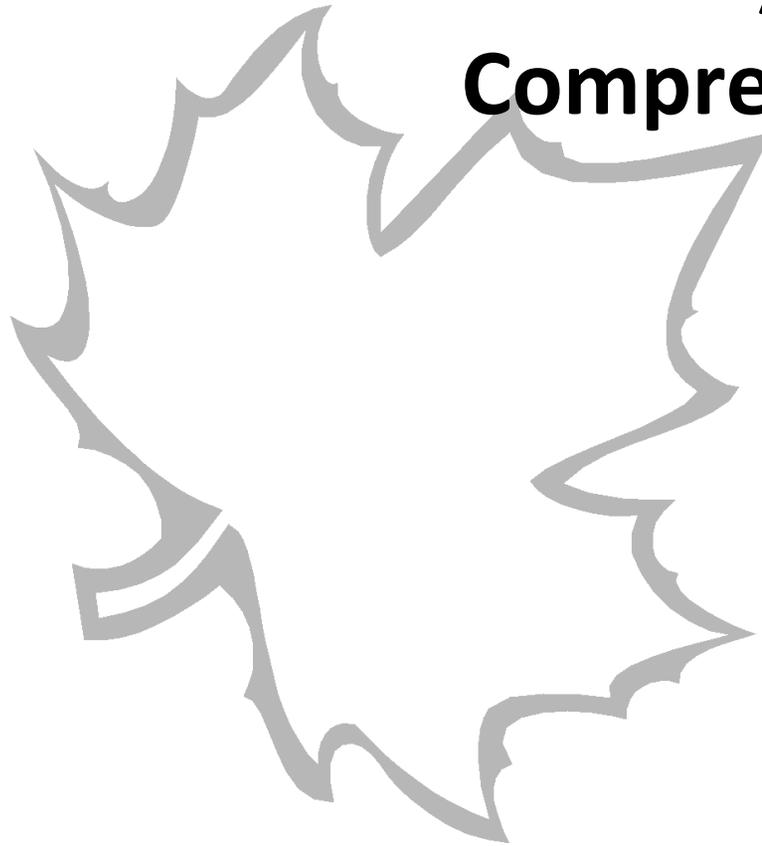




City of Carthage Comprehensive Plan



Adopted
January 27, 2009

PLANNING WORKS

Acknowledgements

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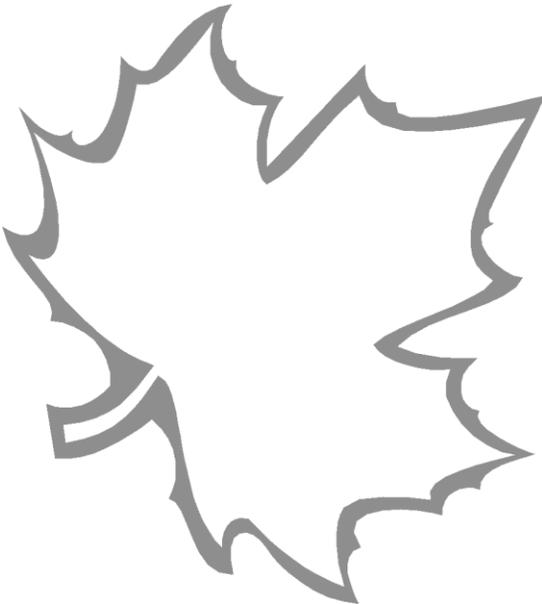


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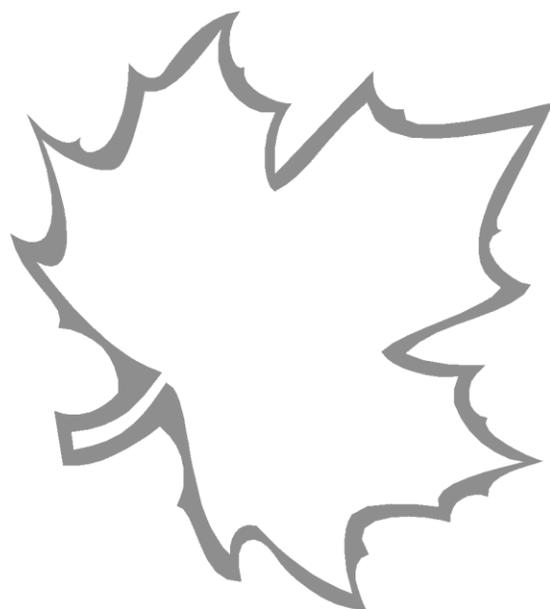


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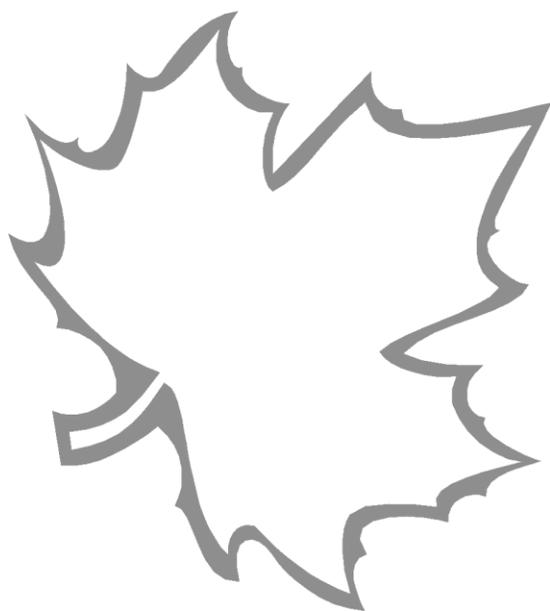


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From the Consultant Team

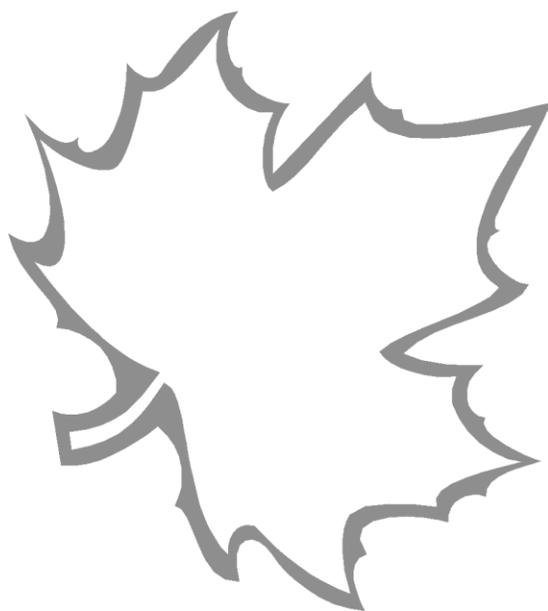
Comprehensive planning is an undertaking that requires the involvement of a wide range of stakeholders – concerned citizens, interest groups, local developers, City staff and elected and appointed officials all working together to reach consensus on how a community should grow and develop. Without the interest and concern of the many people involved in the planning process the recommendations presented in this plan document would not have been possible. The efforts put forth to develop this Comprehensive Plan are excellent examples of community cooperation and involvement.

Recognition and thanks are extended to the Carthage City Council and the Planning, Zoning, and Historic Preservation Commission for having the insight to recognize the benefit of updating the Comprehensive Plan to reaffirm and establish City land use and development policy as a foundation for protecting the City's quality of life. Special recognition and thanks also are presented to Steering Committee Chair Harry Rogers and Planning Commission Chair Carolyn Wyatt for their ongoing support of community planning and citizen participation in the planning process.

Sincere thanks and appreciation are also extended to City Administrator Tom Short, Public Works Director Chad Wampler, and the other members of the City's professional staff for their assistance and involvement during the planning process.

It has been a pleasure to assist the City of Carthage with this Comprehensive Plan.

*Bruce G. Peshoff, JD, Planning Works
Sara Copeland, AICP, Planning Works*



Executive Summary

Using the Plan

The Comprehensive Plan defines the future of the City –the urban form, economic development efforts, and quality of life for its citizens for decades to come. The Comprehensive Plan should guide public and private individuals in decisions about land use, development, housing and a wide range of other issues throughout the planning area.

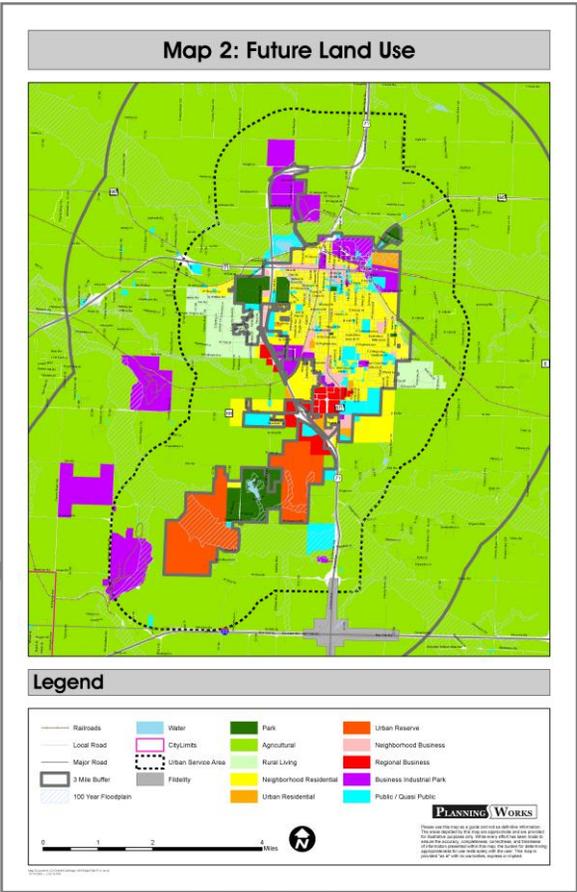
Plan Components

This Plan describes how Carthage will coordinate with its neighbors, private property owners, service providers, businesses and institutions to protect important community resources and make efficient investment decisions that manage growth, maximize the benefits of growth while minimizing its burdens on existing tax and rate payers, and enhance the City’s ability to provide the facilities and services that contribute to the high quality of life.

The Plan is based on a **Community Vision** – a description of Carthage twenty years from now – and the Plan’s **Goals** – statements of the desired outcome of this Plan that support the vision. The **Policies** included in this Plan are based on community input and suggestion, and provide guidance for decision making that will enhance the quality of life for all residents. These policies are designed to achieve the Plan’s goals.

The **Implementation Program** explores various growth management alternatives that reflect the unique needs of the City and identify legally-defensible and fiscally-sound techniques for implementing the Future Land Use Map. The **Background Assessment** describes conditions found in Carthage at the time of the Comprehensive Plan update and provides the foundation for the policies – identifying community issues, defining growth trends and projections, establishing levels of service being provided to existing development and projects and projecting future need based on growth projections.





The foundation for future community development is the **Future Land Use Map**, which shows the desired location for each land use as the City continues to develop. The Future Land Use Map provides a general overview of future land use patterns from which the timing of development, density and mix of use, and design of infrastructure can be determined. Annexation, infrastructure plans and zoning changes should be in agreement with the future land use map in order to ensure continuity and efficiency of community growth.

Plan Vision

For a plan to contain the community's vision of its desired future, and a realistic action program for reaching that vision, it must be developed through a process that includes all interested or affected community members. For Carthage, updating the Comprehensive Plan included extensive public involvement throughout the planning process, including interviews with key civic leaders, establishment of a project Steering Committee, public workshops, an on-line community survey and media outreach.

Community Vision:

Carthage is a prosperous city of opportunity – a great place to raise a family and a vibrant destination that maintains its historical character while welcoming the future.

Community Development

The Community Development Element of this Plan includes Goals and Policies related to Land Use, Economic Development, Housing, Community Identity, and Community Character. These Goals and Policies are based on the concept of Smart Growth, managing growth through fiscally sound, environmentally responsible methods.

Growth Trends

The population of Carthage was steady through the latter half of the twentieth century, but the City has been experiencing modest growth over the last fifteen years.



Carthage Comprehensive Plan

Executive Summary

Enrollment trends for the Carthage School District exhibit robust growth and suggest that the population will continue to increase. Based on State population projections and school enrollment trends, the City population is expected to grow between 2.0 and 2.5 percent per year through 2030, resulting in a 2030 population of 22,557.

Urban Service Area

As part of the Smart Growth framework, the Plan recommends that the City work with Jasper County to establish an Urban Service Area (USA) surrounding Carthage in which the jurisdictions will work cooperatively to guide growth and development. The recommended USA extends three miles from the existing City limits, as shown on the Future Land Use Map. Establishment of the USA will allow the City to protect its ability to provide public services such as water and wastewater cost effectively as well as to protect the quality of life in these areas. The USA should initially focus on subdivision regulations, building code requirements and inspections, wastewater standards, and other public health concerns.

Economic Development

Economic development is a process of building partnerships with other organizations, such as the Chamber of Commerce, that attract new opportunities, from major industrial plants to niche retail businesses. This Plan focuses on encouraging and supporting those partnerships to ensure that the City maintains its status as a strong employment and tourism location.

Housing

Quality housing forms the backbone of City neighborhoods and is essential for attracting and retaining residents. The Plan encourages the development of housing to meet the needs of residents throughout their lifespan, from apartments and starter homes to senior housing. Of particular concern to the City is the management and improvement of rental units. A key strategy of the Implementation Program is the establishment of a Landlord's Roundtable program to establish ongoing dialogue and reach consensus on methods for improving the health and safety of rental housing units.





Community Identity

Community identity issues are not about the growth of one ethnic group or the decline of a particular neighborhood. Building a strong community identity is one way to create a shared foundation for communication and problem-solving, ultimately strengthening Carthage as a community of choice for new and existing residents. In this Plan, the Community Identity goal and policies are focused on communication and partnerships and on improvements to the City's gateways, corridors, and public spaces to improve the community's identity in the region and within each resident.

Community Character

Carthage is a city containing rich historic and cultural assets, from the Civil War to Route 66. The Community Character section of the Plan is focused on preserving and capitalizing on these assets to support the City's character and economic development. A key strategy contained in the Implementation Program is for the City to pursue Certified Local Government status with the State

Facilities, Services, and Resources

The Facilities, Services, and Resources Element of this Plan includes Goals and Policies related to Public Facilities and Services, Transportation, Parks and Recreation, and Natural Resources. These Goals and Policies are based on the concept of Smart Growth, managing growth through fiscally sound, environmentally responsible methods.

Public Facilities and Concurrency

Carthage provides a number of public facilities and services to its residents, from the services of Carthage Water & Electric to the public library. Because the City has ongoing plans for the installation and expansion of water and wastewater services, the key facilities that drive development patterns, this Plan focuses on continued facilities planning and financing. Concurrency is the concept of ensuring that facilities needed to serve new development are in place at the time that new development creates a need for them – ensuring that supply matches demand. Requiring concurrency when making land use and development decisions will ensure that the City grows in an efficient and fiscally responsible manner.



Transportation

Transportation is closely tied to land use and has a major impact on future development of an area. In Carthage, one major transportation issue is the future upgrade of US-71 to Interstate 49. Among the important decisions still pending on this project is the final alignment of the interstate. At this time, the general opinion of the City is that the Business 71/outer loop alignment with a connection to the existing US-71 at Central Avenue interchange is preferred. The City's participation in discussions about the future of I-49 with MoDOT and other stakeholders is vital to the future of the City.

Parks and Recreation

The City has a strong parks inventory, including a high level of acreage per 1,000 residents. The Plan recommends that the City continue to explore opportunities to diversify the park inventory to ensure that all neighborhoods are well-served by accessible parks facilities. One component of a growing parks inventory may be an expanded trails network; many residents have expressed interest in trails that would connect various areas of the City as well as capitalize on natural features and resources surrounding the City.

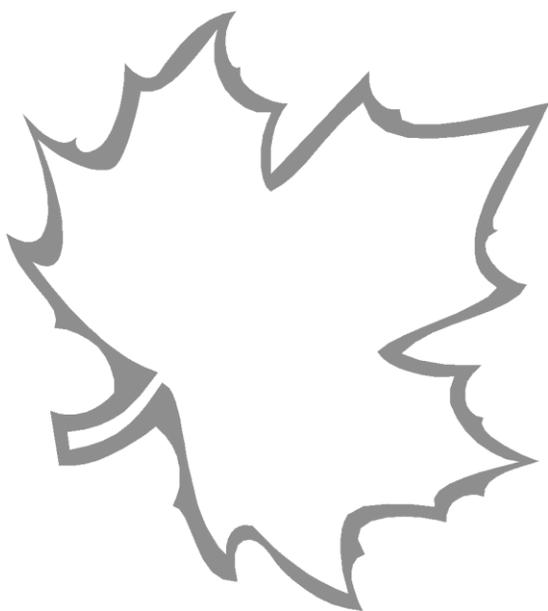
Natural Resources

Because today's development decisions will shape environmental and open space opportunities for generations to come, the Plan recommends strategies for preserving natural resources and managing the environmental impacts of development. These policies include the preservation of mature trees and other natural features and the management of stormwater impacts.



Section 1: Plan Overview

This document is a statement of the Carthage community's vision for its own future and a guide to achieve that vision through the year 2030. The view of the future expressed in the Comprehensive Plan is shaped by local community values, ideals and aspirations about the best management and use of the community's resources. The Plan uses text, maps and diagrams to establish policies and programs which the City may use to address the many physical, economic and social issues facing the community. Thus, the Plan is a tool for managing community change to achieve the desired quality of life.



1.1 Why Plan?

Successful communities do not just happen; they must be continually shaped and guided. A community must actively manage its growth and respond to changing circumstances if it is to continue to meet the needs of its residents and retain the quality of life that initially attracted those residents to the community.

Residents of Carthage value the character and diversity of their neighborhoods, the quality of public services, historic and cultural resources, as well as the strong sense of “community.” Concern about the impact of new growth has increased as residents have experienced demographic changes, inappropriate development on the outskirts of the City, challenges for downtown businesses, and ongoing economic development concerns related to commercial and industrial development and tourism. Effective growth management can help the community address each of these concerns.

The Comprehensive Plan is critical to the future of the City – to define the urban form, economic success, and quality of life for its citizens for decades to come. The Plan is an important mechanism for the preservation of the City's urban form, the timely provision of public facilities and services, and the adoption of equitable funding mechanisms to pay for the public costs that new growth brings to bear on the existing community.

The Comprehensive Plan should guide public and private individuals in decisions about land use, development, housing and a wide range of other issues throughout the

planning area. However, it should not be the only document considered prior to making decisions. Public and private decision-makers should consider the City's land use and development regulations, capital improvement plans and other documents that implement this Plan.

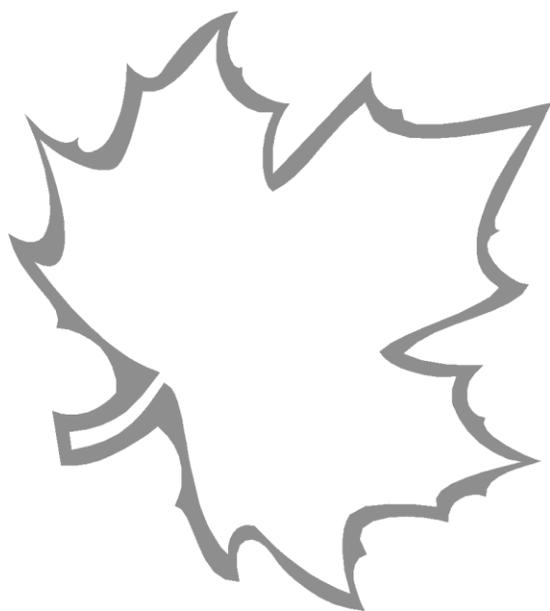
1.2 How Should the Plan Be Used?

The Comprehensive Plan is a guide to action. It is not, itself, an implementation tool. By ensuring that individual actions are consistent with the goals, objectives and policies of the Comprehensive Plan, the City can effectively achieve the vision. For example, the Planning Commission and the City Council will use the Plan's policies and maps to decide whether to approve a proposed re-zoning of land within its City limits. Zoning, subdivision, building and construction codes and standards should regulate development in conformance with the Comprehensive Plan. This Comprehensive Plan Update serves as a tool to assess community needs and preferences in terms of the regulatory structure and any future amendments to the City's development regulations.

The Plan also should guide the preparation of detailed facility master plans and capital improvement programs for the City's water, wastewater, parks, and transportation systems. The Plan should be a dynamic document, subject to periodic amendment when conditions within the City change significantly. Periodic updates of the Plan will be needed to ensure that it continues to meet the needs of City businesses and residents.

1.3 Who Implements the Plan?

The policies and strategies of the Plan must be implemented in a timely manner in order to ensure that the vision of the Comprehensive Plan becomes a reality. Who should be charged with the implementation of the goals, policies and strategies? It should be a joint effort of the City Council, the Planning Commission and City staff, the private sector and other service providers. **Section 4 – Implementation** identifies and prioritizes strategies to ensure that the vision becomes a reality. The schedule establishes priorities for public action and also guides private decisions that support Plan priorities.



