

# **CITY OF RAYMORE, MISSOURI**

**Final Report**  
*Growth Management Plan Update*

**Spring 1995**

**Adopted to:**  
**The Raymore Planning and Zoning Commission**  
**The Board of Aldermen**

*Assisted by:*

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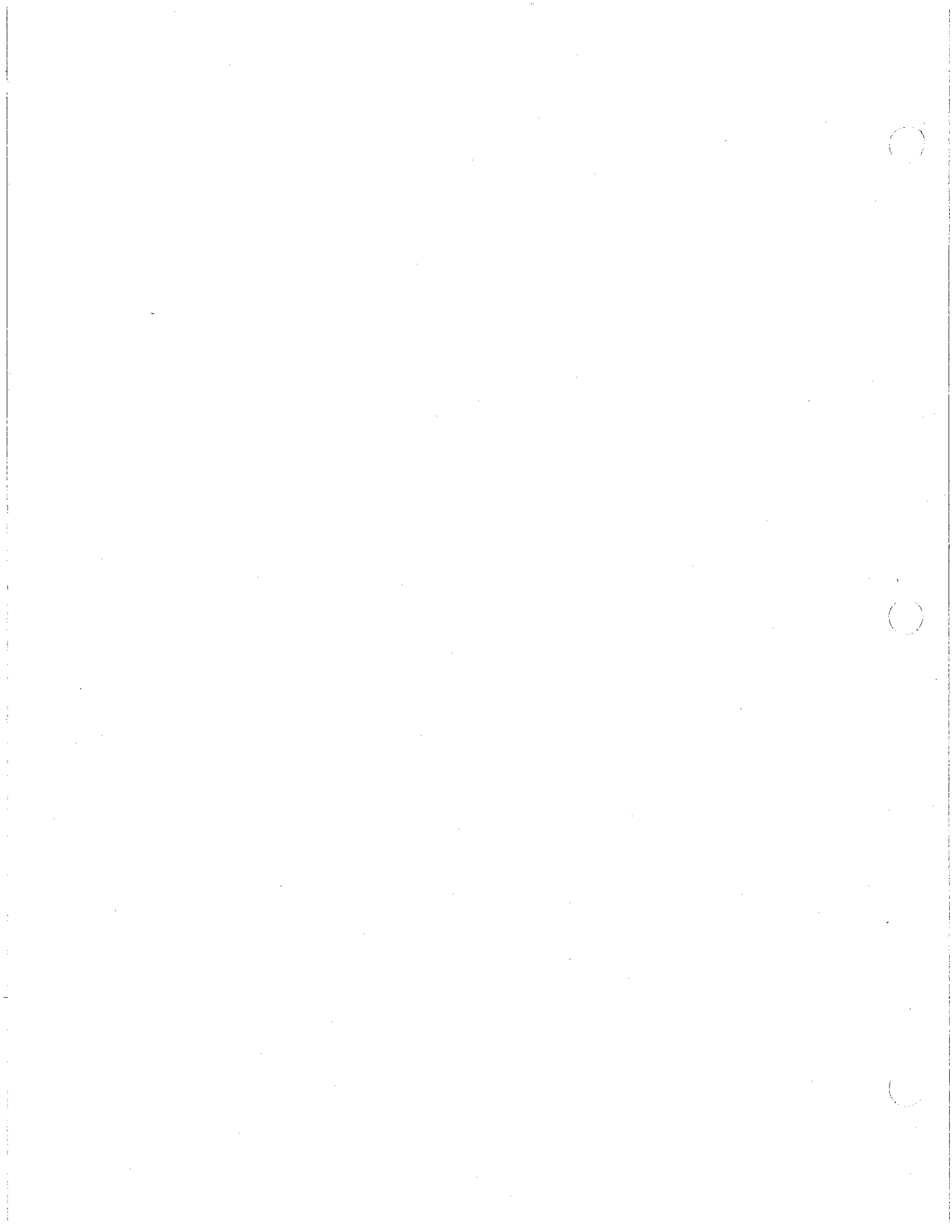


TABLE OF CONTENTS

Chapter I - Growth Management and Land Use ..... 1

    Growth Management and Land Use ..... 1

        Background ..... 1

        Future Land Use Planning, Facilities Planning and Growth ..... 1

            Goal 1 ..... 3

            Goal 2 ..... 3

            Goal 3 ..... 4

            Goal 4 ..... 5

            Goal 5 ..... 7

            Goal 6 ..... 7

            Goal 7 ..... 8

Chapter II - Issues Impacting Growth ..... 9

    Issues Impacting Growth ..... 9

        Identifying Issues ..... 9

        Ranking the Issues ..... 10

            Land Use and Quality of Life ..... 10

            Capital Improvements ..... 10

            Economic Development and Growth ..... 11

            Capital Improvement Program ..... 11

Chapter III - Population Analysis ..... 12

    Population Analysis ..... 12

        Estimating the Future Population ..... 12

        Trends ..... 14

        Conclusions ..... 18

Chapter IV - Public Facilities and Services ..... 19

    Existing Public Facilities and Services ..... 19

        Schools ..... 19

        Parks ..... 19

        Law Enforcement ..... 25

        Fire and Emergency Medical Services (EMS) ..... 25

        Water System ..... 26

        Sanitary Sewer System ..... 28

**TABLE OF CONTENTS (continued)**

City Hall, Public Works, and Maintenance .....	29
Transportation .....	31
 Chapter V - Future Land Use .....	 38
Land Use and Planning Principles .....	38
Physical Characteristics .....	40
Growth Trends .....	42
Future Land Use .....	45
Probable Residential Development Pattern -- Long-Term .....	45
Recommendations -- Residential Land Use .....	48
Annexation .....	50
Recommendations -- Annexation .....	50
Open Space .....	51
Commercial Growth .....	52
Recommendations -- Commercial Development .....	53
Commercial Development Guidelines .....	55
Recommendations -- Industrial Development .....	67
 Chapter VI - Capital Improvement Plan .....	 71
Capital Improvement Program .....	71
Current Capital Improvement Projects .....	71
Near-term Capital Improvement Projects .....	72
Long-term Street Projects .....	82
Updating the Capital Improvement Plan .....	82

**TABLES**

Table 3.1:	Raymore Population .....	14
Table 3.2:	Historic Population Trends .....	15
Table 3.3:	Population Projection .....	16
Table 3.4:	Population of Incorporated Areas .....	17
Table 5.1	Number of Raymore Building Permits Issued from 1988 to 1993 .....	44
Table 5.3	Projected Density of Residential Development .....	46
Table 5.4	Near Term Street Projects .....	80
Table 5.5	Water and Sanitary Sewer Projects .....	81

TABLE OF CONTENTS (continued)

FIGURES

Figure 3.1: Population Projections ..... 13  
Figure 5.1: Number of Raymore Building Permits Issued  
from 1988 to 1993 ..... 43  
Figure 5.2: Building Permits Issued by Type of Use ..... 44

MAPS

Major Thoroughfare Plan Map (following page) ..... 32  
Future Land Use Plan Map (following page) ..... 48  
Capital Improvements Plan Map (following page) ..... 82

APPENDICES

Appendix A Capital Improvement Program  
Appendix B Capital Improvement Program



## **EXECUTIVE SUMMARY**

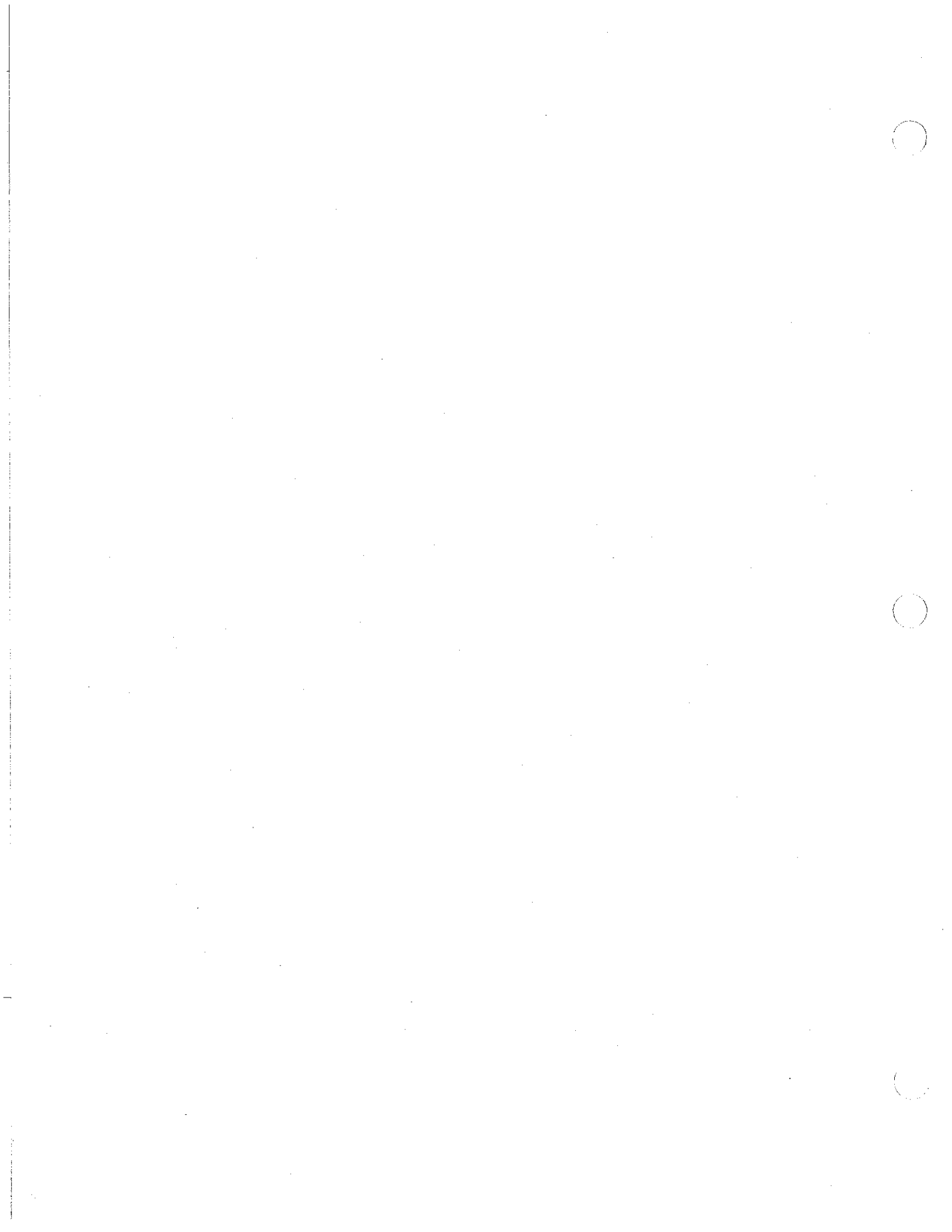
The City of Raymore Growth Management Plan update provides a clear assessment of urban development trends in the City and in its fringe growth areas: how much growth is projected and what public improvements are needed to serve that growth. The City has made strategic improvements, such as sanitary sewer force mains and the pumping station at Waltmire Road which serves all of west Raymore with sewer. The successful bond issue to match funds for widening U.S. 58 Highway will spur commercial growth. With the update of the growth management plan the City of Raymore can implement a new consensus about public facilities. The City can use the detailed capital improvements program to serve growth within Raymore and where urban change needs to become a part of Raymore.

First, the Growth Management Plan concludes that Raymore will experience urban growth in up to 6.5 square miles of land, in varying intensities, to the year 2010. The population is projected to reach 20,000 by that time. The plan ranks the most important roads, sewers and water lines to improve, and in which year, to serve the growth areas. The purpose of the growth management approach is to a) maximize the growth potential and tax base of the key commercial and residential corridors, and b) direct the growth to where the city has already invested in sanitary sewers and highway improvements.

Second, to promote strong and attractive development the City must participate in development to ensure it coordinates with existing land uses. One product of the plan is a set of development guidelines that should be incorporated into zoning and subdivision regulations to promote compatible development.

Third, the plan shows how the City can work with the private sector in getting public and private improvements completed. Investment in U.S. 71 Highway interchanges at 187th Street (Hubach Hill Road) and at 203rd Street can be made sooner with effective coordination, and can be made to suit the needs of Raymore. The City can use the plan to work with the land owners, regional development groups and the state. Similarly, public recreation facilities combined with private commercial, residential and industrial developments are planned to better support and enhance each investment.

Finally, the City can use the growth management policies as a means of implementing its plan of intent to annex land. Cooperation with vested land owners and Cass County will be fostered by the clear policies and capital improvement programs of the new Growth Management Plan.





## CHAPTER I GROWTH MANAGEMENT AND LAND USE

### Background

The City of Raymore is adopting an update of the 1988 *Growth Management Plan*. The original land use plan for the city established projections for growth and basic public policy for responding to change. Today, because of an accelerated pace of growth and because of major capital improvements that must be coordinated in the coming decade, a more detailed update of the *Growth Management Plan* has been undertaken.

The major public improvements that are completed or in the planning phase, designed to coordinate with private sector developments, are characterized as follows:

- Sanitary sewer mains in the Lampkins Fork and Grand River drainage basins in west and northwest Raymore;
- Water distribution mains and storage in north and northeast Raymore;
- Major street system development, primarily to relieve M-58 Highway traffic; and
- Public facilities, such as a future public works complex, to resolve deficiencies in the physical plant and/or meet the growing demands for service.

The updated plan addresses these needs in a "growth management" planning process. The plan first establishes a consensus about the issues; second, sets priorities for specific projects; and third, sets forth a technical document--the Capital Improvements Program--for implementing the plan. The technical program is based on the policy plan. Together the two elements of the *Growth Management Plan*--the technical program and the policy guidelines--combine to provide a guide for making future decisions about growth from a land use regulatory perspective. They create a comprehensive planning approach to future development needs of the City of Raymore.

### Future Land Use, Facilities Planning and Growth

The Growth Management Plan Update has identified three major issues which, as the City continues to grow, will impact future land use and facilities planning. The policies set forth in the following chapters of the *Growth Management Plan Update* address these issues and provide

a means by which the City of Raymore can organize its resources to most efficiently address the wishes of the community.

The issues identified are as follows:

- As identified, the City has implemented far-sighted plans for serving the public with sanitary sewer facilities. More than any other facility, the sanitary sewer system must be utilized by the city to establish a central growth corridor north and south of M-58 Highway in the Grand River basin. Water service improvements are planned to serve the same central area of the city, as well.
- The City has identified another central objective of the plan, which is for Raymore to become a more full-service community, broadening the sales tax base as well as the assessed valuation. Raymore must effectively plan for development other than residential growth. The city must provide for a business park and commercial/manufacturing, office, multi-family, and open space areas.
- Finally, a third central community-wide issue identified in the plan is the need to provide for public facilities. A well-designed public works complex to shelter equipment and materials, a combined municipal services and public safety building to serve a growing community, and a multi-purpose community center\swimming complex--these are all major improvements envisioned by the citizens of Raymore and designated in the plan for further study.

**The Land Use Issues**

The City of Raymore must plan for land use change in multi-layered ways. First the City must accommodate conflicting degrees of residential density as the housing market responds to demand. Second, the City has set as a growth objective the expansion of commercial development. Finally, the City must effectively plan for multi-jurisdictional cooperation with Cass County, the neighboring cities, such as Belton, and the state governmental agencies. In particular, the City must negotiate with the Missouri Highway and Transportation Department (MHTD) plans for regional roadway improvements, which in turn requires coordination at the Metropolitan Area Regional Council (MARC).

**Residential Development.** Concerning housing development, the public reaction to multifamily residential rezoning is generally most severe when proposals for higher density residential development follow single family development in an area. The City has amended zoning and

subdivision regulations to respond to past trends of incompatible development or poor design. Raymore's character as a low density community results from higher density residential development not concentrating in a single area. Development of mixed housing in a single neighborhood requires careful attention to land use transitions, buffering and separation of traffic generated by higher density neighborhoods.

Promotion of larger scale, more creative site planning to take advantage of physical site characteristics and preserve natural features is one means of accommodating such a development pattern. Large scale site design and development facilitates planning for adequate land use transitions. Further, by averaging the densities in an overall tract, it allows the development of higher density housing while maintaining an overall low density character. Incentives can be utilized as one means of promoting both larger scale and more creative site planning.

**Goal 1:** To insure a balance of appropriate housing styles while maintaining Raymore's overall low-density character.

- a. For low-density residential development, the maximum allowable density is three dwelling units per acre.
- b. Higher density residential development should be permitted on major thoroughfare streets as buffers to non-residential development.
- c. The design standards which regulate higher-density residential development should be amended to promote appropriate transitions in land use.

**Goal 2:** Promote the establishment of identifiable neighborhoods with a wide variety of uses through large scale site planning and development.

- a. Promote large scale site planning by establishing more flexible regulations for the development of such proposals.
- b. Adopt a neighborhood approach to land use planning, further insuring the provision of those services and uses needed at a neighborhood level.
- c. Plan for neighborhood parks in west and northwest portions of Raymore.

- d. Plan for park linkages with linear parks, walking and biking trails and bicycle routes improved along collector and arterial streets.

**Development Patterns.** Raymore's existing City limits encompass more than 16 square miles of land. Approximately six more square miles of additional land is expected to experience urban growth by the year 2010. At present, approximately six square miles of land within Raymore has been developed to an urban density. Approximately eleven sections of land have been developed in total or in part to date.

As a result, a great deal of land exists which is perceived to be available for development. However, given increasing demands and increasing costs for municipal services it is important to direct development in a way which insures the most efficient and effective utilization of available City services.

The City has invested in the Lampkins Fork and Grand River drainage basins in west and northwest Raymore. Higher density urban growth demands a higher level of municipal services. Therefore, such development should be encouraged to occur in the west and northwest areas of Raymore where municipal services are readily available or can be extended most easily. Further, the cost of extending such services in interceptors and laterals to a development site should be paid by the development. As a result, land which is contiguous to existing development and has access to City gravity flow sanitary sewer and improved force mains is the most economic to develop both for the City and the developer.

**Goal 3:** Urban growth should be encouraged to occur in a generally contiguous fashion to existing development to maximize utilization of existing public utility infrastructure and City services.

- a. In areas where gravity flow sewers or force mains are neither available nor planned for cost-effective extension, new residential development shall not be encouraged through land use approval or other public actions or investment.
- b. Development should be directed toward the growth pressure areas identified in the Growth Management Plan Update. Other areas of the community shall be considered long range development areas beyond the time frame of the plan.
- c. The cost of public infrastructure made necessary by new development should be assessed to that development.

- d. The improvements to Outer Road, north of Luch Webb Road, should be coordinated with widening of Lucy Webb Road in 1996. Coordination requires cooperative efforts of the City with the state, county and neighboring city of jurisdiction along the existing right-of-way. The cost should be shared by all jurisdictions in which the road lies. The jurisdictions responsible for Outer Road are the City of Raymore, the City of Belton, Cass County, and the State of Missouri.

**Commercial Development.** Historically, the only commercial area of any significance in Raymore was the Central Business District and along M-58 Highway, primarily at U.S. 71 Highway. Land along M-58 Highway has been developed into a significant commercial corridor. Beyond these areas, very few parcels have developed as commercial. As development continues and Raymore's population expands, demand for more commercial space will intensify. Construction of commercial centers in the City of Raymore is critical to the sales tax base of the community.

Traffic management considerations are also important in determining the site planning of commercial centers. Poorly planned strip development along M-58 Highway can result in traffic congestion when conflicting turning movements impede efficient flow of high traffic volumes. Commercial development on M-58 Highway should be encouraged in nodes or activity centers. These nodes should be located at intersections of the highway with major streets, allowing for improved and limited access to the highway.

Finally, the relationship to adjacent residential property must be evaluated when locating commercial retail centers. Commercial development in Raymore along M-58 Highway is close to low density residential development, creating abrupt transitions in land uses in many areas. Also, as commercial needs expand, there is more pressure to expand adjacent to residential neighborhoods. Such expansion must be carefully designed to accommodate compatibility among land use patterns.

