

## *Chapter 1*

# **The Purpose of the Planning Process And the Nature of the Comprehensive Plan**

In the beginning there is a plan. It may be as simple as drawing a line in the dirt to indicate the placement of a house, a store, and a school. Or, it may be vastly more detailed, outlining not only the city today but also the city tomorrow. The number of plans to which a city may credit its creation may be as numerous as the individuals who call the city home. In fact, the majority of planning is done by the homeowner who wants to add a garage, or an additional room, or a new roof to his home. The business owner who expands or closes, or even hangs a new sign on his establishment does it. Planning is done in corporate boardrooms that can dramatically alter the lives of many residents who are not party to the discussion. Most planning, then, is private in nature. It is, by definition, narrow and focused on a single actor, whether that actor is a homeowner, a business person, or a corporation.

The subject of the plan in this volume is that small slice of planning that is done in common by the community for its corporate life together. Specifically, this is a plan to guide the city in an organized efficient manner of growth. As with any plan it is dynamic and meant to be periodically reviewed and adapted to meet the current needs of the city and its citizens. By its methods and contents, it meets the standards for comprehensive plans outlined in Missouri statutes. By way of definition, comprehensive plan is a guide to the physical development of the community. It includes:

- A brief history of the community
- An examination of the geology and geographic features of the community, which in Carl Junction's case is an important factor in community development
- Population, housing, and economic profiles of the community
- An inventory of current infrastructure and public facilities
- A land-use assessment, and ,
- Recommendations for City action based on this study and on citizen input.

There is nothing magical about planning in general or a comprehensive plan in particular. The value of any public policy plan is measured by three criteria: first, to what degree was the process open and accessible; second, the rationality of the document; and, third, its use.

Carl Junction's 2000 Comprehensive Plan is the result of the pro-active leadership of the Mayor and Board of Aldermen who have witnessed dramatic increases in population in the community. The plan is evidence of the City's concern for anticipatory public policies that will assist the community remaining a quality environment in which to live, work, and invest.

In 1998, the City contracted with Missouri Southern State College, Department of Social Science to assist in the development of a comprehensive plan. The City Planning Commission, which has been charged by the city code and the Board of Aldermen to do an annual review have headed this revision.

## *Chapter 2*

# **Specific Features**

### Location

Carl Junction is located in southwestern Jasper County, Missouri. The City is located north and west of Joplin and The Village of Airport Drive. It is approximately 140 miles south of Kansas City, 295 miles southwest of St. Louis, 85 miles west of Springfield, 12 miles west of Carthage, and 5 miles east of the Kansas state line. Carl Junction is 27 miles Southeast of Pittsburg Kansas and Columbus, Kansas is straight west approximately 22 miles.

### Transportation

Carl Junction is served by Missouri Highway 171 and Highway 43. In addition, the City is 13 miles north of Interstate 44. (Need something about the Super Highway in Kansas and maybe the connection from that to Hwy 71 include the new name)

### City Government

Carl Junction is a fourth-class municipality incorporated under Missouri law. The City government is organized under a Mayor and eight-member Board of Aldermen. The Board is elected from four wards on an alternating basis. The Mayor, the City's chief administrative officer, is elected at-large for a two-year term. Other municipal officials include the City Attorney, City Judge, City Prosecutor, City Collector, City Treasurer, City Clerk, and Public Works Superintendent.

Recommendations for planning and zoning issues are made by the City Planning Commission to the Board of Aldermen. The Board of Adjustment deals with code variances and zoning appeals. Both of these groups are made up of volunteers appointed by the Board of Aldermen.

## Chapter 3

# History

Carl Junction is situated in Western Jasper County, upon land that is rich in history. Native American Indians of many cultures settled this region for hundreds of years. Artifacts and arrowheads found at these ancient campsites near Center Creek and Spring River show evidence of Osage, Omaha, Ponca, Kickapoo and Delaware influence. White settlers began arriving in this area between the 1830s and 40s. Frontier explorer Edmund Jennings called this the “Land of the Six Boils (springs).” Due to his long stay with the Indians, he nearly forgot his English tongue, so that by time he returned to his native Tennessee, his countrymen misunderstood him, thinking that he was calling it the “Land of Six Bulls.” Today, both phrases are used in our lexicon.

In 1848, pioneer Daniel Hunt moved from Pipgras, Cooper County, Missouri, to the area just south of Center Creek, presently about three miles southwest of Carl Junction. There, he opened a trading post on the mound. He bartered with the Indians for horses and pelts. From a portion of his 4,000 acre estate he platted the town of Rural in 1858. Two years later, he filed a second plat and renamed the town, “Sherwood.” Sherwood became a hog butchering and pork salting industry town of 250 people, of whom 20 to 30 were employed in the preservation and shipping of pork in barrels. Because its people showed allegiance to the Confederate cause during the Civil War, Sherwood was burned to the ground by the Union army in May of 1863. Once the third largest town in the county, it was never rebuilt. At least one massacre occurred in this area, when bushwhackers led by Confederate Major Thomas Livingston ambushed a Union foraging party at Captain Rader’s farmhouse, the site now located halfway between Fir Road and Fountain Road, on the west side Lone Elm Road (1 mile S. E. of Carl Junction,) which precipitated in the Yankee burning of the town for revenge. There were 15 African-American infantrymen and three officers killed in the raid. In the late 1880s, Carl Junction had a *Grand Army of the Republic* (GAR) post with membership only for Union veterans of the Civil War, which they named in honor of Cameron Garrett, one of the officers killed in the ambush. Lead ore was discovered near there in the 1880s, but an attempt at starting New Sherwood failed to lure many settlers.