1.4 How Do We Work With Other Jurisdictions?

The Planning Area extends beyond existing City boundaries to reflect a *comprehensive* approach to growth management – community issues typically don’t start and end at precise boundaries, but reflect development practices and pressures within a general geographic area. Preparing for growth means that development proposals should be encouraged in appropriate areas, based on land use intensity and available infrastructure, and discouraged in inappropriate areas. The determination of infrastructure availability often is dependent upon the potential of undeveloped land to permit expansion, based on a fiscal impact analysis to ascertain the economic feasibility of such an expansion. A map of Carthage and the surrounding area is shown in **Map 1**, located in **Appendix A**. The Planning Area is shown in **Map 2**, located in **Appendix A**.



Many problems faced by local governments are regional in nature. Issues such as population growth, environmental preservation, growth patterns, and the adequacy of public facilities and services often transcend local, neighborhood or city boundaries. This Plan strongly supports partnerships between Carthage, Jasper County and communities adjacent to the planning area. These partnerships should focus on coordinated growth management and service provision strategies. Through effective coordination, residents and business owners will enjoy the benefits of more cost-effective service provision and a more stable, sustainable region. Failure to coordinate will result in excessive consumption of valuable open space land, as well as the inefficient use of existing public investments in infrastructure.

In other communities, lack of intergovernmental coordination has resulted in the loss of population and economic development. Such losses undermine the stability of neighborhoods and businesses within the City, and reduce public facility and service efficiencies, thereby increasing costs for both City residents and County residents. This makes the City less attractive for major economic development that would benefit the entire planning area and the region, and generates a need for more expansive roads and highways to transport workers longer distances to their jobs. These adverse consequences can be avoided by: coordinated (joint) comprehensive planning; the adoption and implementation of key growth management goals, objectives and policies; and sustained monitoring of development over the planning period.

1.5 Plan Components

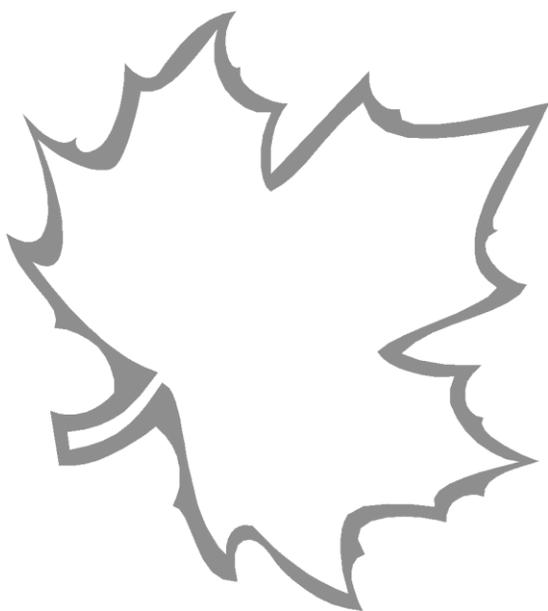
The Plan is intended to be a dynamic document that responds to change in the community. Implementation is fundamental to any planning process, and strategies in this Plan have been designed to achieve Carthage’s vision, goals and policies, provide clear priorities, and describe specific tasks. The Plan outlines a strategy to preserve or enhance residents’ quality of life, while addressing the many growth related challenges facing the City.

The **Policies** included in this Plan are based on community input and suggestion, and provide guidance for decision making that will enhance the quality of life for all residents. These policies are designed to achieve the **Community Vision** – a description of Carthage twenty years from now – and the Plan’s **Goals** – statements of the desired outcome of this Plan.

The foundation for future community development is the **Future Land Use Map**, which shows the desired location for each land use as the City continues to develop. The Future Land Use Map does not represent specific zoning districts. Rather, it provides a general overview of future land use patterns from which the timing of development, density and mix of use, and design of infrastructure can be determined.

The **Implementation Program** explores various growth management alternatives that reflect the unique needs of the City and identify legally-defensible and fiscally-sound techniques for implementing the Future Land Use Map. The **Background Assessment** describes conditions found in Carthage at the time of the Comprehensive Plan update and provides the foundation for the policies – identifying community issues, defining growth trends and projections, establishing levels of service being provided to existing development and projects and projecting future need based on growth projections. The full text of the Assessment is contained in **Appendix B**.

Thus, the Plan is a tool for managing community change to achieve the desired quality of life. It is a guide to action. It is not, itself, an implementation tool. By ensuring that individual actions are consistent with the goals and policies of the Plan, the City can effectively achieve its vision.

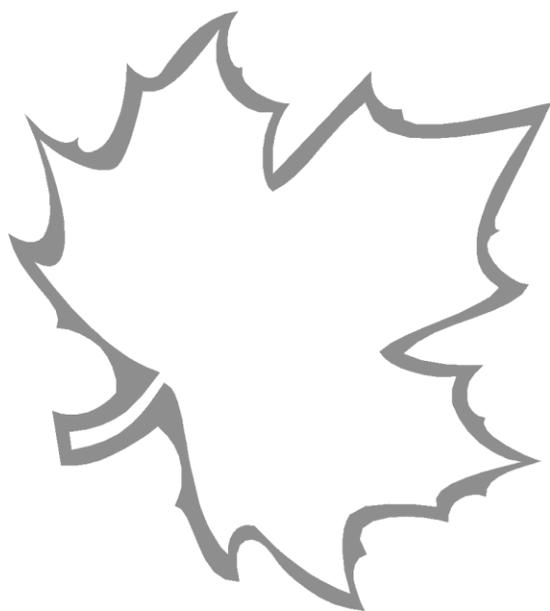


1.6 Plan Vision

A community's long-range plan should reflect the interests, values and desires of all the citizens and groups within that community. For a plan to contain the community's vision of its desired future, and a realistic action program for reaching that vision, it must be developed through a process that includes all interested or affected community members. For Carthage, updating the Comprehensive Plan included extensive public involvement throughout the planning process, including interviews with key civic leaders, establishment of a project Steering Committee, public workshops, an on-line community survey and media outreach.

Community Vision:

Carthage is a prosperous city of opportunity – a great place to raise a family and a vibrant destination that maintains its historical character while welcoming the future.



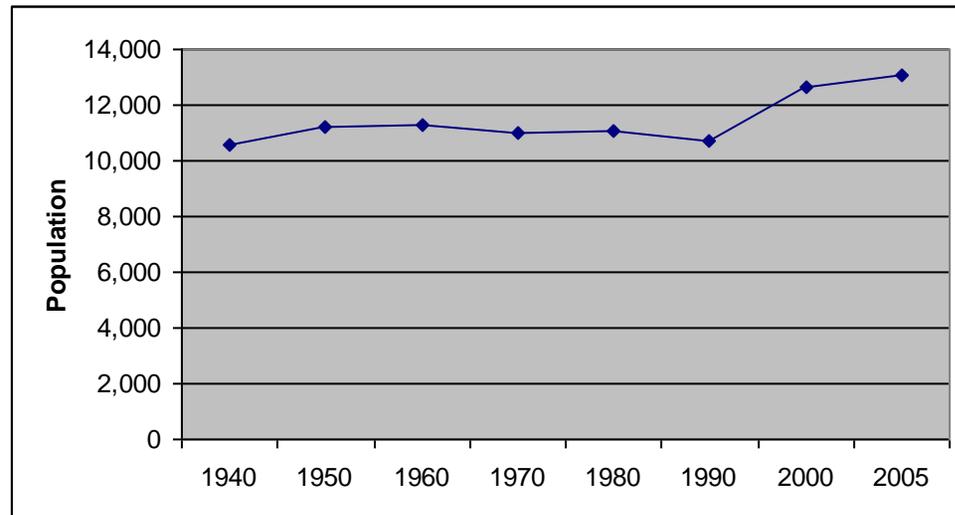
Section 2: Community Development

While continued growth has brought many benefits to the City, it has also raised some challenges, such as the need to encourage downtown investment, diversify the local economic base, and address land use incompatibilities. This section focuses on key growth and development issues facing Carthage and its Planning Area, including community character, land use, and growth management issues.

2.1 Growth Trends

Carthage is one of the oldest communities in southwestern Missouri and is the county seat of Jasper County. The town was founded in 1842. The population of Carthage was steady through the latter half of the twentieth century, but has grown over the past fifteen years. **Exhibit 1** shows the City’s population growth since 1940¹.

Exhibit 1: Population Growth, 1940-2005



Source: U.S. Census Bureau.

¹ See the Background Assessment for a more in-depth discussion of demographics.

The City's growth rate picked up in the 1990s and has risen steadily. **Exhibit 2** shows the City's annual growth rates between 2000 and 2006.

Exhibit 2: Population Growth, 2000-2006

Year	Population	Annual Growth Rate
2000	12,695	-
2001	12,753	0.46%
2002	12,821	0.53%
2003	12,934	0.88%
2004	12,988	0.42%
2005	13,096	0.83%
2006	13,343	1.89%

Source: U.S. Census Bureau.



2.2 Smart Growth

Smart growth is the management of growth in a community through fiscally sound, environmentally responsible means. Among other concerns, smart growth means efficient provision of infrastructure and a greater emphasis on the mix of uses, transportation options and environmental sensitivity. Smart growth means looking into the growth management toolbox, assessing the community's needs and desires, and choosing the appropriate tools, making sure that they will work together to implement a community's growth management goals. Smart growth cannot be achieved through the use of a single magic tool that accomplishes all of the community's objectives, but is achieved through the use of an integrated approach that uses carefully chosen tools calibrated to the City's needs and ability to implement specific programs.

"Smart Growth" is the antithesis of sprawl. "Sprawl" refers to unplanned, single use, auto dependent development built without regard to availability of infrastructure, facilities and services. Unplanned growth can have extensive negative externalities, such as inducing more growth in areas that are unsuitable due to environmental constraints. It can create traffic congestion and overcrowded schools. If unplanned, low density development prevents the orderly growth of urban development contiguous to

Benefits of Smart Growth Include:

- More compact, mixed use development through clustered, higher density centers, corridors and infill development
- Greater preservation of open space, farmland, natural resources, and critical environmental lands
- More sustainable growth and cost-effective infrastructure provision through the linking of availability of infrastructure and development phasing decisions
- Alternative transportation opportunities and increased energy conservation through the encouragement of walking, cycling and public transit
- Better variety of housing choices and easier access to housing, jobs, shopping, recreation, entertainment and community services
- A jobs/housing balance that allows people to live and work in the same community and supports the fiscal sustainability of the municipal government.

the existing urban center, it can cause long-term fiscal stress for a jurisdiction. New growth should be planned to create positive fiscal impacts for the City, and should not burden existing residents with higher taxes to pay for infrastructure that serves new residents.

Smart Growth channels growth into compact and sustainable development patterns within areas already served with infrastructure, or in areas where infrastructure provision is planned, and included in a Capital Improvement Program (CIP). Smart growth does not seek to change the character of the community, but instead builds on the community's existing characteristics and supports amenities that improve the quality of life for residents. It is a framework for achieving Carthage's vision for the future.

The goals, policies and strategies of this Plan form the core of Carthage's Smart Growth framework. The completion of each strategy moves Carthage one step closer to achieving the benefits of Smart Growth.

2.2.1 Sustainability

Rising energy costs across all sectors, especially in regard to natural gas and gasoline, have had a large and immediate impact on personal, corporate and public budgeting and wealth over the past few years. Diminishing supplies and global politics are likely to accelerate these cost increases. Budgetary impact, combined with a strong feeling of personal and public responsibility to minimize human impact on the environment, has fueled the impetus for energy conservation in the community, including increased interest in green building techniques and standards, as well as support for alternative forms of transportation.

"Sustainability" is one of the key principles of Smart Growth, and includes economic, social and environmental sustainability, which are most comprehensively addressed when viewed as interdependent elements. These concepts are addressed throughout this Plan as they relate to current conditions in Carthage and the larger national and global trends that will impact how we live, work and play in the coming decades.

2.2.2 Coordination With Other Jurisdictions



Many problems faced by local governments are regional in nature. Issues such as population growth, environmental preservation, growth patterns, and the adequacy of public facilities and services often transcend local, neighborhood or city boundaries. This Plan strongly supports partnerships between Carthage, neighboring communities, Jasper County, and other service providers. These partnerships should focus on coordinated growth management and service provision strategies. In other communities, lack of intergovernmental coordination has resulted in the loss of population and economic development. Such losses undermine the stability of neighborhoods and businesses within the City, and reduce public facility and service efficiencies, thereby making it more costly for City residents. This makes the City less attractive for major economic development that would benefit the entire planning area and the region, and generates a need for more expansive roads and highways to transport workers longer distances to their jobs. These adverse consequences can be avoided through a Smart Growth framework that coordinates planning; the adoption and implementation of key growth management strategies and sustained monitoring of development over the planning period.

Through effective coordination, residents and business owners will enjoy the benefits of more cost-effective service provision and a more stable, sustainable region. Failure to coordinate will result in excessive consumption of valuable open space land, as well as the inefficient use of existing public investments in infrastructure. **Map 1** shows Carthage's location in the region and its relationship to other municipalities.

2.2.3 Urban Service Area

It is important for the City to influence and guide development that occurs in the Growth Area to protect its future ability to provide services efficiently. Infrastructure efficiency (through maximizing the use of infrastructure investments) is a key component of fiscal sustainability for municipalities and service providers. Many uses and development styles preclude the provision of urban facilities and services, or make the provision of such prohibitively expensive. For instance, when large-lot developments are approved in planned urban areas, infrastructure must be extended

Community Development



through those areas to reach other development that occurs farther from the City at higher densities.

This Plan is intended to facilitate the future growth of the City. Since the growth of Carthage is not constrained by adjacent municipalities, future growth will likely involve annexation of currently unincorporated areas. State law establishes procedures for annexation; the City has previously established annexation policies and continues to refine its annexation policy in this Plan.

However, development occurs even without annexation, under the codes and procedures of Jasper County. While some development adjacent to the City has been neutral in its effect on the City, other development has endangered the health, safety, or welfare of the community, particularly concerning sewerage issues. Because of these experiences, Carthage has placed a high priority on identifying ways to collaborate with Jasper County to manage development so that growth results in positive outcomes for property owners, neighbors and developers, as well as City and County residents.

State law places some limits on the powers of the City and the County to manage development in unincorporated areas. Jasper County currently does not have the power to establish County-wide planning and zoning; and the City of Carthage is not able to extend its development regulations to cover any extra-territorial areas. These limits do not preclude the City and County from working cooperatively through interlocal agreements or other creative solutions.

As part of the Smart Growth framework, the Plan recommends that the City and County establish an Urban Service Area (USA) surrounding Carthage in which the jurisdictions will work cooperatively to guide growth and development to the extent of their abilities. Because the County is not authorized to undertake planning and zoning activities, the USA should initially focus on subdivision regulations, building code requirements and inspections, wastewater standards and other public health concerns.

The recommended Urban Service Area extends three miles from the existing incorporated limits of Carthage, as shown on **Map 2**, the Future Land Use Map, located in **Appendix A**.

2.2.4 Annexation



The City has not had an aggressive annexation policy in the past, preferring to allow annexations to happen voluntarily. At this time, there are several islands of unincorporated land surrounded by the City. These 'islands' of unincorporated land pose problems in terms of efficient provision and expansion of City services. As discussed, it is the City's best interest to use a coordinated set of Smart Growth strategies in order to allow for the orderly expansion of urban growth served by adequate facilities and services, including annexation. This Plan recommends that the City take a more proactive approach to annexation, prioritizing key areas for annexation and working with the residents of those areas to seamlessly integrate them into the City of Carthage in a mutually beneficial manner.

Annexing 'island' areas allows contiguous extension of City services to support maximum efficiency. It also establishes equity by requiring that those that benefit from urban levels of service be required to contribute to the funding of those services. Annexation further establishes equity among both residents and businesses by preventing uses that are incompatible with the surrounding incorporated urban areas. Uses surrounded by the City, in an urban or urbanizing setting should be subject to annexation in order to protect the character and quality of the City and prevent further incompatibilities.

Annexation allows the City of Carthage to control its own destiny by:

- Regulating growth on the periphery or in areas surrounded by the City
- Regulating uses that are or may be inconsistent with land uses within the City;
- Regulating commercial facilities at appropriate locations, with design, landscape, parking and traffic controls;
- Assuring that development conforms to City zoning, subdivision, building, electrical, and fire codes;
- Assuring that new development pays its fair share of the costs of city services;
- Creation of sources of revenue to expand the level of services currently offered, including, police, fire, parks, sewer, water, emergency services and to safely police annexed lands; and

- To allow the City to meet future needs; anticipated and unforeseen, especially to control the future use of lands and to help the residents of lands outside the current boundaries.

2.3 Land Use

Shaping Carthage's future requires an analysis of historical community land use trends from which reasonable growth rates and land use patterns can be projected and upon which future community growth preferences may be assessed. This Section examines historic and projected residential and non-residential development trends and provides baseline assumptions upon which future land use, public infrastructure and service demands, and fiscal stability will be measured during the course of the planning process.

2.3.1 Population Projections

The rate of future growth depends on numerous factors, including the technological, political, environmental and economic climates. Since specific growth projections from outside sources for the City of Carthage are not available, the population projections for Carthage included herein are based on the projected growth rates for Jasper County and the State of Missouri, as shown in **Exhibit 3**.

The Missouri Economic Research and Information Center at the Missouri Department of Economic Development has calculated population projections for various metropolitan areas in Missouri. The Joplin MSA fact sheet includes projected population growth rates for Jasper County. Applying that growth rate to Carthage's current population provides a series of population projections for the City.

The United States Census Bureau has calculated population projections for every state. Two population projections are available; Series A is based on historic population migration trends between states, while Series B is based on Bureau of Economic Analysis employment projections. Because Southwest Missouri is a strong employment center for the region, the projections shown in **Exhibit 3** use the Series B growth rate.



Exhibit 3: Population Projections, Regional Growth Rates

Year	MERIC Jasper County growth rate		US Census State Series B growth rate	
	Population Projection	Average Annual Growth Rate	Population Projection	Average Annual Growth Rate
2005	13,096	-	13,132	0.72%
2010	13,712	0.92%	-	
2015	14,301	0.85%	15,037	1.36%
2020	14,859	0.77%	-	
2025	15,334	0.63%	16,739	1.08%

Sources: U.S. Census Bureau; Missouri Department of Economic Development.

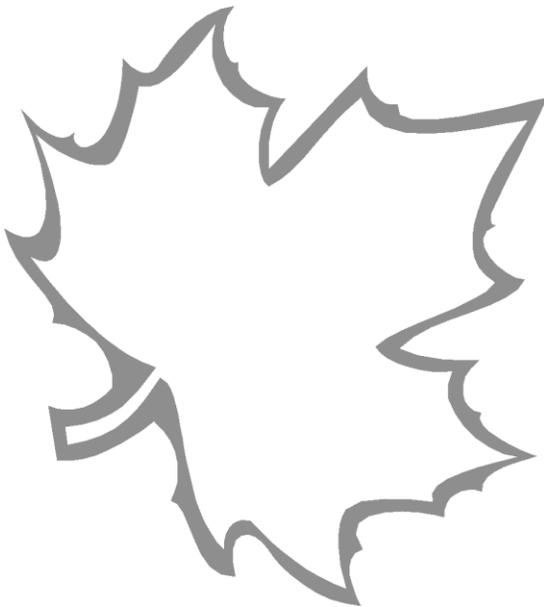
However, enrollment trends for the Carthage School District show a much more robust growth trend than captured in these projections. While the school district includes significant land area outside the municipal boundaries of Carthage, it does not include any other population centers and thus provides a better snapshot of recent growth trends than the U.S. Census. Recent enrollments and growth rates are shown in **Exhibit 4**.

Exhibit 4: Carthage School District Enrollment Trends

Year	Total Enrollment	Enrollment Growth Rate
2001	3,663	-
2002	3,602	-1.67%
2003	3,619	0.47%
2004	3,708	2.46%
2005	3,898	5.12%
2006	4,007	2.80%

Source: Carthage R-9 School District.

School enrollment figures suggest that Carthage’s population will continue to experience growth as families mature and as some of today’s students become



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tomorrow's workers, business people and property owners. The school district enrollment figures also indicate that a growing percentage of students are Hispanic. The Hispanic enrollment trend suggests that some amount of the City's population may have been undercounted by the Census; additionally, the rapid growth in this segment of the population may not be accurately accounted for in the Census Bureau's population estimates.

Based on this data, the population projections for the City have been adjusted to a slightly higher growth rate, as shown in **Exhibit 5**. These projections result in a 2030 population of 22,557. Combined with the growth outlook for the region, trends indicate continued strong growth for the City and continued demand for new and expanded public services and facilities.

Exhibit 5: Carthage Population Projection

Year	Population Projection	Average Annual Growth Rate
2005	13,096	-
2010	14,456	2.50%
2015	16,355	2.50%
2020	18,280	2.25%
2025	20,431	2.25%
2030	22,557	2.00%

2.3.2 Residential Development

In general terms, as population grows the demand for housing grows as well. In order to accommodate these growing demands for housing, private investment, public services, regulatory approvals and the construction industry must respond in a timely and equitable fashion. The timing and form of residential construction reflects the needs of consumers and the developers' experience with producing various housing types, as well as the regulatory condition of the city. Therefore, changes in population demographics are determinants of residential construction activity, as is the ease with which different housing types are built in conformance with the city's development



regulations. This section reviews the nature of residential construction over the past decade and projects the amount and mix of new residential development.