**Goal 4:** Provide locations for a hierarchy of commercial retail services from neighborhood service commercial to regional centers adequate to meet the demands generated by future development while insuring that the expansion of Raymore's commercial based does not negatively impact existing neighborhoods.

- a. Establish a methodology for determining appropriate sites for different levels of commercial retail centers.

- b. Promote the development of retail activity centers in clusters or nodes rather than in strips along major highways and arterial streets.
- c. Plan for maximum and appropriate development of future commercial development centers.
- d. Adopt site development standards to be implemented through site plan review to assure implementation of the growth management plan objectives:
  - Proper site access to accommodate a high volume of traffic;
  - Proper landscaping and buffering from neighboring, dissimilar land uses.

**Land Use Transitions.** Generally accepted land use planning practices dictate that, to reduce the impact of a change in land use, a transition or buffer be established between the two uses. Characteristic approaches include maintaining a minimum physical distance between uses of different intensity; separation of low and high intensity uses with an intermediate intensity land use; or construction of a structural barrier (wall or fence, landscape screen, berm); or some combination of the above.

The effectiveness and feasibility of these techniques depend upon specific site considerations. First, for in-fill development, the creation of a transition must generally take place within the site since opportunities for physical separation through distance are not as feasible. In this instance, because land area is typically limited, structural barriers are usually the only feasible alternative. Second, the lay of the land is extremely important to the success of a transitional buffer technique. If a lower intensity use is located uphill from a higher intensity use, visual screening by use of a structural barrier is ineffective. Natural features existing on the site provide ideal transitions between different land uses and good site design should attempt to utilize such features for that purpose.

The provision of transition zones may also be impacted by the sequence of development. When lower intensity uses exist and higher intensity uses are proposed, the transition between the two becomes very important. Therefore, advance planning for such transitions from land use to land use is essential. For this reason, rezoning of small or isolated sites for a higher intensity use in an existing low density area should generally be discouraged.

Other factors influencing appropriate transition methods include maintenance requirements for any structural barrier needed to effectively transition between uses.

**Goal 5:** To insure the provision of adequate transitions between land uses of different intensity.

- a. Establish specific standards for the type and intensity of land use transition which shall be dictated by the magnitude of change between the land use of the lowest intensity and land use of the highest intensity.
- b. "Section Studies" should be undertaken of discrete areas of Raymore in advance of development to allow more in-depth analysis of land use transitions. For example, a section study of west Raymore would establish specific roadway alignment options, in consultation with large area land owners, preparing the City to better negotiate optimum rights-of-way dedications from future developers.

**Economic Development.** As a result of past economic development policies, large sections of the M-58 Highway corridor in Raymore have been zoned for commercial development. To date, much of this land remains undeveloped. This pattern generally conforms with national trends which indicate demand for high traffic count arterials to support commercial retail segments of the economy. The majority of economic growth has occurred in the information and service sectors of the economy. At the same time, the newly widened highway will remain a key east-west arterial in Raymore and must carry large volumes of traffic efficiently. As a result, the proper development of the 58 Highway corridor is essential to the economic development of the entire community.

**Goal 6:** Support economic development trends and implement the stated economic opportunity of broadening the Raymore tax base by maximizing the commercial land availability on M-58 Highway; while at the same time assuring compatible development, both to maintain traffic flow and to create "good neighbors" for residential uses nearby.

- a. Zone for clusters of retail and office commercial districts along the highway, and adopt guidelines for review of development in order to achieve planning objectives.
- b. Amend site plan review procedures to ensure proper submittals to implement new guidelines for effective, compatible development.

To broaden the local tax base in a more comprehensive way, and to take advantage of future interchanges at U.S. 71 Highway, the City must plan carefully for a broad range of land uses, including light industrial uses.

**Goal 7: Prepare for a broader land use and tax base development by expanding zoning and site plan review standards for mixed-use developments.**

- a. Develop business park site planning guidelines for zoning of a mixture of office, distribution centers and light manufacturing uses with retail and wholesale uses in a business park setting.
- b. Adopt a clear set of design standards and performance criteria which regulate development in tracts designated as business parks.



**CHAPTER II  
ISSUES IMPACTING GROWTH**

**Identifying Issues**

The City of Raymore Planning Commission and Growth Management Task Force hosted a "Focus Session" of members of the public to identify critical issues facing the city in the 20-year time frame of the growth management plan study. Approximately 20 participants met to identify issues and then rank the issues by importance in the following categories:

- The areas of land use and quality of life; and
- The areas of economic development and capital improvements.

Following the identification of issues, the group was divided into the subject areas listed above and each group rank the top issues facing the city. The issues identified and ranked by the group provided direction to the planning commission, task force, governing body and staff in preparing the growth management plan update. Following are the results of the work of the committee:

**Issues Identified by the Entire Group**

Managed Orderly Growth	Infrastructure, Planning and
Support for the Schools	Financing
City/County Cooperation	Balance of Taxation and Fees
City Center/Identity	Commercial Development
Quality of Life, Shopping, Transportation, Parks and Recreation	Residential Development
Community Activity Center	Light Industrial Development
Rates and Fees Too High	Image of the City
Emergency Services	Suburban Design/Open Space
Diverse Housing	Keeping Premises Clean
Desirable Businesses	Regional Road Access
A Broader Tax Base	Land Use Policies/Zoning
Road Improvements and Maintenance	Water Surface Looping and Storage
Road Classification and Thoroughfare Plan	Stormwater Management
Appointment of an Economic Development Director	Alternative Water Source

**Ranking the Issues**

The subcommittees discussed the two topics and ranked the issues as follows:

**Land Use and Quality of Life**

*Opportunities*

1. Broaden the city tax base
2. Support of schools
3. Emergency services, including public safety
4. Road infrastructure: maintenance and improved access/thoroughfare plan
5. Development of utility infrastructure, including water storage

*Threats*

1. One dimensional tax base
2. Poor road access and maintenance
3. Poor utility service and plans
4. School support lags behind growth
5. Rapid acceleration of fees and taxes

**Capital Improvements**

*Opportunities*

1. Infrastructure development
  - Land acquisition for future public facilities
  - Community activity center
  - Water supply storage and looping
  - Water alternative source
  - Stormwater management
  - Road development: standards, regional access, and classification
2. Financing Infrastructure Appropriately

3. Balancing Growth: Timing and Phase
4. Multi-Governmental Cooperation
5. Appointment of an Economical Development Director

**Economic Development and Growth**

*Opportunities*

1. Diversification of the tax base
2. Identification of a "city center"
3. Controlling the timing and direction growth
4. Supporting quality options for residential development
5. Park and Recreation Programs and Staffing

**Capital Improvement Program**

*Threats*

1. The rapid pace of growth and change
2. Federal and state regulations
3. Cost of development and the funding of development

The planning commission and task force evaluated the ranked issues and used the list as a starting point for development of goals and objectives on which to base the growth management plan policies.

### CHAPTER III POPULATION ANALYSIS

A reliable estimate of future population trends is an important component of the planning process. As changes occur over time in a city such as Raymore the nature of the population, both in size and structure, will determine the kind of land use issues which will need to be addressed. This need calls for a population projection to be performed in order to determine Raymore's future population levels.

The resulting population levels yielded by a population projection can be used to determine estimates of land use demand by category of use which, in turn, can be used as one of the determinants of Raymore's future land use pattern. Additionally, the population projections can be used to predict future demand for municipal services.

#### **Estimating the Future Population**

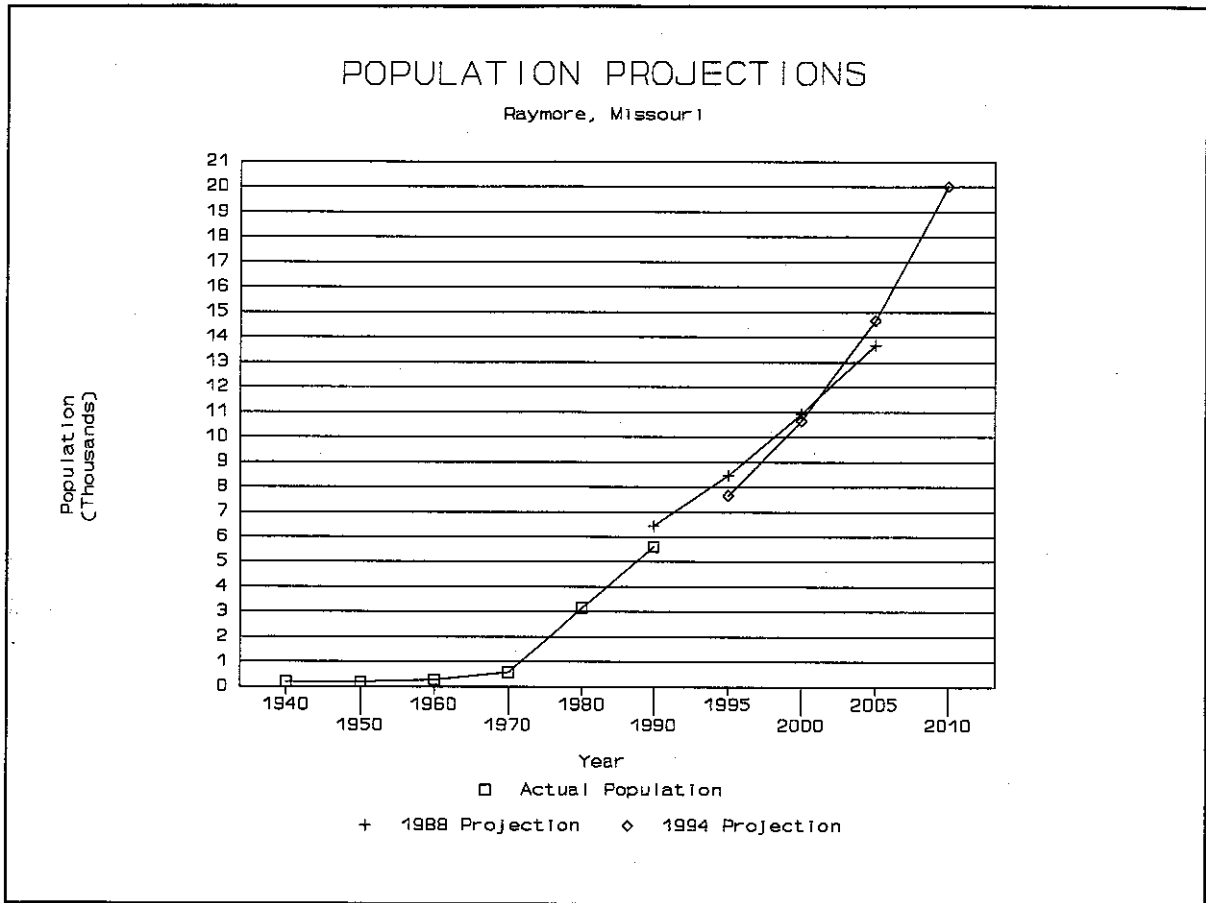
Such a population projection can be determined by the Cohort-Survival method, a projection method which uses individual rates of change for each of the three components of population change, fertility, mortality, and migration, to project population growth. Migration, the number of people that move in and out of an area, is the most critical component which is factored into this projection equation. It is also the most volatile and least predictable of the three components of population change.

In performing the cohort analysis, assumptions were made concerning future city fertility, mortality, and migration rates. It was assumed that the City's future fertility and mortality rates would remain at moderate levels. Migration was inferred from the data. It was assumed that its migration rates would continue the same pattern that evolved from 1980 to 1990. Since growth from 1980 to 1990 was relatively rapid, the projection assumed a relatively rapid growth rate.

Results from the projection indicate that Raymore's population in 1995 will reach 7,651 residents, in 2000 will reach 10,645 residents, in 2005 will reach 14,673, and in 2010 will reach 20,017. The results of this projection can be compared to the results of the projection performed in 1988 for the previous Raymore Growth Management Plan. The results of the 1988 Raymore Growth Management Plan projection indicated that Raymore's population in 1995 will reach 8,450, in 2000 will reach 10,900, and in 2005 will reach 13,670. The new projection contains more recent

data than the 1988 projection. Figure 3-1 illustrates that the new projection is more effected by Raymore's recent rapid growth. Therefore, the population projected is slightly higher than that projected by the 1988 Raymore Growth Management Plan. Figure 3-1 and Table 3-1 display the results of the two projections and Raymore's actual population figures.

FIGURE 3.1



Source: Bucher, Willis & Ratliff

**TABLE 3-1  
RAYMORE POPULATION**

PAST TRENDS		FUTURE PROJECTIONS	
		1994 Growth Management Plan Projection	1988 Comprehensive Plan Projection
1940	207	--	--
1950	208	--	--
1960	268	--	--
1970	587	--	--
1980	3,154	--	--
1990	5,592	--	6,430
1995	--	7,651	8,450
2000	--	10,645	10,900
2005	--	14,673	13,670
2010	--	20,017	--

Note: See text for explanation of projection techniques.

Source: U.S. Census Bureau; City of Raymore; and Bucher, Willis & Ratliff.

**Trends**

According to both the Mid-America Regional Council (MARC) and the Office of Social and Economic Data Analysis at the University of Missouri-Columbia (OSED), Cass County has been one of the fastest-growing counties in the State. Within the last 50 years, Cass County has increased steadily and significantly in population. The figures in Table 3-2 indicate that the population of Cass County has increased over 200% from 19,534 in 1940 to 63,808 in 1990. Additionally, Raymore is one of the fastest growing cities within Cass County. The population of Raymore increased an impressive 437% from 1970 to 1980 and 77.3% from 1980 to 1990.

**TABLE 3-2  
HISTORIC POPULATION TRENDS  
Raymore, Cass County and Missouri  
1940-1990**

	Raymore	Cass County	Missouri
1940	207	19,534	3,784,664
1960	268	29,702	4,319,793
1970	587	39,448	4,677,793
1980	3,154	51,029	4,916,766
1990	5,592	63,808	5,117,073
% Change 1970-80	437.0	29.4	5.1
% Change 1980-90	77.3	25.0	4.1

Source: Office of Social & Economic Data Analysis, University of Missouri-Columbia.

Both the population of Raymore and Cass County have been projected to the year 2010. Table 3-3 and Figures 3-1 and 3-2 display the results of these projections. In 1990, Raymore's population comprised 9.3% of Cass County's population. It is projected that Raymore's population will have grown to 15.8% of Cass County's population in 2000 and to 27.8% of the population by 2010.

Table 3-4 shows the population trends of Raymore and other selected incorporated areas within Cass County from 1980 to 1990, giving a broader perspective of the general growth trends. Raymore's population changed 77.3% from 1980 to 1990 and comprised a significant 19.1% of Cass County's total growth. Growth within many of the other incorporated areas examined was much more modest, with several areas even experiencing decline.

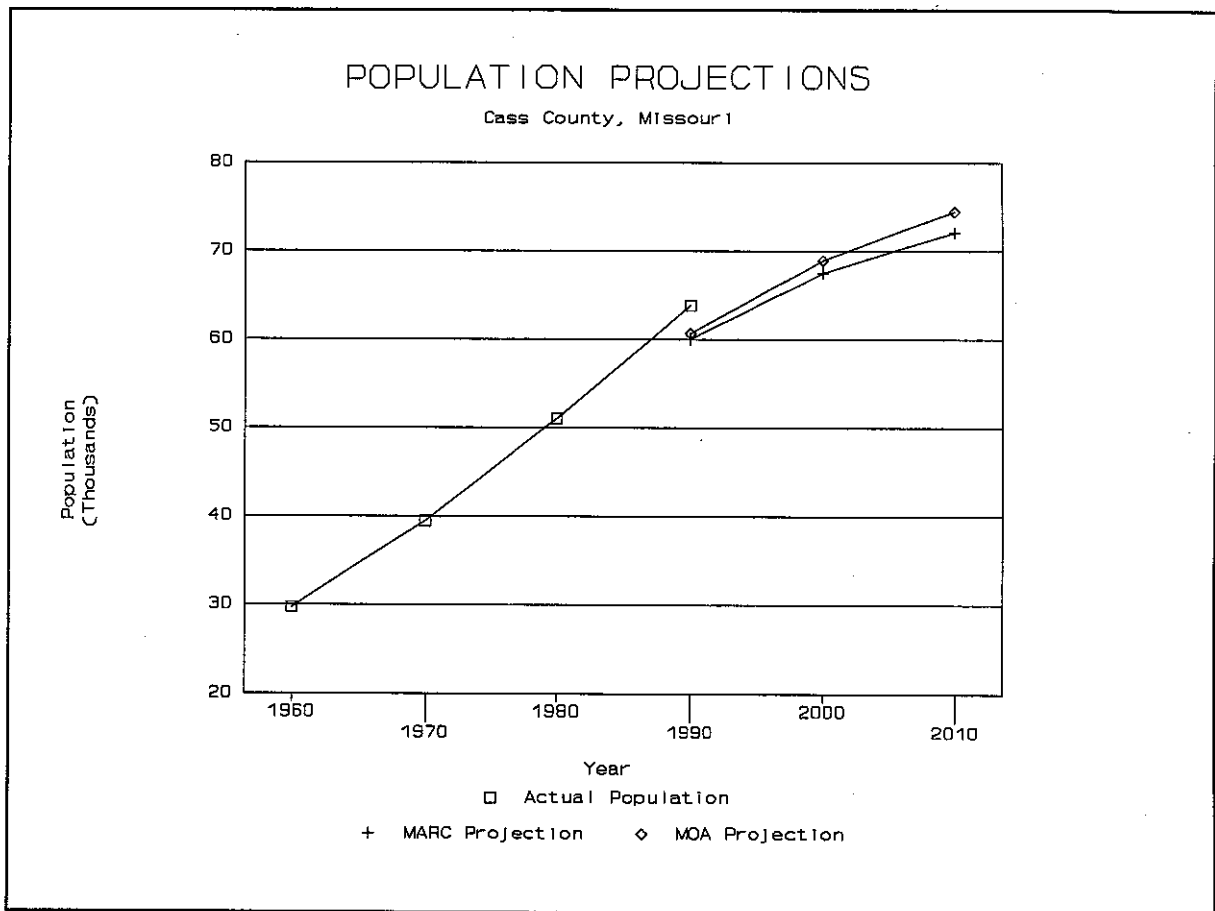
**TABLE 3-3  
POPULATION PROJECTION  
Raymore, Cass County and Kansas City Metropolitan Area\***

	1990	2000	2010	%Change 1990-2010
Raymore	5,592	10,645	20,017	258
Cass County	60,001	67,522	72,055	20.1
Metropolitan Area	1,571,500	1,685,840	1,793,790	14.1
Raymore as a % of Cass County	9.3	15.8	27.8	-

Source: Mid-America Regional Council/Research Data Center.

Note: \* The Kansas City Metropolitan Area includes Johnson, Leavenworth and Wyandotte Counties in Kansas, and Cass, Clay, Jackson, Platte and Ray Counties in Missouri.

**FIGURE 3-2**





**TABLE 3-4  
POPULATION OF INCORPORATED AREAS  
Cass County, Missouri  
1980-1990**

Incorporated Area	1980	1990	% Change 1980-1990	% of County Total Change 1980-1990
Archie	753	815	8.2	.49
Baldwin Park	126	78	-48 people	.38
Belton	13,533	18,159	34.2	36.2
Cleveland	485	512	5.6	.21
Creighton	301	273	-28 people	.22
Drexel (partial)	781	814	4.2	.26
East Lynne	286	279	-7 people	-
Freeman	485	503	3.7	.14
Garden City	1,021	1,242	21.6	1.7
Gunn City	58	58	0.0	-
Harrisonville	6,372	7,683	20.6	10.3
Kansas City (partial)	3	33	1,000.0	.24
Lake Annette	94	155	64.9	.48
Lake Winnebago	681	761	11.7	.63
Lee's Summit (partial)	50	438	776.0	3.0
Peculiar	1,571	1,771	12.7	1.6
Pleasant Hill	3,301	3,834	16.14	4.2
Raymore	3,154	5,592	77.3	19.1
Strasburg	170	106	-64 people	-
West Line	109	92	-17 people	-
Total County (includes unincorporated areas)	51,029	63,808	25.0	100.0

Source: U.S. Bureau of the Census.

