i>Multiple Family</i>					121
<i>Manufactured Home</i>					1
Parks/Open Space	2,664	36.7%			85
Private Recreation			321	5.6%	549
Nature Preserve			2,610	45.6%	2,614
Public/Semi-Public	4	0.1%	29	0.5%	110
Office	7	0.1%	14	0.2%	43
Retail	4	0.1%	4	0.1%	284
Commercial	20	0.3%	122	2.1%	235
Utilities			5	0.1%	41
Rights-of-Way	232	3.3%	218	4.0%	466
Total Developed	3,187	45.4%	3,561	64.6%	5,783
Vacant	3,831	54.6%	1,950	35.4%	3,026
Within ETJ	7,018	100.0%	5,511	100.0%	8,808
Note: No entry means that land use was not included in the categories used that year ⁽¹⁾ "Planning Area" refers to acreage within City limits and the ETJ combined Source: Sefko Planning Group/Freese and Nichols, Inc.					

As in the City itself, there are residential lots in the ETJ that are currently vacant but are ready for construction to begin, approximately 163 in the ETJ. Again, it is reasonable to assume that these will not remain in a vacant state for a long period of time. Also similar to the City is the fact that development on much of this land that is now vacant and is not already subdivided may be conditioned upon the limitations of the topography.

Plate 2-5

City of Bee Cave

Existing Land Use



Existing Land Use	
	Single Family Residential
	Town Home
	Two-Family Residential
	Multi-Family
	Manufactured Home
	Commercial
	Office
	Parks & Open Space
	Private Recreation
	Nature Preserve
	Public/Semi-Public
	Retail
	Industrial
	Utilities
	River
	Vacant
	creeks
	City Limits
	ETU

May 2009

EXISTING LAND USE PATTERN

The following sections summarize features of the existing land use patterns within the City of Bee Cave:

1. Land that is used for residential purposes accounts for the majority of the land that is currently developed within the City. Vacant land currently accounts for a slightly larger percentage.
2. Inasmuch as the City's residential land use is predominately single family, the distribution of such units occurs toward the eastern, southern and western edges of the City.
3. Manufactured homes comprise less than one acre of the land within the City.
4. Public parks/open space land uses constitute a minimal amount of acreage within the City limits, at 2.6% of the total. However, when combined with private recreation acreage, the park area totals about 9.5% of the land within the City.
5. The amount of land being used for public/semi-public purposes in Bee Cave, which includes activities such as City services, churches, cemeteries, and schools, was calculated to be approximately 81 acres of land, or 2.5% percent of the City's total land acreage.
6. As aforementioned, retail land use in the City of Bee Cave is far above the average retail land use in the State of Texas, at approximately 280 acres and 6.2 acres per 100 persons. The Hill Country Galleria and adjacent retail account for a substantial amount of its increase since 1999.
7. The amount of land being used for nonresidential purposes in the City is approximately 34.8% of the total land acreage. The land that is used for these purposes is primarily located along State Highway 71 and R.M. 620. Some open storage land uses still exist along some portions of both of these major thoroughfares.
8. A very small amount of land is used for the purposes of office land use within the City, at approximately 29 acres, and less than one percent of the total land.
9. Developed land accounts for about 67.4% of the land within City limits, leaving about 32.6% vacant.
10. There are approximately 998 residential lots that are currently in the City limits and ETJ calculated within the vacant category; these lots are primed for construction and are unlikely to remain vacant.

11. The City of Bee Cave has a large amount of land contained within its extraterritorial jurisdiction that is currently undeveloped, but will not develop since it is preserve land.
12. The City is adjacent to large portions of land that are designated as preserve land and will never be developed; this land is located along parts of the City's northern, eastern, and southwestern borders.

EXISTING POPULATION AND HOUSING CHARACTERISTICS

Quality of housing and the appreciation of housing values are important planning considerations. Among the factors influencing the desirability of the City of Bee Cave as a place to live is the condition of existing housing and the quality of the residential neighborhoods they form.

The quality of housing within Bee Cave and its ETJ is an important consideration in the evaluation of the adequacy of the existing housing stock, and in estimating future housing requirements. Many of the elements that are utilized to assess the housing characteristics in a community are not applicable to the City of Bee Cave. The City is a relatively young community, and its overall housing stock is, therefore, relatively new. Due to the fact that most of the housing units were built within the last two decades, a discussion of the current quality of the housing stock is not useful. The City of Bee Cave does not have any blighted areas or aging neighborhoods that need to be addressed.

However, it is important to consider the current standards within the City, and thereby determine the ways in which Bee Cave can continue to grow in a positive manner. The issues will be addressed further in later sections of the Comprehensive Plan. For the purposes of the *Baseline Analysis*, however, the current housing characteristics are as follows.