Lead mining was carried out here before the war, but no large deposits were found until 1870, one of which led to the founding of the city of Joplin, Missouri. A second set of railroad spur lines was built to connect the boom town to pre-established rail lines, and to the Kansas coal mines, which fueled the smelters for separating the metal from the ore. Several towns arose as way stations for the new spurs, including the creation of **Carl Junction**. In April of 1877, Miami County, Kansas merchant Charles L. Skinner platted Carl Junction with 81 lots, seven streets and four alleys. Skinner chose the name Carl, after his original German first name, which he had changed when he immigrated to America. The town was situated to take advantage of the junction being created by E. R. Moffett and John B. Sargeant’s proposed *Joplin & Girard Railway* where it crossed the *Kansas City, Fort Scott & Gulf* line nine miles northwest of Joplin. Later, both lines were taken over by the Frisco. The first train ran through Carl Junction on the newly completed line was made July 20, 1879. A railroad section facility,

switching yard, coal and water chute, a depot and an office were constructed about a decade later and employed 42.

In 1880, Mr. Skinner's former business partner, James Lillie, found lead ore along Center Creek near the outskirts of town. Keeping the location to himself, he told the curious that he had found his samples in "skeeterville." Mosquitoes notwithstanding, his discovery soon got out, and Skeeterville erupted into a mining boom town. Later, as so much "blende," or zinc ore, was found, the new town became known as Blende City. The mineral discovery there was determined to be the richest in the district at that time. Blende City was enlarged with a residential addition known as Knight's Addition, which was renamed "Lehigh" when they applied for a post office in 1890. Lehigh was Carl Junction's rival for many years, until the ore ran out and most of the people moved to Carl Junction or elsewhere. By 1912, Lehigh and Blende City were ghost towns.

Carl Junction was given village status on April 8, 1884, then on May 10, the town was incorporated as a city of the 4th class. The new community grew rapidly between 1890 and 1910, going from 699 to 1,177 in population. Several additions were made to the city limits, but with Sweede's Addition, the town earned the nickname "Dollar Town" because lots there sold for one dollar down, and a dollar a month until they were paid off. A national recession in 1892, followed by extremely wet weather which flooded and kept many of the richest mines closed for as long as two years, cast doubt on the new town's future for a time. Thanks to Carl Junction's diverse economy, they weathered these storms, and indeed many growing pains after that, to emerge confident and ready for the future.

Carl Junction got the nation's attention in August of 1892, when the fossilized remains of two adult and two infant elephants were discovered at the 20 foot level of a mine belonging to Silas A. Stuckey, on the south end of town. These bones of the extinct species, *Elephas Americanus*, were purchased by St. Louis businessmen and displayed at the Columbian Exposition of the Chicago World's Fair in 1893, and one of the skeletons was reputed to have been the largest ever found for the species up to that time. Carl Junction was also known through some of its citizens. A former Carl Junction youth, inventor Albert C. Webb possessed a genius with internal combustion engines, and created what was said to be America's first automobile fire truck, which the city of Joplin bought and nicknamed "the goat," pressing it into service in 1906.

Over the years, Carl Junction has been served by numerous newspapers and periodicals, including *The Sunbeam* (started in 1882), *The Carl Junction Standard*, the *Jasper County World* (1900), *The Carl Junction Democrat*, *The Carl Junction Times* (1913), *The Plaindealer* (1914), *The Socialist News* (1907), *The Carl Junction Courier* (1995), all weeklies except for a short-lived daily, *The Carl Junction Evening Graphic*. Of these, only one survived more than a few years, *The Carl Junction Standard*, which was started by H. C. Routzong in April of 1890 (1890-1982). The Courier changed its name to the Standard in November of 1999 to revive the 92 year old paper.

By 1903, Carl Junction boasted two banks: the Bank of Carl Junction, organized in 1891 by T. W. Cunningham, William Carter and later owned by the Chitwood Family; the Citizen's Bank organized in 1902 by a board of directors including Harve Chitwood and Dr. H. L. Isherwood. Both banks merged in 1930. Various hotels were opened, including the Stroud Hotel, the Carl Junction Hotel, the Carlton, the Nilson, the Marr and the Rock Haven, but only one lasted beyond two decades. Boarding houses and

apartments proved more lucrative with nearly 100% occupancy.

Carl Junction made numerous improvements during the early 1900s, which kept the town abreast of the times. Electricity was introduced when a franchise was granted to W. G. Sargeant's power company in 1904, which he later sold to Empire District Electric Company. Natural gas was introduced in 1905, with a franchise shared by Oronogo, Missouri. Voters approved a \$9,300 bond for the start of a water works system and water tower. Before 1902, the Home Telephone Company started serving the city, which was joined by rival Bell Telephone to provide phones to more than 300 residences. Telegraph the Frisco R. R. office at their depot provided service. By 1922, Main Street was curbed and paved, and by 1938 electric lighting replaced the old gas mantles that once illuminated it.

Though the mines began to close down around 1920, other tracts were opened at nearby Smithfield and at Waco around 1915-1925. The need for explosives launched a marketing company in 1908 at Carl Junction, known as the *Home Powder Company*. Manufacture of dynamite began here in 1916, when General Explosives took over the company. After a series of fatal blasts, the financially embarrassed company sold their operations to *E. I. DuPont De Nemours & Company* in 1924. They expanded the plant to 600 acres, added safety features and employed several hundred people. DuPont paid the city \$8,500 annually, in school taxes alone. The Carl Junction plant was closed in April 1960 after the company changed from nitroglycerin production to improved prill-nitrate ammonia explosives, and nitro manufacture was turned over to the company's larger plants. Carl Junction businessmen organized the *Carl Junction Development Association* to purchase on August 1, 1961, the entire 600 acres of land from the company for commercial development. Unable to attract business to such large acreage, the Association turned toward community development and the Briarbrook Country Club with its residential development is the result. The Briarbrook area was annexed into the city on June 27, 1967.

Carl Junction survived numerous boom and bust years, with the loss of mining production following World War I (the town's mining boom was mainly between 1899 and 1922), the Great Depression (throwing 224 Carl Jct. residents out of work), the closing of the railroad yards during the 1940s, World War II and the reopening of abandoned mines for the war effort, a new housing boom begun in 1950, and the rapid growth that came in the 1970s. Carl Junction's most progressive years (barring the present) were between 1950 and 1980, when the population tripled according to the U. S. Census, from a low of 1,005 in 1950, to 3,936 by 1980. Transportation, arduous at first, over dirt roads, gave way to passenger train service to other cities six times daily by 1902, with 25 freight schedules per day. Electric trolley service began with the Joplin & Girard Electric Railway in July of 1907, but this line discontinued passenger service in January, 1929. In 1924, the Red Bird Bus Company also failed due to poor ridership, but William Cook ran a reliable automobile taxi service out of Carl Junction 16 times a day for many years beginning in 1946.