**Conclusions**

While it is not possible to predict exact population figures, it is apparent that if Raymore's present growth continues, the City will experience sizable and significant growth in the future. These figures will approach 20,017 people by 2010. Additionally, it is projected that Raymore will continue to be a leader of growth in Cass County along with other northeastern cities.

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**CHAPTER IV  
PUBLIC FACILITIES AND SERVICES**

**EXISTING PUBLIC FACILITIES AND SERVICES**

As Chapter 3, Population Analysis, of this document has established, Raymore faces rapid growth in the near term. As a result, the need for expanded public services will arise. In order to plan for these expansions, the current status of Raymore's public facilities and services must first be inventoried. The purpose of this chapter is to perform such an inventory.

**Schools**

If the City's growth continues at its present rate, it follows that the school system will continue to experience pressure from enrollment increases. A new high school has been completed and, additionally, a bond issue for a new elementary school will be presented to voters in 1994. It has been projected that school enrollment in the district will grow from approximately 3,200 students in 1994 to between 4,100 and 4,600 students in 1999. As a result, it is almost certain that additional construction will be required in the future.

**Parks and Recreation**

One of the most visible measures of the quality of life in a community is the park system. Parks and recreational facilities provide opportunities for exercise and relaxation. They offer a visual and psychic respite from the routine of daily life. This section includes an inventory of existing park land and recreational facilities in Raymore. The inventory is compared with national and state standards to establish recommendations for park system improvements.

The first step in analyzing the adequacy of a park system is to review the type, size and location of existing park land. Different types of parks serve different functions in the community and each type has its own requirements for size, location and equipment. Generally speaking, the three basic types of parks are regional, community and neighborhood parks. A description of each type follows.

*Regional Park:* Serves an area consisting of one or more counties and contains more than 100 acres. The primary attraction of a regional park is a large-scale recreational amenity, such as a lake or wilderness area. Raymore does not have a regional park.

*Community Park:* Provides separate facilities for quiet and active play. Competitive sports, passive entertainment, large group gatherings, and individual usage are characteristics of city-wide, community parks which serve several neighborhoods. Raymore's Recreation and Memorial Parks are both community parks.

*Neighborhood Park:* Serves the local residents of a specific area of the City. These parks are generally less than eight acres in size and contain relatively unstructured facilities such as playground equipment, picnic tables and basketball courts. The JayCee Park is an example of a neighborhood park within the City.

**Park Land Area**

National standards for park land use are listed in Table 4.1. This table can be used to determine the total amount of park land within each category that the City of Raymore should obtain. Obviously, there is some overlap between these categories. In particular, community parks often double as neighborhood parks for the immediate surrounding area. It is also common for a park to be in one category based on its size but another category based on its function. For example, Recreation Park is a community park that has some attributes of a regional park since it serves many of the residents of Cass County. Given these limitations, the existing parks in the City of Raymore have been categorized and listed in Table 4.2.

For a City the size of Raymore, the National Park and Recreation Association recommends a minimum of 5.5 acres of neighborhood parks and 28 acres of community parks. Also recommended is the use of 28 acres of a regional park. A regional park is much larger than the prescribed 28 acres. However, a regional park includes several communities in its service area.

The City's current supply of park land within the City of Raymore--approximately 103 acres--is well above the total land area of 61.5 acres recommended as the minimum acreage for neighborhood, community, and regional parks. However, the City's park system does not meet the recommended acreage for the individual neighborhood and regional park land categories.

**TABLE 4-1  
RECOMMENDED STANDARDS FOR PARK FACILITIES**

<u>Facility</u>	<u>Service Area</u>	<u>Acres/1,000 Population</u>	<u>Desirable Size in Acres</u>
Neighborhood Park/Playground	½ mile radius	1 - 2	6 - 8+
Community Park	several neighborhoods	5 - 8	25+
Regional/Metro Park	5 - 15 mile radius	5 - 10	100 - 500

Source: Recreation, Park and Open Space Standards and Guidelines,  
National Recreation and Park Association, 1983.

**TABLE 4-2  
PARK LAND INVENTORY  
City of Raymore**

<u>Neighborhood Park Land</u>	<u>Size (acres)</u>
Eagle Park	0.25
JayCee Park	<u>0.50</u>
	0.75
 <u>Community Park Land</u>	
Recreation Park	80
Memorial Park	<u>22</u>
	102
 <u>Regional Park Land</u>	
none	<u>0</u>
	0
 <b>TOTAL PARK ACREAGE</b>	<b>102.75</b>

Source: City of Raymore

**Park Land Distribution**

Another problematic issue in cities beyond the issue of total park area is the location of existing parks. It is normally assumed that most users will drive to regional and community parks. Thus, vehicular accessibility is the most critical factor, although geographic proximity is certainly desirable. Proximity is much more important for neighborhood parks because many users, especially children, arrive on foot or on a bicycle. For this reason, it is recommended that residential areas be within one-half mile of a neighborhood park.

The term "neighborhood park" in this case normally includes both community parks and school grounds which have playground areas. The Existing Land Use Map shows the locations of existing parks and schools along with other land uses in the City of Raymore. As the map indicates, Raymore's park facilities are not adequately spaced throughout the community. Most of Raymore's residents should be within one-half mile of a community or neighborhood park. Residents within the central core of the City are generally offered adequate coverage. However, neighborhoods farther from the center of the city generally do not have the desired access to a neighborhood or community park.

**Park Facilities**

A measure of park land is important, but the extent and adequacy of recreational facilities available provide a critical variable in determining the quality of the parks system. Ideally the number and type of facilities should correspond directly to the size and diversity of recreational demand. Unfortunately, determining demand is difficult. It is best measured by monitoring the continued use of existing facilities.

Table 4.3 uses national and state standards to establish the suggested number of recreational facilities in the City of Raymore. When comparing the facilities recommended by the state to those of the City, it is revealed that Raymore has more than the state recommended number of ball diamonds and soccer fields and fewer than the recommended number of other facilities. The State standards recommend that Raymore obtain the following number of additional recreational facilities: two tennis courts, one volleyball court, two basketball courts, one picnic shelter, one handball court, three horseshoe pits, and two playgrounds. These figures are intended to be used as a guide for future decisions concerning the park system. However, these numbers are meant as a starting point. It should be taken into consideration that differences in community tastes may alter the distribution of facilities from recommended state standards.

**Existing Parks**

The City maintains two community parks: the 80-acre Recreation Park and the smaller 22-acre Memorial Park. A park master plan has been prepared for Recreation Park in order to guide the development of its facilities. Recreation Park contains four baseball diamonds, four soccer fields, and a playground. Memorial Park contains four baseball diamonds, two tennis courts, one volleyball court, two picnic shelters, and one playground. Additionally, the Park Board has recommended that lights be installed at Recreation Park's baseball fields.

The City also maintains two neighborhood parks which have been donated by private individuals and organizations. JayCee Park is located at the corner of Washington and Maple Streets. It has an area of approximately one-half acre and contains a small playground. Eagle Park is located at the intersection of Highway 58 and Jefferson Street. It has an area of approximately one-quarter acre and contains a sitting area.

Recreation Park has some characteristics of a regional park since it serves not only Raymore residents but residents from the greater Cass County area. Certain problems arise from this arrangement since only Raymore residents fund the park. In the future, the City is interested in coordinating recreational facilities with Cass County.

Additionally, semi-public as well as private entities should bear some responsibility for fulfilling park land needs. Dedication of park land for recreational uses should be considered as the City prepares amendments of the subdivision regulations. For instance, a third park has been proposed by the Good Ranch Planned Community development proposal. Such a park would be a linear park lying within the floodplain and following the creek. The development would donate the land and the City would provide the funds and labor for its development and upkeep. The park lends itself very well to a system of biking and walking trails. It not only provides an excellent opportunity to provide relief from development in the form of open space, but also discourages development in the floodplain.

# CITY OF RAYMORE

## Growth Management Plan Update

**TABLE 4-3  
STANDARDS AND EXISTING FACILITIES FOR RECREATIONAL USES  
City of Raymore**

Recreational Facility Type	STANDARDS			RAYMORE		
	National <sup>1</sup> Facility: Pop.	State <sup>2</sup> Facility: Pop.	Facilities Needed by NRPA Standards	Facilities Needed by State Standards	Existing <sup>3</sup> Facilities	
Hand/Racquetball Courts	1: 20,000	1: 5,000	0	1	0	
Ball Diamonds	1: 5,000	1: 1,500	1	4	8	
Soccer/Football Fields	1: 10,000	1: 4,000	0	1	4	
Tennis Courts	1: 2,000	1: 1,500	3	4	2	
Volleyball Courts	1: 5,000	1: 3,000	1	2	1	
Basketball Courts	1: 5,000	1: 3,000	1	2	0	
Horseshoe Pits	N/A	1: 2,000	-	3	0	
Swimming Pools	1: 20,000		0	0	0	
Picnic Shelters	N/A	1: 2,000	-	3	2	
Picnic Tables	1: 125	1: 125	44	44	unavailable	
Playgrounds	N/A	1: 1,000	-	5	3	
Public Golf Course	25,000	1: 25,000	0	0	0	

Sources: <sup>1</sup> National Recreation and Park Association (NRPA)  
<sup>2</sup> State of Missouri, Department of Natural Resources  
<sup>3</sup> City of Raymore, Missouri



**Law Enforcement**

Law enforcement service within the City is provided by the Raymore Police Department. The Raymore Police Department has one central station which is currently located at 210 South Washington. As reported by the City of Raymore, Raymore Police Department personnel currently consists of nine full time police officers and five dispatchers serving in the Department. This personnel is supported by additional Reserve Officers, two certified D.A.R.E Officers, and an Animal Control Officer. The result is a ratio of 1.5 police officers to every 1,000 persons. Additional resources include an enhanced 9-1-1 communication system, connection to Kansas City-based crime and license information, a Telephone for the Deaf system (TDD), and mutual aide agreements with the Belton Police Department, the Cass County Sheriff Department, and the Missouri State Highway Patrol. It should be noted that the City's crime rate for 1993 was lower than the crime rate for 1992.

Correctional facilities within the city are operated by the Raymore Police Department. There is a need to improve and expand the correctional facilities, which consist of several holding cells. Under current conditions, prisoners can be held for a maximum of four hours. New or renovated facilities should be designed to meet current correctional standards, unlike the existing facilities. Given increasing requirements and demands of service, the City prefers participation in a regional jail facility in the future which would meet new standards.

The Department is currently experiencing difficulties at its present facilities as a result of the age and size of the building. Further exacerbating the problems at the present location, the Raymore Police Department facilities will need further improvements to accommodate additional field and support personnel to handle increased service calls and workloads resulting from the predicted rapid population growth.

It should be noted that as the City grows, it will become increasingly important to locate any new law enforcement facilities in a central location to ensure the most efficient operation of daily activities. New law enforcement facilities could be housed with other governmental units or could remain separate.

**Fire and Emergency Medical Service (EMS)**

The City of Raymore is included in the South Metropolitan Fire Protection District. The South Metropolitan Fire Protection District is a separate political body and is not affiliated with any city government. The District provides service to Raymore, Lake Winnebago, and

unincorporated North Central Cass County. As of 1994, 26 full-time (13 paramedic/firefighters and 13 EMT/firefighters) and 30 reserve (2 paramedic/firefighters and 28 EMT/firefighters) personnel served a population of 22,000 North Central Cass County residents.

There are three stations and one training complex within the district. There are also plans for a fourth fire station. The District's fire and rescue facilities are distributed as follows:

Headquarters and Training Complex	Raymore
Station 1	Raymore
Station 2	Lake Winnebago
Station 3	Unincorporated Cass County
Station 4 (site plan only)	Raymore.

As a member, Raymore receives many services from the District, including not only state of the art fire suppression, rescue, and paramedic ambulance service but also hazardous materials mitigation, building code enforcement, and public fire and medical education. The District's personnel are highly trained and are required to receive State certification as Firefighter I, Haz-Mat Operations, and either Emergency Medical Technician or Paramedic.

The South Metropolitan Fire Protection District has an average response time of 3.3 minutes in Raymore and a cardiac arrest save rate of 44%. The District's excellent service has contributed to an insurance rating of Class 4 for its incorporated areas, which is the best in Cass County and is comparable to major cities in the Kansas City Metropolitan Area such as Overland Park and Lee's Summit.

### **Water System**

Municipal water systems consist of three components: supply, storage and distribution. For the entire system to function properly, each component must be sized to meet anticipated demand and designed in a manner consistent with the rest of the system. The primary purpose of a water system, of course, is to deliver an adequate volume of water to each customer at an adequate pressure. In addition to normal customers, however, water must also be available in all parts of the community for use by the fire department in fighting fires.

The source of supply for Raymore's water system is the City of Kansas City, Missouri. Raymore has a contract, valid until 1998, to buy up to 640,000 gallons per day (this limit applies to the average day in any month). The point of supply is the City's extreme northwestern corner

where the city maintains its own ground storage reservoir and pumping station. Assuming an average per capita consumption of 80 to 100 gallons per day, the available supply should serve 6,400 to 8,000 residents. East of Raymore to M-291 Highway, water is provided by RWD No. 6.

The city has begun renegotiation of the contract and investigation of alternative water sources. As the city plans to increase its water delivery in response to demand, capital improvement plans must be studied to determine how to transport the increased volumes of water to Raymore.

The ground storage reservoir at the point of supply, located at the northwest corner of the city limits, has a capacity of 750,000 gallons. This is supplemented by additional storage facilities consisting of a 200,000-gallon ground reservoir near the center of the City and a 500,000-gallon elevated tank along the ridge line north of Highway 58 in the area of Mott Street. Additionally, in order to supply backup service in the event of fire flow or low water pressure on the east side of the City, two pumps were installed which work in conjunction with the 200,000-gallon ground reservoir.

Water is pumped into the distribution system from the ground reservoir via a main which follows County Line Road and North Madison and a second main which parallels Kentucky. This avoids the potential, albeit unlikely, problem of a water main break isolating the rest of the water system. The City intends to build a second point of supply further east to provide a stronger distribution system for future eastern growth. The City plans will be implemented with the installation of a pump station and a three million-gallon ground reservoir in the north east section of Raymore at the intersection of County Line Road and "J" Highway, a 1 million-gallon water tower due south of the pump station at the intersection of Hubach Hill Road and "J" Highway, and a 16-inch transmission line running along "J" Highway connecting the pump station and water tower.

The rest of the distribution system offers an adequate level of service. The majority of water lines are 6 or 8 inches in diameter, and there are relatively few dead ends. It should be noted that the City has approved and annexed the "Good Ranch Planned Community" and has agreed to provide water to its parcels. In order to supply long-range growth to the east and south, such as the "Good Ranch Planned Subdivision," it will be necessary to design a system of 12- to 15-inch water supply mains to serve as feeders for the more localized lines and to maintain adequate volume to support the more distant subdivisions.

Once the planned improvements are constructed, the City will be able to serve approximately 40,000 residents. As indicated by the population projection, this level of service should be adequate beyond 2010.

### **Sanitary Sewer System**

A public system for the collection and treatment of sewage is a necessity in order to avoid disease, as well as pollution and odor problems. Unfortunately, the layout of a public sewer system is constrained to a substantial degree by topography. Therefore, the location of future development must be carefully coordinated with the expansion of the sewer system, if the efficiency of the system is to be maintained.

In general, sewer systems depend upon gravity flow to transport sewage from each source to the treatment plant. The weakness of this method of collection is that it can only serve the area directly uphill from the treatment plant. Areas which are below the treatment plant or in a different drainage basin require either an additional treatment plant or a lift station to pump the sewage uphill. Although lift stations are widely used, they are considerably more expensive--both to install and maintain--than are systems which are entirely gravity flow. For this reason, it is preferable for new development to be encouraged to locate in areas which can gravity-flow into the existing system. If additional lift stations are installed, they should be located to serve as large an area as is reasonably possible to avoid a proliferation of small systems.

Unfortunately, Raymore's location astride a major ridge line guarantees either multiple treatment plants or lift stations. The majority of Raymore is divided into three major drainage basins. To the north and northwest is Lampkins Fork, a tributary of the Little Blue River. To the northeast and east is the Middle Big Creek. To the south and southwest is the Grand River drainage basin. In addition, there is a portion of the extreme southeastern corner of the City which is in still another drainage basin, but it currently does not contain any public sewers.

The results of this topographical division is a complex sewer system. In the past, all of the City's sewage flowed to the Middle Big Creek treatment plant northeast of Raymore. It was carried to the plant via the Alexander Creek Interceptor, which was at or above capacity in certain segments. The problems were not caused by excessive development in the Middle Big Creek basin, which was relatively minimal but, rather, by development in two other basins: the Grand River basin and the Lampkins Fork basin. The Grand River basin, which is the site of the vast majority of recent development, had three lift stations which ultimately pumped all of their

wastewater into the Middle Big Creek basin. Similarly, the Lampkins Fork basin had two lift stations which pumped into Middle Big Creek.

A report by Larkin Associates, consulting engineers, examined the City's sewer system and contained several alternative scenarios for making improvements. The Raymore Sewer Project, modeled after one of the alternative scenarios, implemented many improvements recommended by the report. The capacity pressures on the Alexander Creek Interceptor were relieved when the Little Blue Sewer District extended trunk mains to serve the Lampkins Fork basin in Raymore. Also, the Owen Good Pump Station was constructed in the Grand River Basin and ten miles of gravity lines and three lines of force main were put into operation. This new pump station routed sewage to the Lampkins Fork basin and in turn to the Little Blue Sewer District. This has opened the northwest portion of the City and has eliminated capacity pressures on the Alexander Creek Interceptor. The construction of the Owen Good Pump Station resulted in the elimination of all but one of the existing pump stations, yielding a net total of two pump stations.

Although the City's major capacity problems have been alleviated, there are still some existing lines which are undersized and should be enlarged. Service to the southeast corner of the city remains a problem since it is in another drainage basin. A portion of northeast Raymore is included in a DNR abatement order to resolve problems relating to quality of treated effluent. Lastly, a lift station in the Grand River basin is experiencing problems due to wet weather infiltration.

#### **City Hall, Public Works, and Maintenance**

From a planning perspective, the adequacy of City Hall is less crucial than the water, sewer and street systems because it does not have a direct impact on future growth patterns. Nevertheless, it is an important issue because there are several indirect impacts on the long-term well-being of the community. Improving the current City Hall is likely to have the following benefits:

1. The convenience of City residents will be increased;
2. The efficiency and productivity of City employees will be improved;
3. The self-image of the community will be enhanced and will be more consistent with its emphasis on quality development; and
4. It will be easier for the City to attract and keep quality employees.

Although the absence of improvements will not create a crisis or public hazard, it is important that improvements to City Hall keep pace with the growth of Raymore.

The primary City offices are located at 104 North Madison Street. The main building space must accommodate the needs of approximately ten full time and three part time employees. The main floor is occupied by administrative offices and customer service personnel while the basement is occupied by Planning and Engineering. The existence of overcrowding is evidenced by the location of Purchasing, Accounting, and Building Inspection services in a separate modular building located behind City Hall. The modular building houses four full time and one part time employee.

Due to the rapid growth anticipated for the future, it is recommended that City Hall expansion plans contain space for at least 25 to 30 employees to be in-house during a normal day. Using a standard rule-of-thumb of 150 to 200 square feet per employee, this would mean that there should be between 4,000 and 6,000 square feet of available office space. In addition, there should be an expanded Council Chambers, a separate Municipal Courtroom, jail space and increased storage area (including a fire-resistant vault for municipal records).

The location of City Hall should be accessible to the residents of the community, but is otherwise relatively unconstrained. A possible new location for City Hall is within the mixed use core of the "Good Ranch Planned Community." The Good Ranch proposal, which has been recently approved by the City, has set aside 136 acres for administrative offices for city, fire, and school operations and for a community center and a park.