2.3.2.1 Recent Residential Growth Trends

Housing data available from the U.S. Census provides a foundation for evaluating recent residential growth. Exhibit 6 shown below illustrates the change in number of housing units and their occupancy status, from 1990 to 2000.

According to the Census data, the City's housing stock grew by 443 housing units between the 1990 census and 2000 census. In addition, building permits issued between 2001 and 2005 provided for 356 new housing units. Most units permitted since 2000 have been single-family homes, which account for over 66 percent of all permitted units since 2000. While the number of permits issued each year has fluctuated, permit data shows a continuing demand for housing, which indicates population growth. *(See Background Assessment for further discussion of recent permitting trends.)*

2.3.2.2 Housing Tenure

Housing "tenure" is a term used to denote whether a housing unit is owner or renter-occupied, although in rare cases squatters may occupy dwellings. The projection method used treats growth of owner-occupied and renter-occupied dwellings as separate calculations. **Exhibit 6** shows the housing tenure characteristics of Carthage's housing. The Census data indicates that, during the decade of the 1990's:

- Owner-occupied dwellings slightly declined from 65.1 percent to 58.8 percent of all dwelling units;
- Renter-occupied housing rose, from 26.2 percent to 34.1 percent of total units; and
- The vacancy rate for all dwelling units declined slightly to 7.2 percent.

Overall, housing tenure statistics show a stable housing stock, with minor fluctuations in occupancy trends.



Exhibit 6: Housing Tenure (1990, 2000)

Year	Owner-occupied		Renter-occupied		Vacant		Total
	Number	Percent	Number	Percent	Number	Percent	
1990	3,068	65.1%	1,235	26.2%	409	8.7%	4,712
2000	3,030	58.8%	1,753	34.1%	372	7.2%	5,155

Source: U.S Census

2.3.2.3 Housing Projections

The demand for shelter may be projected using the population projections, household size and dwelling unit tenure ratios. Although residential growth projections may be calculated, numerous relevant social and political factors influence the ultimate breadth and quality of future residential construction. These factors include, but are not limited to, the regulatory environment, interest rates, fluctuations in the local job base, natural disasters and changing migration patterns. Although Carthage’s housing market has exhibited some recent growth, the local economy could either stabilize the local housing market or cause it to deteriorate depending on changing conditions.

Housing construction projections are based on population projections. The projection of average household size is used to determine how many households will result from the projected population. For the purposes of projecting Carthage’s residential growth by 2030, the assumed tenure ratios will be approximately 68 percent single-family and 32 percent, mirroring current housing market ratios.



2.3.2.4 Household Size

Household size refers to the number of people living in a single housekeeping unit in a specific dwelling. Generally, household sizes rise during times of economic distress, as young people continue to live with their parents and people choose to live together to share expenses. Similarly, household sizes tend to fall during times of economic prosperity, as people have the resources to find new housing. Household sizes are projected to remain constant at an average 2.5 persons per household.

National trends in household size have been steadily down as “baby boomers” become “empty nesters” and the elderly live longer. The U.S. Census Bureau projects that household sizes will continue to decrease.² However, Carthage has a growing number of working-age residents and strong school enrollments and so household size was held constant for the purpose of calculating projections.

2.3.2.5 Projected Growth Trends

The number of single-family and multi-family dwelling units needed to accommodate the projected population scenarios are shown in **Exhibit 7** in 5-year intervals. Based on this analysis, the following observations are made about the residential growth projections:

- The housing stock will include 9,096 total housing units with 3,988 new dwelling units built by 2030;
- 2,728 new single-family dwelling units will be needed for the full-time occupancy market; and
- Multi-family housing units will increase by 1,261 dwellings.



² U.S. Census Bureau, May 1996, available at <http://www.census.gov/population/nation/hh-fam/table1n.txt>.

Exhibit 7: Projected New Dwelling Units by Type

	2010	2015	2020	2025	2030	Percent of Total
Single-Family Units	493	1,017	1,548	2,141	2,728	68.4%
Multi-family Units	228	470	715	989	1,260	31.6%
Total Dwelling Units	721	1,487	2,263	3,130	3,988	100%

Source: Planning Works calculation.

Based on these projections and the minimum lot sizes mandated by the City's current zoning ordinance, a total of 643 acres of land will be developed for residential uses by 2030.

2.3.3 Commercial and Industrial Development

Commercial and industrial uses provide shopping, entertainment, services and employment opportunities for residents and visitors to the community. Based on this relationship, there is a clear nexus between population growth and commercial/industrial growth trends.

The method employed to project Carthage's commercial and industrial growth uses employment projection scenarios based on the population projections and typical floor area ratios (FARs) to determine the additional amount of floor space and land needed to accommodate growth to 2030.

There are a number of assumptions that are inherent in the projection method, including:

- Floor Area Ratios for future commercial and industrial development in Carthage will reflect typical ratios;
- The total ratio of land uses for the year 2030 will remain relatively constant; and
- The amount of commercial and industrial development per person within the community will remain relatively constant.

Floor Area Ratio
 0.5 FAR - If lot is 10,000 sq. ft., building is 5,000 sq. ft.

2 Stories on Quarter Lot 1 Story on Half Lot

1.0 FAR - If lot is 10,000 sq. ft., building is 10,000 sq. ft.

4 Stories on Quarter Lot 1 Story on Entire Lot

2 Stories on Half Lot

2.3.3.1 Floor Area Ratios

Floor Area Ratios (FARs) refer to the amount of floor area relative to the parcel of land that the building sits on. For instance, a 10,000 sq. ft. commercial building on a 20,000 sq. ft. lot would have a FAR of 0.5 indicating that the floor area of the building is equal to half the lot size. Multi-floor structures can often reach FARs above 1 when the cumulative floor space surpasses the size of the lot. The Urban Land Institute (ULI), Center of Urban Policy Research (CUPR) and the Institute of Transportation Engineers (ITE) have conducted extensive research into typical FARs based on the classification of use. **Exhibit 8** lists typical FARs for general commercial land use classifications. Projections of non-residential development assumes that FARs for future non-residential development will continue to reflect typical ratios.

Exhibit 8: Typical Floor Area Ratios

Land Use Category	Typical Floor Area Ratios
Office and Services	0.2
Commercial	0.2
Industrial	0.3

Source: Compilation of ULI and ITE data.

2.3.3.2 Projected Non-Residential Development

Using the aforementioned assumptions, non-residential development was projected through the year 2030. These land uses were separated into three categories: office, commercial/retail and industrial. **Exhibit 9** shows the projected total amount of non-residential development in square feet of floor space and parcel acreage.

Based on these projections, a total of 147 acres of land will be developed for non-residential land uses by 2030.



Exhibit 9: Non-Residential Growth Projections

Year	Office		Commercial/Retail		Industrial		Total Acres
	Acres	Sq. Ft. Floor Space	Acres	Sq. Ft. Floor Space	Acres	Sq. Ft. Floor Space	
2010	7.4	64,185	4.3	46,259	9.5	124,322	21.3
2015	17.7	153,866	10.2	110,894	22.8	298,028	50.7
2020	28.1	244,729	16.2	176,381	36.3	474,025	80.6
2025	39.8	346,285	22.9	249,575	51.3	670,733	114.0
2030	51.3	446,678	29.6	321,930	66.2	865,186	147.0

Source: Planning Works calculation.

2.3.4 Land Use Mix

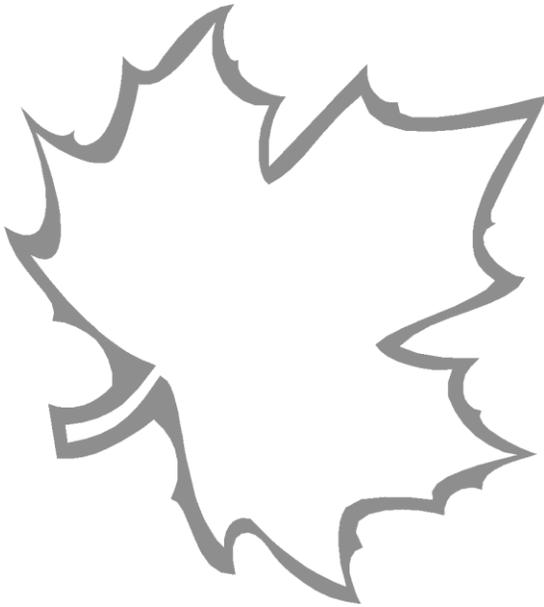
Exhibit 10 shows the existing mixture of land uses within Carthage. Map 3 shows how these land uses are distributed through the City. In developed areas, residential land uses are generally the predominate use. In Carthage, residential uses covering nearly 28 percent of the City’s area. Non-residential land uses account for approximately 15 percent of land area.



Exhibit 10: Developed Land Use Mix Table

Land Use Category	Acreage	Percentage
Agricultural / Large-lot Residential	500.7	7.8%
Residential	1,779.1	27.6%
Commercial / Office	335.8	5.2%
Industrial	664.4	10.3%
Public	944.6	14.7%
Undeveloped	2,222.5	34.4%
Total	6,447.2	100.0%

Source: Carthage GIS data.



This table is based on the zoning and GIS data from the City. While approximately one-third of the City’s land area is shown as *undeveloped*, acreage that is included in another land use category is likely to be *underdeveloped*. The Agricultural/Large Lot Residential category includes a number of large parcels that may be subdivided and further developed in the future, when development pressures make the land valuable for development. Likewise, there may be larger developed parcels that have additional development potential due to their size, particularly in the Commercial/Office and Industrial categories where one building may occupy a lot that can accommodate additional development.

2.3.5 Future Land Use

One of the primary purposes of the planning process is to ensure compatibility among various land uses in order to preserve and protect the health, safety and general welfare of the populous. Future land use planning provides predictability and security by

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protecting property values and public and private investments in property improvements. Land use compatibility provides smooth edges between neighborhoods, ensures adequate transportation network capacity and establishes connectivity between existing and new development.

Land use compatibility issues include how well a proposed land use achieves the goals of the Comprehensive Plan, if there are adequate facilities to serve the proposed use, and how performance standards can be used to promote employment and economic growth while protecting residential areas from noise, traffic, diesel fumes and brownfield sites.

Key components of land use compatibility include the intensity of development and how transitions between uses are addressed. Intensity of use is measured by density in residential zones – typically dwelling units per acre. In commercial areas, intensity is typically measured by floor area ratio (FAR), which compares the area of a building's footprint on a lot to the amount of total area that the building is allowed to encompass. A higher FAR ratio indicates a more intense land use.

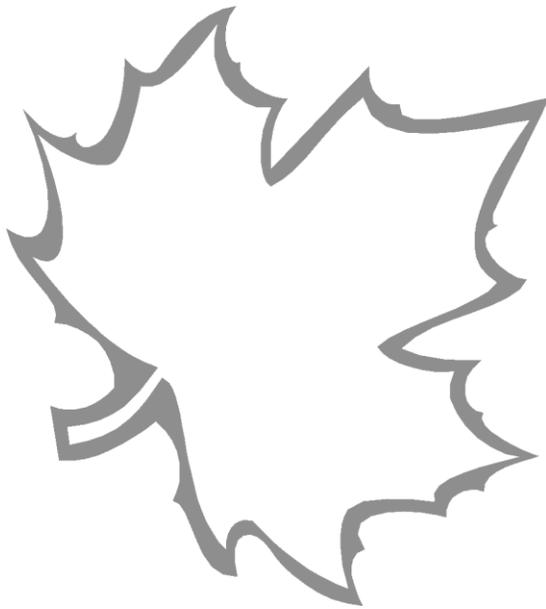
The foundation for future community development is the Future Land Use Map (**Map 2**), which shows the desired location for each land use as the City continues to develop. The Future Land Use Plan does not represent specific zoning districts. Rather, it provides a general overview of future land use patterns from which the timing of development, density and mix of use, and design of infrastructure can be determined. Annexation, infrastructure plans and zoning changes should be in agreement with the future land use plan in order to ensure continuity and efficiency of community growth. The Future Land Use categories are described in **Exhibit 11**.



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Exhibit 11: Future Land Use Categories

Category	Description	Average Dwelling Units per Acre	Zoning Districts Included	Typical Floor Area Ratio
Rural Living	Rural Living allows suburban residential use that provides space for large lot development, with an average of one home per acre. There is minimal infrastructure and other public improvements.	1 DU/Acre	A	-
Neighborhood Residential	Neighborhood Residential includes low density neighborhoods typically composed of single-family detached dwellings.	4 to 6 DUs/Acre	A, B	-
Urban Residential	Urban Residential provides a range of attached housing types, including duplexes, triplexes, apartments, and townhomes.	12 to 20 DUs/Acre	B, C-1, C	-
Neighborhood Business	Neighborhood Business uses provide goods or services to their immediate neighborhood and generally do not draw patrons from outside that market area.	-	O, D	0.3 to 1.5
Regional Business	Regional Business is intended for services, large-scale retail, and wholesaling activities that serve the entire community and the region.	-	E, C-P	0.25 to 1.0



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Category	Description	Average Dwelling Units per Acre	Zoning Districts Included	Typical Floor Area Ratio
Industrial Park	Industrial Parks include low scale industrial uses and associate office space. Small retail components may be included in these developments to serve on-site employees.	-	E, F, G	0.25 to 0.5
Urban Reserve	Urban Reserve provides an area where land is expected to be developed at urban densities and intensities but development is currently premature or unplanned.	-	-	-
Public / Semi-Public	Public uses include government buildings, schools, churches, parks, educational institutions, and cultural facilities.	-	-	-
Open Space	Floodplains, detention ponds, and other environmentally sensitive lands where development is precluded.	-	-	-

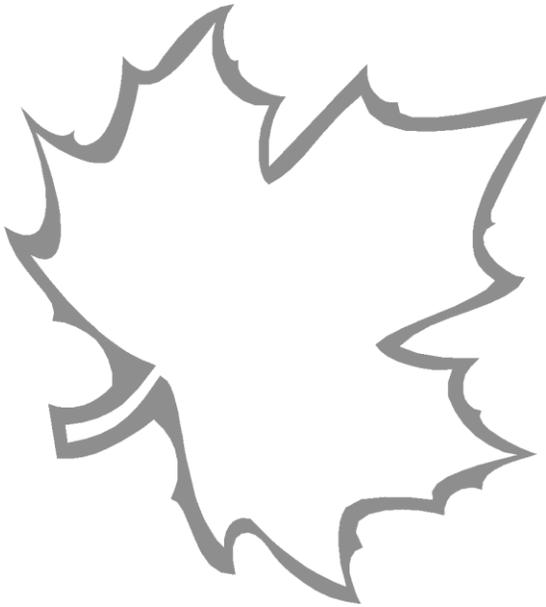
2.3.6 Development Demand Model

The Development Demand Model is a Geographic Information Systems (GIS-based) land use model. The model was created to provide a consistent, technically defensible system for the evaluation of land development proposals in the City. The model measures a wide variety of factors, including environmental and community factors. Data was obtained from various local, State, and Federal entities. These factors are weighted in importance based on the relevance of the factor to the City's goals, objectives and policies. The model is intended to aid decision-making by assessing the impact of development and facilities decisions on the City's natural, cultural, economic, infrastructure and other community resources. **Exhibits 12 and 13** identify the land characteristic factors that are included in the model to aid in the development review process.

This suitability analysis is used to determine the appropriateness of proposed development for its geographic location. Land suitability is defined in the following manner:

- **Low Suitability** – There is a presumption that land is not suitable for development. This does not preclude development but requires a showing by the property owner that sufficient conditions exist that should permit development to occur and that on- and off-site concerns attributable to the proposed development are addressed.
- **Moderate Suitability** – There is no presumption the site is either not suitable or suitable for development.
- **High Suitability** – There is a presumption that land is suitable for development, but does not guarantee that a proposed development is appropriate for the location.

The Development Demand Model developed for Carthage includes two components: Employment Center Suitability and Residential Neighborhood Suitability. Employment Center Suitability examines the suitability for uses that would draw a high number of employees, customers, or resources to a particular area, such as industrial uses and regional business uses. Residential Neighborhood Suitability examines the suitability for

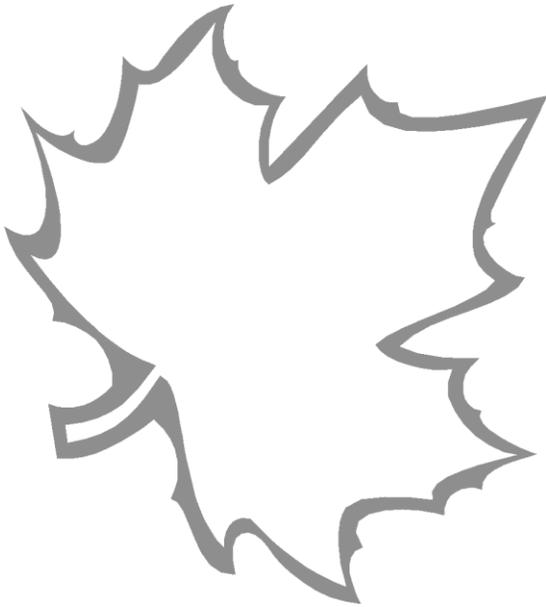


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uses that are neighborhood based, such as residences of all types, neighborhood businesses, and some public and civic uses such as schools. The outcomes of the two components of the model are shown in **Map 4**, Residential Neighborhood Suitability, and **Map 5**, Employment Center Suitability.

The model is intended to supplement the Future Land Use Map and aid in future decision making for areas that are shown as Agricultural or Urban Reserve. In some cases, the model shows that land is highly suitable for both Employment Center and Residential Neighborhood. In those cases, the City will need to evaluate other information available to make a decision.

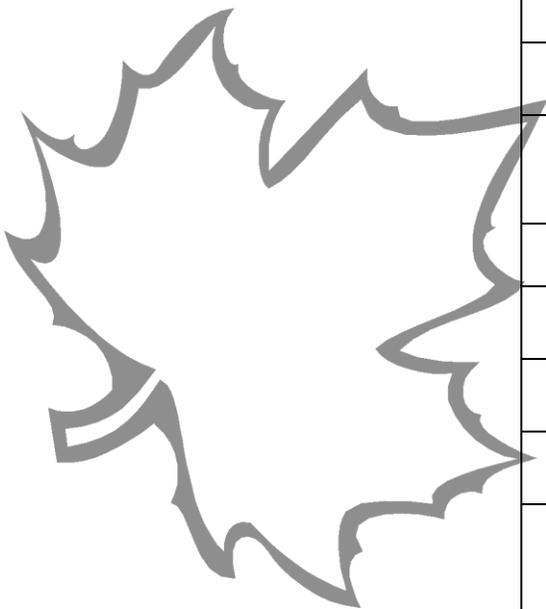
As conditions change, the model may be updated to show the impact of new facilities and development decisions.