Some of Carl Junction's most productive industries at one time or another, were DuPont Explosives, the Elder Manufacturing Company shirt factory, Surgi Manufacturing (nationally known maker of pony carts), Hinkley's Royal Crown-Nehi Cola Bottling Company, Lee Products Corporation (makers of lawn mowing machines) and Unitech (industrial sanitary products). All have contributed to the stability of the

community. However, because most of Carl Junction's citizens lived here and worked outside her limits, Carl Junction was referred to as a "bedroom city." The Carl Junction Lions Club, organized in 1946 with Wilson Gilbert as its first president, was largely responsible for the drives to entice industry to resettle here. They raised the capital to erect a \$30,000 factory building for the Elders company, which employed 225.

Of all that her people are proud of, Carl Junction's school system is foremost. The first school was a one-room frame house southeast of town. In 1887, a two story, six-room brick building was built west of town on land donated by Augustus Knight. A second school house known as the East Town School was built a few years later, followed by the modern, twelve-room West Town School built in 1914 on the site of the old Knight School. The new school burned in 1928 and was replaced by another that eventually served as the high school until it was razed during the mid 1980s. School enrollment went from 375 in 1902, to over 3,000 before the century was out. A \$9.5 million high school was built and is expected to open for the Year 2000 - 2001 classes.

Annually, Carl Junctionites hold a unique celebration known as "Bingville" in July. The gala was created by Nellie and Lenore Vance to earn money for their Methodist evangelist league, the Epworth, but soon became a celebration secularly enjoyed by the entire district. Based on a comic strip that once appeared regularly in a Joplin newspaper, the town transforms into the "hick" village of Bingville, where procrastinators celebrate the 4th of July a little late. The event, which includes music, carnival-like booths, food and a parade, has been popular every year since 1910.

Since the 1960s, Carl Junction has experienced its first sensation of what boom town growth is like, and finds itself struggling with the increasing demands on its infrastructure caused by its growing population. At the end of the century, Carl Junction is the fastest growing city in Jasper County with much to offer in the way of high quality services and amenities. The late Carl Junction mayor, Frank Dean, summed it up in a 1976 newspaper interview this way, "Carl Junction's success is due to 'bread and butter' reasons."

## Chapter 4

# Physical Features

## Climate

Carl Junction is located in a humid continental climate characterized by warm summers, cold winters, and maximum rainfall in early summer. The climate is affected by cold air masses moving southward from Canada, by warm, moist air masses moving northward from the Gulf of Mexico, and by dry air masses moving eastward.

Temperatures range widely. Winters are often cold; summers are very hot. Prolonged periods of either extreme however are rare. On an average, the temperature reaches 90 degrees (F) fifty days per year, and fall below 0 degrees (F) only two to three days per year. Normally, the last freeze each spring is in mid-April and the first freeze each fall is in late September or early October.

The mean annual rainfall is about 41 inches. The winter months are comparatively dry, with most precipitation occurring during the spring and summer months. Summer rains generally come as thunder showers of high intensity and of short duration, while winter precipitation is in the form of gentle rain, mist, snow and sleet. May is usually the single wettest month. Forty percent of the total annual precipitation occurs in April, May, and June. Only fourteen percent of the total annual precipitation is received during December, January, and February.

The winds in the area vary from gentle breezes to high velocity tornadic winds. The high velocity winds have been estimated at ninety to one hundred miles per hour. The prevailing winds are from the south and southwest at approximately twelve miles per hour. Wind velocities are slightly higher in March and April and slightly lower in July and August. Tornadic winds are fairly common in the area and have been observed in every month of the year. The overwhelming majority, seventy percent of the storms, has occurred during the period from March through June. August has proven to be the month of least tornadic activity.

## Soils

The *Soil Survey Map of Jasper County, Missouri*, published by the State of Missouri, shows fifteen different soil series in Carl Junction. For the purposes of urban development, these soil series can be combined into five general groups based on their limitations.

- Group I soils typically are level to moderately sloping soils on the uplands, and are generally well drained. In spite of some moderate limitations these soils are generally well suited for urban development, providing slopes of less than ten percent. The major problem associated with these soils is the use of septic tanks in populated areas.
- Group II consists of moderate to well drained soils with a fragipan, i.e., compact or dense subsoil which is resistant to penetration by air, water, and plant roots, which are on gentle to moderate slopes. The major problem associated with these is the fragipan. Water that is held in the soil above the fragipan could cause cracked

foundations. The use of septic tanks should be avoided, especially in moderate to high-density areas.

- Group III soils consist of somewhat poorly drained soils with fragipans. Typically, they occupy gently sloping to nearly level upland area. Like Group II soils; the fragipan is the major problem with these soils. Due to being almost level, however, the problem is much more severe with these soils than with Group II soils. Successful urban development can occur on these if septic tanks are avoided and foundation are properly constructed to avoid failure.
- Group IV soils are alluvial soils, especially stream deposits that occur along streams and drainage courses. These soils are subject to occasional flooding which make them poorly suited for most urban uses.
- Group V is the mining areas. These are waste areas including chat piles, tailing piles, sump ponds, and mill sites, composed mostly of finely broken chert and limestone. These areas have been virtually destroyed by mining, and without extensive reclamation, are poorly suited for urban use.