Finally, it is recommended that the City consider consolidating and expanding its public works and maintenance facilities. The construction of such a facility is likely to lengthen the life span of the City's heavy equipment, facilitate equipment maintenance and repair, and improve the appearance of the area surrounding the maintenance facilities. The site selected for a maintenance facility should be centrally located, have direct access to a major street which is accessible to heavy equipment, and be separated or buffered from any nearby residences.

In general, it is advisable to conduct a space needs analysis for all governmental activities which will determine the long-range future floor and parking space requirements as a result of expected personnel increases. This will become increasingly important as the City's population continues to grow at such a rapid rate.

**Transportation**

Major Issues

The planned relocation of 58 Hwy in northern Cass County is included in the plans of the Mid-America Regional Council (MARC) and the Missouri Highway and Transportation Department (MHTD), to improve east/west traffic movement through the region. Federal funds are eligible to be expended by the MHTD, because MARC has indicated the east/west highway as a "Major Improvement" west of M-291 Highway. The eligible improvement assures funding for a highway interchange at U.S. 71 Highway and the vicinity of 187th Street in the City of Raymore.

The critical issues concerning the relocation of 58 Hwy, as far as the City of Raymore is concerned, are two-fold:

- Alignment of the highway, and
- Design standards for the widened roadway.

The role of the regional planning agency is to (a) study the long term need of a 21st Century Parkway as it relates to the system-wide needs of the entire region, and (b) to provide guidance to local communities, in the interim, in order to help the local municipalities deal with incremental growth. In other words, the role of MARC is to help the entire region come to a consensus about how to meet the needs for efficient movement across the region. At the same time, the role of the MHTD is to decide on the design standards of the improvement.

The City of Raymore has identified that the region needs (a) an interchange with U.S. 71 Highway at 187th Street, or Hubach Hill Road, and (b) a future additional interchange approximately two miles south at 203rd Street. The 187th Street interchange is needed to accommodate the current traffic demand in the north Cass County region. The City of Raymore needs the 187th Street interchange to serve local arterial traffic.

The transportation planning needs of the City and of the metropolitan region may be coordinated in several ways:

- The local jurisdiction should "keep its options open" when responding to development initiatives of the private sector by reserving sufficient right-of-way to accommodate the highest level of potential future improvement;

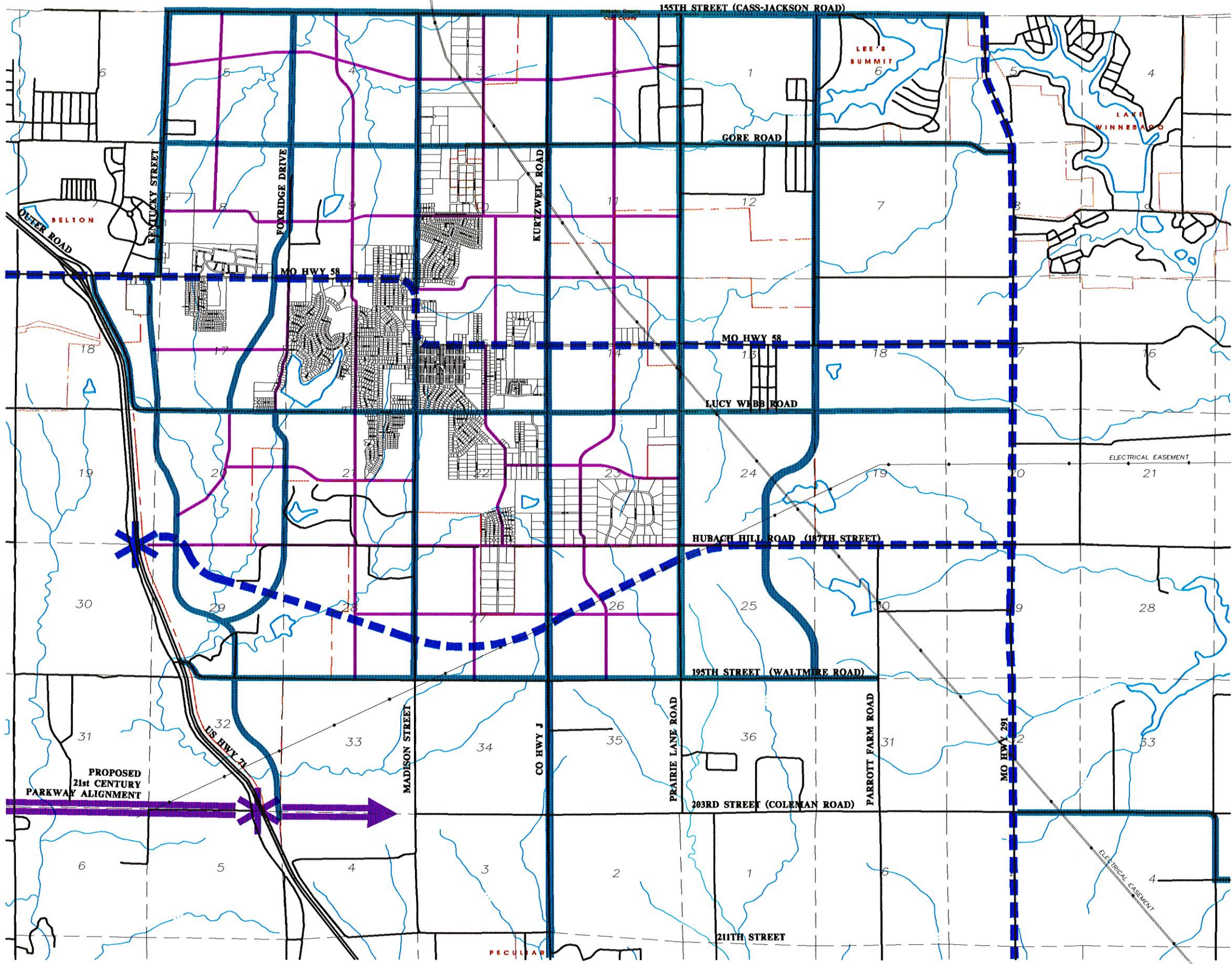
- The City should encourage development from north to south in order to delay the effect of inadequate transportation systems in the southern portions of the City; and
- The City needs to adopt local plans which take into account the regional plans of the metropolitan area.

The City has the opportunity to move ahead with its local thoroughfares and land use plans and submit the adopted future land use plan and thoroughfare plan to MARC and the MHTD in order to maximize regional coordination. By this approach, the City of Raymore will be in a strong position to advocate for regional improvements which do not conflict with local needs. It is up to the City Raymore to advocate for a particular design of the realigned highway, such as for a five lane arterial road.


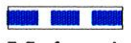




A future "21st Century Parkway", or beltway across northern Cass County, may only be planned as a circumferential highway within the larger metropolitan region. Such a roadway would require a planning time frame beyond the current planning needs of the City of Raymore. Therefore, the 187th Street interchange (at Hubach Hill Road) should be planned as an arterial road, not as a circumferential highway or beltway. Any regional beltway should be planned in a general alignment approximately 2 miles south of Hubach Hill Road at an interchange with U.S. 71 Highway in the vicinity of 203rd Street.

The Growth Management Plan affords the City of Raymore an opportunity to clearly communicate local transportation needs to MARC for their consideration in deciding the needs of the larger region. The City also has the opportunity to identify local alignments of arterial roads in order to coordinate with the design of relocated 58 Highway by the MHTD.

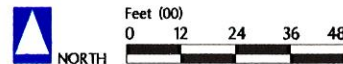




**LEGEND**

-  Expressway
-  Major Arterial
-  Minor Arterial
-  Collector
-  Interchange
-  Interchange - Long Term

**MAJOR THOROUGHFARE PLAN**



**BUR** BUCHER, WILLIS & RATLIFF  
ENGINEERS • PLANNERS • ARCHITECTS

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DWR 93-556 816 / 363-2696 MARCH 1994  
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Standard Street Classifications

Street classifications are based on the functioning of a hierarchy of vehicle origin-destination movements. Traffic flow in and out of the City or from one section of the City to another is carried on arterials which ideally are uninterrupted corridors designed for the smooth flow of large volumes of traffic. Sub-section movement occurs on collector streets which connect residential areas with commercial areas, with schools, and with other heavy-use areas. The lowest level of the system, local streets, carries the flow to the abutting properties.

In order to work effectively, each level of the hierarchy must be properly interconnected with the other street types. The following section explains the function of each street classification and its relationship to other types of streets.

*Arterial Streets*

Arterials streets should function to connect areas of principal traffic generation and important highways. They provide for the distribution and collection of traffic to and from collector streets and local streets. The arterial street is given preferential treatment over collector and local streets in signing and signalization of intersections. It is preferable that private property not have direct access to arterials, but be provided access to the arterial through the local and collector street system.

The best way to maximize the traffic capacity and safety of arterial streets is to minimize conflicting traffic movements. These conflicting movements are most likely to occur in two situations. First, each point of vehicular access will generate cross traffic and turning movements are most likely to occur in two situations. First, each point of vehicular access will generate cross traffic and turning movements both onto and off of the arterial. This applies not only to intersecting streets, but also to driveways leading to individual parcels of land. Where possible, access points should be kept to a minimum by requiring frontage roads. Where providing access is necessary, interruptions to traffic flow can be lessened by using turning lanes. In general, a minimum spacing of 400 feet is recommended between access points on major arterials. Second, on-street parking generates turning movements and often necessitates backing up into traffic lanes. Thus, it should be allowed only where it is absolutely unavoidable.

While a variety of factors will affect the ultimate design of a given street, the following criteria are recommended for arterial streets:

Major Arterial

Right-of-Way Width	100-120 feet	
Lane Configuration	<u>Number</u>	<u>Width</u>
Moving Lanes	4	12 feet
Turning Lanes	1-2	10 feet
Parking Lanes	None	
Design Speed	45 MPH	
Maximum Grade	6 percent	
Design Volume		
2 Lanes	12,000 vehicles/day	
4 Lanes	24,000 vehicles/day	

Minor Arterial

Right-of-Way Width	100 feet	
Lane Configuration	<u>Number</u>	<u>Width</u>
Moving Lanes	2-4	12 feet
Turning Lanes	0-1	10 feet
Parking Lanes	None	
Design Speed	35-40 MPH	
Maximum Grade	6 Percent	
Design Volume		
2 Lanes	12,000 vehicles/day	
4 Lanes	24,000 vehicles/day	

*Collector Streets*

Collector streets serve traffic desiring to travel between major arterials and local streets, and are used mainly for traffic movement within residential, commercial and industrial areas. Collector routes provide the combined functions of through traffic service and access to adjacent land, but they should be designed or developed to discourage any long distance of continuous through traffic.

In order to safely accommodate local traffic without unnecessarily disrupting the character of residential areas, experience has shown that collector streets should be spaced at intervals of roughly one-half mile. Collectors should be given preferential treatment over local streets at intersections.

The following criteria are recommended for collector streets:

Right-of-Way Width	70-80 feet	
Lane Configuration	<u>Number</u>	<u>Width</u>
Moving Lanes	2	11 feet
Turning Lanes	0-1	10 feet
Parking Lanes	0-2	9 feet
Design Speed	30-35 MPH	
Maximum Grade	8 percent	
Design Volume	12,000 vehicles/day	

*Local Streets*

The primary function of a local street is to provide access to abutting property. Continuity of local streets is not important and through traffic should be discouraged. Local streets should be designed to intersect with a collector street and provide easy access to adjacent property. Although they should not be unnecessarily confusing, it is often preferable for local streets to have a curvilinear alignment. This frequently improves the visual appearance of the area, slows the speed of traffic, and allows the street to be more naturally integrated with the topography.

The following criteria are recommended for local streets:

Right-of-Way Width	50-60 feet	
Lane Configuration	<u>Number</u>	<u>Width</u>
Moving Lanes	2	10 feet
Turning Lanes	0-1	9 feet
Parking Lanes	1-2	7 feet
Design Speed	25 MPH	

Maximum Grade	10 percent
Design Volume	1,500 vehicles/day

*Curbs and Gutters*

It is recommended that all urban streets be paved and have curbs and gutters. The curb and gutter system serves three functions. First, it provides a surface drainage channel along the side of the street. Second, it protects the pavement edge from breaking up and thus extends the life of the street. Finally, it limits access onto major streets to intersections and curb cuts.

Major Thoroughfare System

Based on the information presented above and the anticipated distribution of trip demand, a network of arterial streets has been designated. Where appropriate, the existing street system has been used to minimize costs. The major thoroughfare system is shown on the Major Thoroughfare Plan map.

In addition to accommodating current traffic needs, the major thoroughfare system anticipates future traffic needs based on the Future Land Use Plan. Thus, several major streets have been proposed where no street currently exists. This is not intended to imply that these streets should be constructed in the near future. Construction should not occur until the surrounding land is developed. The reason they are included is to assist in coordinating the major thoroughfare system with future subdivision proposals and to assure that adequate right-of-way is obtained where necessary.

Collector streets are also shown on the Future Land Use Map although their location is somewhat more flexible. In general, collector streets should be located halfway between arterials. Their precise location, however, may need to be adjusted because of topographical or land use constraints.

The layout of local streets is normally left to the discretion of individual subdividers. The Institute of Transportation Engineers, however, has recommended the following guidelines for local street system design.

1. Adequate vehicular and pedestrian access should be provided to all parcels.
2. Local street systems should be designed to minimize through traffic movements.

3. Street patterns should minimize excessive vehicular travel.
4. Local street systems should be logical and comprehensible, and systems of street names and house numbers should be simple, consistent and understandable.
5. Local circulation systems and land development patters should not detract from the efficiency of major streets.
6. Traffic generators within residential areas should be considered in the local circulation pattern.
7. Planning and construction of residential streets should clearly indicate their local function.
8. Local streets should be designed to discourage excessive speeds.
9. Pedestrian-vehicular conflict points should be minimized.
10. A minimum amount of space should be devoted to street uses.
11. There should be a minimum number of intersections.
12. The arrangement of local streets should permit economical and practical patterns, shapes and sizes of development parcels.

These guidelines, as with most planning standards, require the use of good judgment and the consideration of site-specific conditions. If they are used during the subdivision design and plat review process, however, they can help ensure a logical and efficient street system in the future.

**CHAPTER V  
FUTURE LAND USE**

**LAND USE AND PLANNING PRINCIPLES**

The City of Raymore has been applying comprehensive planning principles to influence change, in the public interest, as it responds to rapid growth of the past decade. In order for the Raymore community to attain the goals for the updated growth management plan, it is helpful restate the dynamics of urban development. Without such an understanding, local efforts cannot promote community goals as effectively. The City of Raymore plan has been developed with the land planning principles presented in this section.

**Land Use Externalities**

As Raymore plans to implement the capital improvement program of the growth management plan, basic planning issues are still relevant. Concerning externalities, or the impact of a given parcel of land from adjoining parcels, site planning is ever more critical. For example, a residential district which abut expanding commercial districts on M-58 Highway can experience negative externalities. If not carefully planned, the residential district has less value than a similar district integrated within a residential neighborhood.

In effect, the land use incompatibility creates a cost imposed by the commercial owners on the residential owners. The best way to minimize these external costs is to a) inter-relate the multiple land uses in a planned mixed-use development, or b) separate incompatible land uses with effective urban design and buffers. These planning principles help create effective transitions between residential and commercial areas.

Areas of Raymore that are vulnerable to the "externalities" of change and need careful land use planning include existing single-family residential areas near vacant, commercial land, and redevelopment areas where mixed-use commercial uses will shift as a result of the highway widening. Characteristics which most people seek in a residential area--quiet, serenity, stability--can be protected by implementing the site plan recommendations of the plan update.

Non-residential uses which are not designed as part of a mixed use development can be made compatible with sensitive screening and other mitigating design features.



Positive externalities can develop, as well. A concentrated shopping districts along M-58 Highway will attract customers from a wider market area than will commercial uses dispersed along the highway in a strip. Clustering retail and commercial uses where arterial roads intersect, for example, benefits the commercial use while protecting residential districts from commercial strips.

### **Transportation Access**

The planning principles for Raymore in the current *Growth Management Plan* continue to be relevant. As urban growth continues and redevelopment occurs on portions of M-58 Highway, the City not only must protect existing development but must also protect certain "urban systems." Growth along major arterial roads must be carefully planned to allow the major thoroughfare to continue carrying traffic. Development along the arterial roads, such as M-58 Highway must be designed to minimize conflicts.

Access within Raymore to the regional highway network is important for a) convenience of residents and b) continued growth of commercial and industrial districts. The viability of the local arterial street system to carry future traffic is critical. Redevelopment along the corridors of Hubach Hill Road, Lucy Webb Road, Gore Road, Madison Street and other local arterials must be done in a planned way.

For example, standards for clustering of retail and office uses helps channel traffic efficiently onto arterial streets. Clusters of retail activity create discrete retail districts. Retail districts also create opportunities for the joint use of parking facilities.

### **Neighborhood Design**

The concern about urban design can be summarized by focusing on neighborhood design. Good urban design can help new developments relate to adjacent developments to form strong neighborhoods. The land use pattern of a neighborhood plays a major role in determining its strengths and weaknesses.

The growth management plan identifies detailed policies and proposed locations for neighborhood schools and parks which serve as the recreational and cultural as well as educational hubs of the district. The proposed linear parks will create efficient and safe corridors to schools should be created for vehicular, bicycle and pedestrian traffic.

The school and park sitings are based on a standard of from 2,500 to 5,000 people for cost-effective services, including convenience shopping. As residential growth becomes more dense through new development and redevelopment of land, the importance of the planning process becomes clear. To support commercial and industrial growth, the Major Thoroughfare Plan must be followed to create efficient access to internal land areas from the regional highway and interstate network.

## **PHYSICAL CHARACTERISTICS**

In addition to public land use policy, the physical features of the land affect future development.

### **Environmental Features**

#### Topography

The land within the City of Raymore is characterized by gently rolling hills in east Raymore, and flat bottom land in the west conducive to farming and development of industrial uses. Steep slopes in excess of 20 percent are found only in the basins which rise from the drainageways of the creeks running predominantly in the park lands and residential areas. The visual appearance of the City is characterized by gently rolling land with scattered wooded areas, especially along the drainageways, and by flood plain and bottom land. Drainage basin boundaries and flood plains are shown on the Future Land Use Map.

#### Vegetation

In examining the existing context of the area for clues as to appropriate planting decisions one finds a continuum of native, introduced and naturalized plant materials. This kind of a mixture is a result of the sequence of events which has occurred within ecological/botanical and cultural/historical contexts. Existing vegetation in the City of Raymore is found within the following categories:

- Woodland groves especially along creeks, and creek branches;
- Agricultural crop and pasture land; and
- Remnants of shelter belts and hedgerows.

The plant materials native to this community and likely to occur in the City are as follows:

**Trees: Canopy (over 48')**

- Gleditsia triacanthos  
Common Honeylocust
- Juniperus virginiana  
Eastern Redcedar
- Quercus ellipsoidalis  
Northern Pin Oak
- Quercus macrocarpa  
Bur Oak

**Shrubs: (6-12')**

- Cornus racemos  
Gray Dogwood
- Corylus americana  
American Filbert
- Rhus glabra  
Smooth Sumac

**Trees: Canopy**

- Acer saccharum  
Sugar Maple
- Quercus rubra  
Red Oak
- Quercus alba  
White Oak
- Tilia americana  
Linden or Basswood

**Trees: Understory (12-48')**

- Crataegus mollis  
Downy Hawthorn
- Malus ioensis  
Prairie Crabapple
- Prunus americana  
American Plum
- Prunus virginiana  
Common Chokecherry
- Viburnum prunifolium  
Blackhaw Viburnum

**Shrubs (less than 6')**

- Ribes missouriense  
Missouri Gooseberry
- Symphoricarpos occidentalis  
Western Snowberry
- Symphoricarpos orbiculatus  
Indiancurrant Coralberry

**Understory:**

- Acer saccharum  
Sugar Maple
- Ostrya virginiana  
Eastern Hop Hornbeam
- Asimina triloba  
Pawpaw
- Putty Root Orchid
- Showy Orchid
- Rattlesnake Fern
- Cut-leaf Grape Fern  
(Rare Flora)

The City staff, in reviewing site plans with developers, should consider the concept of "appropriate planting design" in making decisions regarding plant materials. This concept is emerging as an ecologically-based framework which influences choices about plant materials and planting designs. Appropriate planting design supports the existing living systems of plant materials. Indigenous plants, such as specific species of maple trees listed above, are most adaptive to the local environment and soils. Such plants should be considered when making decisions about newly planted areas, areas of existing vegetation that warrant protection, or plantings which extend areas of existing vegetation.