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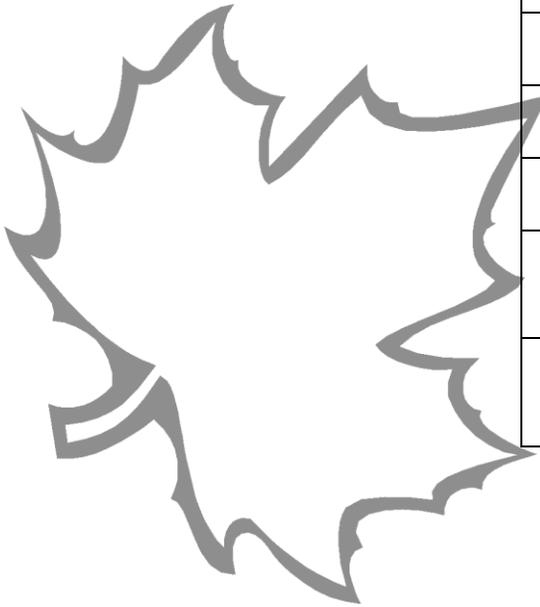
Exhibit 12: Residential Neighborhood Suitability Factors

Residential Neighborhood Development		Presumption of Development Suitability			Prioritized Weight
		Low Suitability (high constraint)	Moderate Suitability (moderate constraint)	High Suitability (low constraint)	
Factor	Description				
1	Identify lands with important environmental characteristics				
1.1	Identify lands within floodplain	Within floodplain	Within 500 Feet	Outside floodplain	4
1.2	Identify lands proximal to drainage buffers	Within 100 feet	Within 500 Feet	Outside 500 Feet	2
2	Identify lands with important physical characteristics				
2.1	Identify lands within Hydric Soils	Within Hydric Soils		Outside Hydric Soils	1
2.2	Proximity to Wetlands	Inside Wetlands	Within 500 Foot Buffer	Outside Buffer	1
2.3	Prime Farmland Classification	Poor Value	Moderate Value	High Value	3
2.4	Proximity to lands suitable for dwellings without basements	Poorly Drained, Very Poorly Drained	Moderately Well Drained, Somewhat Poorly Drained	Well Drained, Somewhat Excessively Drained, Excessively Drained	2
2.5	Identify lands with steep slopes	Greater than 25 percent slope	15 to 25 percent slope	Less than 15 percent slope	3
3	Identify land use compatibility and development potential				
3.1	Proximity to highway	Outside 1 Mile	Between .5 and 1 Mile	Within .5 Mile	2



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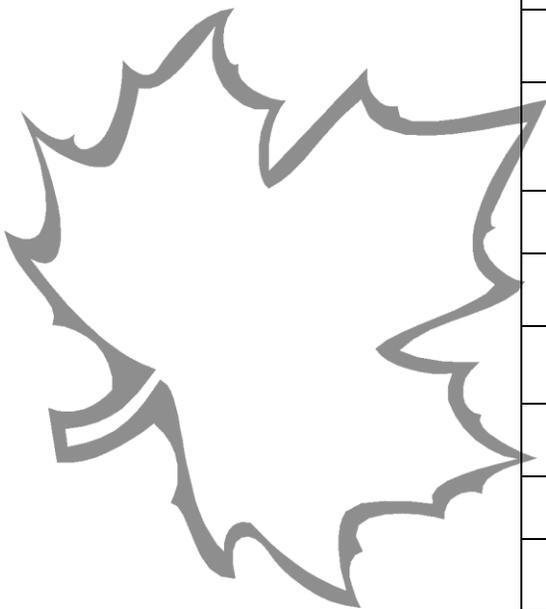
Residential Neighborhood Development		Presumption of Development Suitability			Prioritized Weight
		Low Suitability (high constraint)	Moderate Suitability (moderate constraint)	High Suitability (low constraint)	
Factor	Description				
3.2	Proximity to residential developed land	Outside 1 Mile	Between .5 and 1 Mile	Within .5 Mile	1
3.3	Proximity to water lines / service area	Outside .5 Mile	Between .5 and .25 Mile	Within .25 Mile	4
3.4	Proximity to sewer lines / service area	Outside .5 Mile	Between .5 and .25 Mile	Within .25 Mile	4
3.5	Proximity to municipal boundary	Outside 1 Mile	Between .5 and 1 Mile	Within .5 Mile	1
3.6	Identify lands proximal to fire station	Greater than 4 Miles	Between 2 and 4 Miles	Within 2 Miles	3
3.7	Identify lands proximal to public school	Greater than 4 Miles	Between 2 and 4 Miles	Within 2 Miles	2



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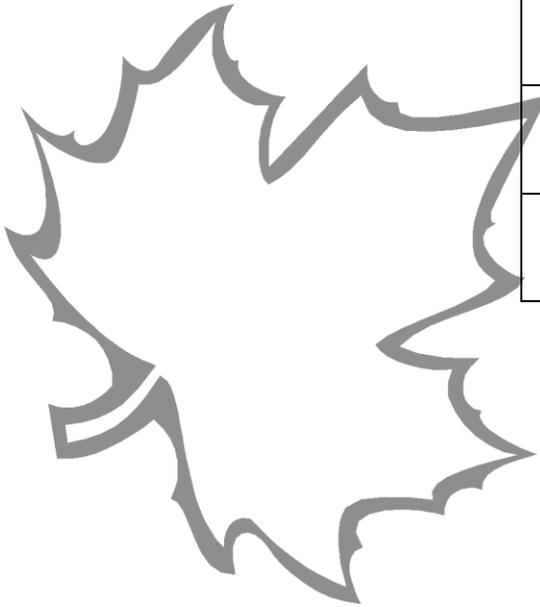
Exhibit 13: Employment Center Suitability Factors

Employment Center Development		Presumption of Development Suitability			Prioritized Weight
		Low Suitability (high constraint)	Moderate Suitability (moderate constraint)	High Suitability (low constraint)	
Factor	Description				
1	Identify lands with important environmental characteristics				
1.1	Identify lands within floodplain	Within floodplain	Within 500 Feet	Outside floodplain	1
1.2	Identify lands proximal to drainage buffers	Within 100 feet	Within 500 Feet	Outside 500 Feet	1
2	Identify lands with important physical characteristics				
2.1	Identify lands within Hydric Soils	Within Hydric Soils		Outside Hydric Soils	1
2.2	Proximity to Wetlands	Inside Wetlands	Within 500 Foot Buffer	Outside Buffer	1
2.3	Prime Farmland Classification	Poor Value	Moderate Value	High Value	3
3	Identify land use compatibility and development potential				
3.1	Proximity to highway	Outside 1 Mile	Between .5 and 1 Mile	Within .5 Mile	5
3.2	Proximity to industrial developed land	Outside 1 Mile	Between .5 and 1 Mile	Within .5 Mile	4
3.3	Proximity to residential developed land	Within 1/8 Mile	Between 1/8 and 1/4 Mile	Greater than 1/4 Mile	10
3.4	Proximity to water lines / service area	Outside .5 Mile	Between .5 and .25 Mile	Within .25 Mile	4



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Employment Center Development		Presumption of Development Suitability			Prioritized Weight
		Low Suitability (high constraint)	Moderate Suitability (moderate constraint)	High Suitability (low constraint)	
Factor	Description				
3.5	Proximity to sewer lines / service area	Outside .5 Mile	Between .5 and .25 Mile	Within .25 Mile	4
3.6	Proximity to municipal boundary	Outside 1 Mile	Between .5 and 1 Mile	Within .5 Mile	1
3.7	Identify lands proximal to fire station	Greater than 4 Miles	Between 2 and 4 Miles	Within 2 Miles	6
3.8	Identify lands proximal to elementary school	Within 0.5 mile	Between 0.5 and 1 Mile	Greater than 1 Mile	5



2.4 Economic Development

This section focuses on key economic development issues facing Carthage, including sustaining the local economy and exploring unique niches for local businesses. Economic development is not a task that can be successfully tackled by one organization alone. The City of Carthage works cooperatively with the Carthage Chamber of Commerce to retain and expand local businesses and to attract new businesses to the area; and with the Carthage Convention and Visitors Bureau to attract visitors to the area. These partnerships are essential as the City continues to identify needs for particular businesses within the City and works to expand its retail economy.



One key component of economic development that the City controls is land use. Land use decisions have broad fiscal implications for public and private entities related to the costs to serve and revenue generated by various land uses. While commercial land uses are generally revenue generators that contribute positively to a City's budget, residential uses generally cost more to serve than they contribute through fees and taxes. Therefore it is important to balance residential and commercial growth to maintain the fiscal stability of the City and its ability to provide a high level of facilities and services.

The availability of appropriate commercial and industrial development sites, while necessary, isn't likely to induce economic growth on its own. However, the lack of appropriate sites is certain to limit economic growth. It is through partnerships and other programs that the City can further encourage economic growth. Supporting the educational system, in order to produce a high quality workforce, and providing a high level of services to attract and retain high level workers is an essential role that the City also plays. Protecting the environment is also key to economic development. When regions come under scrutiny by federal agencies due to non-attainment of water and air quality standards, it can become more difficult to attract businesses, both due to increased performance standards and quality of life issues. Once again, economic, environmental and social sustainability are linked in the quest to build a better community.

2.4.1 Jobs / Housing Balance

The jobs / housing balance within a community has implications for residents and employers as well as for service providers. A balanced community has employment options for residents, so that they can live and work in the same community, and an educated workforce for employers, so that they are able to retain employees who are vested in their community and in their job. Communities with an imbalanced ratio of jobs to housing are unsustainable for both residents and employers.

A balanced jobs to housing ratio can reduce traffic congestion, support revenue generation and provide a high quality of life for residents. As discussed, critical to the achievement of jobs / housing balance is the designation of appropriate sites for non-residential development on the Future Land Use Map.

2.4.2 Retail/Commercial Development

While Carthage provides a full-range of development types, goods, and services to its residents, it is not a retail or commercial center within Southwest Missouri. Most Carthage residents travel to Joplin or other nearby regional centers to take advantage of greater retail opportunities. Carthage has made successful efforts in recent years to attract more retail development and has experienced some success in these efforts, such as the opening of the Lowe's store on the south side of the City.

Carthage intends to continue their efforts to attract greater retail and commercial development, particularly to expand the local sales tax base and provide services to residents.

2.4.3 Industrial Development

Service and retail jobs serve local needs, while basic sector jobs, such as production and mining, bring money into the local economy from a broader area, through exports. Although a generally declining portion of the national economy, basic sector jobs are important to local economies as they contribute net gains and provide higher quality jobs.

Carthage has a number of active and vital industries, such as Leggett and Platt and Renewable Environmental Solutions. The strong industrial base of the City's economy



provides jobs for residents of the City and the region. The industrial park on the north side of the City is near capacity and the City has taken steps to provide additional industrial expansion areas. The City is committed to supporting the industrial base, both by ensuring that there are ample locations for industrial development and by protecting these areas from incompatible development.

The City has positioned itself to support industrial development in the southwestern area of the City, although this type of development would require a new interchange on US-71. The City prefers to find “cleaner” industries to locate in this area, most of which is already zoned for light industrial.

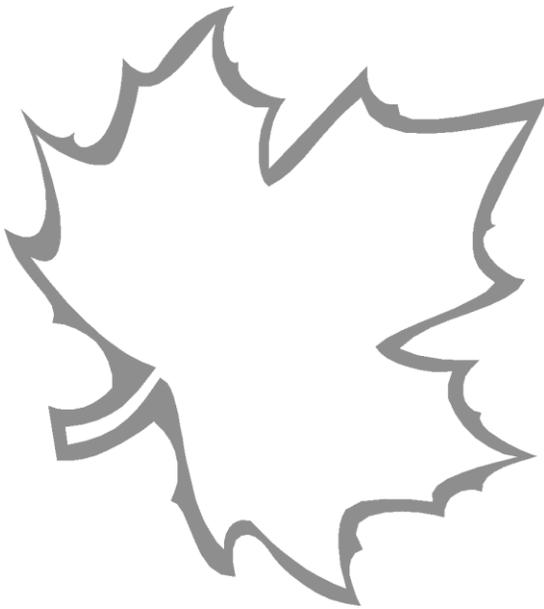
2.4.4 Civic Uses

Carthage is the historic county seat for Jasper County and the County Courthouse continues to house the main functions of the County government, with annex space located in close proximity to the downtown square. The downtown location for these County buildings draws County employees, people accessing County services, and complementary businesses to downtown Carthage. The importance of the County functions to downtown Carthage is immeasurable in terms of defining the character of and drawing visitors to the downtown square. For these reasons, maintaining the County’s presence is important for the long-term health and stability of downtown. The City should work with the County to ensure that as the County’s needs change, the downtown square continues to serve as the heart of Jasper County.

2.4.5 Incentives

Carthage generally has a strong economy, with local businesses that are continually growing and established businesses that bring new residents to the area. However, there is a need for new enterprises in the area and a need to attract new employees and business people to live in Carthage rather than locating in a nearby community such as Webb City or Joplin.

There are two enterprise zones within the City; one is located on the northern side of the City around the existing industrial park. A second is a joint enterprise zone between Joplin and Carthage in the southwestern area of the City. Carthage has an agreement



with the City of Joplin to administer any development in that enterprise zone that is within the Carthage Planning Area.

To support economic sustainability, this plan recommends that incentives should not be given to employers whose average salary is below the County's median wage.

2.4.6 Tourism

Carthage is home to a number of tourist attractions that draw visitors to the area, from the Precious Moments Chapel to the abundance of Victorian homes to its Civil War-era resources. The Carthage Convention and Visitors Bureau (CVB) works to market Carthage as a tourist destination and develop the City's assets.

While this Plan is not a marketing plan, the City's ongoing growth and development, as well as the attention given to redevelopment and support to the City's historic core, will have an impact on the CVB's activities and on the City's ability to continue to attract visitors to the area. In particular, downtown Carthage and the City's historic resources provide an economic niche to support small and specialized businesses. See the Historic Preservation section for an expanded discussion on the economic benefits of historic preservation.



2.5 Housing

Providing a balance of housing types within the community can be a challenging endeavor. Local housing issues often involve a broad range of considerations and terminology. Before any meaningful discussion can occur on housing policy, it is important to clarify specific definitions frequently used by those who are addressing local housing issues in the community.

Workforce housing refers to the concept of providing programs that meet the Carthage's diverse workforce housing needs, consisting of both owner- and renter-occupied housing that is affordable to the local workforce and carefully located to meet their needs.

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The persons and families that need affordable workforce housing are, for the most part, ‘working people’. This is a particular hardship for those who work in entry level jobs that are vital to sustaining a good economy and a good quality of life for everyone, and also includes essential workers (police, fire, health care, utilities, teachers and child care workers), retail, industrial, office and service industry workers, entry-level professionals and public sector (government and non-profit community organizations) employees.

There are also special needs populations outside of the workforce who need housing assistance. These groups include seniors, persons with disabilities and the homeless.

2.5.1 Housing Sustainability

Sustainable communities provide housing options for all residents, so that people can stay invested and participating within their community though their housing needs may change over time. In terms of housing, social sustainability means that housing is available for people of all racial, ethnic and socioeconomic backgrounds, as well as all household types (families, singles, un-related individuals, elderly, etc.). Sustainable neighborhoods provide a mixture of housing forms, sizes, prices and densities, as well as opportunities for social interaction, such as neighborhood parks or neighborhood-based schools. Conventional subdivisions are often designed and marketed to separate housing products based on small pricing increments, for instance, homes with two bedrooms priced very closely to one another are all located in one pod, while slightly larger homes with three bedrooms priced just higher are located in a different pod. While this is presented as a way to maintain property values, it really serves to isolate people based on very small economic factors and matters of preference.

From an economic perspective, adequate workforce housing should be available to support a high-quality employment base for local and regional employers. Workforce housing is necessary if the community and region are to maintain and enhance their economic health and vitality. Additionally, the provision of adequate, attainable housing helps to prevent neighborhood deterioration and a declining tax base.

Finally, from an environmental perspective, housing should be sustainable in terms of energy efficiency and its ecological footprint. The design of neighborhoods should

Community Development

support alternative transportation methods and public health goals through the integration of pedestrian facilities and proximity to employment opportunities.

The most immediate housing need identified in Carthage is for middle-income housing, which falls under the umbrella of workforce housing. This need will likely be exacerbated as the increasing costs of fuel and construction materials contribute to increased prices for housing in general. Rising energy costs for transportation and home heating and cooling, as well as the related increases in commodity and food costs will limit the budget that most families can spend on housing, for both renter and owner-occupied units. It is therefore important for the City to encourage various housing types that are cost-effective, energy-efficient and appeal to a wide variety of household types, such as housing units over commercial spaces, row homes and patio homes, zero lot line development and retirement housing

2.5.2 Public Safety

Landlord-tenant issues are a growing concern in the City. While the Police and Fire Departments are interested in conducting inspections to address safety issues, the City does not have a code that allows it to do regular inspections of rental property. This is of concern particularly in the northeast area of the City that has become home to the growing Hispanic community. While this population has formed a community in the area, it is burdened with the poor condition of rental housing combined with overcrowding of some units, which has caused a public health, safety and welfare concern. The Plan recommends that the City pursue a rental licensing program and inspection program to address substandard rental housing.

2.5.3 Senior Housing

Retired people often have smaller household sizes, reduced incomes, and can suffer impaired abilities and mobility as they age. Without housing choices, long-time residents may be forced to leave the community they have always lived in to find appropriate housing as they age. It is expected that senior housing will be a growing concern as baby boomers age.

Senior housing is generally based on market-rate rents, and provides a community for seniors to live in that provides for their increasing needs. Communities that are



designed for those 55 years of age and older are increasingly committed to an “active lifestyle” for seniors and cater to the increased health and vitality of today’s seniors. Many middle-income seniors that are looking for housing do not qualify financially for the available government-subsidized senior housing. The preference of many seniors is to obtain modestly-sized residences where they can live near their children and grandchildren. Additionally, the principles of “Visitability” are increasing important to the housing needs of the senior population.



Accessible House, Photo Source: www.activerain.com

2.5.4 Visitability

As of 2006, approximately 15.1% of Americans had a disability status,³ yet the majority of American homes and communities are neither welcoming nor safe for physically handicapped people to travel to. Communities and homes built inaccessible to so many create social barriers, increase the number of institutionalized individuals, and increase the chance of injury for handicapped individuals. As the baby boomers reach retirement age the need for accessible housing increases.

Currently in the U.S. there are limited federal mandates that affect the way a new home is constructed in regard to handicap accessibility, but these do not apply to single-family housing. Title II of the Americans with Disabilities Act (ADA), as well as many state laws require homes built with public funding to be accessible. However, more and more states are mandating or adopting incentives for homes built accessible to the needs of a growing number of Americans.

Visitability is a concept that deals with the ability of a physically handicapped individual to visit a home or community without needing assistance. Visitability is defined in two parts; it includes a new attitude and way of thinking towards physically handicapped people and new home construction, as well as definable features that allow a home to be considered visitable.

Since the cost of converting a built home to accessible standards is much greater than building accessible homes in the first place, visitability proponents emphasize

³ Source: U.S. Census

incorporating the principles of visitability in the new construction of homes. The minimal requirements for a home to meet visitability standards are:

- 32 inch wide passage doors and hallways
- At least a half bath room on the main floor large enough to accommodate a wheel chair.
- At least one zero-step entrance approached by an accessible route

The City of Carthage is home to persons with various special needs, including an aging baby boomer population that will require accessible housing. By considering these needs in the planning and development review process, the City can set itself apart as a place with a high quality of life for all its citizens and a progressive view of inclusiveness.



2.6 Community Identity

While it is hard to quantify, the aesthetic and design components of places are valued by residents. Efforts to landscape, unify design elements, limit strip development and other aesthetic considerations are valued, even if the design is not architecturally distinguished. It has been found that the urban design strategies used in new planned communities contribute to measures of high quality of life for residents. These lessons can be applied on a broader basis as communities evolve over time and seek to develop a unified sense of place.

2.6.1 Community Inclusiveness

In recent years, Carthage has experienced not only population growth but also demographic changes, as the racial and ethnic composition of the community has grown more diverse. The changes that Carthage has experienced in recent years have prompted a number of related concerns. How can the City maintain a cohesive community identity? How can new residents, especially residents who may have different backgrounds or cultural traditions from lifelong Carthage residents, be smoothly integrated into the community? What can be done to ensure communication throughout the City and between different neighborhood or cultural groups?

The City has experienced strong growth of its Hispanic population over the last ten years, as new Hispanic residents are attracted to the City by employment opportunities.



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The growth of this Hispanic population is one of the driving forces behind the City's growth, particularly since the 2000 Census. Rapid growth of any kind has impacts of the availability of facilities and services, such as schools, as well as both rental and for-sale housing. Additionally, the growth of a particular ethnic community has its own challenges, such as recognizing particular language, cultural and social needs, as well as preferences for community amenities and the built environment.

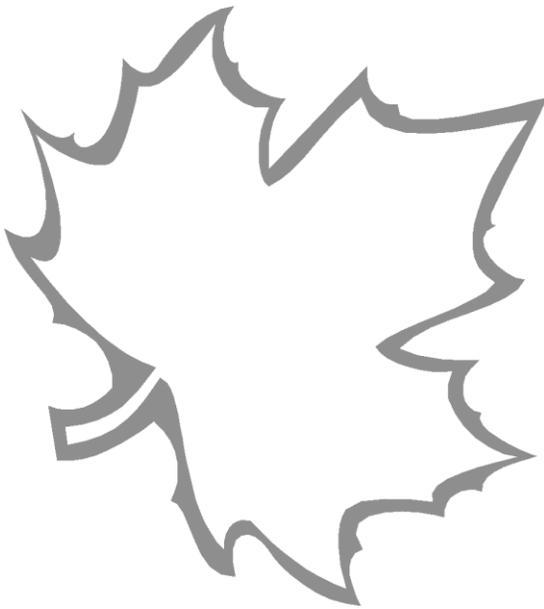
The Hispanic population initially located in the northeast area of the City, but has recently begun spreading throughout the City, especially as the residents have transitioned from rental housing to owning their own homes. Disinvestment in the rental housing in the northeast area of the City has been a burden to renters in the area, including the Hispanic community, however a strong support network has also grown in the area, with businesses, churches and social support services that cater to the Hispanic community. Despite the fact that the Hispanic residents have located in areas throughout the City, the perception is still that this population is isolated from the City at large.

Continued outreach and communication is essential to prevent potential conflicts among long-term Carthage residents and Hispanic newcomers, and perhaps more importantly, to welcome this growing population that will contribute to Carthage's growth and prosperity. By building a reputation for inclusiveness, the City of Carthage may reap the benefits of being a truly multi-cultural city, home to a strong, integrated Hispanic population as well as other diverse groups, including the growing Vietnamese and Chinese populations.

Ultimately, community identity issues are not about the growth of one ethnic group or the decline of a particular neighborhood. Strengthening community identity is a method of building a shared foundation for communication and problem-solving that can move the City forward in achieving all of its goals. It is a way of strengthening Carthage as a community of choice for new and existing residents.