## Geology and Mining

The discovery of lead ores in the Joplin area during 1848 marked the beginning of mining in the Tri-State District. The associated zinc ores were originally discarded for lack of an efficient, economical technology for recovery of the zinc. About 1870, however, the extension of railway lines into southwest Missouri and the development of new milling and smelting techniques led to profitable production of zinc in the area. By 1875, Missouri had become the leading zinc producer in the nation. Early mining tracts were small, some leases measuring as little as 200 feet square, or about one-acre. Mining was confined to the upper-ground ore zone within the first 100 feet or so of the surface. Due to the “broken” nature of this ore zone, drifting operations were limited; therefore, many shafts were sunk at close intervals. In fact, Missouri laws required two shafts for each property. As a result, thousands of production and prospect shafts were sunk in the district. In Carl Junction there were 1,163 prospects and 229 shafts.

The major ore minerals of the Tri-State District are sphalerite (zinc sulfide) and Galena (lead sulfide). Marcasite, pyrite (iron sulfide) and chalcopyrite (copper-iron sulfide) are of minor importance. Small amounts of greenockite (cadmium sulfide) are also present.

Near surface oxidation of these sulfides has produced commercially important amounts of smithsonite (zinc carbonate), cerussite (lead carbonate) and hemimorphite (zinc silicate). Gangue minerals include quartz, calcite, and dolomite. Quartz occurs as chert and secondary jasperoid. A coloring agent in the jasperoid is a dark, opaque material, bitumen, and a residual organic matter that appears through out the mining district, usually in tar-like or hardened masses coating rock surfaces. It is believed to have been instrumental in the chemical reduction of some of the sulfide ores.

The zinc-lead ore deposits of the Tri-State region are in cherty Mississippian limestone, the chert occurs as nodular in limestone and as interbedded layer. From oldest to youngest, the Peirson (Fern Glen), Reeds Spring, Elsey (Grand Falls), Burlington, Keokuk, Warsaw, and Carterville Formations were the host rocks for most of the zinc-lead mineralization. Their total thickness in the area exceeds 400 feet.

Small outlays of the Pennsylvanian Cherokee Formation (shales and sandstone) uniformly overlay the Mississippian rock in some localities. Rich ore bodies are associated with these Pennsylvanian sediments where they have filled dissolution structures such as sinkholes and collapses in the Mississippian strata.

Throughout the Tri-State District, extensive chemical dissolution of carbonite rock produced horizontal and vertical channels, porous breccia zones of insoluble cherts and other surface cavities. These voids proved excellent repositories for ore precipitation and concentration from mineralized fluids.

Structure in the area is limited to gentle folding, the axis generally plunging northwest. The regional one-degree dip of the sedimentary formations is also northwestward, away from the Ozark uplift.

Open mine shafts, subsided areas having steep unstable slopes and open pits containing deep pools of water exist throughout the region. Damage to buildings and roads above shaft areas and underground mine workings have been reported throughout the Tri-State region. Accidents to people and livestock frequenting or wandering into abandoned mining sites in rural areas have also occurred. In addition, in some areas water quality problems result from artesian flow of mine waters from open shafts and rainwater runoff and seepage from tailings piles and settling ponds.

In the Carl Junction Quadrangle, two areas are notable for their dense concentration of mine related hazards. The first area, just southwest of the City of Carl Junction (S7, T28n, R33w), contains fifteen open shafts and five subsidence pits. The shafts are in advanced stages of collapse. The subsidence pits, up to 100 feet in diameter, are water filled. Public access to this area is uncontrolled. The second area, southwest of the town of Waco, adjacent to the Missouri-Kansas border (S14, 15, 22, 23, T29n, R34w), is honeycombed with twenty-eight open shafts and twenty-three subsidence pits, all of which have incomplete Pennsylvanian strata in their upper walls. These weak surface layers of rock are largely responsible for the extensive collapse throughout this area. Water quality is also a problem here. Enormous amounts of rubbish are being dumped in and about the water-filled subsidence pits. Reddish-brown mine waters are spilling onto the surface from several shafts with artesian flow.

## Chapter 5

### Population Characteristics

An understanding of population characteristics and trends provides a basis for preparing future population projections. It is also an essential factor in the establishment of the future requirements for expansion of public utilities and community facilities.

The existing and future population within an urban area naturally influences the physical size of the community and aids in determining requirements for housing, business, industry, and transportation services as well as for community facilities and public utilities. The population projection forecasts provide a guide for the scheduling of services to be extended to meet the requirements of increased numbers of people.

Carl Junction is a city of 4,125 located in western Jasper County, Missouri. The City is contained within 4.5 square miles and has a per square mile density of 918 people. The population is essentially equally male and female (2,048 males, 2,077 females), and is overwhelmingly Caucasian. Table 5-1 details the gender and ethnicity of the City.

*Table 5-1. Gender and Ethnicity of Carl Junction*

	<u>Number</u>	<u>Percent</u>
Females	2,077	50.4
Males	2,048	49.6
Caucasian	4,022	97.5
Black	40	1.0
Asian & Pacific Islander	5	0.1
American Indian	58	1.4
Hispanic	6	0.1

Source: Missouri State Census Data Center, 1990

The age distribution for Carl Junction, drawn from the 1990 Census as reported by the Missouri State Census Data Center, is detailed on Table 5-2. The City's median age is 31.9 years.

*Table 5-2. Age Distribution*

	<u>Number Of Persons</u>	<u>Percentage of Population</u>
0 to 4 years	266	6.4
5 to 9 years	350	8.5
10 to 13 years	392	9.5
14 to 17 years	326	7.9
18 to 24 years	336	8.1
25 to 34 years	651	15.8
35 to 44 years	627	15.2
45 to 54 years	546	13.2
55 to 59 years	157	3.8
60 to 64 years	133	3.2
65 to 74 years	223	5.4
75 to 84 years	79	1.9
85 years and over	39	0.9

Source: Missouri State Census Data Center, 1990

While the information on age distribution is interesting, the data are more meaningful if they are arrayed in a manner that speaks to life phases. Reexamining the data by defining the age groups into four categories provides a better picture of the City. The groups detailed in Table 5-3 are: Schoolers (ages 0 through 19), Climbers (ages 20 through 39), Cruisers (ages 40 through 64), and Seniors (ages 65 and over). The purpose of these divisions is to reflect the life phases people experience. Each broad category has characteristic needs and demands which impact the City.