### Hydrology

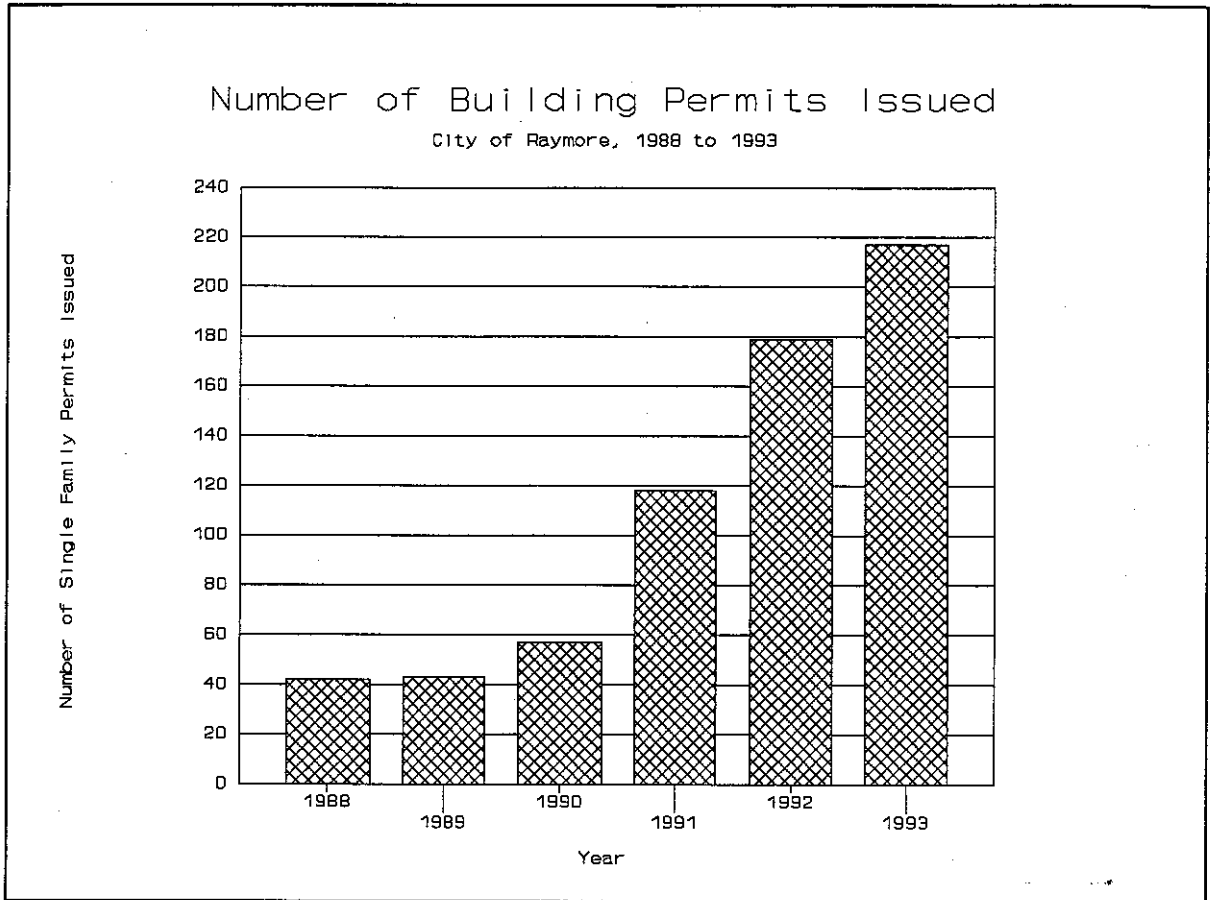
The most prominent physical feature that defines the natural framework of the area is the Missouri River and creeks, which run from west to northeast across the planning area. The pattern of drainage into the creek forms a watershed center primarily on Alexander and Grand River Creek.

The watershed land forms are defined by the ridge lines, moderately sloping hills, upland and lowland meadows and woodlands, and stream corridors. The stream corridor is further defined by its drainage channel, stream banks and flood plain areas.

### **GROWTH TRENDS**

The City's rapid population growth has been accompanied by a building boom. Raymore's growth trends are revealed by an examination of its current building permits. Single family dwellings comprise most of the City's building activity. As shown by Table 5.1 and Figure 5.1, the number of single family building permits has risen substantially each year since 1988. There were more than five times the number of single family building permits granted in 1993 than in 1988, growing from 42 in 1988 to 217 in 1993 for a total of 656 single family permits issued from 1988 to 1993. The year 1994 appears to continue the trend. As shown by Table 5.1 and Figure 5.2, the total number of building permits, encompassing not only single family but also multi-family, industrial, and commercial, grew from 52 in 1988 to 223 in 1993.

FIGURE 5.1



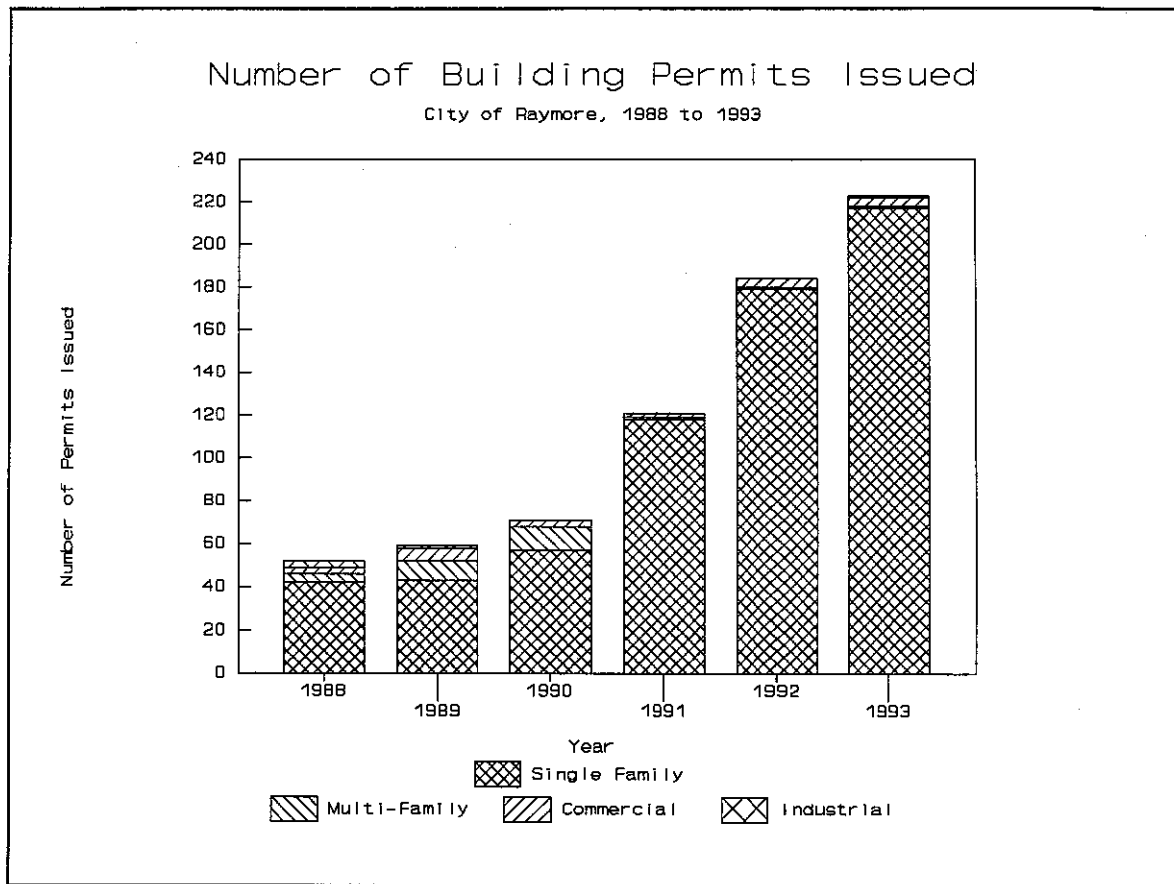
Source: City of Raymore

**TABLE 5.1**  
**BUILDING PERMITS ISSUED FROM 1988 TO 1993**

Land Use Category	1988	1989	1990	1991	1992	1993	Total
Single Family	42	43	57	118	179	217	656
Multi-Family	4	9	11	1	1	1	27
Commercial	3	6	3	2	4	4	22
Industrial	3	1	0	0	0	1	5
<b>Total</b>	<b>52</b>	<b>59</b>	<b>71</b>	<b>121</b>	<b>184</b>	<b>223</b>	<b>698</b>

Source: City of Raymore

**FIGURE 5.2**



Source: City of Raymore

The new building activity generally rings the original city core. There are areas of intensive single family building activity to the north, south and west of the city core and areas of high density, multi-family building activity to the east. There is little building activity to the northeast of the City. Many large lots with a distinct rural character lie to the north and south of the City's core.

Future growth of the City is influenced most directly by recent extensions of sanitary sewer mains and force lines from the Owen Good pump station. The other major influence will be paving of arterial roads. The sanitary sewer system has been extended and upgraded. Planning for major thoroughfare roads--and getting them paved--is the central challenge of the plan update.

#### **FUTURE LAND USE**

##### **Probable Residential Development Pattern -- Long-Term**

In establishing which pattern of residential development may be expected in the Raymore area, the extreme higher-density residential development pattern as presented in Table 5.3 was rejected as unrealistic. The higher-density extreme would anticipate 90 percent of residential housing developed in a high density of 10 units per acre. A pattern of development this dense does not predominate in the region.

The cost of development of urban utilities and streets is too great to support extremely low-density residential. The market costs dictate that urban growth occurs in low-to-moderate-density patterns. In-fill development in Raymore is projected to follow trends shown on the Existing Land Use Map, which has been compiled as part of the planning process and is on display in the offices of the Public Works Department.

A long-term potential development of higher-density residential land uses may be anticipated at discrete nodes within a planned development district, such as within the Otis-Good Ranch planned development.

**TABLE 5.3  
PROJECTED DENSITY OF RESIDENTIAL DEVELOPMENT  
Raymore Area**

<u>Density Patterns</u>	<u>2.0 U/Acre</u>	<u>10 U/Acre</u>	<u>Population/Acre at 2.54 Persons/Unit</u>
Low/Moderate Density	85%	15%	8.1
Higher Density	10%	90%	23.4

Source: Bucher, Willis & Ratliff

The most probable development pattern for the City of Raymore is a low-to-moderate-density development pattern. The low-to-moderate-density residential pattern is summarized in Table 5.3. The scenario is presented as an ultimate pattern for development in the City, either on vacant parcels or on newly subdivided land. The pattern represents gross density of 3.2 units per acre on average for residential development.

The development scenario is based on the population projections which indicate population growth from 5,592 people in 1990 to 20,782 in 2010. For planning purposes the City is expected to experience urban growth within the next twenty years following certain trends:

- Approximately 15,192 additional people are estimated to be living in 5,981 dwelling units;
- 1,869 acres of land are estimated to be developed as residences in low-to-moderate-density patterns, mostly as single family homes, at an average gross density of 3.2 units per acre;
- 4,153 acres of land, or approximately 6.5 square miles, will be expected to develop overall in an urban pattern by 2010 in the Raymore corporate limits and outside in the planning area, based on a planning principle that approximately 45% of the urban land area is residential.

For planning purposes the planning area is expected to experience urban growth in up to 13.0 square miles of land during the next 20 years, applying a multiplier of 2.0. The multiplier is applied because of the dispersed nature of development at the "urban fringe." Residential development is expected to spread in two patterns:



- Incrementally on large lots served by individual septic tanks east of the City where sanitary sewer interceptors are not extended; and
- More compactly in areas where the City has extended main trunk line sanitary sewers, primarily where served by the Waltmire Road force main.

**Future Land Use Map Legend -- Explanation**

The "Future Land Use Plan" map is developed based on the following legend:

Low Density Residential	1.0 to 4.0 units per acre, and moderate density residential uses.
Moderate to High Density Residential	Up 4 to 15 units per acre.
Office/Institutional	Commercial, office and service uses, with public and semi-public institutional uses, such as medical office complex.
Retail/Commercial	Retail sales land uses, including shopping centers and isolated retail establishments.
Mixed use development	Retail and office commercial uses mixed with higher density residential uses. (Such developments will be shown on the Future Land Use Map within the "Redevelopment Overlay Districts" along the re-aligned U.S. 58 Highway, where careful site plan review is required to assure compatible development.)
Public/Semi-public	Institutional uses for government and educational purposes primarily.
Industrial	Light industrial assembly and manufacturing uses.

Parks and Recreation	Park land and recreational improvements.
Linear Park/Recreational	Improved active recreation linkages from one park to another park.
Long Term Development	Development of land uses beyond the time frame of the Plan update.

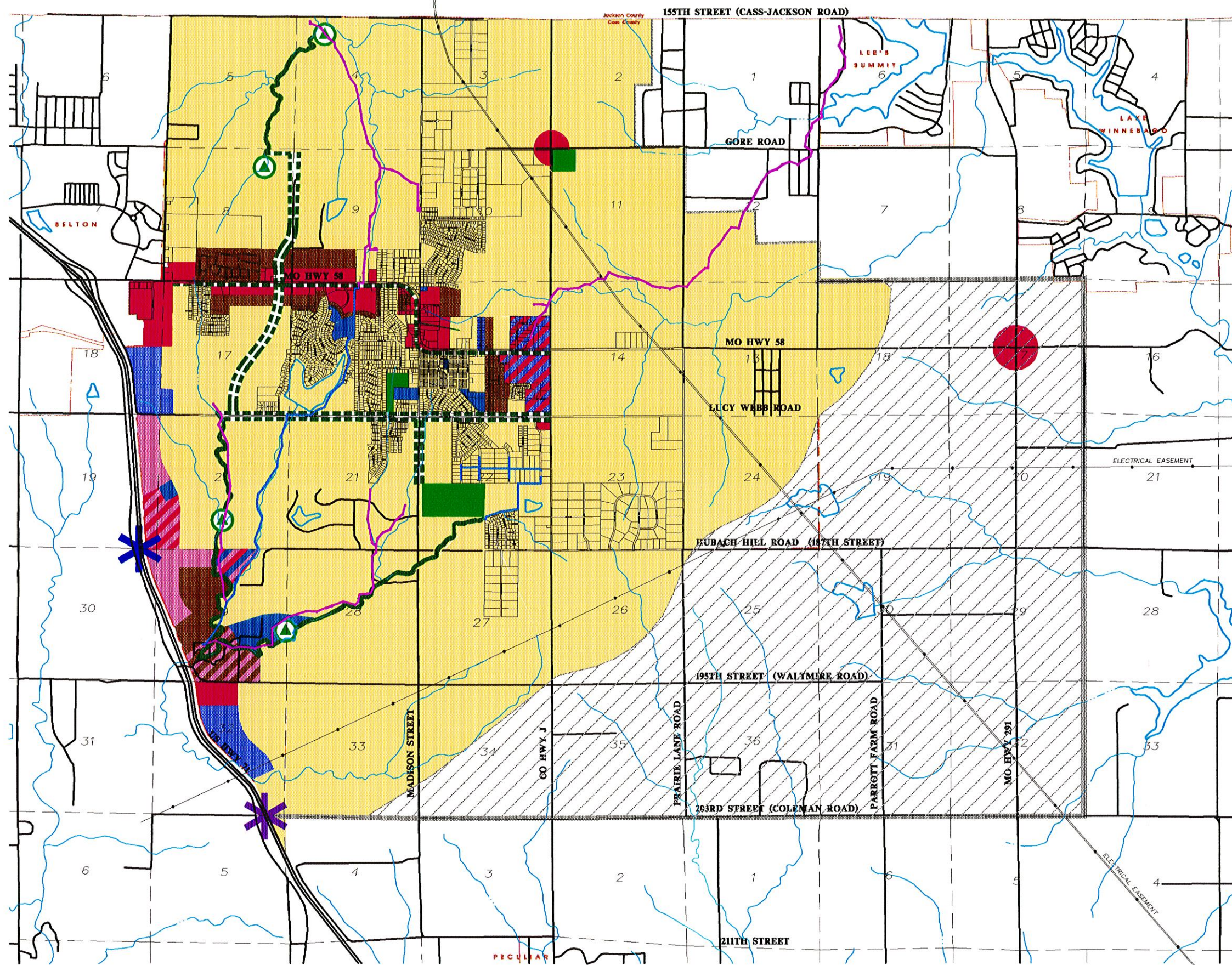
**Recommendations for Future Land Use Development**

Based on the goals and objectives of the plan, the existing land use patterns of the City, and the future land use issues of the plan, the following recommendations should be followed in implementing the future land use plan, the intent of which is illustrated on the "Future Land Use" map on the following page:

**Recommendation -- Residential Land Use**

**Establish a residential density policy and standards to guide future land use regulatory decisions.**

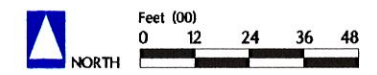
- Inventory single-family residential subdivision density: divide the acres of platted land zoned for low-density residential by the number of recorded lots to establish *gross residential density*;
- Inventory multifamily residential subdivision density: divide the acres of platted land developed as higher-density residential uses by the number of developed dwelling units to establish *gross multifamily residential density*; and
- Establish current average single-family and multifamily residential densities, adopt density standards, and evaluate future subdivision plats and rezoning applications to maintain current density standards.
- Amend zoning regulations to adopt the density standards. Include a requirement for open space set aside in an amount of 15% to be implemented during site plan review of site plans greater than 2.5 acres on one tract or parcel.



1994 COMPREHENSIVE PLAN

LEGEND

- Low-Density Residential
- Moderate-Density Residential
- Commercial
- Office/Institutional
- Light Industrial
- Public/Semi-Public
- Parks
- Linear Park/Bikeway
- Park Sites
- Mixed-Use Development
- Interchange
- Interchange - Long Term
- Boundary of Intent to Annex
- Sewer Trunk Lines (Gravity and Force Mains)



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**FUTURE LAND USE PLAN**



**Encourage opportunities for expansion of residential development in the growth areas City of Raymore where indicated on the Future Land Use Map.**

- Prepare for higher-density development in and adjacent to future business districts in growth areas, along M-58 Highway;
- Amend zoning regulations to expressly require a planned development review, such as a Community Unit Plan, or similar site plan procedure, in all multifamily and non-resident districts;
- Adopt screening and landscape standards to ensure compatibility between higher-density and existing low-density residential districts, as well as between residential and non-residential districts;
- Update landscape requirements for off-street parking screening; and
- Adopt design standards for reviewing multifamily development which address:
  - Site appropriateness,
  - Building arrangement,
  - Access,
  - Parking and circulation,
  - Service facilities,
  - Outdoor storage,
  - Buffers from neighboring land uses, and
  - Signage and lighting.

**Stabilize existing residential neighborhoods.**

- Create financing through "Neighborhood Improvement District" assessments and "Neighborhood Assistance Programs" (NAP);
- Concentrate multifamily housing as buffers between commercial uses and single-family residential uses;
- Implement site plan review to protect established areas from new development;

- Target capital improvements to maintain infrastructure in established neighborhoods, such as sidewalk in-fill development; and
- Fund neighborhood park development, in west and northwest Raymore, to implement the plan update.