2.6.2 Public Realm: Greenspaces, Streetscapes & Pedestrian Amenities

The physical condition of streets, sidewalks, utilities, public spaces and other infrastructure often provides visitors with their first impression of a place and sets the



tone for the level of maintenance of private property. High quality streetscapes enhance the community identity and encourage pedestrian activity, adding vitality to commercial and residential areas. Pedestrian amenities make walking and biking attractive for recreation and travel. Such amenities include:

- Sidewalks and bike lanes;
- Street furniture: benches, trash receptacles, bicycle racks, etc.;
- Street trees and street lights;
- Constructing other public spaces, such as greens and squares;
- Dedicating public access easements; and
- Providing public art.

This Plan includes policies and strategies for improving the aesthetic quality of Carthage's gateways, corridors and other public spaces to reflect the high quality of life and pride of community.



2.7 Community Character

2.7.1 Historic Preservation

Carthage is a community with a long and storied history, from the community's pre-Civil War roots to its location along US Route 66. Historic preservation is an important issue facing the community. Not only is the community's history an important part of its character, but the historic resources in and around Carthage draw visitors to the area, making historic preservation an element of the City's economy.

Historic preservation aims to identify, preserve, and protect sites, buildings, and structures that have significant cultural, social, economic, political, archaeological, or architectural history. The social and cultural benefits to historic preservation are numerous; it can revitalize neighborhoods and instill pride in the community.

Preservation is also associated with sustainability, as it preserves existing buildings and sites as well as their infrastructure, rather than building new structures in greenfields. By taking advantage of existing infrastructure through adaptive reuse (using historic buildings for new purposes), preservation reduces the environmental toll of growth.



Community Development



Historic preservation also increases and encourages heritage tourism. The National Park Service identifies heritage tourism as “traveling to experience the places, artifacts, and activities that authentically represent the stories and people of the past and present.” From an economic perspective, a study by the Travel Industry Association of America found that people who engage in historic and cultural activities do more, spend more, and stay longer than other types of U.S. travelers.⁴ While on vacation, visiting historic and cultural sites ranks second only to shopping, which underscores the economic importance of preservation.

There are three historic districts and two historic buildings in the City listed on the Federal Register of Historic Places, in addition to numerous local cultural and historic sites, such as the WPA-constructed buildings at Municipal Park and the City’s many Victorian homes. The City has an adopted historic preservation ordinance; however, it is not consistently enforced.

The City’s previous efforts to build a historic preservation program were clouded by general confusion and a lack of public education. Some property-owners within the existing historic districts believe that they “opted out” of the historic district, although it is unclear from what they opted out and whether the opt-out carries any legal basis. There is also a general lack of awareness of historic preservation issues in the community at-large. Past historical societies or organizations have dwindled.

Despite the current condition of “benevolent neglect,” the City recognizes the importance of its historic resources and desires to maintain them. This Plan, through the Community Character goal and policies, focuses its efforts for historic preservation on what has been defined as the City’s Cultural Area, shown in **Map 6**. This area encompasses the City’s historic districts, major parks, the bulk of the City’s Victorian homes, the Route 66 corridor and associated gateways into the City.

Not all properties within the Cultural Area are historic. Development along Central Avenue that is included in the Cultural Area includes a number of fast food



⁴ Source: Cultural Resource Management, National Park Service, U.S. Department of the Interior

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establishments, banks, and other contemporary buildings. The purpose of the Cultural Area is not to require new construction to replicate historic styles or to force the preservation of every old building. The purpose is to concentrate the City's preservation efforts to create the greatest possible impact. The Cultural Area has the greatest potential for defining and protecting a critical mass of historic buildings that will contribute to the character of the community.

One of the key recommendations of this Plan is for the City to investigate and move toward participation in the Certified Local Government (CLG) Program run by the Missouri Department of Natural Resources' State Historic Preservation Office. While the requirements for participation are flexible, they are built on four main requirements:

- enacting a historic preservation ordinance,
- appointing a preservation commission;
- conducting an ongoing survey and inventory of historic properties; and
- conducting public outreach and education.

Participation in the CLG Program offers two main benefits. First, CLG participation receive training from the State Historic Preservation Office on historic preservation topics and prioritized response on technical assistance requests. Second, Historic Preservation Fund grant applications from Certified Local Governments receive a higher priority. Pursuing certification offers the City a good opportunity to revitalize its historic preservation efforts.

Except where specifically noted, all policies related to the Community Character Goal are to be applied specifically to the defined Cultural Area.

Carthage on the Map: Route 66

Route 66 was created in 1926 as part of the nation's first system of federal highways. Linking Chicago, Illinois to Santa Monica, California, Route 66 was the shortest, best-weather route across the country, and it achieved its iconic status as the most famous highway in America through literature, film, television, and song.

The route was decommissioned in 1985 and traffic was diverted to the interstates, and many of the locally-owned establishments that catered to travelers and gave the Route its character went into decline. In 2001, Congress recognized the significance of Route 66 through the creation of the National Park Service Route 66 Corridor Preservation Program, a federal program of technical and financial preservation assistance. Along the Route, significant buildings and businesses are threatened by economic hardship, deferred maintenance, development pressures, and a lack of awareness of the importance of these recent-past resources. Individual states, private and public organizations and individuals have also taken action in recent years to protect the Route.

Route 66 has been named to the World Monuments Fund 2008 Watch List of 100 Most Endangered Sites. In particular, motels on Route 66 are particularly threatened and are listed as a category to the 2007 America's Eleven Most Endangered Places List by the National Trust for Historic Preservation. According to the National Park Services, these listings bring important attention to Route 66 around the nation and the world, raising awareness of its significance, history, challenges and successes.

Source: National Park Service; Route 66 Corridor Preservation Program.



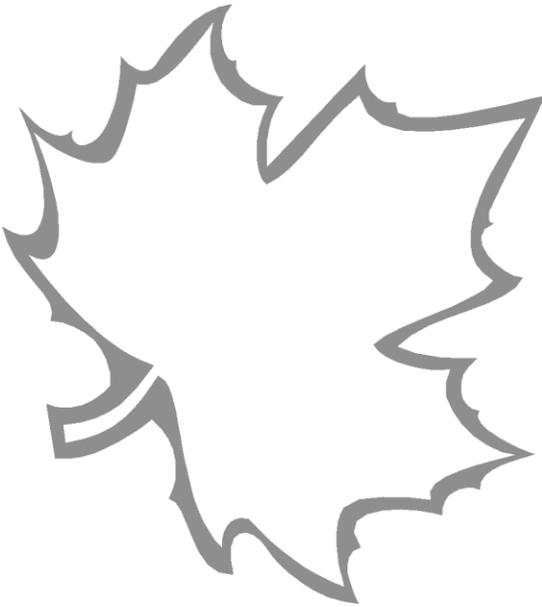
Photo Source:

<http://www.theroadwanderer.net/66Missouri/carthage.htm>

2.7.2 Crime Prevention Through Environmental Design

Proper design of the physical environment can be used to reduce opportunities for criminal activity to occur and improve public perceptions of safety and well-being.

When residents feel safe in their community, they experience a higher quality of life and the community becomes more attractive for investment of all types. Crime Prevention Through Environmental Design (CPTED) uses four physical design strategies, as described below, to create safer neighborhoods, shopping, recreation and business areas, as well as public spaces. Encouraging these principles through the City's development review process may contribute to great comfort and perceptions of safety in Carthage.



Four Strategies of Crime Prevention Through Environmental Design

1. Natural Surveillance - A design concept directed primarily at keeping intruders easily observable. Promoted by features that maximize visibility of people, parking areas and building entrances: doors and windows that look out on to streets and parking areas; pedestrian-friendly sidewalks and streets; front porches; adequate nighttime lighting.
2. Territorial Reinforcement - Physical design can create or extend a sphere of influence. Users then develop a sense of territorial control while potential offenders, perceiving this control, are discouraged. Promoted by features that define property lines and distinguish private spaces from public spaces using landscape plantings, pavement designs, gateway treatments, and "CPTED" fences.
3. Natural Access Control - A design concept directed primarily at decreasing crime opportunity by denying access to crime targets and creating in offenders a perception of risk. Gained by designing streets, sidewalks, building entrances and neighborhood gateways to clearly indicate public routes and discouraging access to private areas with structural elements.
4. Target Hardening - Accomplished by features that prohibit entry or access: window locks, dead bolts for doors, interior door hinges.

2.8 Goals and Policies

2.8.1 Land Use

Land Use Goal: Maintain a balanced, sustainable land use pattern that accommodates growth while fostering community vitality and improving the quality of the developed environment.



- LU-1: The City shall use the land use categories described in **Exhibit 11** for future land use planning. Each category may permit land uses and densities from more than one zoning district, as shown.
- LU-2: The City shall use the **Future Land Use Map (Map 2)** to guide land use and development decisions. The map illustrates the distribution and type of future land uses. The City shall establish a mechanism that allows interpretations and minor boundary adjustments in the Future Land Use Map without requiring formal Plan amendments.
- LU-3: Prior to amending the Future Land Use Map, the City shall make findings that the proposed amendment:
- Will be consistent with the Plan goals and priorities;
 - Will be compatible with existing and future land uses for surrounding areas of the City;
 - Will not create a shortage of any particular type of residential or non-residential land; and
 - Will enhance the overall quality of life in the City.
- LU-4: Prior to amending the Official Zoning Map, the City shall make findings that the proposed amendment:
- Will be consistent with Plan goals and policies;
 - Will be compatible with the future land use as shown in the Future Land Use Map;
 - Is compatible with the character, zoning, and uses in the area;

Community Development

- Is consistent with the recommendations of the City’s professional staff; and
- Will enhance the overall quality of life in the City.

LU-5: Ensure that the Future Land Use Map is regularly updated to reflect any changes in zoning classifications or development patterns.

LU-6: Discourage development within the floodplain. Portions of a parcel lying within the floodplain may be used for open space, trails, or other amenities and may be counted toward a parcel’s overall calculation of density.

LU-7: Coordinate land use decisions to ensure that residential development does not create negative impacts on the viable operation of agricultural, commercial and industrial uses.

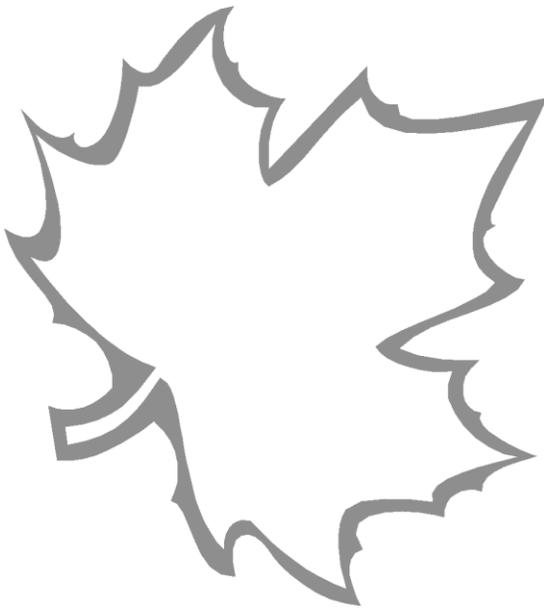
LU-8: Encourage infill development through incentive zoning, public-private partnerships, and other strategies that discourage leapfrog development on the outskirts of the City.

LU-9: Prior to considering any development applications in areas shown as Urban Reserve on the Future Land Use Map, the City shall consider Future Land Use Map amendments for such areas.

LU-10: Require an area plan showing internal circulation, anticipated uses, design elements, and any other elements required by the City when an application for an amendment to the Future Land Use Map is made for land categorized as Urban Reserve.

2.8.1.1 Urban Service Area Policies

LU-10: Seek opportunities to work with Jasper County to manage development occurring on the outskirts of the City.



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LU-11: Coordinate capital improvements plans with those of Jasper County, the Carthage School District, and other service providers to more efficiently serve the community.

LU-12: The Future Land Use Map illustrates the Urban Service Area around Carthage. The following statements shall guide development of an intergovernmental agreement that directs land use, development, and utility extensions:

- a. The City's public improvement standards will apply to new subdivisions and non-residential development.
- b. The County shall retain final approval authority for subdivision and zoning applications. The City shall work with the County to develop a joint City/County review committee to ensure compliance with adopted improvement standards.
- c. Jointly establish with the County standards for interim development of parcels that cannot be served with adequate water and wastewater service through existing facilities or improvements identified in the City's adopted CIP.
- d. Undeveloped land in the Urban Service Area should be retained in rural uses with limitations on premature subdivisions. Premature subdivision exist where any of the following criteria apply:
 - i. Lack of adequate water or wastewater facilities;
 - ii. Lack of adequate roads to serve the subdivision;
 - iii. Lack of or poor access to public facilities such as recreational facilities, schools, fire protection, and other facilities that must be provided at public expense; or
 - iv. Inconsistency with adopted capital improvement plans.

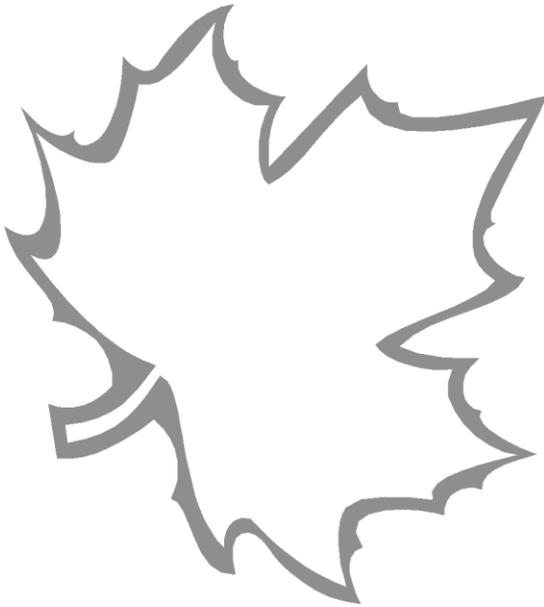


2.8.1.2 Annexation Policies

LU-13: Maintain an annexation program that is fiscally responsible, that serves the needs of Carthage's existing and future residents, and that:

Community Development

- a. ensures that facilities in annexation areas are designed to City standards or provisions have been made to fund upgrades to deficient facilities;
- b. coordinates with residents, property owners, and Jasper County to equitably fund improvements required to bring potential annexation areas into compliance with City standards;
- c. annexes unincorporated islands upon resolution of public service and improvements issues, including street design standards, wastewater system needs, and drainage needs; and
- d. establishes an agreement phasing development and annexation of contiguous holding when an annexation is requested for a portion of contiguous land holdings.



2.8.2 Economic Development

Economic Development Goal: Maintain a strong local economy that provides a stable and diverse economic base and employment opportunities for all segments of the population.

2.8.2.1 Economic Development Policies

- ED-1: Coordinate with the Carthage Chamber of Commerce, Convention and Visitor's Bureau, and other local, regional, and state economic development agencies to create a positive climate for both existing and new businesses.
- ED-2: Coordinate land use decisions to ensure that residential development does not create negative impacts on the viable operation of commercial and industrial uses.
- ED-3: As major industrial development occurs, the City shall re-evaluate the supply of industrial land designated in the Future Land Use Map to

Community Development

ensure that there is an adequate supply of vacant land that can readily be served by adequate public facilities.

ED-4: Ensure that financial incentives are linked to specific performance criteria, such as specified numbers of jobs, wage rate targets, redevelopment objectives and/or other measurable economic development objectives.

ED-5: Provide opportunities for economic development interests such as the Chamber of Commerce to participate in decision-making processes pertaining to economic development, capital facility planning and land uses.

ED-6: Proactively coordinate with economic development interests to designate, serve, and protect sufficient economic development sites to accommodate long-term employment growth, and that capitalize on the City's ability to provide infrastructure and services.

ED-7: Encourage the recruitment of new retail and commercial business and the retention of existing retail and commercial businesses.

ED-8: Work to provide an atmosphere attractive to new and existing businesses and industries that will strengthen the area economy.

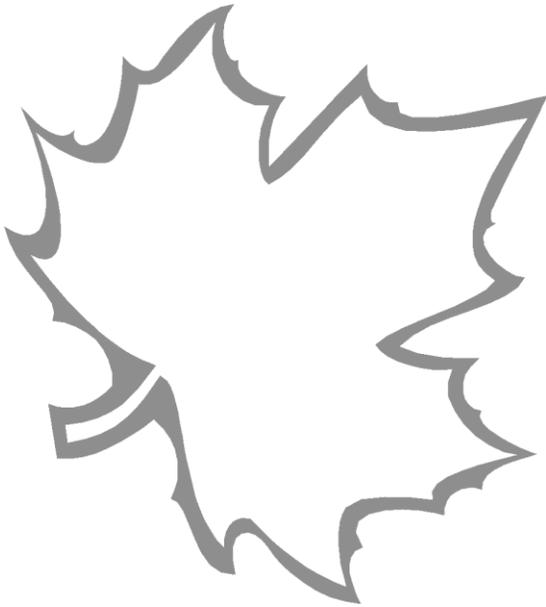
ED-9: Participate in public-private partnerships for economic development initiatives through investment in infrastructure and/or other development assistance. Economic development incentives shall be linked to measurable community benefits, such as wage and job production targets.

2.8.2.2 Tourism Policies

ED-9: Continue public investments in parks, trails, and open space amenities that serve residents and visitors and target those investments to support tourism-related development.



- ED-10: Continue to make public investments in the downtown area that support economic development in the area and enhance access for residents and visitors.
- ED-11: Promote the historical and modern heritage of the community through support of special events and festivals.



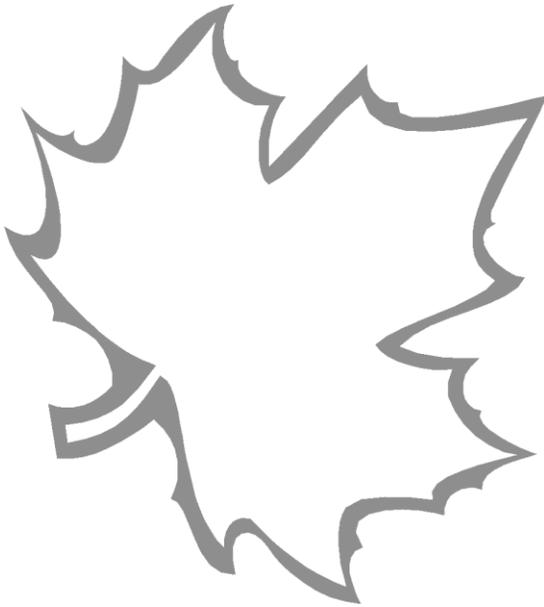
2.8.3 Housing

Housing Goal: Provide adequate and attainable housing through a variety of housing types, and support neighborhood stability and reinvestment.

2.8.3.1 Housing Policies

- H-1: Proactively identify dilapidated structures and take appropriate measures to encourage property owners to rehabilitate or demolish unsafe structures, such as through fee waiver for building or demolition permits.
- H-2: Permit flexibility to address site limitations (such as irregular or small lots and parking requirements) that otherwise preclude infill redevelopment activities and to encourage desirable uses.
- H-3: Protect existing residential neighborhoods from incompatible encroachment of commercial and industrial uses.
- H-4: Encourage the development of a mix of housing types to meet the needs of residents throughout their lives (e.g., starter homes through nursing facilities).
- H-5: Support programs to improve the energy efficiency of housing to moderate energy consumption and reduce long-term energy costs for residents.

- H-6: Encourage the development of mixed-density projects that provide the opportunity for varied housing choices and a range of housing prices.
- H-7: Ensure that adequate opportunities are provided for development of housing for seniors and other populations with special needs.
- H-8: Assist housing agencies and non-profit organizations in the provision of affordable housing and other needed housing services. City assistance may include technical or other support for grant applications, fee subsidies, coordination of agency efforts, funding programs or other direct or indirect assistance.



2.8.4 Community Identity

Community Identity Goal: Enhance a sense of community identity, civic pride and inclusiveness for newcomers and long-term residents, establishing Carthage as a diverse and multicultural community.

2.8.4.1 Community Identity Policies

- CI-1: Ensure that new development and redevelopment be designed with an architectural style that is compatible with the surrounding neighborhood and includes a relationship to the overall community identity or sense of place.
- CI-2: Coordinate with community institutions, such as the Carthage School District, McCune-Brooks Hospital, area churches, and other organizations, to identify partnerships and other methods of enhancing community interaction.
- CI-3: Encourage the development of gathering places for formal and informal community interactions, including parks, trails, plazas, and other spaces.

Community Development

- CI-4: Work to develop strong partnerships among neighborhoods, police and other City agencies to solve problems and prevent crime. The City should encourage efforts to mobilize community groups and neighborhoods (e.g., scout troops, service clubs, neighborhood watch groups) to take responsibility for improvement activities such as trash cleanup and graffiti removal.
- CI-5: Enhance landscaping, buffering, and street tree planting in roadways for key gateways and corridors and upgrade existing streetscapes in conjunction with programmed capital improvements projects.



2.8.5 Community Character

Community Character Goal: Preserve and enhance the historic, cultural, and artistic resources that enhance Carthage’s identity and attract residents and visitors to the City.