*Table 5-3. Life Phases Distribution*

	<u>Number Of People</u>	<u>Percentage of Population</u>
Schoolers (ages 0-19)	1,458	35.3
Climbers (ages 20-39)	1,198	29.0
Cruisers (ages 40-64)	1,128	27.3
Seniors (ages 65 and older)	341	8.3

Source: Missouri State Census Data Center, 1990

The data indicates that well over a third of Carl Junction's population is essentially dependent. That is, of school age, the overwhelming majority living within a family. The younger categories are normally not income producers and, therefore, not taxpayers. They are, however, service consumers, especially schools, recreation programs, and protective services.

Slightly less than a third of the City's population are Climbers -- young families and singles who are buying houses and planning their careers. They bridge the generations and bring to the City a mix of service demands.

The Cruisers and the Seniors, taken together, account for over a third of the population. Cruisers are families that are settled into their careers, more frequently looking at retirement, and are the wealthiest of all the groups. Their demands for service center on protective services, utility service delivery, and property protection.

## Population Projections

Carl Junction was one of the fastest growing cities in Jasper County at the end of the 20<sup>th</sup> Century, and will probably continue that growth well into the 21<sup>st</sup> Century. The growth rate of the 1990's will perhaps not be sustained, but it will be at a pace that will place significant pressures on infrastructure and services. Table 5-4 details the population trends for Carl Junction and several other communities in Jasper County.

**Table 5-4 Population Trends of Cities in Jasper County, 1990-1996**

	1990 Population	1996 Est Population	Pct. Change 1990-1996
Carl Junction	4,125	5,080	23.2
Cartersville	2,013	2,143	6.5
Carthage	10,747	11,381	5.9
Jasper	994	1,056	6.2
Joplin	37,032	39,379	6.3
Sarcoxie	1,330	1,342	0.9
Webb City	7,449	8,488	13.9
Jasper County	90,465	97,965	8.3

Source: Missouri County Facts Sheets, MO office of Administration 1997

Table 5-5 presents three scenarios for growth. The first scenario uses a yearly growth rate of 1% and projects the City into 2006; the second scenario does the same but uses 1.25% growth rate; and, the third scenario projects the current rate of growth into 2006.

**Table 5-5. Population Projections**

1996 Est. Population	Annual Rate	2006 Population	Net Increase in Pop.	Percentage Increase in Pop.
5,080	1%	5,588	508	10%
	1.25%	5,715	635	12.5%
	2.3%	6,248	1,168	23%

## Chapter 6

# Governance

Three distinct governing bodies make up the governance of the community of Carl Junction. They are the City of Carl Junction, the Carl Junction Special Fire District, and the Carl Junction R-1 School District. The City is split between the 126<sup>th</sup> and 127<sup>th</sup> State Legislative Districts, the 32<sup>nd</sup> State Senatorial District, and the 7<sup>th</sup> Missouri Congressional District. The City is part of the Eastern District of Jasper County.

### City of Carl Junction

The City of Carl Junction is a fourth class city, governed by a Mayor-Council form of government. The Board of Aldermen consists of eight members elected from four wards and a mayor elected at large. Two aldermen represent each ward. Aldermen serve two-year terms. The terms are staggered in order that one alderman is elected from each ward each year. The mayor serves a two-year term.

Carl Junction is divided geographically into four neighborhoods: central Carl Junction, Briarbrook, Country Club Estates, and the area east of High 171 commonly known as Oscie Ora Acres. Generally speaking, the four wards are divided similarly. The central part of the city is split north and south into two wards along Pennell Street. Briarbrook makes up a third ward, and Country Club Estates and the area east of Highway 171 is the fourth ward. City election wards are depicted on Map 6-1.

The City receives funding from a levy at a rate of \$1.10 per \$100 assessed valuation, and a 1.5 cent city sales tax. The City's fiscal year 2000 budget expects income of approximately \$ .

### Carl Junction Fire Protection District

The Carl Junction Fire Protection District provides fire protection for the entire city and a significant portion of the surrounding area as well. The boundaries, as shown on Map 6-2, are south to Newton County line, west to State line, North to Nutmeg Rd. (one mile north of Waco), and east to Highway 43 to Joplin City limits excluding Airport Drive. The firefighters (all volunteers) serve as emergency response personnel. Most are cross-trained as first responders, with some being certified Emergency Medical Technicians. They also employ one full time secretary.

The Fire District Board is composed of three members elected at large. Board members serve six-year, staggered terms. The annual budget of the Fire District is \$225,000. It is funded by a levy at the rate of \$0.30 per \$100 assessed valuation.

### Carl Junction R-1 School District

The Carl Junction R-1 School District educates approximately 2,550 students annually, from grades Kindergarten through 12. In the 1999-00 school year, the high

school (grades 9-12) has 719 students, while the elementary level (grades K-8) has 1,806 students.

The District is governed by the Carl Junction R-1 School Board, consisting of seven members. Members are elected at large to staggered three-year terms.

The District estimates its fiscal year 1999-2000 spending at \$23,547,867. This total reflects the construction of a new high school during this budget year. Money allocated for this construction is approximately \$9,300,000, leaving around \$14,300,000 for all other spending. The District derives its local funding from a levy at the rate of \$2.75 per \$100 assessed valuation for operations, and another \$0.89 levy for debt service.

*Chapter 7*

**Housing**

Carl Junction is a highly desirable suburban community. The rapid increase in population demonstrates this assertion. The population numbers are supported by the increase in housing stock, and the age of the units. While the City is not a housing developer, nor should it be, it does have a civic responsibility to ensure that housing is safe, adequately serviced by infrastructure amenities, constructed in compliance with legally imposed building standards, and contributory to the betterment of the community.

The City should have a coherent housing strategy that encourages rational private development and prevents the following conditions.

**Improper Land Use Arrangement:** Inadequate or poorly enforced regulations permitting a poor intermix of incompatible land uses.