**ANNEXATION**

Due to the large amount of undeveloped land in Raymore, the City can be less aggressive on the issue of annexation. In fact, additional annexations could further strain municipal resources. To avoid such strains on resources and to most efficiently utilized current infrastructure investments, further annexations should not be undertaken by the City within the next five years. However, there are specific circumstances which would warrant annexation by the City. Such circumstances are described by the Annexation Recommendation within this section.

**Recommendation - Annexation**

**Discourage additional annexations in the near-term.**

- Further annexation should not be undertaken within the next five years except under the following situations:
  - Where annexation would substantially increase Raymore's tax base or revenue producing ability;
  - Where annexation is necessary to control short-term development in an area which is important to Raymore's long-term growth plans (e.g., the Highway 291 corridor);
  - Where the annexation plans of adjacent communities threaten the long-term growth potential of Raymore;
  - Where annexation would add an area with short-term development potential which can be easily serviced by existing infrastructure; and

- Where land in Raymore's long-term growth area is being inappropriately developed under County development regulations.

Absent the presence of one of these five factors, it is recommended that further annexation not be undertaken in the near-term. This recommendation must be tempered, however, by the realization that poorly planned development outside current boundaries could limit the City's future growth capabilities. Thus, annexation decisions must balance the problems of assuming short-term service costs against the long-term benefits.

In the long-term, Raymore is expected to expand beyond the Development Area shown on the Future Land Use Map. If Raymore expands in such a manner, annexation will be eventually required. Future annexations in the long-term have been illustrated on the Future Land Use Map.

#### **OPEN SPACE**

The amount of open space within Raymore directly impacts the quality of life of its residents. Therefore, it is important to maintain adequate amounts of open space within the City. Open space is defined as an area of land or water or combination thereof planned for maintenance of the natural environment in its undeveloped state; or for passive or active recreational use by all residents of a platted subdivision, or by the general public, including an area of recreational activities such as swimming pools, tennis courts, and shuffleboard courts; and which does not include areas utilized for streets, alleys, driveways or private roads, off-street parking or loading areas.

#### **Recommendations -- Open Space:**

Provide for the appropriate use of open space within Raymore.

- Amend zoning regulations to expressly require open space designated on all site plans and subdivision plats of parcels greater than five acres;
- Amend zoning regulations to establish agreements between the City and applicants providing for the establishment of an association to maintain dedicated open space. Such agreements should include provision for default, cure by the City and enforcement;

- Amend zoning regulations to prohibit the association from disposing of the open space established in the preceding section by sale or otherwise without first offering to dedicate the same to the City; and
- Amend zoning regulations to require the provision of open space to buffer dissimilar uses or to counterbalance any reduction in lot area, yard size or bulk limitations.

## COMMERCIAL GROWTH

The plan projects retail development based upon an Urban Land Institute analysis of retail commercial patterns, summarized as follows:

The *neighborhood center* provides for the sale of convenience goods (food, drugs, and sundries) and personal services, those which meet the daily needs of an immediate neighborhood trade area.

A grocery store is the principal tenant in the neighborhood center. Consumer shopping patterns show that geographical convenience is the most important factor in the shopper's choice of supermarkets. The customer usually chooses such stores from among those most conveniently located, usually those nearest the shopper's home. Only as a secondary consideration does wide selection of merchandise or service come into play.

The neighborhood center has a typical gross leasable area of about 50,000 square feet but may range from 30,000 to 100,000 square feet. For its site area, the neighborhood center needs from 3 to 10 acres. It normally serves a trade area population of 2,500 to 40,000 people within a 6-minute drive.

The *community center* is built around a junior department store or variety store as the major tenant, in addition to the supermarket. Such a center does not have a full-line *department store*, although it may have a strong specialty or discount store as an anchor tenant.



**TABLE 6.3**  
**Characteristics of Shopping Centers**

<b>Center Type</b>	<b>Leading Tenant (Basis for Classification)</b>	<b>Typical GLA</b>	<b>General Range in GLA</b>	<b>Usual Minimum Site Area</b>	<b>Minimum Support Required</b>
Neighborhood Center	Supermarket or drug store	50,000 sq. ft.	30,000-100,000	3 acres	2,500-40,000 people
Community Center	Variety, discount, or junior department store	150,000 sq. ft.	100,000-300,000 sq. ft.	10 acres or more	40,000-150,000 people
Regional Center	Mall development	800,00 + sq. ft.		50 acres	150,000 people +

Source: Urban Land Institute

The community center has a typical gross leasable area of about 150,000 square feet but may range from 100,000 to 300,000 square feet. For its site area, the community center needs from 10 to 30 acres and, normally, serves a trade area population of 40,000 to 150,000 people.

The *regional center* is a mall development with multiple retail vendors and enclosed shops, serving a trade population in excess of 150,000 persons.

#### **Recommendations – Commercial Development**

**Support commercial growth with financing mechanisms.**

- Prepare financing plans, such as neighborhood improvement districts, to extend infrastructure improvements to connect to utility main extensions;
- Target C.I.P. projects to support development within commercial districts.

**Create good urban design along commercial thoroughfare corridors by linking developments with common and consistent design patterns to promote orderly commercial development.**

- Amend commercial district regulations to expressly require site plan review of all commercial development and to establish design standards;

- Cluster commercial centers, particularly community centers, at the arterial roads which connect to the highway interchange and future Hubach Hill Road interchange;
- Coordinate major thoroughfare improvements in the Major Street Plan with patterns of commercial growth so that streets can accommodate increased traffic volumes, in particular and M-58 Highway and future north/south streets on the east and west sides of the city; and
- Create strong continuous corridor edges using either consistent building setbacks or continuous sequences of plant materials, street light standards and compatible signage;

**TABLE 6.4**  
**Typical Suburban**  
**Cluster Retail Development**

	<b>Clusters Per Population</b>	<b>Land Area</b>	<b>Gross Leasable Area (GLA) (square feet)</b>	<b>Employment (persons/sq. ft.)</b>
Neighborhood Center	1:10,000	6 acres	50,000	1.8/500 GLA
Community Center	1:35,000	20 acres	100,000	1.8/500 GLA
Regional Center	1:150,000	60 acres	800,000	1.8/500 GLA

Source: Urban Land Institute

- Minimize curb cuts and median breaks by requiring adjacent commercial uses to design internal connections between parking lots to minimize street traffic and curb cuts;
- Require all commercial developments to be pedestrian-oriented with clearly identified walk-ways between parking lots and buildings;
- Lighting for businesses and parking lots should be low glare and designed so as not to shine directly into adjacent residential areas;

- Where possible, encourage the location of developments internally to site, maintaining a solid vegetated edge along thoroughfare frontage;
- Require substantial vegetated buffering and screening of distracting and unsightly development elements;
- Require substantial vegetated buffering and screening between incompatible land uses;
- Require parking lots to be planted with street landscaping as well as appropriate number of shade trees (one tree for every five to ten parking spaces is recommended); and
- Require commercial and industrial developers to maintain trees and plants they have installed as landscaping.

**When regulating new commercial development on arterials such as Hubach Hill Road, protect the capacity of the road to carry arterial traffic.**

- Businesses should be clustered in developments to allow for the preservation of turning movement capacity;
- Use the site plan review process to promote clustering development for maintaining design standards and preserving traffic capacity;
- Orient and align buildings and developments with a sensitivity to the existing cluster development along the corridor and to establish a sense of design; and
- Encourage the design of residential and office park internal traffic circulation to make parking more efficient.

### **Commercial Development Guidelines**

#### *Retail Corner and Mixed-use Commercial Center Design Guidelines*

The city should establish guidelines to provide a clear, consistent approach to the review of zoning and development requests for retail corner and commercial strip shopping centers.

Corner shopping centers are and will continue to be a prominent part of Raymore's neighborhood and community character. Continuous strip commercial centers will continue to develop as mixed-use centers as retail and commercial developers seek high traffic count locations on arterial streets. The commercial strips should be allowed to develop on arterial roads, only, as indicated on the Future Land Use Plan map.

The retail corners and commercial centers serve as districts for commercial activity and focal points. These guidelines are intended to accomplish the following:

- Provide for the proper sizing and location of new retail zoning requests and developments;
- Improve on- and off-site vehicular and pedestrian circulation and safety;
- Improve the compatibility and coordination of corner shopping centers with existing and proposed land uses for the surrounding area;
- Allow commercial centers to develop on arterial streets while at the same time preserving the capacity of the arterial street to carry City-wide traffic; and
- Improve the visual character and identity of retail centers, mixed-use commercial centers, and major transportation corridors.

These guidelines are intended to supplement the City of Raymore regulatory review process. Each of the nine design elements or sections includes a statement of purpose and a listing of key issues. The applicant will be expected to address these issues by: a) complying with the guidelines for each section; or b) proposing alternative solutions that specifically address the identified issues.

The guidelines should be officially coordinated with adopted zoning and subdivision regulation amendments; however, the process is intended to remain flexible. The applicant is encouraged to propose innovative alternatives that accomplish the stated purpose of the guidelines.

The guidelines will be used by staff in its initial discussions with the applicant as he prepares his submission. Upon receipt of a zoning case, concept plan, or site plan, the staff will evaluate the request based on its compliance with guidelines or upon how effectively it addresses the

intent of each section through alternative solutions. The applicant shall clearly show how he addressed the key issue(s) with supportive information and data.

When an applicable zoning case, circulation plan, land use plan, preliminary site plan, or site plan is presented to the Planning & Zoning Commission and/or Board of Aldermen, the staff's recommended action will be included. Staff's recommendation will be based on its determination of the proposal's conformance to the guidelines and/or its effectiveness in meeting the purposes and issues of the various design elements.

Site Appropriateness--Retail Centers.

**Purpose:** In order for the retail centers to best serve as corner neighborhood shopping centers, certain parameters need to be addressed. These include:

- appropriate site location;
- efficient site shape and size; and
- site accessibility.

**Guidelines:**

- Retail centers should typically be located at the corner of two major thoroughfares.
- Sites for neighborhood commercial centers should be generally 6 to 10 acres to accommodate 30,000 - 100,000 SF of retail space including serving a 1 1/2 mile radius for 1 or 2 "anchor" stores. Community centers should be planned for a larger site.
- Sites should generally be accessible from major thoroughfares at median breaks and located along at-grade intersections.
- Sites should be accessed from local streets that are segregated from the street system of residentially zoned land.
- Topography and drainage should be addressed with regard to corner shopping locations.

Site Appropriateness—Mixed-use Commercial Centers.

*Purpose:* In order for the mixed-use commercial centers to best serve as shopping districts, certain parameters need to be addressed. These include:

- appropriate site location;
- linear design principles; and
- site accessibility.

*Guidelines:*

- Mixed-use commercial centers should be restricted to major thoroughfares, such as arterial streets.
- Continuous linear strip centers should be discouraged on collector streets or lesser designated streets because of their disruption to traffic and adverse neighborhood effects
- Sites for mixed-use commercial centers should be generally restricted to a single lot depth.
- Sites should generally be accessible from major thoroughfares at median breaks and developed deeper as a cluster center at at-grade intersections.
- Sites should be accessed from local streets that are segregated from the street system of residentially zoned land.
- Topography and drainage should be addressed with regard to the linear street stormwater drainage system.

Building Arrangement

*Purpose:* Proper arrangement of buildings on a site provides for efficient and viable long term use. Key issues include:

- storefront visibility and accessibility;
- relationship of buildings to each other;
- orientation to thoroughfares;
- compatibility with surrounding land uses; and
- re-use of buildings and adaptability for new tenants

*Guidelines:*

- Storefronts should generally be visible from main circulation aisles unless a "mall" or courtyard approach is used.
- Pad sites, generally defined as free standing structures of less than 5000 SF of floor area, should be limited to one per 5 acres of land area.
- Buildings should be arranged to reduce visibility of service areas from streets, customer parking areas and adjacent properties.
- Bay depth of buildings should be sized to accommodate a variety of potential uses.
- Two-story buildings should generally not be placed adjacent to single- or two-family residential districts, nor between the main building(s) of a center and streets.
- Buildings should be grouped along one side lot line, with one end at the front yard building setback, and with the front setback landscaped, providing a 10' setback for all paved off-street parking.

Access

**Purpose:** Safe and efficient access to the corner shopping center or mixed-use commercial strip minimizes potential vehicular and pedestrian conflicts. The key issues include:

- location of median breaks along major thoroughfares;
- number and location of entry drives;
- design of entry drives; and
- traffic visibility.

**Guidelines:**

- Driveways should typically be spaced with a minimum of 125 feet from the intersections of major thoroughfares unless a one-way traffic flow is used. All other driveway and median openings should adhere to a Driveway Access Manual, which should be adopted by the Board of Aldermen.
- The ingress side of the main entrance drive should be the largest radius allowed by ordinance for better access into the site, particularly at major centers, such as clustered along M-58.
- Driveways should maintain an appropriate sight distance triangle at all perimeter entrances. (To be established in future Zoning Regulation Updates.)
- Main entrance drives should generally be located at median breaks providing left turn access to and from the site. Continuation left-turn lanes should be broken with medians a major intersections.
- Main entrance drives should connect to a "straightaway" aisle that does not dead end or require an immediate turn to approach the main building.
- Aisles intersecting with entrance drives should be spaced a minimum of 20 feet from the entrance line to provide for smooth turning movements.



Circulation and Parking

*Purpose:* Proper circulation and parking systems minimize confusion and facilitate safe and easy pedestrian and vehicular movement within the corner shopping center. The key issues include:

- traffic aisle alignment;
- traffic speed and safety;
- parking location and layout;
- service area parking and circulation;
- customer pick-up areas;
- drive-thru building circulation; and
- pedestrian circulation and safety.

*Guidelines:*

- Provide a 10' setback from street-side property lines for all off-street parking drives and spaces.
- Main drive aisles should generally be free of parking when adjacent to large anchor tenants of 30,000 SF of floor area or more.
- The direction of traffic flow should be identified.
- Long circulation aisles (generally in excess of 500') should be off-set (typically 45 degrees or more) to prevent excessive speed.
- Lanes should be provided for drive-thru facilities, including stacking space, that are physically separated from other circulation and parking aisles.
- Parking aisles should be oriented toward anchor stores to minimize the number of parking lanes crossed by pedestrians.
- Typically provide right angle intersections (80 to 100 degrees) with no more than 2 traffic lanes crossing at any interior intersection.

- Parking should be arranged to provide readily accessible spaces for each establishment.
- The parking layout should maximize the amount of parking in front of the building and minimize the amount behind.
- Separate service vehicle circulation from customer circulation routes.
- Allow for all tenants to be accessed from within the development through cross-access agreements.
- Customer pick-up areas should be provided at "anchor" stores.
- Pad sites shall be required to obtain mutual access and parking agreements within the remaining retail center. This shall be required in order to enhance safe on-site circulation and provide access to left-turn lanes.

Building Elements

*Purpose:* In order to create a positive overall development character, all structures (including separate pad site structures) at shopping centers should have an attractive and uniform architectural treatment. The key issues include:

- consistency of design between structures;
- materials standards; and
- rear facade treatment.

*Guidelines:*

- Facade design plan of entire project should be submitted with site plan review.
- Facades and roof lines facing streets or main parking areas should be consistent throughout the development in design, color and materials.
- Roof lines, overhangs, and the front facia should be extended to the rear of the building(s).

- High quality, low maintenance building materials are recommended.
- Signage located on the buildings should be consistent in size, location and material throughout the project.
- Rear facades should be of finished quality and should be of color and materials that blend with the remainder of the building(s).
- All rear facades of centers should be stucco, brick, exposed aggregate or textured concrete and of the same color as the front facade.

Service Facilities

*Purpose:* Service areas should be appropriately located and designed to efficiently and inconspicuously serve the corner shopping center development without disrupting on-site circulation or adjacent land uses while maintaining visibility for security purposes. The key issues include:

- location of service areas;
- visibility of service areas; and
- treatment of pad site service areas
- location of trash containers.

*Guidelines:*

- Service facilities should generally be located in a central area to be used by several retail establishments.
- Service and docking facilities should be separate from main circulation and parking functions.
- Trash containers should be located in appropriately screened central service areas, and not visible from U.S. 71 Highway.

- All dumpsters should be screened on all sides exposed to street view. All dumpsters should be shown on the approved site plan and whenever possible shall be clustered.
- Service areas should be easily accessible by service vehicles.
- Pad site service areas should be screened from the remainder of the development and physically separated from the circulation aisles and parking areas serving the remainder of the site.
- Pad site service areas should typically be screened by an extension of the building.
- Service facilities should be screened from the remainder of the project, adjacent land uses and major thoroughfares. Extended wing walls from the building may be used to screen service areas. When used, these walls may be of solid construction if lighted on both sides, or a minimum of 30% of open construction if lighted on only one side. A combination of landscaping and screening walls may also be used.

Utilities/Mechanical/Outdoor Storage

*Purpose:* The location and treatment of utilities, mechanical functions and outdoor storage areas should be managed and coordinated to achieve physical and visual order within the corner shopping center development. The key issues include:

- location of facilities; and
- visual impact of utilities.

*Guidelines:*

- Typically, utilities should be underground from R.O.W. to building to reduce visual clutter.
- Locate utility metering within a designated service area.

- Locate mechanical equipment in the designated service area and screen from the project and adjacent land uses.
- Limited outdoor storage will only be permitted in designated service areas that are screened from the remainder of the project, adjacent land uses and streets.
- Utility conduit and boxes should be painted to match building color.
- Roof mounted mechanical units shall be screened from view with a parapet wall, mansard roof, or other architectural extension, equal in height to the unit(s) except when that distance exceeds five feet. In this case, an additional setback will be required at a ratio of two feet horizontal for each additional foot of vertical height above five feet.

Buffers and Screens

*Purposes:* Proper use of buffers and screens will lessen the differences between land uses and diminish the visual impact of undesirable elements. The key issues include:

- unified character;
- high quality construction;
- longevity of system;
- disparity between land uses; and
- visibility of undesirable elements.

*Guidelines:*

- Architectural screens should be an extension of the development's architectural treatment and consistent in color and design. The development of an office business park, such as at a future interchange with U.S. 71 Highway, affords good visibility and a chance to create an attractive "front door" to Raymore.
- Screening walls should be constructed of low maintenance, high quality materials which are consistent with the building facade material.
- Screening walls should conform to the City zoning and subdivision ordinances.

- Painted or coated screening walls should be avoided.
- Landscape screens (typically 18" to 36" in height) should be provided between all parking areas and streets.
- Landscape screens may include a combination of plant massing, earth berming and walls.
- A 10 foot to 15 foot wide landscape buffer should be provided to separate the retail use from residential land uses. A masonry wall or combination wall and landscaping may be substituted for this buffer.

Landscaping

*Purpose:* The location and design of landscaped areas, entrances and edges should effectively reinforce development's character and quality, identify its entry points and break the massiveness of a center's parking area. The key issues include:

- unified development image and character;
- parkway treatment;
- identifiable entrances;
- visual dominance of parking area; and
- existing mature trees.

*Guidelines:*

- Landscaped planting plan of the entire project should be submitted with site plan review.
- Approximately 15% of the area between the main building face and the front property lines should be of a permeable landscaped surface. (Secondary buildings located between the main building and the front property line should not be included in the area calculation.)
- Landscape areas should generally consist of a combination of trees, shrubs and groundcover.

- Use landscape areas for transition and integration between pad sites and surrounding land uses.
- Minimum 4" caliper trees are recommended.
- Artificial plants are prohibited.
- Preserve existing mature trees where possible.
- Special landscape treatment should be employed to highlight and identify entrances.
- Landscape areas should be regularly spaced in parking lots to break up massiveness of pavement.
- Mechanical irrigation systems are typically required to ensure maintenance of plant materials.
- Landscaping should be used in conjunction with screening walls when multi-story buildings aut an adjacent property where topography lessens the effect of a wall alone. Where a building exceeds 15 feet in height, 4" caliper trees shall be required, spaced every 30 feet along the wall or spaced every 50 feet apart if an irrigation system is provided.