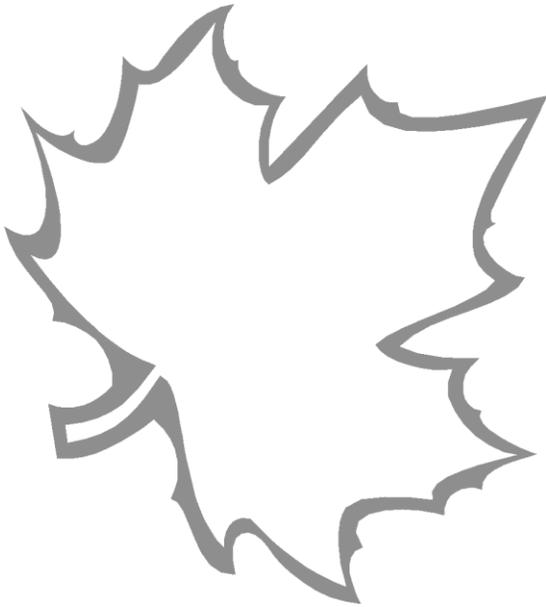
Except where specifically noted, all policies related to the Community Character Goal are to be applied specifically to the defined Cultural Area (Map 6).

2.8.5.1 Community Character Policies

- CC-1: Encourage the development of mixed-use and residential projects within the downtown area to increase the community's housing stock and to enhance the vitality of downtown businesses.
- CC-2: Encourage the retention of ground floor space for retail, service or entertainment uses in the downtown area, while permitting upper floor residential development.
- CC-3: Encourage sensitivity to historical context and the preservation of historic structures and building features and encourage the adaptive re-use of historic buildings.

Community Development

- CC-4: Support efforts to educate Carthage residents on the importance of historic preservation, and the historic survey and designation process.
- CC-5: Increase and maintain pedestrian, cultural, and artistic amenities (e.g., streetscape, public art, public buildings, etc.) to attract residents and visitors to the Cultural Area.
- CC-6: Ensure that redevelopment or expansion projects increase the compatibility of commercial and industrial developments with adjacent neighborhoods.
- CC-7: Citywide, encourage the use of Crime Prevention Through Environmental Design (CPTED) principles in the design of developments to prevent crime and promote personal safety.



Section 3: Facilities, Services & Resources

3.1 Public Facilities & Services

Carthage provides a number of public facilities and services that need to be coordinated with growth and development of the City, some of which are provided outside the incorporated boundaries of the City. This Section is focused on facilities as they relate to development in the City's planning area and the gradual expansion of the City boundaries. As Carthage seeks to meet the needs of future residents, workers, and visitors, it should strive to provide public facilities and services in a reliable and efficient manner.

Although there are definitive numeric measures of service levels for public facilities and services, the locally accepted standards are a matter of policy. Ultimately the community, through its appointed and elected officials, determines the acceptable service levels necessary to achieve and maintain the desired "quality of life".

Though the City of Carthage is a primary provider of community facilities to residents of the City, other service providers also operate within the planning area. For instance, schools and cable television are services that are provided by non-City public or private entities. Despite the fact that Carthage does not provide all of the community services, the City can influence how, where and when these services are provided and how projected growth will affect the service delivery requirements.

While the City does not provide all community facilities and services, the City is *solely* responsible for planning and for land use approvals within the City limits. The City may rely on the availability and/or adequacy of community facilities and services as a factor in the approval, approval with conditions, or denial of applications for development. This may be accomplished informally as the development application is reviewed by City staff, more formally via a referral process whereby each service provider reviews the development for compliance with its standards and requirements, or through a highly rigorous concurrency management system.



The key point is that while the City is not responsible for providing *all* community facilities and services, it does have a responsibility to ensure that all necessary community facilities and services are available at adopted level of service standards at the time of development.

3.1.1 Level of Service

Level of service ("LOS") standards for community facilities and services are most commonly presented in terms of the resident population served. Initially, LOS can be determined by investigating the existing levels of service that are provided to the existing resident population. Level of service indicators can be evaluated based on service provider's LOS goals, performance data provided by other communities and/or professional standards. Levels of service typically are measured and projected in terms of service area population (*e.g.*, two police officers per 1,000 population). LOS also may be based on responses to calls for service. This measure frequently is used for police, fire and EMS services. Based on the level of service standards and the projected population to be served, costs can be projected for facility levels of service.

The LOS data presented below and the cost figures for maintaining the existing LOS through the planning period are intended for discussion and budget planning purposes. The LOS figures are based on provided data that has not been verified for accuracy. These figures should not be used to identify service deficiencies or oversupply.

3.2 Police

The Police Department provides public safety and law enforcement services to area residents. The City maintains a force of 29 commissioned officers and 6 non-commissioned officers. There are two administrative staff and three part-time staff members.

The Police Department maintains a variety of vehicles and other equipment such as radios and communications equipment. The department currently uses six patrol vehicles. Used patrol vehicles are reused as unmarked cars and vehicles for School Resource Officers. The department also has 20 in-car radios and 30 portable radios. The



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Police Department headquarters is an approximately 10,400 square foot building located at 310 West 4th Street.

The Department currently maintains a personnel ratio of approximately 2.2 sworn officers per 1,000 population. Overall police staffing per 1,000 population is at 2.9 employees, as shown in **Exhibit 14**.

Exhibit 14: Levels of Service for Police Capital Equipment

Capital Facility	Existing LOS per 1,000 population
Vehicles	1.3
Radios	3.82
Dispatch Equipment	0.15
Facility Space	794.14



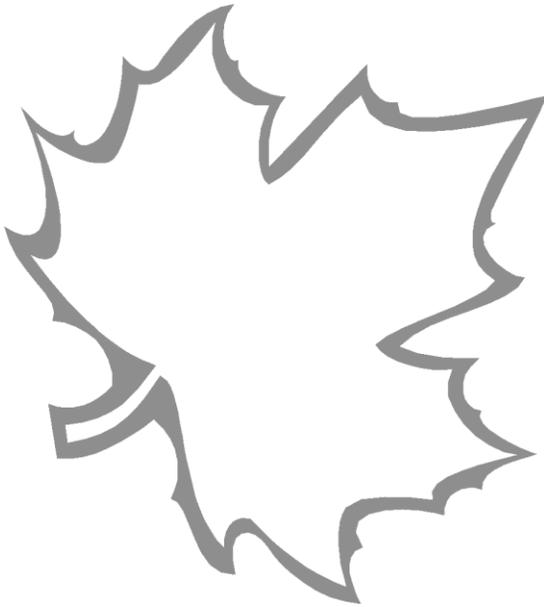
3.3 Fire Protection

The Carthage Fire Department provides fire protection and emergency response within the City limits and the surrounding area. Calls for service are shown in **Exhibit 15**. In 2006, there were 2,138 total calls for service. Medical aid and miscellaneous calls make up the majority of total calls, while fires of all types account for less than ten percent of total incidents.

Exhibit 15: Fire Department Incidents, 2006

Incident Description	Total Incidents	Percentage
Accidents	156	7.3%
Alarm System	56	2.6%
Commercial Fire	5	0.2%
Hazardous Conditions	116	5.4%
Industrial Fire	2	0.1%
Medical Call	989	46.3%
Miscellaneous	388	18.1%
Mutual Aid	18	0.8%
Natural Cover Fire	144	6.7%
Rescue	27	1.3%
Residential Fire	53	2.5%
Smoke Scare	30	1.4%
Trash Fire	75	3.5%
Other	79	3.7%
Total	2,138	-

Source: Carthage Fire Department.



The department currently operates out of one fire station located near downtown Carthage. The station is a 3,600 square foot building. The department has identified a need for an additional station to improve service in the southern areas of the City. When a south station is secured, the department will also need room for a drafting pit, testing area, and training tower.

The department currently employs 18 firefighters, four chief officers, and a secretary.

Existing Fire Department vehicles include three fire engines, three brush trucks, and a ladder truck, a rescue vehicle, a hazmat trailer, and other vehicles. The department has identified a need to replace the older small trucks, including its rescue vehicle, as well as a need for a small boat or raft and a new paging system. The department maintains 0.92 vehicles per 1,000 residents, as shown in **Exhibit 16**.

Exhibit 16: Levels of Service for Fire Capital Equipment

Capital Facility	Existing LOS per 1,000 population
Vehicles	0.92
Communications Equipment	4.66
Facility Space	274.89



3.4 Carthage Water & Electric

Carthage Water & Electric Plant is a public utility that provides water, wastewater, and electric service to Carthage and the surrounding area.

3.4.1 Water

CW&EP produces more than 3 million gallons of water on an average day. **Map 7** shows the network of water lines throughout the City. As stated in the Water and Sewer Rate Study report prepared by Shafer, Kline, and Warren in 2001:

The existing water system for the City of Carthage, Missouri consists of wells, a water treatment plant, pumping stations, water storage facilities, transmission mains, and distribution mains. The water utility is operated by the Carthage Water and Electric Plant, which provides water, sewer and electric services to residents, commercial and industrial customers in the City.

The CW&EP began major improvements to the waterworks system beginning in 1996. These improvements included upgrades to the treatment plant, two new storage facilities, two new wells and improvements to the distribution system. These improvements, costing 6

million dollars will provide the City of Carthage with enough capacity to support growth for many years into the future.

The City [had] 4,535 Residential customers, and 762 Commercial/Industrial customers [in 2001]. Residential water use accounts for approximately 28% of the water produced while commercial/industrial water use accounts for 72%.

3.4.2 Wastewater

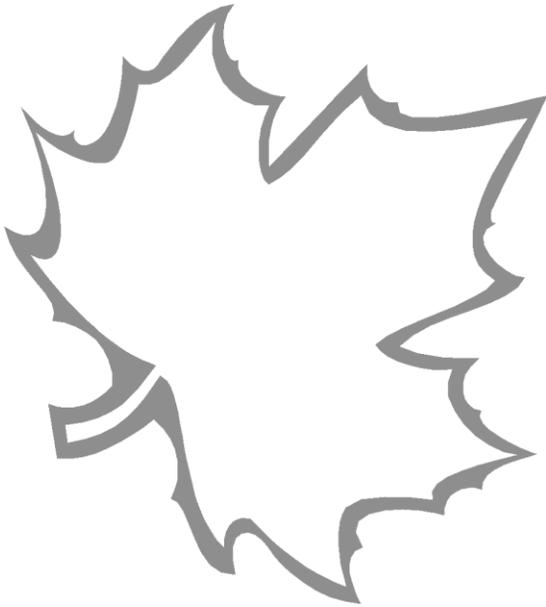
As stated in the Water and Sewer Rate Study report prepared by Shafer, Kline, and Warren in 2001:

The existing sewer system for the City of Carthage, Missouri consists of a collection system and a new mechanical wastewater treatment facility.

During FY 2000, the sewer utility provided service to 4,936 customers. The primary difference between the number of water customers and sewer customers is due to residential customers who provide their own sewage treatment with septic tanks.

The wastewater treatment system is in good physical shape after the improvements financed by the 1996 bond issuance. However, ongoing capital projects to maintain and improve the collection system are necessary. It is anticipated that these projects will primarily focus on replacement of sewer mains in a proactive fashion.

Map 8 shows the existing network of wastewater collection lines. According to City staff, Carthage Water & Electric is in the process of installing a 16 inch sewer line that will open up development in the western area of the City, both within the existing City limits and on the western outskirts of the City. Southern Carthage lies along a ridge that roughly parallels Highway HH. Land lying to the north drains to the Spring River while land to the south drains to Center Creek. Expansion of the wastewater collection system has largely been driven by development; lines and a lift station were recently installed to serve the new McCune-Brooks Hospital. There is a large lift station located on the south side of the City, but it is probably not sized to served industrial growth on



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the south side of the City. Water & Electric has adopted a policy against the installation of numerous small lift stations due to concerns about ongoing maintenance.

Beyond 20 to 30 years, the City will probably need a treatment plant on the south side of the City rather than pumping wastewater over the ridge and to the existing wastewater treatment plant on the north side of the City, but the treatment capacity is considered sufficient for current needs. The adequacy of existing capacity is partially determined by the amount of pre-treatment required by industrial users; Water & Electric is currently updating its industrial sewer policies. The existing plant can be expanded when necessary. At the City present residential growth rate, without significant industrial expansion, capacity is probably available for the next 15 years.



3.4.3 Electricity

According to the CW&EP website:

Carthage Water & Electric Plant serves almost 6,000 residential customers and just over 900 commercial and industrial accounts with electric service. CW&EP's Power Plant located at the intersection of Third & River in Carthage, is rated a 35 Megawatt plant. This means our combination of 9 Nordberg & Cooper dual fuel engines can generate 35 Megawatts of electricity an hour. With our generation and a series of firm power contracts with companies like Sikeston Board of Municipal Utilities and Southwest Power Administration, allow us to keep our reliable, low cost energy supply well into the future.

We have approximately 180 miles of distribution lines throughout Carthage that includes 162 miles of overhead line and 18 miles of underground line.

3.5 Transportation

The predominate mode of travel in and around Carthage is vehicular; the road network is maintained both by the City and by the State, which maintains the state highways passing through the area.

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According to 2005 data, there are approximately 103 miles of roadway in the City, including highways that pass through the City such as US-71 and Highway 96. Functional classifications are shown in **Map 9**. Roadways may be classified into four general types:

- **Major Arterial** routes serve countywide or statewide travel, linking cities and regions together. Speeds and volumes on these routes may be higher. In Carthage, major arterial routes include US-71, Highway 96/Central Avenue, and Highway 571/Garrison Avenue.
- **Minor Arterial** routes serve countywide travel, linking areas together. These routes generally serve lower volumes of traffic than major arterial routes, often because there is a higher level of access from individual properties. In Carthage, minor arterial routes include Fairview Avenue, Centennial Avenue, River Street, and Baker Boulevard.
- **Collector** streets link neighborhoods and smaller areas to the arterial route network and to each other. They are generally smaller than arterial streets, with lower speeds and volumes. In Carthage, collector streets include Chestnut Street, Hazel Street, Highland Avenue, and HH Highway.
- **Local** streets provide direct access to homes, local businesses, and other properties. Most residents of Carthage live on a local street.

Missouri Department of Transportation 2006 traffic count data indicates that the highest traffic levels through the City are found on US-71, where the annual average daily traffic peaks at 19,924 vehicles per day. On City streets, the highest traffic levels are found on Highway 571 south of Airport Drive (13,023 vehicles per day), Central Avenue (14,698 vehicles per day), Baker Boulevard (5,181 vehicles per day), and Fairview Road (4,903 vehicles per day).

3.5.1 Transportation / Land Use Linkage

Transportation is an important and costly component of a community's infrastructure base that has a profound influence on its land use patterns and rate of growth. Consideration of traffic demands is a critical aspect of an overall smart growth framework.



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Transportation is inextricably linked to land use. Community-wide development patterns and site specific lot design influence the availability and efficiency of various transportation modes. Development intensity/density, street lay-out, connectivity and access, and public improvement requirements are some of the many components that contribute to the viability of transportation options.

While the City of Carthage and the surrounding areas are primarily of lower density character, served almost exclusively by private automobiles, current and projected fuel costs are beginning to impact driving patterns and development preferences throughout the country. It is expected that public transportation and other alternatives to private auto use, such as walking and bicycling will become more popular. Moderate to high-density mixed use development is widely regarded as a land use that maximizes transportation options. The benefit of mixed use development and higher density residential include land conservation and increased mobility options, such as car pooling, biking/walking, bus or fixed-route transit since uses aren't artificially separated and population densities support viable ridership. Mixed uses allow people to live, work and shop in the same neighborhood, reducing their need to travel long distances in the course of daily living. Increased mobility options can reduce household transportation costs, reduce pollution and traffic congestion and increase interaction between neighbors. It will be important for the City to respond to demands for such development types in a timely manner in order to maintain a competitive edge and high quality of life.

3.5.2 Potential I-49 Highway Alignment

Transportation is a particularly important issue for Carthage at this time, due to its location on US Highway 71 and ongoing discussions regarding the upgrade of US-71 to Interstate 49. The improvements necessary for US-71 to become I-49 include a number of important decisions; in the Carthage area, these decisions include the finalization of the route that I-49 will take through the area. There are two possible alignments under consideration: using the US-71 corridor north from the I-44 interchange at Fidelity or using the Business 71/outer loop road under construction west of Carthage, which would join US-71 at the existing Central Avenue interchange. According to the Missouri Department of Transportation, a final alignment decision remains to be made in the



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future and will be preceded by abundant opportunity for public comment, both from the City and from interested area residents.

At this time, the general opinion of the City is that the Business 71/outer loop road alignment, with its connection to the existing US-71 at the Central Avenue interchange, is preferred. The City has a number of concerns about increased semi-trailer traffic along US-71 and the impact of this increased traffic on the quality of life in Carthage. While some growth in traffic on this route is inevitable, the City would prefer to keep that growth as low as possible.

However, some within the City prefer that US-71 become I-49 for its entire course through the City. These persons see the growth in interstate traffic as an asset upon which the City should capitalize. At this time, this opinion appears to be the minority view.

It is essential that the City participate in any discussions about the future of I-49 and its ultimate alignment. The improvements necessary for the complete upgrade of the existing highway to interstate status will be long-term, depending on the level of funding the State is able to dedicate to the project. However, these improvements will have a direct and permanent impact on the future of the City.

3.5.3 Safe Routes to School

According to the Federal Highway Administration, the number of school children that walk or ride a bike to school has dropped from 50% in 1969 to less than 15% today. This is particularly alarming in consideration of the rising rates of childhood obesity and the associated chronic health disorders, including Type II diabetes and asthma. Aside from the public health concerns of a less physically active school-age population, the number of children who cannot walk to school due to safety concerns is problematic in terms of the increasing costs of fuel for cars and busses. An additional concern is that as more children are driven to school, the increased traffic and air pollution around schools makes it more challenging for the remaining walkers and bike riders to travel safely.



Parents repeatedly identify safety as the number one reason their children ride in vehicles. Safe Routes to School (SRTC) is a national program that addresses the issues that prevent students and parents from utilizing transportation alternatives. The first Safe Routes to School (SRTC) program in America began in New York City in 1997, and in 2005, Congress dedicated \$612 million dollars towards the SRTC Program. Schools provide a unique opportunity to educate students as well as provide school-based walking programs where students can walk safely in supervised groups. The SRTC Program is having success in communities around the nation and is expected to increase greatly in the next several years.

To promote safe routes to school and the quality of the overall pedestrian environment, the City should consider including specific design components for new and existing City facilities, parks, schools and other community gathering places, such as pedestrian crosswalks, sidewalks and bike trails, signage, traffic calming measures, pedestrian refuges and other techniques, including community education.

3.6 Parks and Recreation

Carthage currently maintains three large citywide parks and four smaller neighborhood parks as well as the Municipal Golf Course, a total of approximately 325 acres of parkland. The City does not provide recreation programs; those programs are generally operated by outside organizations. However, the City does maintain a significant inventory of athletic fields and other recreation facilities. The biggest City parks are Kellogg Lake and Municipal Park, which includes many WPA-built facilities and the City's golf course, which was renovated in 2001. The Fair Acres Sports Complex was completed in several stages and provides a number of athletic fields.

The City partners with the Friends of Kellogg Lake group that has adopted Kellogg Lake Nature Center and Preserve. The Friends of Kellogg Lake was formed in the 1950s and is a non-profit 501(c)3 organization. The Friends of Kellogg Lake recently received a grant to plant trees in the park; the organization actively looks for outside funding sources to allow it to make park improvements. The fishing pier and boat dock on the lake are part of a fishing program that will soon be up for renewal. The park is considered a regional attraction; the Friends organization has prepared a master plan to guide ongoing development of the park.



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The area is also at one end of a significant Rails to Trails project. Burlington Northern has dedicated nearly 30 miles of former track for a trail project that begins with a trailhead to the north of Municipal Park. There has been some discussion of connecting the trail to Kellogg Lake and subsequently south to Carter Park and then to the Y facility. Such a trail connection could facilitate pedestrian access to the Y, especially for youth.

Parks needs include additional parking and restroom facilities and a growing demand for soccer fields. The City has explored developing a skate park, and there is also demand for a water park. If the City continues to grow to the south and east, there will be a need for another neighborhood park to serve that area. However, there is likely to be general opposition to increasing fees or municipal revenue to fund parks improvements. There is some general understanding that as the City grows, the park system will need to grow as well and that additional trails and greenspace can add to the economic attraction of the City.

Parks and open space are an important public facility. While not required for ongoing development in the way that streets and wastewater lines are, parks and open spaces contribute to the character and quality of an area and provide much needed recreational spaces for City residents. Urban development that does not include parks and open space is unlikely to hold long-term appeal for residents or maintain long-term values for property owners.

While Carthage has an enviable supply of parkland in terms of acreage, the City should continue to explore opportunities to diversify the park inventory, particularly as the City grows through annexation, to ensure that all neighborhoods are well-served by accessible parks facilities.

3.6.1 Levels of Service

The City's current level of service for citywide parks is 15.04 acres per 1,000 residents, which exceeds the National Recreation and Parks Association (NRPA) recommendation of at least 3.0 acres of parkland per 1,000 residents. If the City does not acquire any additional parkland by 2030, the LOS will still be a high 10.71 acres per 1,000 residents.



3.6.2 Open Space

It is important to realize that incremental losses of open space or habitat rarely have measurable or predictable impacts -- it is the cumulative impact of many decisions over time that has more profound effects. This, combined with the fact that developed land is rarely redeveloped as open space, increases the importance of ensuring that adequate land is set aside to maintain the community's environmental integrity.