**Poor Original Layout of Residential Areas:** Small lots, steep slopes, poor land character all contribute to blight.

**Conversion of Structures:** Use of structures not originally intended for residential use or current densities.

**Overbuilding:** Lack of open space.

**Absentee Ownership of Rental Property:** Non-responsive and non-accountable ownership in property being held for maximum income with minimum investment (both residential and commercial property).

**Poor Traffic Conditions:** Careful attention to the use of existing streets and developing traffic patterns.

**Abuse of Property:** Poor maintenance is a primary cause of deteriorating neighborhoods.

**Ineffective Code Enforcement:** The entire range of building codes, adopted by the City, must be firmly but fairly administered. The City must invest in the necessary training of its code enforcement officials and ensure that the code enforcement effort is adequately staffed.

Carl Junction has experienced a remarkable increasing in its housing inventory. The City has taken on a strong residential quality, proving to be an attractive community to would-be homeowners. The increase in the housing inventory has been brought about by

at least three factors: 1) Carl Junction is geographically close to Joplin, the major employment center in the region; 2) the City offers an excellent public school system; and, 3) private developers have aggressively pursued new housing subdivision developments that offer affordable, up-scale single family dwellings.

**Table 7-1. Occupancy**

	<u>Number Of Units</u>	<u>Percentage of Units</u>
Total Housing Units	1,483	100
Occupied Housing Units	1,408	94.4
Owner Occupied	1,186	84.2
Renter Occupied	222	15.8
Vacant Housing Units	75	5.1

Source: US Census, 1990

Data indicate that the City has an extremely high rate of owner-occupied units, almost 85%, and a low vacancy rate, roughly 5%. Table 7-1 details occupancy of Carl Junction's 1,483 housing units.

Further supporting the residential quality of the City are the data on types of housing units. This information is presented in Table 7-2. The data show that the overwhelming majority, 92.4%, of housing units in Carl Junction are single family dwellings.

Also of interest is the age of the housing stock in Carl Junction. It is relatively new, meaning that the overwhelming majority of it, almost 75%, has been built since 1970. Table 7-3 shows the data on age of housing stock. The decade of the 1970s was the period of the most intense building, accounting for over half of the housing stock in the City.

**Table 7-2. Types of Housing Units**

	<u>Number Of Units</u>	<u>Percentage of Units</u>
Single family dwelling	1,370	92.4
Multiple family dwelling	68	4.6
Mobile homes	45	3.0
Total Units	1,483	100

Source: US Census, 1990

*Table 7-3. Age of Housing Stock*

	<u>Number Of Units</u>	<u>Percentage of Units</u>
Built prior to 1940	155	10.5
Built 1940 – 1969	195	13.1
Built 1970 – 1979	795	53.6
Build 1980 – 1990	338	22.8
Total Units	1,483	100

Source: US Census, 1990

When viewed in isolation, Carl Junction's housing statistics are informative but not overtly instructive. To put the data into perspective, Table 7-4 offers comparisons of Carl Junction's housing survey with Jasper County, the Joplin MSA, and with the State of Missouri. Of note in these comparisons are the following:

Carl Junction has a far higher percentage of owner-occupied dwellings than the general population;

the median value of housing in Carl Junction is on par with the metropolitan area, but below Missouri's median; and,

rent is on par with the general population.

*Table 7-4. Housing Compared with Other Jurisdictions*

	Carl Junction	Jasper County	Joplin MSA	Missouri
Owner Occupied (%)	84.2	69.3	71.7	68.8
Median Value (\$)	38,900	38,000	39,300	59,300
Median Rent (\$)	313	301	298	368

Source: US Census, 1990

concerns regarding housing, however, the City should take specific steps.

**Building Codes:** The City, having enacted building and construction codes must continue to vigorously enforce them.

**Planning and Zoning:** The City should enact, then vigorously enforce, appropriate planning, zoning, and land use regulations.

**Chapter 8**

**Economic Characteristics**

**Components of Economic Characteristics**

Several factors are used to assess a community’s economic vitality and potential. For the purposes of this report, education attainment, income, poverty levels, and employment patterns are examined. To relate the data to the overall levels found in the region and state, data are also presented for Jasper County, the Joplin MSA, and the State of Missouri.

**Educational Attainment**

The US Census provides data on residents who are at least 25 years of age living in Carl Junction regarding their education attainment. This data is summarized in Table 8-1. The data indicate that 79% of Carl Junction residents over the age of 25 have completed high school. In comparison, the high school graduation rate for Jasper County is 71.4%, for the Joplin MSA is 71.8%, and for the State of Missouri is 73.8%. Likewise, Carl Junction residents with a college degree is comparatively higher than the County, the MSA, and on par with the State.

*Table 8-1. Educational Attainment*

	<u>Carl Junction</u>	<u>Jasper County</u>	<u>Joplin MSA</u>	<u>Missouri</u>
High School Diploma (%)	79.0	71.4	71.8	73.9
College Degree (%)	18.1	13.4	13.0	17.8

Source: City/County Databook, 1992

The significance of the measure is the strong correlation between educational attainment and economic opportunity. Generally accepted studies indicate that high school graduates earn a third to a half more in a lifetime than do non-high school graduates. And, further, that college graduates earn almost double in a lifetime than do

high school graduates. Certainly, continued emphasis by the community on its public education carries with it a strong incentive.

## Income

Two measures of economic vitality regarding income used are the Per Capita Income and Median Family Income. The former is a result of total community income divided by the number of individuals in the community. Its utility is limited to relative comparison with other jurisdictions as an indicator of economic activity. The Median Family Income figure is the exact middle of the income distributions of all families in Carl Junction. The result means that half of all families in Carl Junction earn more than the median and half earn less than the median. Again, the measure is a comparative measure when viewed with Median Income of other jurisdictions. Table 8-2 summarizes the data on both of these measures.

	<u>Carl Junction</u>	<u>Jasper County</u>	<u>Joplin MSA</u>	<u>Missouri</u>
Per Capita Income (\$)	10,464	10,621	10,740	12,989
Median Family Income (\$)	25,852	20,924	21,393	26,362

Source: Missouri State Census Data Center, 1990

The income distribution in Carl Junction is summarized in Table 8-3.