Table 2-3
2008 HOUSING UNITS
City of Bee Cave and ETJ

Housing Type	City Limits	ETJ
Single Family	712	1,079
Manufactured Homes	1	
Multiple Family	850	
Total Units	1,563	1,079
Source: Sefko Planning Group/Freese and Nichols, Inc.		

In 2000, it was determined by the U.S. Census that there were 246 housing units within the City of Bee Cave. During the update of the land use survey, the current number, as shown in **Table 2-3**, was estimated to be about 1,563. It should be noted that this housing unit increase has also been impacted by the acreage increase of 1,665 acres within the City limits since the 2000 Census.

It was also determined by the U.S. Census that there were 656 people living in the City of Bee Cave in 2000 and that there were on average approximately 3.17 persons per household. Based on the number of housing units currently within the City (1,563), the average number of persons per household (3.17), the occupancy rate (91%), the number of people living within the City limits in 2008 can be estimated to be approximately 4,509 people (see **Table 2-4**).

The number of housing units in the extraterritorial jurisdiction (ETJ) of the City is also important in helping to determine future growth. In 1999, there were 641 housing units counted in the ETJ during the land use survey, all of which were single family dwelling units. As shown in **Table 2-3**, it is estimated in 2008 there were approximately 1,080 single family dwelling units, which using the same

calculations as previously explained would result in an ETJ population of about 3,115 residents. Thus, the total 2008 population of the City and its ETJ area is about 7,600 residents.

Table 2-4
POPULATION ESTIMATE
City of Bee Cave and ETJ

Type of Development	Housing Units	Persons per Household ⁽¹⁾	Occupancy Rate ⁽¹⁾	Households	Population
City					4,509
Single family Lots	712	3.17	91%	648	2,054
Manufactured Home Lots	1	3.17	91%	1	3
Multiple-Family Units	850	3.17	91%	774	2,452
ETJ					3,115
Single family Lots	1,080	3.17	91%	983	3,115
Total					7,624
<small>⁽¹⁾ Data from 2000 U.S. Census Source: Sefko Planning Group/Freese and Nichols, Inc.</small>					

EXISTING ZONING CHARACTERISTICS

The ability to zone property for certain uses is one of the most significant regulations in terms of land use management that a city has. Therefore, it is important to document the types of zoning districts that have been established within Bee Cave. Zoning in the City of Bee Cave is shown graphically on **Plate 2-6**. From this visual picture, it is apparent that the zoning category with the majority of the acreage within the City of Bee Cave is the Rural Residential category. As **Table 2-5** shows, this category comprises about 1,010 acres and over 30% percent of the total land acreage in the City. This is the designation used for the vast majority of the residential zoning in Bee Cave – a total of 1,367 acres, or over 41% of the land within the City limits. This is also an expected characteristic of zoning within the City due to the fact that, as aforementioned, residential land use accounts for the majority of the developed land in the Bee Cave.

The second largest existing zoning category is Mixed Use, covering 765 acres, or over 23% of the land within the City limits. The next largest category is the Town Center development at 295 acres, or 9% of the City.

It is interesting to note that 70 acres are zoned for office uses, but only about 29 acres of office development currently exists (refer to **Plate 2-5**).