**Recommendations -- Industrial Development**

**Implement appropriate industrial park site selection criteria, incorporating the goals and recommendations for achieving site-specific urban design based on the natural amenities of the environment.**

- Use the site plan review process to ensure that industrial developments allow the preservation of stream corridors (includes drainage channel, stream banks and flood plain areas) as open space areas in industrial park cluster developments;
- Where possible encourage clustered development to allow for the preservation of flood prone areas -- including the 500 year flood plains -- as open space in developments; and

- Orient and align buildings and developments with a sensitivity to the existing watershed land forms (for example, cluster development) along or within ridge lines, high points, upland meadow and woodland areas of the Creek areas visible from the highway.

**Follow normally accepted site selection criteria for evaluating proposed industrial developments, including the following considerations:**

- Evaluate proposed sites for appropriate access by an existing interchange of the highway and/or area primary arterial road;
- Evaluate proposed sites based upon direction and type of industrial growth near the area thoroughfare system and the ability of the local street system to serve local traffic linkages to the thoroughfare system;
- Prioritize local capital improvements by how they serve current and future industrial sites and how they create linkages to major thoroughfare roads, particularly at current and the future U.S. 71 Highway interchange(s);
- Plan for infrastructure improvements to take advantage of the regional thoroughfare roads, such as the future interchange at Hubach Hill Road; and
- Estimate the amount of land required through a study of local absorption rates for a five-year period (acres absorbed per year by type of industry typical to industrial parks and number of transactions).

**Apply development standards when reviewing industrial development proposals in mixed-use districts.**

- Rooftop equipment shall be screened from view from the ground near the building with vertical extensions of the building walls or with parapets or other architectural design features of the same materials used on the walls of the building. Where the topography permits, it is desirable to screen such equipment from adjacent property, but it is not the intent of this requirement to increase the height of the screening significantly above that of the equipment in order to screen it from view from tall buildings or from higher ground.



Raised exterior walls or screen walls should be designed to enclose groups of equipment. Wall material should be compatible with or identical to the predominant opaque material on the exterior of the building.

- The form and proportion of buildings shall be consistent or compatible with the scale, form and proportion of existing development in the immediate area.
- The use of unusual shapes, color and other characteristics that cause new buildings to call excessive attention to themselves and create disharmony shall not be allowed.
- The rhythm of structural mass to voids, such as windows and glass doors, of a front facade should relate to the rhythms established in adjacent buildings.
- Where large structures are proposed with overly-long facades (walls), where one dimension exceeds the length of the perpendicular dimension, such as warehouses, building mass should be articulated with variations in the building plane and parapet height and through the use of other unique design or site plan features.

Overly-long horizontal facades should be articulated with variations in the building plane and parapet height, materials and colors, entrance canopies, and landscaping. Parking lots along the facade can also relieve horizontally through the use of landscaped fingers and islands containing trees and shrubs.

- Architectural design should create visual interest through the use of different textures, complementary colors, shadow lines and contrasting shapes. The use of walls in a single color, with little detailing or completely blank, is discouraged.
- Monotony of design in single or multiple building projects shall be avoided. Variation of detail, form, and siting shall be used to provide visual interest.
- Careful consideration of durable materials, proportions, and shapes, emphasizing the importance of roofs as integral and embracing elements of the over-all design, is particularly important.

- Use of substantial amounts of masonry materials (face brick, stucco, stone) is encouraged. The use of aluminum siding, metal ribbed panels, and extensive mirrored glass surfaces is discouraged. Evaluation of building materials shall be based on the quality of its design and relationship and compatibility to building materials in the immediate neighborhood.

Corrugated metal facades should be complemented with abundant use of masonry, whether brick, stone, stucco, or split-face block, especially along perimeter streets. Architectural metal panels may be an acceptable substitute for masonry. Appropriate landscaping can be used to complement and enhance a building's design, color and material.

- Architectural treatments (e.g., building materials, colors, facade design, roof lines, screening) shall be consistent and compatible on all sides. Treatment that is uniform on all sides will be deemed to meet the requirements of this principle. Adjacent land uses, visibility from public streets, use of screening devices (walls, fences, berms, landscaping) are criteria to be considered when varying this treatment. The applicant will have the burden of demonstrating the reasons for differing treatment on different sides (e.g., the need for truck access on one side and pedestrian access on another).

Long expanses of overhead doors should be relieved by matching their color to the wall or trim, recessing the doors, or adding architectural details to diminish the dominance of the doors.

**CHAPTER VI  
CAPITAL IMPROVEMENT PLAN**

**CAPITAL IMPROVEMENT PROGRAM**

The City of Raymore has followed a Capital Improvement Program (C.I.P.) process informally at the staff, administrative and legislative levels. A rational process of selecting projects, while informal, has led to carefully selected improvements. The C.I.P. process recommended for the City of Raymore is not so much a departure from current practice, as it is a formalization of the process.

In particular, the recommended C.I.P. process a) involves the planning and zoning commission in recommending projects, b) recommends a finance subcommittee to examine investment options, and c) sets forth public policy ranking procedures by which to score the various projects. The total score of each project allows the city to evaluate how it ranks relative to other projects.

The other elements of the C.I.P. are the listed projects and the financing mechanism review. The objective of the process is to start with the current list of projects and then rank them by the adopted policies. New projects may be added to the process to see if they rank high enough to add to the near-term five year list, or the long-term 15 year list.

**Current Capital Improvement Projects**

The City of Raymore has several currently initiated C.I.P. projects. The first project is the widening of 58 Highway from Dean Avenue to J Highway. The project has been undertaken in cooperation with the Missouri Highway Department and will be funded with state and local matching funds. The second project is the replacement of County Line Bridge, which collapsed in 1976 and has remained closed since that time. Both projects are necessary in order to provide a higher level of service in the designated growth areas of the City. Following is a more detailed description of both projects:

1. 58 Highway: From Dean Avenue to 300 feet east of J Highway. A Missouri Highway and Transportation Department (MHTD) project funded in part with local matching funds. The highway will be widened to five lanes, four 11' moving lanes and one 13' center turn lane. The current ditches will be replaced

with curb and gutter with a concrete sidewalk on the North side and an asphalt bike path on the South. The total Right-Of-Way (ROW) required for most of the project will be 100' with the section between the Madison curves requiring 78' - 80', depending on what section MHTD will approve. Traffic flowing onto M-58 at the Madison intersections will be improved with the elimination of the current entrances and the addition of new entrances that meet M-58 at right angles. The engineer's opinion of probable cost is \$6,000,000 with the MHTD's share being approximately \$1,000,000. Additionally, the construction of a five foot sidewalk on the north side of the highway and an eight foot bicycle path on the south side of the highway is being considered. ROW acquisition is expected to begin no later than January 1995 and construction beginning no sooner than the 1996 construction season and requiring 2 construction seasons to complete.

2. County Line Bridge: The bridge consists of 2 triple reinforced concrete box culverts and 1,300 feet of asphalt pavement, 9 inches thick. The cost of construction is \$535,000 of which the City is paying \$115,500. The City also paid for Engineering and Right-Of-Way (ROW). The construction began in January 1994 and will be completed in late spring or early summer 1994. This project was first recognized in 1968 when Kansas City, Missouri requested Raymore, Jackson County and Cass County to share in the project. A Kansas City, Missouri Public Works dump truck tried to cross the bridge and the bridge collapsed in 1976. It has been closed ever since.

### **Near-Term Capital Improvement Projects**

As a result of the formal C.I.P. process in which the City of Raymore engaged, a ranked list of proposed C.I.P. projects has been generated. Projects scheduled to start between the years 1995 and 2001 are considered to be near term projects. The costs of the near term projects have been estimated and potential funding mechanisms have been identified. The projects identified comprise four categories: street, water and sanitary sewer, public facilities, or parks projects. Table 5.3 provides a description of the identified near term street projects. Table 5.4 provides a description of the identified wastewater projects. Descriptions of proposed near term facilities and parks improvements are found in the following sections, "Facility Projects". Additionally, Appendix A contains opinions of probable costs to the City, financing sources, and suggested implementation dates for each project.

**Facility Projects**

Municipal Services and Public Safety Building

*Function included:*

City Administration	Municipal Court
Finance Dept.	Police Dept.
Engineering Dept.	
Zoning and Codes Administration	Parking for staff and visitors
Parks Dept.	

*Building Area*                                      20,000 S.F. Initially                                      30,000 S.F. Future

*Site Area Recommended:*                                      4 Acres

<i>Costs</i>		\$2,050,000
Design and Construction	1,850,000	
Furnishings and Equipment	150,000	
Site Acquisition	50,000	

Public Works Complex

*Functions Included:*

Administrative Offices and Locker Areas	Covered Equipment Station
3 Maintenance Bays	Material Stockpiles
1 Wash Bay	Exterior Fueling Station
Parts and Tool Storage	Parking for staff and visitors

*Building Area:*                                      19,000 S.F. Initially                                      22,000 S.F. Future

*Site Area Recommended:*                                      5 Acres

<i>Costs:</i>		\$1,560,000
Design and Construction	1,400,000	
Furnishings and Equipment	100,000	
Site Acquisition	60,000	

Community Center

*Functions Included:*

Administrative Offices	Meeting Rooms (6)
Gymnasium with stage and bleachers	Crafts Room
Fitness Center (aerobics, weights)	
Youth Center and Child Care	
Locker Rooms	

*Building Area:* 35,000 S.F.

*Site Area Recommended:* 5 Acres

<i>Costs:</i>		\$3,085,000
Design and Construction	2,985,000	
Furnishings and Equipment	25,000	
Site Acquisition	75,000	

**Park Projects**

Recreation Lanes

<i>Improvement:</i>	<i>Cost:</i>
From 58 Highway North and South	
2 miles of walk/bike trail at \$12/lf. (paved)	\$126,720
2 miles of hiking trail at \$5/lf. (mulched)	\$52,800
Signalization for Bikes and Pedestrians	
Pedestrian crosswalk with one light - midblock	\$10,000
Lighted Intersection	\$80,000
Bicycle Route with Marked Lanes	
paved, 10 ft wide, and adjacent to streets	\$65,000/mi.

General Park Land Improvements

<i>Improvement:</i>	<i>Cost:</i>
Soccer Fields (5 fields)	\$30,000
Sand Volleyball Court	\$3,000/each
Play Structures	\$10,000/each
Park Benches	\$400/each
Signs	\$350/each
Picnic Shelter	
small	\$8,000/each
large	\$25,000/each
Picnic Tables	\$700/each
Barbecue Grill	\$200/each
 <i>Improvement:</i>	 <i>Cost:</i>
Restrooms	\$12,000/each
Exercise Station	\$1,200/each
Trees	\$100/each
Shrubs	\$35/each

Park Land Acquisition - Neighborhood or Community Park

*Site Area Recommended:*

10 to 50 acres

*Location Recommended:*

Northwest Quadrant of the City

*Cost:*

\$2,500 to \$15,000/acre

Nature Trails

Option A - Wood Chips

1) Grading - 1.2 miles x 10' wide / Acres) @ \$2000/Acre	\$ 2,900.00
2) Wood Chips - 25,400/s.f. @ \$0.50 s.f.	12,700.00
3) Seeding - .85 Acre @ \$1200/Acre	<u>1,020.00</u>

TOTAL \$16,620.00

*Maintenance*

Remulch every 2 years

25,400 s.f. @ \$0.40/s.f. ÷ 2 yrs. \$ 5,080.00

Option B - Asphalt

Grading

1.45 Acres @ \$2000/Acre \$ 2,900.00

*Asphalt*

4" Thickness 2,822 s.y. @ \$10.00/s.y. \$28,220.00

*Seeding*

.85 Acres @ \$1200/Acre \$ 1,020.00

TOTAL \$32,140.00



*Maintenance*

Seal Coat once every 4 years

2822 s.y. @ 2.50/s.f. ÷ 4 yrs.

\$ 1,763.00

\*\* NOTE: ± 5 years after installation, the asphalt option is less cost than mulch.

Chip and Seal Parking Lots and Driveways

Parking Lots - 8,150 s.y. @ \$4.00/s.y.

\$32,600.00

Driveways - 4,175 s.y. @ \$4.00/s.y.

16,700.00

TOTAL \$49,300.00

Lighted Baseball/Softball Fields

4 Fields @ \$36,000.00/Field

\$144,000.00

(Includes 8 poles per field with total of  
22 lights per field, control panel and wiring.)

Construct 2 Baseball Fields

Grading - 4.25 Acres @ \$2,000/Acre

\$ 8,500.00

Infield - 2200 s.y. @ \$1.00/s.y.

2,200.00

Lighting - 2 Fields @ \$36,000/Field

72,000.00

Backstops - 2@ \$4,500.00/Each

9,000.00

Fence - 1,300 l.f. # \$12.00/l.f.

16,900.00

Dugout Pads - 20.c.y. @ \$250.00/c.y.

5,000.00

Seeding - 3.5 Acres @ \$1,200.00/Acre

4,200.00

Gravel Parking - 1,600 s.y. @ \$2.00/s.y.

3,200.00

Chip and Seal - 1,600 s.y. @ \$4.00/s.y.

6,400.00

TOTAL \$62,250.00

# CITY OF RAYMORE

## Growth Management Plan Update

### Trees per Master Plan

± 350 Shade Trees	1-1/2" Cal. @ \$150/Tree	\$52,500.00
± 50 Flowering Trees	1" @ \$75/Tree	3,750.00
± 75 Everground Trees	4' Tall @ \$80/Tree	<u>6,000.00</u>
		TOTAL \$62,250.00

### Concession Stand

#### Option A

Concession Area		
900 s.f. @ \$40/s.f.		\$36,000.00
Restrooms with flushing toilets		
300 s.f. @ \$55/s.f.		16,500.00
Sanitary Sewer		
1,600 fl.f @ \$30/l.f.		<u>48,000.00</u>
		TOTAL \$100,000.00

NOTE: This is full service facility for serving prepared foods and drinks.

#### Option B

Concession Area		
900 s.f. @ \$30/s.f.		\$ 27,000.00
8 Portable Toilets		
\$50/week x 20 weeks		<u>8,000.00</u>
		TOTAL \$35,000.00

NOTE: This is not a full service facility. No hot dogs, hamburgers or fountain drinks.  
Pre-packaged foods only!

### Dugouts

Fence		
50 l.f. x 2/Field x 12/l.f.		\$ 1,200.00
Concrete Pad		
10 c.y. @\$250/c.y.		<u>2,500.00</u>
		TOTAL \$ 3,700.00

Fence In-fields

Fence

1,320 l.f. @ \$12/l.f.

\$ 15,840.00

Gates

20 l.f. @ \$25/l.f.

500.00

TOTAL \$ 16,340.00

Tennis Courts/Basketball Court

Tennis Courts

4 @ 20,000 Each

\$ 80,000.00

Basketball Court

1 @ 20,000 Each

20,000.00

Grading

2.3 Acres @ \$2,000/Acre

4,600.00

Lighting

5 courts @ \$14,000/court

70,000.00

TOTAL \$174,600.00

Swimming Pool

TOTAL \$1,500.00.00

# CITY OF RAYMORE

## Growth Management Plan Update

TABLE 5-3 NEAR TERM STREET PROJECTS

Project Location	Project Length	Project Description	Existing Construction	Proposed ROW
Lucy Webb Rd - West of J Hwy to Outer Road	15,800 LF	Overlay 24 ft. Reconstruct/lengthen box culvert SW of Silver Lake.	2 lane - ACC, poor condition	80'
Bicycle Lane- Lucy Webb Road	15,800 LF	Lucy Webb Rd - West of J Hwy to Outer Road. Three miles of bicycle route. Paved, marked lanes, 4 feet wide and adjacent to street, on two sides.	None	
Foxridge Drive - Hwy 58 to 163rd (Gore Road)	5,400 LF	Construct Standard 4 Lane Arterial with curb/gutter/storm sewer. Traffic Signal at Hwy 58.	None	80'
163rd Street (Gore Rd) - Madison to Kentucky	10,200 LF	Construct 3 Lane Arterial with curb/gutter/storm sewer. Traffic Lights at Foxridge Drive and Madison.	None	70'
Madison Street - Hwy 58 to 155th Street (County Line Rd)	5,900 LF	Construct 3 Lane Arterial with curb/gutter/storm sewer.	2 Lane ACC, good condition, 3 lanes adjacent to Cumberland Hills Subdivision	70'
Kurtzweil - 163rd Street to Hwy 58	8,060 LF	Construct 3 Lane Arterial with curb/gutter/storm sewer. Traffic Light at Hwy 58	2 Lane gravel	70'
South Madison-Lucy Webb to Hubach Hill Road	5,900 LF	Overlay 24 ft.	ACC, poor condition	80'
Dean-South of Lucy Webb	not available	Possible long term project to be determined by future development.		
Foxridge-South of Lucy Webb	not available	Possible long term project to be determined by future development.		

# CITY OF RAYMORE

## Growth Management Plan Update

**TABLE 5-4 WATER AND SANITARY SEWER PROJECTS**

Project	Location	Description	Estimated Cost (1)
Elevated Water Storage Tank	Southeast corner of J Highway and Hubach Hill Road	Construct 1.0 Million Gallon Elevated Storage Tank to serve future development.	\$1,500,000 (4)
Land Acquisition: Elevated Water Storage Tank	Southeast corner of J Highway and Hubach Hill Road	Acquire minimum of 2.0 Acres of land at proposed site at a cost of \$10,000/acre.	\$20,000
Replacement of undersized water lines	N/A	Replace undersized water lines throughout City.	N/A (3,5)
Ground Storage Tank and Pumping Station	Southeast corner of County Line Road and Kurzweil	Construct 3.0 Million Gallon ground storage tank and 6.0 MGD pump station. Pump station sized to service population of 35,000.	\$2,400,000 (4)
Land Acquisition: Ground Storage Tank and Pumping Station	Southeast corner of County Line Road and Kurzweil	Acquire minimum of 4.0 Acres for site at a cost of \$10,000/acre. (2)	\$40,000
Kurzweil Road Water Main	Kurzweil Road from County Line Road to elevated tank at Hubach Hill Road.	Construct 16 inch water main from proposed pump station to elevated storage tank.	\$1,700,000
Inflow/Infiltration Study	Grand River Basin	Perform a detailed I/I study of sanitary sewer system. Include flow monitoring, manhole inspections, etc. to identify I/I sources. Provide recommendations for elimination of excess I/I, and construction of relief sewers.	\$75,000 (5)
Replacement of Undersized Sewer Lines	Entire City	Replace or rehabilitate undersized and deteriorated sanitary sewer lines as identified in the I/I study.	N/A (3,5)
Storm Water Management Plan	N/A	Perform stormwater study for entire Raymore area. Adopt stormwater standards. Address localized stormwater problems at Fox Haven, Silver Lake, Maplewood, Lucy Webb Road at City Park, North Madison at Stagmair Acres, Prairie Lane north of 58 Highway, 58 Highway west of Madison, Skyview Apartments, and other locations.	N/A (5)
Total Cost:			\$5,735,000

- (1) All construction project costs include an allowance of 30 percent for engineering, construction services, and contingencies.
- (2) Pump Station sizing based on firm capacity to serve 35,000 population at 100 gpcd with maximum day peaking factor of 1.7.
- (3) No costs are included for replacement of undersized sewers and water mains. These costs would require detailed study of the systems.
- (4) Costs do not include land acquisition.
- (5) Funded through allocations for annual infrastructure study and upgrade costs.