<u>Household Income</u>	<u>Number of Households</u>	<u>Percentage of Households</u>
Less than \$10,000	211	14.9
\$10,000 to \$14,999	173	12.2
\$15,000 to \$24,999	265	18.7
\$25,000 to \$34,999	265	18.7
\$35,000 to \$49,999	273	19.3
\$50,000 to \$74,999	168	11.8
\$75,000 to \$99,000	33	2.3
\$100,000 and over	30	2.1

Source: Missouri State Census Data Center, Household Income, 1989

## Poverty

The term poverty has a statistical, no sociological, definition. It is determined by total family income and the number of people in the family. Thus, the poverty line varies with circumstance. As a general rule, public assistance programs are available for families with incomes at 60% or less of the median family income of the county. Using Jasper County's median family income (\$20,924 for an average family of 3.2 people) would result in a theoretical poverty line of \$11,892 (for the same size family). Based on these numbers, Carl Junction could be said to be "better off" than the County, the Joplin MSA, and the State. Table 8-4 outlines the data on poverty.

	Carl Junction	Jasper County	Joplin MSA	Missouri
% Individuals	12.4	15.3	14.9	13.3
% Families	9.2	11.4	11.2	10.1

Source: Missouri State Census Data Center, 1990

## Labor Force

Carl Junction is not a wholly contained city. No city is. This is especially true when examining a labor force. Transportation allows workers to live in a different jurisdiction than they work. The average commute time for workers in the Joplin MSA is 15.1 minutes which indicates a high incidence of separation of workplace and residence. For analysis of labor force to be meaningful, it should indicate the types of labor force arrayed within a reasonable commuting area. For this analysis, the labor forces composition is examined in the County and in the Joplin MSA since these are areas that would normally circumscribe a worker's job search.

Table 8-5 divides the work force into broad categories. By way of indicating relative composition of the work force, comparative statistics have been included for the State of Missouri. Those workers classified in the professional, management, and technical fields are highly trained, many with college degrees. This is the traditional "white collar" job. Over a fifth of Jasper County and Joplin MSA workers fall into this category. Precision production and crafts workers included skilled jobs, especially in the construction trades. The region has a strong manufacturing element with almost a quarter of the work force involved in the manufacture of goods. Finance, insurance, and real estate are a small portion of the work force. Service industry jobs account for about 15% of all jobs in the 1990 Census of the region. This is considerable smaller than the one-fifth of the work

force reported in the State. Farming, an ever-decreasing segment of the labor force, holds on to about 3% of the total. Included in farming are some non-manufacturing elements of agriculture.

*Table 8-5. Labor Force*

	Jasper County	Joplin MSA	Missouri
Total Labor Force	52,983	74,873	2,761,000
% Professional, management, technical	21.9	22.5	24.0
% Precision production, crafts	13.0	11.8	9.6
% Manufacturing	23.4	23.0	16.0
% Retail	17.5	14.9	14.9
% Finance, insurance, real estate	2.3	2.1	4.9
% Services	15.1	14.8	21.5
% Farming	2.9	3.9	2.7

Source: US Census, 1990

## Local Economic Base

The number of Carl Junction residents employed within Carl Junction is quite small. Of the City's 4,123 residents, only 289 (7%) are employed in the City.

There are 103 businesses in Carl Junction. These can be divided into three main categories: service, retail, and industry. The largest category is service. Carl Junction has 62 service businesses. Predominant among these are construction companies and auto and appliance repair shops. Beauty salons and day care providers are also common.

Carl Junction has 27 retail businesses. Common among these are collectibles and crafts shops as well as floral and garden shops.

There are four manufacturing businesses in Carl Junction, as of the 1997 business license year. The four are Missouri Furniture Industries, New-Aire Manufacturing, Precision-Master Made, and Surgi Manufacturing.

## *Chapter 9*

# **Community Facilities**

The City of Carl Junction can boast a variety of parks, recreational facilities, schools, and public buildings. These provide services and recreation for the community.

There are five public parks. Facilities within these parks include: baseball and softball fields, basketball courts, sand volleyball, horseshoe pits, tennis courts, playground areas, a swimming pool, a walking trail, barbecue grills, and pavilions. Seasonal soccer and football are also available. All of these facilities are open to the public. The existing parks and their specific features are:

- Memorial Park – (1.5 acres) tee ball field, baseball field, playground area, walking trail;
- Center Creek Park – (2.5) swimming pool, tennis courts, volleyball, barbecue grills, playground area, horseshoe pits, two pavilions;
- Frank Dean Ball Complex – (1.5 acres) two baseball fields, two softball fields, soccer field;
- Country Club Park – (1.5 acres) basketball courts, playground area, baseball field, pavilion; and,
- Four Oaks Park – playground area (**need acres and facilities**).

Privately owned recreational facilities include a roller skating rink and Briarbrook Country Club. Briarbrook includes a twenty-seven-hole golf course, a swimming pool, and tennis courts, all within a planned residential development.

There will be six schools within the city limits when the new high school is completed in July 2000. These include a lower primary for kindergarten and first grade; an upper primary for second and third grade; an intermediate school for grades four through six; a junior high for grades seven and eight; a high school for grades nine through twelve; and, an alternative school for high school aged students that are “at-risk.” Recreational facilities located at the schools include a football field, basketball courts, playground areas, baseball and softball diamonds, soccer fields, and a track. The schools are located on the north west side of the city. The alternative school is located on Main Street and the rest of the schools are located on a campus bounded by South Broadway, Wells and Highway Z.

Public buildings include the City Hall, located on Pennell Street; the Police Station and City Court, located on North Main Street, and the Alba “Curly” Donham Public Works Complex, housing water, sewer, and street services, on Joplin Street. The Carl Junction Special Fire District headquarters is located on Pennell Street. Three substations are located within the city limits. The United States Post Office is located in the 100 block of South Main Street.