While all undeveloped land can be considered “open space,” this discussion centers on land that is desirable as permanently protected open space because it has certain characteristics that the community values over and above its development potential. For instance, its visual appeal, such as scenic vistas; public safety features, such as steep slopes or fire and flood protection; or cultural or environmental features, such as historic areas or wildlife habitat. Open Space is usually considered to be: 1) in a natural or primarily natural state; 2) containing significant features that warrant protection; and 3) protected from development. As with other facets of planning, balancing the value of development with the value of open space preservation to the community is central to the design and implementation of an open space preservation program. Prioritization of important parcels for preservation should be monitored on an on-going basis.



3.6.3 Trails

Trails are an important community asset, providing both recreational and transportation opportunities for a variety of users. Understanding the types of trail users and their needs and preferences is key to designing a system that is well-used for both practical and recreational purposes. The sidewalks, walking trails, bike lanes and informal pathways that make up a trail system connect residents to the places they go, such as work, school or a neighborhood business, as well as to their neighbors, as one resident meeting another on a community trail is more likely to spark a personal connection than passing each other on a congested freeway. The social, environmental and public health benefits of a well-designed trail system contribute to a high quality of life and associated economic benefits for the community.

Three basic considerations for the City to consider as it discusses expanding its trail network include:

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Trail Users. Children, adults, residents and visitors, who might be walking, jogging, biking or rollerblading.

Trail Routes. Trails connect homes, parks, shopping areas, businesses, schools and public lands and other transportation modes. Direct routes are preferable to reach practical destinations, such as schools or shopping, while scenic routes are preferable for recreational users.

Design. Surface materials, width, grades, signage and lighting are some of the design issues to consider when thinking about the trail users and their needs.

A unified trail system with themed signage that links key points and neighborhoods in the City would provide a valuable public amenity.

3.7 Library Facilities

The Carthage Public Library provides library services to the City. In May, 2007, the Library opened a new addition to its existing structure. Since that time, the Library has seen a 30 percent increase in circulation, a 158 percent increase in new cards issued, and a 46 percent increase in computer use. Circulation numbers are expected to continue to increase as short-term check-out restrictions are lifted. In the year of May 1, 2006 through April 30, 2007, library circulation reached 84,380 items, public computers were used 11,936 times, and 703 new cards were issued. The library is open 58 hours per week.

The library is currently located within a 21,692 square foot City-owned historic building with its new addition. The addition added over 18,000 square feet to the 102 year old Carnegie Library building. There is also a small library annex of 1,820 square feet. Library staffing includes two administrative staff, over seven library clerks and aides (measured in full-time equivalents), and a custodian.

The Public Library offers 54,696 volumes, 24 public computer terminals, and 9,572 e-books to patrons. New services that are associated with the addition and renovation project include wireless public internet access, state-of-the-art micrographics



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equipment, a children’s programming area, a community room, study rooms, and increased number of computers for public use, and space for collection growth.

Current library facilities provide 4.18 volumes per resident and 0.002 public computers per 1,000 residents, as shown in **Exhibit 17**. The level of service for computers and staff is expected to rise in the short term as the Library completes its renovation and addition project.

Exhibit 17: Library Levels of Service

Facility Type	Existing LOS
Volumes	4.18 volumes per capita
Computers	0.002 per 1,000 residents
Facility	1.8 sq. ft. per capita



3.8 Financing Facilities

Although residential property taxes form a significant revenue stream, most cities cannot rely exclusively on residential property taxes to fund those services. Sales and property tax revenues from industrial and commercial uses are needed to overcome budget shortfalls created by residential uses. Property taxes are a significant expense for most households, adding to the cost of owning a home and making the goal of housing affordability harder to achieve. By supporting land uses that are less expensive to service and create positive revenue streams, the City can keep residential property tax rates down, contributing to a higher quality of life for residents through greater housing affordability.

Legally implementable tools that can be used to manage growth and ensure fiscal responsibility should be used to preserve the area’s quality of life, preserve levels of service and protect property values, and promote economic development. Existing Carthage residents should not suffer a decline in the quality of their services or be unduly burdened by costs to serve new development. New residents and business

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should pay their fair share of the costs associated with extending infrastructure and city services (capital costs) to new growth areas, as well as the subsequent operating expenses of those facilities.

Within the broad term of “Growth Management” exists a number of regulatory, fiscal and administrative techniques that if properly employed allow communities to ensure that development is timed, located, designed and financed without negatively impacting the community. Concurrency and adequate public facilities ordinances require that specified public facilities and services be provided to new development at the adopted LOS, without diluting the service levels currently enjoyed by existing development.



3.8.1 Adequate Public Facilities / Concurrency

Concurrency is the concept of ensuring that the facilities needed to serve new development are available at the same time that the new development creates demand for facilities. In simple terms, concurrency is the policy that supply will be available when demand occurs. Concurrency requires the City to plan ahead for the provision of capital facilities and encourages partnerships between the City and developers to provide for capital investments.

One growth management technique ties development pace and location to "adequate public facilities." This technique is designed to ensure that the necessary public facilities and services at adopted levels of service are required to support new development are available and adequate at the time that development is considered. An Adequate Public Facilities Ordinance (APFO) establishes level of service (LOS) standards for each major kind of physical infrastructure (e.g., road, water, sewer, drainage, parks, community facilities) and services (e.g., police, fire, EMT) which must be in place at the time that the development occurs, often with some phase-in component.

APFOs control the timing of new development. If infrastructure capacity is limited, an APFO will require phasing of the development until the facilities are available. The major objectives of an APFO are:

- To link the provision of needed public facilities and services to the type, amount, location, density, rate and timing of new development;

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- To ensure that new growth and development do not outpace the ability of service providers to accommodate such development at established level of service standards; and
- To coordinate public facility and service capacity with the demands created by new development.

Other methods for funding public facilities that the City may consider when necessary and fiscally prudent include, but are not limited to user or impact fees, development agreements, tax increment financing and/or improvement districts.

3.9 Natural Resources

Carthage's natural environment is a valuable community resource - it is a feature of the community's character and it makes Carthage unique. Because today's development decisions will shape environmental and open space opportunities for generations to come, it is critical to prioritize natural resources and to maintain a balance between built and natural environments.

3.9.1 Green Infrastructure

"Green infrastructure" includes the open spaces and natural areas that naturally improve environmental quality by managing storm water, reducing flood risk and improving water and air quality. Greenways, wetlands, parks, forest preserves, and native plant vegetation sites generally cost less to develop and maintain in comparison to traditional forms of infrastructure and can provide much greater economic and environmental benefit. Planning policies and development mechanisms that value, protect and enhance green infrastructure components provide a solid framework for a region's future and encourage a healthier ecosystem.

Open space and conserved lands not only provide an increased quality of life for residents, but also provide economic support and vitality. Conserved environments and natural spaces increase property value for neighborhoods and reduce the need for expensive built infrastructure management systems. A conserved site provides water filtration, runoff management, and reduces pollution naturally, without the need for expensive facilities or built systems. Open spaces and conserved lands are generally



inexpensive to develop and maintain, while offering an increase in local property value, a decrease in taxes due to the reduction of expenditures on infrastructure systems, and satisfy residents with a better quality of life in a natural setting. By developing the City's green infrastructure, Carthage can promote economic, social and environmental sustainability.

3.9.2 Stormwater Management

Stormwater management practices are based on two complementary goals: preventing the liabilities of flooding and building on the amenities of greenways and other features that assist in managing stormwater. With urban growth and the transformation of open spaces into impervious surfaces, conventional methods of land development and stormwater management can lead to increased volumes and rates of stormwater runoff and reduced water quality. The increased runoff may result in substantial erosion, stream deterioration and flooding, and contribute to degrading otherwise valuable areas. Ultimately, the goal of managing stormwater is to achieve No Adverse Impact (NAI), a concept of preventing stormwater runoff from one site from negatively impacting another site.

Low Impact Development (LID) is a stormwater management approach based on the integration of complimentary land planning and engineering design tools. The approach concentrates on managing rainfall at the source by using decentralized, small scale controls.

According to the EPA Office of Water "LID's goal is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source. Techniques are based on the premise that stormwater management should not be seen as stormwater disposal. Instead of conveying and managing / treating stormwater in large, costly end-of-pipe facilities located at the bottom of drainage areas, LID addresses stormwater through small, cost-effective landscape features located at the lot level. These landscape features, known as Integrated Management Practices (IMPs), are the building blocks of LID⁵."



⁵Source: US EPA Office of Water Low Impact Development website, on-line at <http://www.lid-stormwater.net/index.html>.

Low Impact Development techniques include bioretention, green roofs, permeable pavers, rain barrels and cisterns, soil amendments and tree box filters. Many of these techniques are not only cost-effective and environmentally sound, but can also have secondary aesthetic benefits to a community.

3.10 Goals and Policies

3.10.1 Public Facilities and Services

Public Facilities and Services Goal: Provide adequate public facilities and services for existing and future residents and businesses in an equitable and cost-effective manner that supports fiscal responsibility.

3.10.1.1 Public Facilities and Services Policies

- PF-1: Develop and maintain capital improvements programs that:
- Establish level of service standards and maintains adequate levels of services in a cost effective manner;
 - Identify existing service deficiencies, and include plans to resolve existing service deficiencies;
 - Accommodate demands from new development; and
 - Distinguish costs for resolving existing deficiencies and providing new capacity.
- PF-2: Coordinate with the Carthage School District to ensure that new school sites can be adequately served by existing and planned infrastructure (including, streets, sidewalks, water, wastewater, and public safety facilities and services).
- PF-3: Conduct periodic meetings with other service providers to exchange information about capital improvements projects and to coordinate the



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timing and capacity of improvements to efficiently provide for demands from planned development.

PF-4: Require facilities to be extended through new developments to provide for future growth.

PF-5: Target development in those areas where public facilities (including water, wastewater, roads, and schools) exist or can be provided efficiently without compromising service or increasing costs to existing citizens and businesses.

PF-6: Evaluate annual CIP projects for potential state, federal, or other funding sources.

3.10.1.2 Concurrency Policies

PF-2: Require adequate public services and facilities to be in place or programmed to be in place concurrent with urban development in the planning area. The City will adopt consistent urban level of service standards for all facilities and services within the planning area.

PF-3: Require new development to fund its proportional share of costs for capital facilities for on- and off-site capital improvements required to serve new development.

3.10.1.3 Water / Wastewater Policies

PF-7: Support water conservation programs aimed at reducing demands from new and existing development through public education efforts and requirements for water conserving fixtures in new or remodeled buildings.

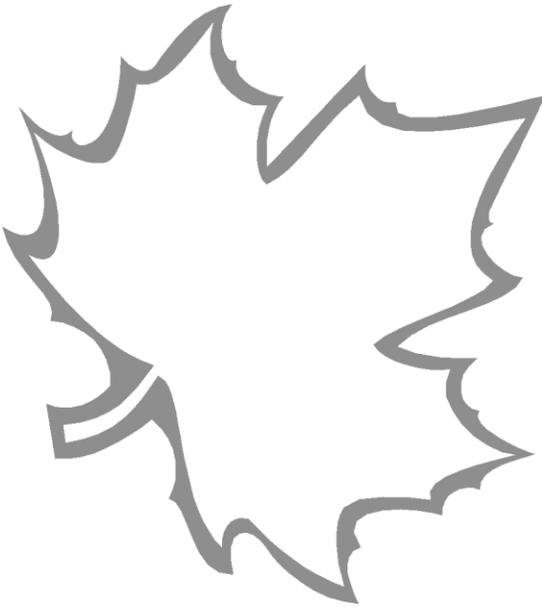


3.10.2 Transportation

Transportation Goal: Provide a network of transportation improvements that safely and efficiently connects people and places throughout the City while supporting the desired land use pattern.

3.10.2.1 Transportation Policies

- T-1: Maintain and periodically review the **Master Street Plan (Map 9)** as necessary based on new construction and to reflect changing conditions.
- T-2: The street network shall support the land use policies of the City. The City shall consider the impact of land use decisions on the transportation network.
- T-3: Encourage connectivity in subdivisions and limit the number of dead-end streets and cul-de-sacs.
- T-4: Promote coordination of street improvements with other public facilities such as water and wastewater.
- T-5: Minimize individual property access directly from arterial roads.
- T-6: Adopt property access design standards that:
 - a. Establish connectivity between adjacent commercial or industrial properties;
 - b. Allow or encourage shared driveway access for adjacent properties; and
 - c. Establish appropriate driveway separation.
- T-7: Monitor and participate in regional transportation planning efforts, particularly those involving Interstate 49 planning.



3.10.3 Parks and Open Space

Parks and Open Space Goal: Provide a diverse and accessible parks and open space inventory that maintains the City’s existing parks while enhancing the distribution of parks throughout the City.

3.10.3.1 Parks and Open Space Policies

- P-1: Maintain and periodically update a Parks Master Plan.
- P-2: Ensure that neighborhood and community parks have safe linkages to surrounding neighborhoods for pedestrians and bicyclists.
- P-3: Explore the construction of trails to connect parks and other community facilities.
- P-4: Require new suburban residential neighborhoods to provide for ongoing maintenance of green-space unless the City, County or some other approved entity accepts responsibility for ongoing maintenance.



3.10.4 Natural Resources

Natural Resources Goal: Preserve and protect resources essential to sustain a healthy environment.

3.10.4.1 Natural Resources Policies

- NR-1: Require development to mitigate impacts on natural resources, including surface and ground water contamination, soil erosion or contamination, air quality degradation and loss of vegetation.
- NR-2: Protect environmentally-valuable land, including woodlands, wetlands, stream banks and wildlife habitat areas, from inappropriate development

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and coordinate with state and federal agencies on such protections as appropriate.

NR-3: Encourage the preservation of mature trees and those having historical or cultural significance, including trees that line corridors.

NR-4: Require appropriate protective measures to be taken during construction to preserve existing trees that are intended to be saved. When trees designated for preservation are killed or removed during construction, the City shall require replacement trees to be planted after construction is complete.

NR-5: Require that new subdivision include natural vegetative buffers and that existing buffers along natural drainage ways, riparian corridors and wetlands be retained.

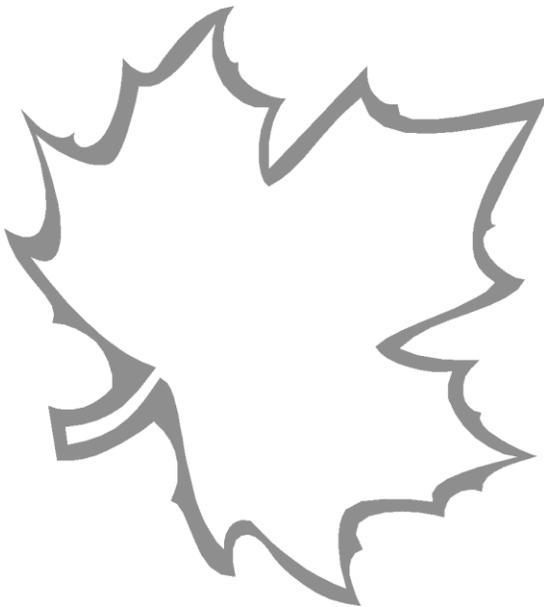
NR-6: Encourage the increased development of greenways and green infrastructure as a means to protect water quality and reduce damage from stormwater runoff.

NR-7: Expand the scope of local recycling efforts and the use of recycled products.

NR-8: For residential developments located within the Rural Living future land use category, the City shall encourage the preservation of natural features to the greatest extent practical through clustering or other design features.

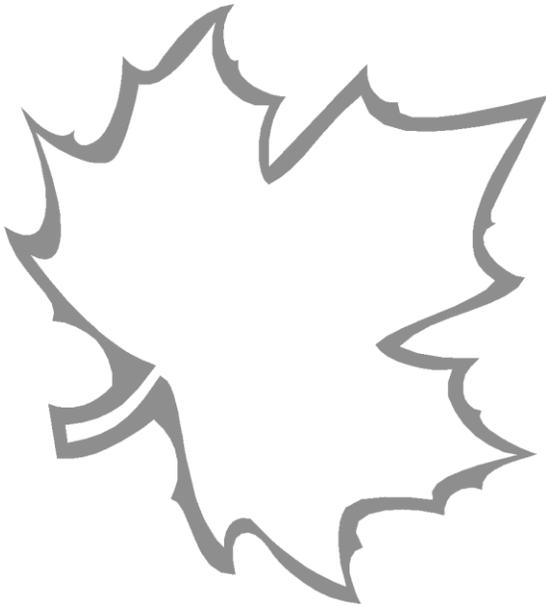
3.10.4.2 Stormwater Management Policies

NR-9: Minimize the effects of human activity on the quality of surface and groundwater through effective stormwater management and subdivision design.



Facilities, Services, & Resources

- NR-10: Favor natural or landscaped drainageways over built drainage systems whenever the natural drainageway can accommodate anticipated runoff. Where projected runoff cannot be accommodated by natural drainageways, the City should seek improvements that retain the natural characteristics of water courses and floodplain areas to the greatest extent feasible.
- NR-11: Closely monitor development on parcels containing floodplain to ensure that flooding hazards are minimized. Where possible, the City should limit development in the floodplain to bridge crossings, utilities, trails, river and stream access improvements, and low intensity recreational uses.
- NR-12: Require commercial and industrial land uses to detain stormwater and provide for vegetative filtering of water prior to being released into the surface drainage system.
- NR-13: Require all new development that encompasses major drainage ways, wetlands, floodplains, or land within riparian corridors to avoid or minimize impacts on natural resources through sensitive site design. The City shall create incentives to create conservation easements, deed restriction or covenants over said resources that preserve the natural drainage and vegetation within these areas.



Section 4: Implementation

Carthage's Comprehensive Plan is intended to be a dynamic document -- one that responds to changing needs and conditions. To assess the Plan's effectiveness in responding to changing conditions, the City will need to monitor actions affecting the Plan. As a result of these monitoring efforts or private development requests, the City will need to amend the Plan periodically. However, Plan amendments should not be made lightly. City Council and Planning and Zoning Commission members should consider each proposed amendment carefully to determine whether or not it is consistent with the Plan's goals and policies. In addition, the cumulative effect of many changes may be a change in policy direction. For this reason, Comprehensive Plan amendments must be evaluated in terms of their significance to overall City policy.

This chapter describes the processes to annually review, monitor and amend the Plan, Plan goals and policies, and the Future Land Use Plan Map. The Future Land Use amendment process will be subject to adopted code provisions.

4.1 Annual Review and Monitoring

Department Directors should provide to the City Administrator an annual review of Comprehensive Plan related activities prior to the initiation of the budget process each year. The annual review is intended to:

- Measure the City's success in achieving plan goals through the recommended strategies;
- Propose strategies to be pursued under the coming year's budget;
- Identify unlisted strategies that will achieve Plan goals;
- Document growth trends and compare those trends to plan projections;
- List development actions which affect the Plan's provisions; and
- Explain difficulties in implementing the Plan.

This annual review should include statements identifying that respective departments' progress in achieving the goals of the Plan, the impact of the Plan on service provision,



and proposed programs to help achieve the Plan's goals. The annual review should be used as a tool to help set budgetary priorities.

4.2 Land Use Amendments

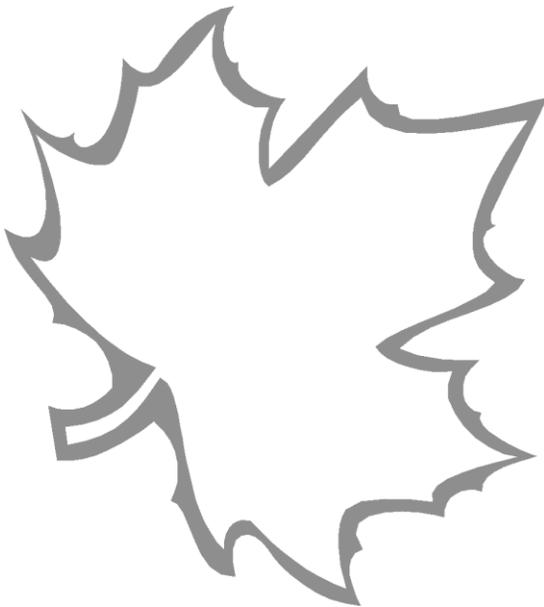
The Future Land Use Map is intended to serve as a guide for public and private development and land use decisions. The City should adopt a formal amendment process in the development regulations. Land use amendments are anticipated as growth occurs and market conditions change. While land use amendments may occur more frequently than policy changes, they should not occur more than once per year. By limiting opportunities to amend the future land use plan, the City will reduce the potential for incremental land use changes to result in unintended policy shifts.

4.3 Policy Review and Amendment

To ensure that the Comprehensive Plan remains an effective guide for decision-makers, Carthage should conduct periodic major evaluations of the plan policies and strategies. These evaluations should be conducted every four to six years, depending on the rate of change in the community, and should consider the following:

- Progress in implementing the Plan;
- Changes in community needs and other conditions that form the basis of the Plan;
- Fiscal conditions and the ability to finance public investments recommended by the Plan;
- Community support for the Plan's goals and policies; and
- Changes in county, state or federal laws that affect the City's tools for Plan implementation.