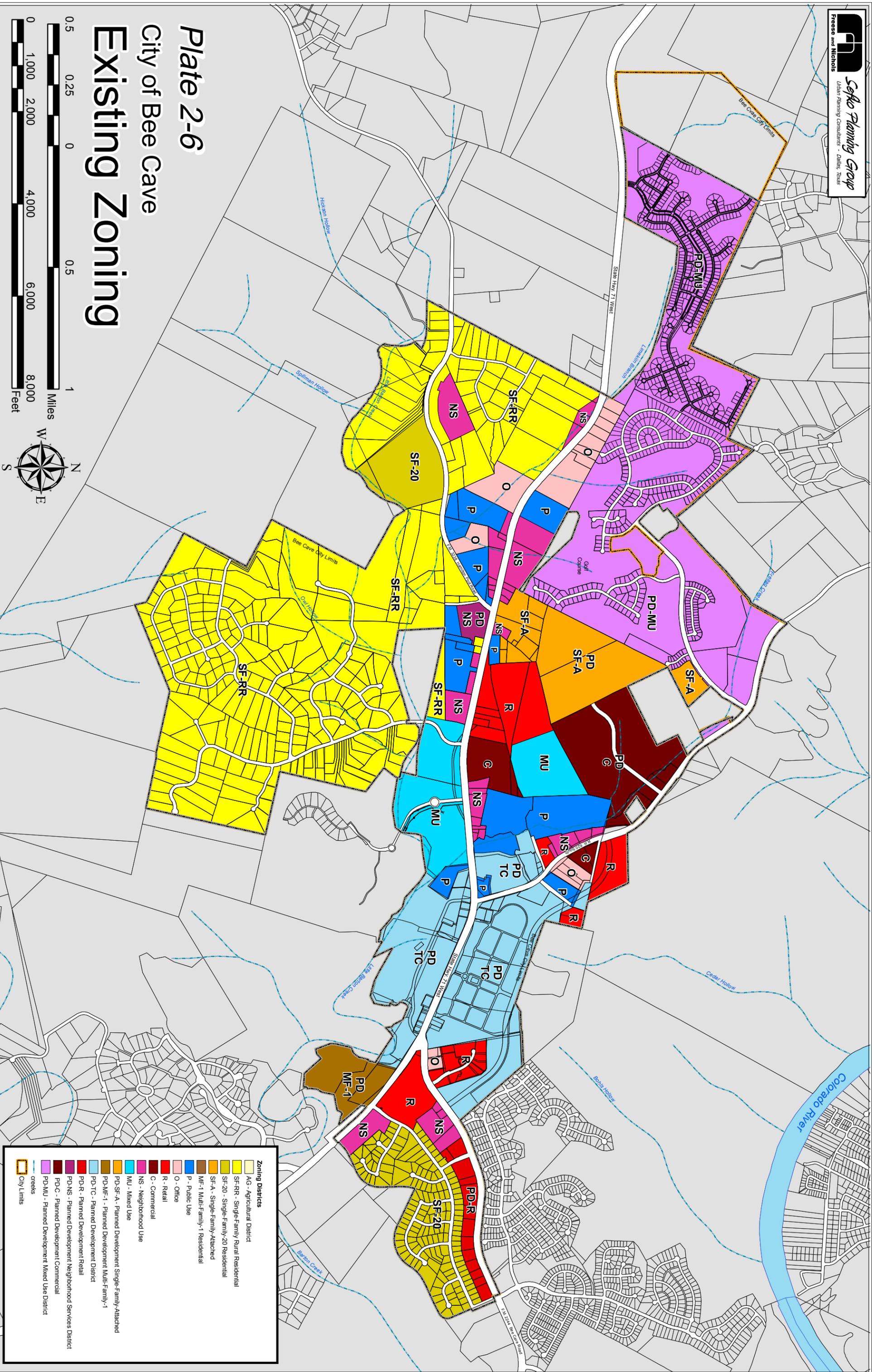
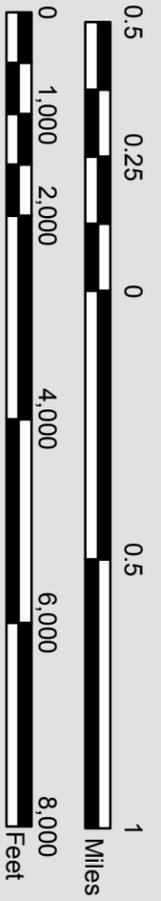
Table 2-5
EXISTING ZONING – 2008
City of Bee Cave, Texas

Land Use Category	Acres	Percent
Single Family Residential (Rural)	1,010	30.6%
Single Family Residential	193	5.9%
Single Family Residential (Attached)	124	3.8%
Multiple Family	40	1.2%
Public Use	145	4.4%
Office	70	2.1%
Retail	151	4.6%
Commercial	124	3.8%
Neighborhood Services	119	3.6%
Mixed Use	765	23.2%
Town Center	295	9.0%
Rights-of-Way	261	7.9%
Total Acres in City Limits	3,297	100.0%
Note: Categories have been combined with the Planned Development categories shown on the Zoning Map. Source: Sefko Planning Group/Freese and Nichols, Inc.		

Plate 2-6

City of Bee Cave

Existing Zoning



Zoning Districts	
	AG - Agricultural District
	SF-RR - Single-Family Rural Residential
	SF-20 - Single-Family-20 Residential
	SF-A - Single-Family-Attached
	MF-1 Multi-Family-1 Residential
	P - Public Use
	O - Office
	R - Retail
	C - Commercial
	NS - Neighborhood Use
	MU - Mixed Use
	PD-SF-A - Planned Development Single-Family-Attached
	PD-MF-1 - Planned Development Multi-Family-1
	PD-TC - Planned Development District
	PD-R - Planned Development Retail
	PD-NS - Planned Development Neighborhood Services District
	PD-C - Planned Development Commercial
	PD-MU - Planned Development Mixed Use District
	creeks
	City Limits