Howard Cemetery is located on South Grimes. Carl Junction Cemetery is located on North Grimes. The Masonic Lodge is located next to the Police Station on North Main Street. There are nine churches in the city limits, which represent a wide range of religious preferences.

Carl Junction has two adult residential facilities. Carl Junction Residential Care is located at 210 Fir Road; the Carl Junction Housing Authority is located on Karen Drive. The Senior Citizens Center is located on Pennell Street. A private group, Redwood Development, is in the process of applying for grants and funding to provide a senior housing development just off Pennell on Dean Dr.

## *Chapter 10*

# **Infrastructure**

## **Telephone Service**

The City of Carl Junction is served by Southwestern Bell with DMS-10, a digital switch located within the City. The integrated service digital network (ISDN) provides high-speed service to 1,765 residences and 312 business lines. This service includes all call-control features such as call-waiting, forwarding, and caller ID. Fiber optic lines connect Carl Junction to the main phone system in Joplin, which will allow any and all future upgrades.

## **Solid Waste**

The City with American Disposal currently contracts waste disposal for city residents. The residents are billed monthly for the service through the City in conjunction with water and sewer fees. Commercial sites contract separately for direct billing. The City does not have a waste disposal site within the corporate limits.

Recycling is offered for a separate fee that is billed directly to those who choose to participate. The City offers leaf pick-up along city streets during the fall. There is also a City Compost area on South Roney where residents may discard natural yard waste.

Carl Junction is a member of the Region M Solid Waste District. The purpose of the District is to assist local governments in meeting increasingly stringent waste stream reduction goals mandated by the State.

## **Cable Television**

All properties within the corporate limits of Carl Junction have access to cable television through Mediacom, Inc., whose franchise runs through the year 2006.

## **Electricity**

Empire District Electric Company via a 12,000-volt capacity sub-station provides electricity for the City. This nine-year-old facility is sufficient to handle projected needs and growth for the next ten to fifteen years. Delivery of electrical service is carried out in compliance with Missouri regulations, as interpreted by the Public Service Commission.

## **Wastewater Treatment**

Wastewater treatment is handled by an oxidation ditch system at a class "C" treatment plant. Originally constructed at a cost of \$3.2 million, a \$1million addition was added in 1996 which brings the plant capacity up to 840,000gpd. A current daily treatment load is approximately 500,00 gpd, treated b two oxidation ditches, clarifying

tanks, and ultraviolet light. This effluence is discharged into Center Creek, south of the plant at the city limits. The existing lagoon system serves as a storm water run-off and holding basis, while the twin cells are utilized for sludge holding with alternate year emptying and cleaning.

Along with Carl Junction, the wastewater treatment facility also provides treatment for the Village of Airport Drive. The Village pays costs and fees in compliance with the terms of the bond agreement used to construct the facility. Wastewater is carried to the plant via 75 miles of 8" to 12" pipe. Six lift stations are required: Southeast Karen Drive; Quail's Nest; Oscie-ora Acres; Briarbrook, and two to serve Airport Drive.

The wastewater treatment plant currently has two full-time employees, one with a Class "C" license and one a Class "A" license. Testing is conducted in compliance with guidelines set forth by the Missouri Department of Natural Resources.

## Water

Six wells and five water towers serve the City. All wells currently meet Missouri Department of Natural Resources' (MoDNR) guidelines, with only wells #1 and #2 adding chlorine. Each is cased to 500 feet. The tower for well #1 and #2 was replaced in May 1997, to increase volume from 50,000 gallons to 200,000 gallons. Wells #5 and #7 serve the Briarbrook and Oscie-ora subdivisions. Well #5 and tower are in use with well #7 coming on line in 1997. Abandoned well #4 was replaced by well #6, but it is a low-volume well. The cost of bringing well #6 on-line was \$41,000. Well #3 is tested every five years for radon 226 per order of the MoDNR. Levels are currently acceptable. Table 10-1 provides details of the depth of each well, storage capacity of the towers, as well as providing data on the linear feet of water pipe within the City.

Iron, calcium, and hydrogen sulfide are present in local water but not at contamination levels. Additionally, outlook for purification may include implementation of an aeration filter system, and creation of a fresh water reservoir.

## Natural Gas

Natural gas is provided to Carl Junction by Missouri Gas Energy.

## Streets

The City has 41 miles of streets. A Street is paved roadway that affords principal means of access to abutting property. Most city streets are 20' across without a curb. Approximately 18 miles are curbed to aid in drainage control. All curbed streets are 30' across.

Streets are classified based on their function as follows:

- **Highways:** A street or road of great continuity with either a single roadway or a dual roadway that serves or is intended to serve major traffic flow. A roadway that is designated in the Major Street Plan or is otherwise designated as a limited access

highway or freeway, highway, boulevard, parkway, or other equivalent term to identify those streets comprising the basic street system.

- **Thoroughfares:** A street or road of considerable continuity which serves or is intended to serve principal traffic flow between separated areas or districts and which is the main means of access to the residential street or roadway system.
- **Street, Collector:** A street or road which carries or is proposed to carry intermediate volumes of traffic from minor streets to thoroughfares, and which may or may not be continued.
- **Street, Minor:** A street of limited continuity used primarily for access to abutting properties, providing for minimum speeds and traffic volumes. This includes cul-de-sacs.

The Major Street Plan of the City of Carl Junction shows and designates the major streets of the City of Carl Junction. (see appendix map 000)

<i>Table 10-1. Data on Water System</i>					
<b>Wells and Towers</b>					
<u>Well</u>	<u>Location</u>	<u>Depth (ft)</u>	<u>Tower Capacity (gals)</u>		
1		890			
2		1355	200,000		
3		1425	100,000		
4		Abandoned			
5	Lakeview	1475	50,000		
6		1545	100,000		
7	Copper Oaks	1650	300,000		
<b>Water Pipe</b>					
<u>Pipe Diameter (inches)</u>					
	<u>2</u>	<u>3</u>	<u>4</u>	<u>6</u>	<u>8</u>
<u>Linear Feet</u>	15,535	2,190	85,438	47,460	10,102