The major review process should encourage input from merchants, neighborhood groups, developers and other community interests through the creation of a Citizen Review Committee. Plan amendments that appear appropriate as a result of this review would be processed according to the adopted Plan amendment process.



4.4 Key Implementation Tools

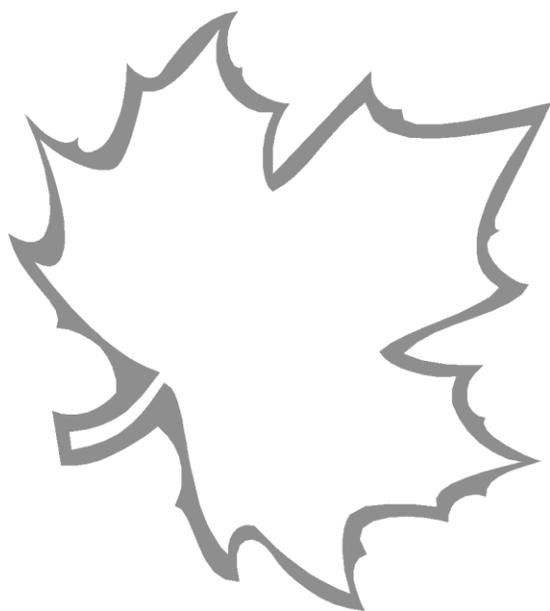
The Plan implementation program identifies a number of tools available to the City that may be employed to bring the goals, policies and strategies of the Plan to fruition. These implementation tools are interrelated and work together providing continuity and breadth to the implementation program.

4.4.1 Development Regulations

On a day-to-day basis, the development regulations (zoning and subdivision regulations) are the most important tools for Plan implementation. The Future Land Use Map and the growth-related goals are achieved through a myriad of incremental decisions about specific development projects. Because the Plan does not carry the force of law, the City must effectuate Plan policies through a variety of actions, including amendments to the City subdivision and zoning regulations. Updates to these development regulations should be consistent with the Plan to ensure that incremental actions on development requests support the Plan's goals, policies and recommendations.

4.4.2 Capital Improvements Plan (CIP)

Short- and long-range CIPs are important planning tools to ensure that the City has planned the most cost effective facilities and to determine whether the City will have the capability to fund needed public facilities. The short-range CIP should identify and estimate costs of improvements needed to serve anticipated growth for the next 5 to 10 years; the long-range CIP should identify and estimate costs of improvements needed to serve anticipated growth for the next 10 to 20 years. This plan is not an engineering document, but should provide enough specificity to determine which costs are required to remedy existing deficiencies and which costs provide new capacity that will be demanded by new development. The short-range CIP should establish the basis for the City's development fees and be updated annually. The long-range CIP should be updated at least once every five years or when significant changes to the base systems modify the City's long-term capital investment strategies (*e.g.*, changes in service areas, significant changes in the Future Land Use Plan, changes in service demand or delivery patterns). The CIPs should list short-term projects needed to maintain existing levels of service, with each project being assigned a budget and a time frame for completion.



The CIP also should delineate the proportion of project costs that is designed to provide new capacity and the proportion that is required to fund existing deficiencies. This delineation will enable the City to quantify the capital costs associated with new development and to monitor the expenditure of development fees.

4.4.3 Intergovernmental Agreements

Intergovernmental agreements (IGAs) are essentially treaties between two or more units of government for the mutual benefit of all parties. Within the context of this plan, an agreement between the City, County and other providers could address growth within urban service areas. Such an agreement could establish each party's rights, responsibilities and recourse within a cooperative growth management process designed to implement the Urban Service Area policies of this plan. Items typically addressed in local government IGAs include: development review authority, annexation processes, infrastructure projects, building and related codes, public safety mutual aid agreements and IGA administrative procedures.

4.4.4 Comprehensive Plan

Completion of the Comprehensive Plan is not the end of planning for the future. Other planning projects will build upon the foundation of this plan, whether they are neighborhood plans that provide detailed examinations of needs and conditions or area plans developed in partnership with a developer. As the City continues to plan for the future, these planning efforts should be based on the vision and goals of the Comprehensive Plan and be consistent with the policies established by this document.

4.5 Implementation Work Program

Successful implementation of the Plan results from many individual actions by the City, other jurisdictions and service providers, and private decision-makers over the course of many years. The goals and policies describe what the community wants to become and how decision-makers should respond to varied circumstances. To accomplish the plan's goals and the Community Vision, the City will need to accomplish many tasks throughout the life of the plan. Key strategies will be used to accomplish the Plan's goals in the initial years of plan implementation. While most of the items on the list will



be carried out by the City, some items may require coordination with neighboring cities, other service providers, or economic development entities.

The work program:

- Correlates implementation measures with specific Comprehensive Plan goals and policies;
- Sets a general time frame to carry out each strategy;
- Identifies action tools (*i.e.*, existing and proposed codes, ordinances, regulations, standards, requirements and policies) to implement action items; and
- Assigns responsibility for implementing the action items and lists other entities that should be involved in the process.

The work program is not intended to be an exhaustive list of all strategies that will implement the Plan. The City may pursue different strategies and adjust priorities, depending on changing opportunities and resources. The City should update this work program on an annual basis, adjusting the Short-Term Work Plan and tasks that are included in each year's budgeted work programs.

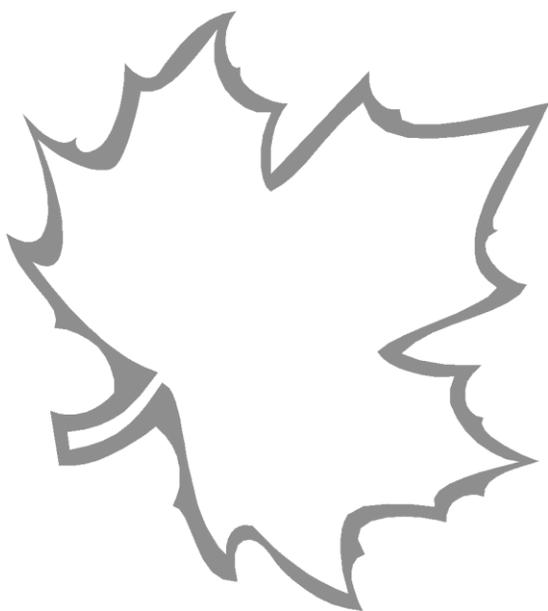
4.5.1 Short-Term Work Program

A Short Term Work Program should be developed and reviewed on an annual basis to identify the previous years accomplishments and to modify the work program tasks establishing a reasonable timeline for key plan implementation tasks. A listing of short term projects and activities can provide the following information for elected and appointed decision-makers:

- **Project/Activity** - identifies the task as depicted in the Long Term Work Program and describes the project, action or document necessary to carry-out the strategy.
- **Timeline** - the project timeline based on the annual budget cycle.



- **Responsible Party** - the estimated budget cycle or cycles in which the task will be included within the Capital Improvements Program or special projects budget.
- **Cost Estimate** - the estimated costs of the project or activity. The costs estimates should be reviewed and revised on an annual basis.
- **Funding Source** - the local, state, federal or other funding source proposed to finance the project or activity. Funding sources may include, but are not limited to: bonds, general revenues, sales tax revenues, impact fees, tax credits, dedicated fees, grants and loans.



4.5.2 Strategies Matrix

The Strategies Matrix, which serves as the long-term work plan, is intended to be the most dynamic component of the Plan. Through annual updates, the City can ensure that the Plan continues to serve the community effectively.

The **Implementation Strategies Matrix**, shown as **Exhibit 18**, schedules actions and recommends an initial work program (Priority 1 Strategies), which should be updated annually to reflect community accomplishments, new approaches to community issues, changing conditions, shifting priorities and new demands. This list is not intended to be exhaustive or all inclusive -- the City, County and other public and private entities will take numerous actions throughout the life of this plan to achieve the community goals. This list is intended to identify the highest priority tasks to be pursued over the next several years. The table identifies the goals related to each task, the timeframe for task completion, and the entities responsible for carrying out the tasks. Tasks that are not funded in the recommended years should be evaluated for removal from the list or to be shifted back for later implementation. Programs that are completed should be removed from the list.

The list of implementation strategies provides the following information in each column:

Implementation

- **Strategy Number** - the number of the implementation strategy to allow for future referencing of City activities.
- **Action** - description of the specific strategy being recommended to implement the Plan.
- **Priority/Schedule** - a ranking of importance based on its priority relative to other similarly-classed strategies. The ranking abbreviations are labeled in the following manner:
 - 1 = This is a critical task and should be undertaken as soon as possible. Necessary for immediate implementation of the Plan. To occur now.
 - 2 = This is a very important task with a sense of urgency. Necessary to implement the Plan. To occur within two to five years.
 - 3 = This is an important task but there is no immediate sense of urgency. This task will help implement the Plan. To occur within five to ten years.
 - 4 = This task will help implement the Plan but can be delayed in order to complete other more important tasks. To occur within the next twenty years.
- **Responsible Entity**- the person, department or agency that is primarily responsible for initiating, advocating and/or performing the strategy. Anticipating that some functions currently performed by City staff may be contracted to qualified consultants, references are made to function (*i.e.*, 'Planning' refers to tasks that are the responsibility of the City's planner or planning consultant). When multiple entities are identified, they are presented in order of responsibility for the task.
- **Tool** - the document or action necessary to carry-out the strategy.



- **Budgetary Impact** - indicates the relative fiscal impact of the specific strategy on the City's budget. The ranking abbreviations are labeled in the following manner:

Low = Little or no fiscal impact on the City's budget.

Mod = Moderate; some fiscal impact, but likely to be funded within one to two fiscal periods.

High = May be significant fiscal impact, depending on the nature of the capital investment, but may provide opportunities for the use of alternative revenue sources.

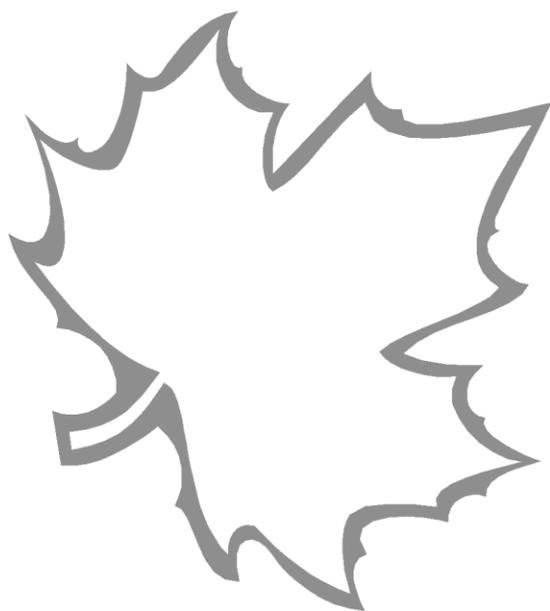


Exhibit 18: Implementation Strategies Matrix

Strategy	Action	Priority	Responsible Entity	Tool	Budgetary Impact
ED-1	Acquire and/or annex key lands to support economic development.	1	City Administration	Annexation	Low to High
H-1	Develop a Landlord's Roundtable program to bring rental property owners together for regular conversation regarding rental property issues with City officials for the purposes of promoting safe housing and identifying ways to work cooperatively on housing issues.	1	City Administration	Outreach	Low
LU-1	<p>Adopt a unified development code (UDC) that incorporates all of the City's development regulations, including subdivision, zoning, floodplain and other relevant ordinances, in order to bring the Code into consistency with the Comprehensive Plan. Include regulations addressing:</p> <ul style="list-style-type: none"> • Industrial noise, odors, and environmental impacts; • Stormwater management; • Site and design standards for commercial and industrial development; • Construction standards and erosion mitigation measures; • Prohibition on residential land uses within industrial districts; • Updated floodplain regulations; • Open space requirements; • Additional requirements for new subdivisions, such as sidewalks; and • Updated variance and exception provisions. 	1	City Administration	Development Regulations	Mod

Implementation

Strategy	Action	Priority	Responsible Entity	Tool	Budgetary Impact
LU-2	Develop an industrial park with necessary infrastructure for future growth and expansion of industrial businesses.	1	City Administration; Public Works	CIP	Mod
LU-3	Review floodplain maps to ensure they are complete and up-to-date.	1	Public Works	Development Regulations	Low
LU-4	Work with Jasper County to establish an Urban Service Area based on the City's Planning Area in which the City and County will work cooperatively to manage growth and development.	1	City Administration	Interlocal Agreement	Low
LU-5	Incorporate Comprehensive Plan recommendations (goals, policies, strategies) in Planning Commission, Board of Zoning Adjustments and City Council staff reports and recommendations.	1	City Administration	Staff Reports	Low
PF-1	Work with Carthage Water & Electric to develop long-range utility plans for area growth, including where to expand services and how to maintain utility capacities.	1	Public Works; Water & Electric	CIP	Low
PF-2	Coordinate with utility providers to offer incentives for 'green' projects.	1	Public Works	Coordination	Mod
PF-3	Develop a system to rank capital improvements based on consistency with the plan, location, level of deficiency and demand. Favor capital improvement projects for developed areas of the community with existing deficiencies	1	Public Works	CIP	Low

Implementation

Strategy	Action	Priority	Responsible Entity	Tool	Budgetary Impact
PF-4	Identify alternative funding sources for City projects, such as developer impact fees and State and Federal grant programs.	1	City Administration; Public Works	CIP	Low
CC-1	Update the historic preservation ordinance to support historical character and investment, reflect reasonable standards and guidelines and not allow property owners to 'opt out' of the district's requirements.	2	City Administration	Development Regulations; Municipal Code	Low
CC-2	Work with the Convention and Visitors Bureau to establish a plan to support and promote Civil War and Route 66 era assets.	2	City Administration	Coordination; Comprehensive Plan	Mod
CC-3	Revitalize downtown to include more shopping and entertainment uses and alternative residential uses.	2	City Administration, CVB, Chamber	Comprehensive Plan	Mod
CC-4	Prioritize improvements in older neighborhoods, such as street and sidewalk repair, to foster a sense of investment in the area.	2	Public Works	CIP	Mod
CI-1	Support a 'wayfinding' signage program that directs and informs visitors.	2	City Administration, CVB, Chamber	Comprehensive Plan	Mod
ED-2	Work with the Chamber of Commerce and to provide incentives and assistance for small business start-ups.	2	City Administration, Chamber	Coordination	Mod

Implementation

Strategy	Action	Priority	Responsible Entity	Tool	Budgetary Impact
ED-3	Identify regional needs for attractions, facilities, and services and work to fill identified economic development gaps.	2	City Administration, CVB, Chamber	Coordination	Low
ED-4	Conduct a targeted industry study to strategically plan for industrial recruitment and retention in an effort to diversify local employment sectors.	2	City Administration, Chamber	Comprehensive Plan; Coordination	Low
H-2	Explore options for the licensing and inspections of rental housing.	2	City Administration, Public Works, Fire Department	Development Regulations, Municipal Code	Mod
H-3	Improve enforcement of property maintenance codes to promote neighborhood stability.	2	City Administration, Public Works	Education; Enforcement	Mod
H-6	Explore options for the licensing and inspections of rental housing.	2	City Administration, Public Works, Fire Department	Development Regulations, Municipal Code	Mod
LU-6	Use annexation as one tool to facilitate rational development patterns, including to 'square-off' boundaries and eliminate 'donut holes'.	2	City Administration	Annexation	Low
P-1	Improve Kellogg Lake dam and drainageways.	2	Parks; Public Works	CIP	Mod

Implementation

Strategy	Action	Priority	Responsible Entity	Tool	Budgetary Impact
P-2	Develop a Parks Master Plan to identify needs for expanding the parks inventory, for parks that serve specific needs such as skateboarding, dog parks, educational or sporting facilities, spread throughout the City and to improve and add recreational facilities, including jogging, biking, hiking, and nature trails and sidewalks and paths that connect neighborhoods and key activity centers, and identify methods to increase revenue and funding for parks improvements.	2	Parks	Comprehensive Plan	Mod
PF-5	Develop a stormwater management plan for the City.	2	Public Works	Comprehensive Plan	Mod
PF-6	Develop plans for enhanced police and fire services as the City grows, including identifying needs and locations for new stations.	2	Police, Fire, City Administration	CIP, Comprehensive Plan	Mod
PF-7	Develop stronger relationships between the City and the School District, the County, and Carthage Water & Electric	2	City Administration, Water & Electric	Coordination; Outreach	Low
T-1	Develop a strategy for prioritizing street maintenance and repair needs.	2	Public Works	CIP	Low

Implementation

Strategy	Action	Priority	Responsible Entity	Tool	Budgetary Impact
CC-5	Work to inform and educate the community about historic preservation in Carthage by creating a historic preservation page on the City website, developing a brochure with information regarding historic properties and the City's historic preservation code, and coordinating training opportunities for the Planning, Zoning, and Historic Preservation Commission.	3	City Administration	Outreach; Education	Low
CI-2	Create a roundtable program to bring representatives of diverse populations together to define goals and needs for the community.	3	City Administration	Outreach	Low
CI-3	Identify the primary gateways to Carthage as a community and establish a program to enhance these gateways as entrances into the community	3	City Administration, CVB	Comprehensive Plan	Mod
CI-4	Enhance the City website to allow residents to get information and pay city bills online.	3	City Administration	Outreach	Low
ED-5	Diversify economic base by attracting businesses needing professionally and technically skilled workers as well as entertainment/tourism businesses that provide jobs and amenities to existing residents/visitors.	3	City Administration, Chamber	Coordination	Low

Implementation

Strategy	Action	Priority	Responsible Entity	Tool	Budgetary Impact
H-4	Develop informational materials to distribute to rental housing property owners, including information on all codes applying to rental property, any requirements to obtain a City Rental Certification, if applicable, and information regarding Missouri Housing Development Commission programs to promote substantial rehabilitation.	3	City Administration	Education, Outreach	Low
H-5	Create and maintain a housing stock inventory, including data on the condition, value and characteristics of residential structures.	3	Public Works, City Administration	GIS	Mod
LU-10	Identify key economic development activity centers and corridors and help develop area and sub-area plans for development of land and public facilities.	3	City Administration, Public Works, Chamber	Comprehensive Plan	Mod
LU-7	Work with School District to identify future land use needs.	3	City Administration	Coordination	Low
LU-8	Work with adjacent communities to identify opportunities for shared planning, particularly with respect to major transportation facilities and/or improvements, including land use planning along US 71 / the future I-49.	3	City Administration	Interlocal Agreement	Low
LU-9	Establish Neighborhood Improvement Districts and use other incentives to encourage development within the City limits where adequate facilities and services are available.	3	City Administration, Public Works	Incentives	Low

Implementation

Strategy	Action	Priority	Responsible Entity	Tool	Budgetary Impact
P-3	Pursue a rails-to-trails program to capitalize on unused rail beds in and around the city.	3	Parks, Public Works		Mod
T-2	Participate in efforts to develop a regional public transportation system linking Carthage to Joplin and other regional towns and facilities to serve residents and visitors.	3	Public Works, City Administration	Transportation Plans	Mod
CC-6	Support historic district streetscape improvements.	4	Public Works	CIP	Mod
CC-7	Investigate participation in the Certified Local Government Program administered by the State Historic Preservation Office.	4	City Administration	Development Regulations, Education, Outreach	Low
CI-5	Pursue a branding program for the area on which to base marketing materials and signage	4	City Administration, Convention & Visitors Bureau	Coordination, Comprehensive Plan	Low
CI-6	Develop a city program to install and maintain public art (downtown murals, sculptures, etc).	4	City Administration	CIP	Mod
ED-6	Work with the Chamber of Commerce and Convention and Visitors Bureau to develop a "Main Street"-style organization to provide incentives and assistance for strengthening the downtown square retail area.	4	City Administration	Coordination	Mod
ED-7	Explore development of a multi-purpose public convention center.	4	City Administration		Low

Implementation

Strategy	Action	Priority	Responsible Entity	Tool	Budgetary Impact
H-6	Develop housing incentive programs that target home ownership, rehabilitation incentives, and new affordable home construction.	4	City Administration, Public Works	Incentives	Mod
LU-11	Explore the use of Conservation Overlay Districts as a mechanism to protect special areas of historic, architectural and/or cultural significance to the city's heritage where historic districts are unfeasible.	4	City Administration	Development Regulations	Low
NR-1	Improve streamways to include access for recreational purposes.	4	Public Works	CIP	Mod
P-4	Develop a "Friends of the Parks" program to enhance the parks system and develop a feeling of ownership of city parks.	4	Parks	Outreach	Low
PF-8	Work cooperatively with educational institutions to prepare students for future job opportunities and to maintain a high-quality workforce.	4	City Administration	Coordination	Low

Appendix A: Maps

- Map 1: Regional Base Map
- Map 2: Future Land Use Map
- Map 3: Existing Land Use Map
- Map 4: Residential Neighborhood Suitability
- Map 5: Employment Center Suitability
- Map 6: Cultural Area Map
- Map 7: Water Lines Map
- Map 8: Wastewater Collection Map
- Map 9: Roadways Network Map
- Map 10: Annexation History



Appendix B: Background Assessment