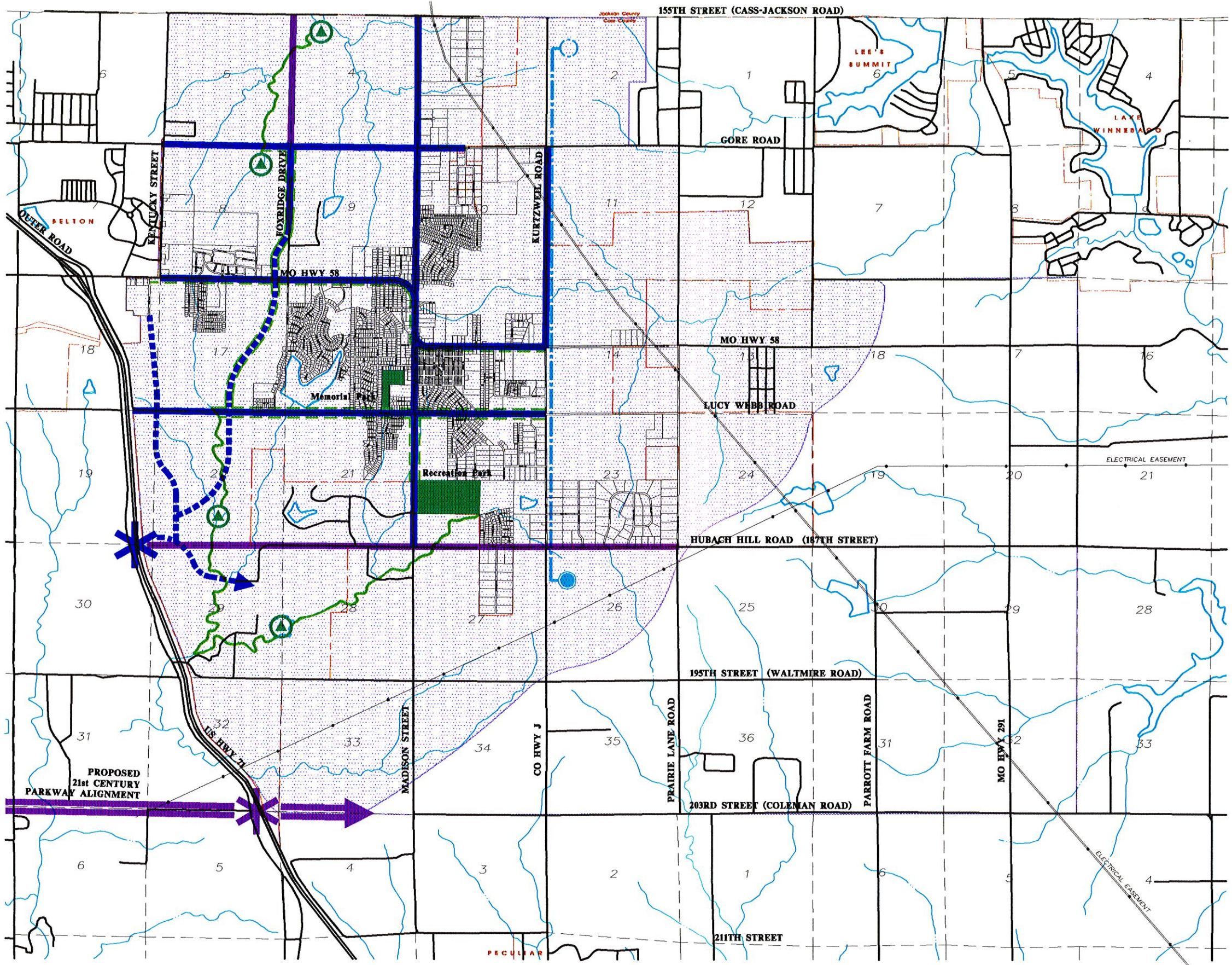
**Long-Term Street Projects**

Long-term projects are those which are implemented after the first six years of the Growth Management Plan. Some of the major long-term street projects identified during the planning process are:

- Widening and Improving 155th Street;
- Widening and Improving 195th Street; and
- Widening and Improving 203rd Street

**Updating the Capital Improvement Plan**

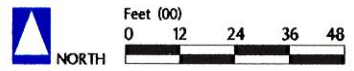
Once a Capital Improvement Plan has been adopted, a yearly examination of the C.I.P., by the City is recommended. A yearly update of the C.I.P. will ensure that it remains current and appropriately addresses growth within the City. To facilitate the update process, a Project Scoring Sheet has been included within Appendix B. The purpose of the Project Scoring Sheet is to provide a ranking of C.I.P. projects which will assist the City in its C.I.P. evaluation.



**LEGEND**

- Development Area
- Major Road Improvements
- Conceptual Major Road Alignments
- Long Term Road Improvements
- Interchange
- Interchange - Long Term
- Water Line
- Elevated Storage (1 Million Gals.)
- Ground Storage (3 Million Gals.)
- Proposed Park Site
- Bike Route
- Bike Path

**NOTE:** Unless noted otherwise, all projects are anticipated in the near term - within 5 years.



**BUR** **BUCHER, WILLIS & RATLIFF**  
ENGINEERS • PLANNERS • ARCHITECTS

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BWR 93-556 818 / 363-2696 MARCH 1994  
RAYPCP...3-13-95 RAYBASE...12-2-94

**PROPOSED CAPITAL IMPROVEMENTS PROJECTS**





# CAPITAL IMPROVEMENT PROGRAM

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*Appendix A*

## APPENDIX A

City of Raymore Comprehensive Plan

Capital Improvement Program

Project Timing and Finance

## APPENDIX A CAPITAL IMPROVEMENT PROGRAM

### **Capital Improvement Project Cost, Financing and Timing.**

The following table (Table A.2) contains information concerning the cost, timing, and funding sources of each near term capital improvement project. Table A.1 gives a definition of the abbreviations used in Table A.2. Each project falls into one of four categories: streets, water and sanitary sewer, public facilities or parks projects.

### **Assumptions**

Certain assumptions apply to the opinions of probable cost. Opinions of probable cost concerning street, water and sanitary sewer projects assume that all construction project costs include an allowance of 30 percent for engineering, construction services, and contingencies. Also, in all locations, it is assumed that the City will pay 100 percent of traffic signalization costs at locations indicated. Additionally, the City has indicated that its policy on street improvements is to only participate in the portion of costs associated with upgrading streets from Collector to Arterial standards. The remaining costs and improvements are to be made by developments as they occur. Therefore, probable cost opinions for street improvements include both a total project cost and the City's estimated share. The City's share of street paving projects is assumed to consist of only the direct costs for extra paving width at the time of construction. This assumption is based on the City constructing their share of the street with the initial development of the street. If the City were to construct these improvements at a later date than initial improvements, the costs would be significantly higher due to required curb installation, extensions and relocation of storm sewers, reconstruction of adjacent driveways, and other costs associated with a street widening project. Right-of-Way acquisition costs are not included.

# CAPITAL IMPROVEMENT PROGRAM

Appendix A

TABLE A.1  
CITY OF RAYMORE FINANCIAL SOURCES

<u>ABBREVIATION</u>	<u>FUNDING</u>	<u>DESCRIPTION</u>
Ent. Fund	Enterprise Fund	Revenue bonds sold and retired by water and sewer fees.
LWCF	Land & Water Conservation Fund	Federal/State.
Gen. Fund	General Fund	Local taxes and fees and state shared taxes.
CIPST	Capital Improvement Sales Tax	1/2 cent sales tax to fund Highway ancillary capital improvement projects.
G. O. Bond	General Obligation Bond	Bonds sold by the City.
Parks	Parks & Recreation Bond Fund	Local T&C Levy for Parks & Recreation.
ISTEA	Intermodal Surface Transportation & Efficiency Act	Federal Highway Demonstration Funds.
TAB	Tax Anticipation Bond	General Obligation Bonds sold in anticipation of sales tax revenues.

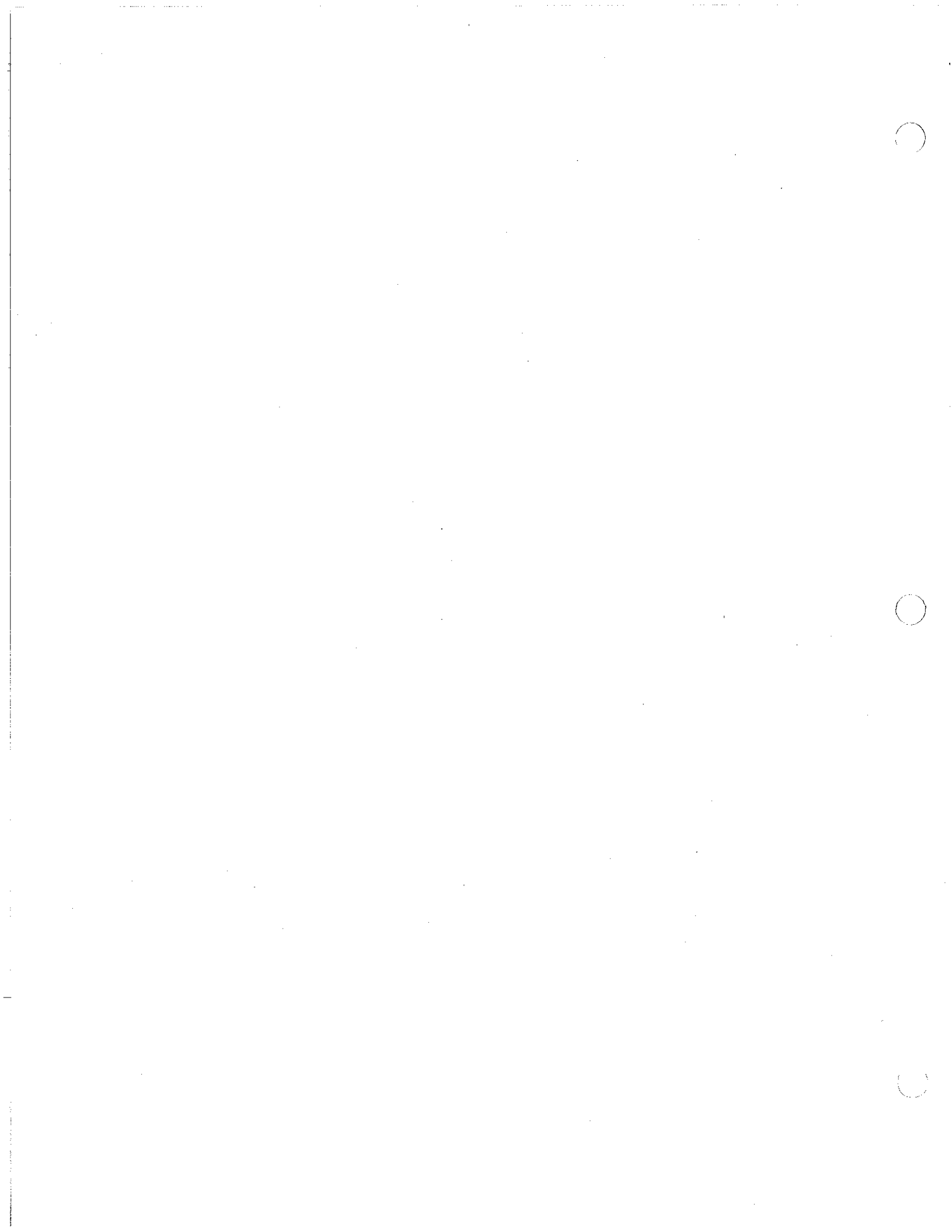


# CAPITAL IMPROVEMENT PROGRAM

Appendix A

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# **CAPITAL IMPROVEMENT PROGRAM**

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*Appendix B*

## **APPENDIX B**

City of Raymore Comprehensive Plan

Capital Improvement Program

Capital Facilities Planning  
The Capital Improvements Process  
Priorities Setting  
Project Scoring Work Sheets

# CAPITAL IMPROVEMENT PROGRAM

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## *Appendix B*

### Capital Facilities Planning

Planning is both process-oriented and production-oriented. The first step is to develop a Comprehensive Plan, a process which typically involves three entities--the Planning Commission, the public at-large, and the Board of Aldermen. The Raymore Planning Commission has begun the "planning process." The second step is to implement the plan. Implementation tools include the capital improvements program.

Within the context of the Comprehensive Plan many of the community's needs, desires, and goals have been discussed. The capital improvements program begins the process of identifying and establishing priorities for specific improvements in order to achieve those needs, desires, and goals. If implemented and updated in a formalized process, the capital improvements program provides a variety of benefits:

- The Comprehensive Plan becomes more than an exercise, it becomes a tool that plays an important role in the growth and development of the City;
- The community as a whole is given consideration;
- A degree of objectivity is given to the major capital expenditures;
- An understanding of where the community is going provides an opportunity to purchase property in advance of improvements, often resulting in considerable savings;
- A certain degree of certainty is given to the development process, stimulating growth in the direction of public improvements and providing greater efficiencies to businesses making location decisions;
- Greater lead time can be provided to the funding process, allowing the City to seek alternative sources of revenue for given projects;
- Bond issues can be better planned, reducing the likelihood of major fluctuations in the tax rate; and
- Intergovernmental cooperation can be enhanced by allowing joint fiscal programming.



# CAPITAL IMPROVEMENT PROGRAM

## Appendix B

The reasons for capital facilities planning are many. The City of Raymore has long engaged in a C.I.P. process. However, agreeing on a more formal, clear process is important to ultimate success. Such a process includes more formal public involvement, and helps assure fiscal implementation. This section, then, recommends both a process by which a capital improvements program can be developed, as well as procedure through which projects can be ranked.

### The Capital Improvements Process

In order to be effective, a capital improvements program must integrate community desires and goals in a formalized process of needs assessment and financial programming. The figure attached summarizes a basic process for the City and includes six major groups:

- **The "Capital Facilities Committee"** - a group of key City staff representatives is recommended as a start to the C.I.P. process, which mirrors the general procedure for C.I.P. planning in Raymore at this time. The staff committee would be responsible for establishing an inventory of capital needs within their respective areas, undertaking an evaluation of each project request, describing each proposed project in sufficient detail for others to understand, and, as a group, providing a preliminary ranking of each project relative to the funding cycle (1-5 years and long-term).
- **The Public Works Director and City Administrator's Office** - while also an integral part of the Capital Facilities Committee, the Public Works Director as chief facilities administrator, and the City Administrator, as the chief administrative officer, should provide the first administrative check of the proposed capital facilities program. Two key responsibilities of the City Administrator will be to check the program for consistency with both legal requirements and previous years plans, and to make a preliminary check for financial integrity.
- **The Planning Commission and Planning and Zoning Administrator's Office** - the Planning Commission should have two primary responsibilities in the C.I.P. process. First, the Planning Commission should ensure that recommendations within the C.I.P. are consistent with the Comprehensive Plan. The Comprehensive Plan update is being prepared to vest the Commission with a central role in the C.I.P. process. Second, the Planning Commission should take

# CAPITAL IMPROVEMENT PROGRAM

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## *Appendix B*

public comment, in hearings, and serve as a recommending body to the Board of Aldermen. The Planning and Zoning Administrator should help manage the C.I.P. process, providing research and planning expertise, and act as liaison to the "Capital Facilities Committee."

- **The Public** - to maintain the integrity of the Comprehensive Plan and achieve established community goals, the citizens of the City should play a role in this process. At the very least they should be invited into advertised public hearings to listen to and comment on the recommendations of the Capital Facilities Committee.
- **Board of Aldermen "Public Works Committee" and "Finance Committee"** - capital facilities programming involves many complex issues of both budgeting and development for the City. Because of the degree of complexity in a City the size of Raymore, detailed study should be undertaken by elected officials, prior to general meetings. The "Public Works Committee" should first report to the "Capital Facilities Committee" concerning their ranking of projects. To provide a detailed level of understanding, the "Finance Committee" is recommended to next rank the projects. This committee will review the proposed C.I.P. in detail, providing a second legislative check of the program, reviewing proposals for their consistency with public policy and assuring financial soundness. This committee would, after its review is complete, make a report and recommendation to the Mayor and Board of Aldermen, with the City Administrator directing the administrative role in the research and recommendation.
- **The Board of Aldermen** - finally, after rankings and reports from the three committees, the Board of Aldermen as a whole should review the recommended C.I.P. Two additional open public hearings are recommended at the Board of Aldermen level to provide assurances that the integrity of the program has been maintained and to help build public trust in the process. Finally, the Board of Aldermen will both adopt and implement the plan.

It should be kept in mind that this process is not linear as suggested here, but cumulative and circular. At the end of each budget cycle, the process begins again, building upon the work of the previous year.

# CAPITAL IMPROVEMENT PROGRAM

## Appendix B

### Priorities Setting

When the capital improvements process begins, the initial list of projects are little more than a cataloging of needed and desired projects. As the Capital Facilities Committee establishes its recommendations, the ranking of projects should become more formalized, based upon a given set of considerations. Further, these considerations should follow throughout each level of refinement. At a minimum, each project should be evaluated and scored based upon five major factors, each of which has sub-elements to consider. The relative weight given to each element in the ranking system is largely up to City's policy makers. For the purpose of this discussion, each of the five major considerations are weighted equally, on a basis of one to five, with five indicating the greatest degree of need. The ranking system, then, is based upon the elements described below.

#### Maintenance

*Ordinary* - is this a project which may be necessary and improve the quality of life, but is not essential and could be postponed to a later year (example: street reconstruction)?

*Continuation* - is this project a continuation of a preceding years ongoing effort and therefore worthy of a higher degree of consideration?

*Imminent* - is this a project that represents some threat to the public health or safety if not undertaken? A failure in a sewage system would rank highly, while a nonessential bridge which could be temporarily closed might rate less highly.

#### Redevelopment

*Support of 58 Highway Widening Project* - does the project support the acquisition and redevelopment along the 58 Highway corridor?

*Stabilization of Decline* - a project in the original town core, heading toward physical decline, might receive a higher rating than one within a blighted area because it can be seen as eliminating a greater problem before it occurs.

# CAPITAL IMPROVEMENT PROGRAM

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## Appendix B

*New Construction* - projects which encourage new construction in older areas of the community are as important in many instances as projects in new areas. Consequently, they too should be given consideration in the programming process.

### Public Policy Support

*Comprehensive Plan* - projects which serve to implement the goals of the Comprehensive Plan should be given immediate consideration.

*Political Considerations* - political reality is a part of the capital improvements programming process. Consequently, consideration should be given to projects which achieve campaign promises, encourage intergovernmental cooperation, and/or implement federal or state mandates.

*Geographic Distribution* - it is difficult for a C.I.P. to be successful over the long-term if all projects are concentrated within a limited area. Consequently, both the historical and current year distribution of projects should be considered in the ranking process. Clearly, the future land use plan of the current Comprehensive Plan update should direct the public policy here. Investment, for example, where sewer interceptors are planned or under construction, should be a guiding factor.

*Timing* - it is critical to allow financing of timely projects, such as matching funds for state grants. The C.I.P. process should be flexible and re-evaluated to accommodate such circumstances; and the availability of such funds should be factored into the ranking. Private sector initiative should be evaluated and support with public projects, so that growth is served adequately.

### Investment Opportunities

*Term* - consideration should be given to whether the implementation of a project has a immediate impact on the community.

*Characteristics of the Investment* - some projects, by their very nature, affect competition in the market place. For example, a major capital improvement, funded by the community at-large, for a residential development, should not be given as high a ranking score as one for industrial development. The City has a high degree of competition in the residential market place and such an investment could provide

# CAPITAL IMPROVEMENT PROGRAM

## Appendix B

one developer an unfair advantage over another. Conversely, there is very little local competition in the industrial real estate development market and the community could take a position, which would be supported by the Plan, that public investment to encourage industrial development is a beneficial expenditure of public revenues.

*Leverage* - a project which leverages monies from other entities (grants, private investment, special assessments, etc.) might be rated more highly than one which must stand alone; particularly if the "window of opportunity" is small and a program must be taken advantage of immediately or be forever lost.

*Uniqueness and/or Innovation* - some projects represent a unique opportunity to the community. These projects, then, should receive additional consideration.

### Debt Capacity

*Availability* - clearly the ability of the community to fund improvements must be a consideration. Consequently, a project that utilizes currently budgeted funds should be rated higher than a project that requires a tax bond vote.

*Revenue Source* - some projects may receive a higher rating because of the way in which they can be funded. For example, a project funded by a revenue stream unique to that project may be rated more highly than one which requires general obligation debt. In addition, projects which are funded by an equitable distribution of monies based upon impact may also rate more highly than one which requires an unfair collection of funds.

As each project is considered, based upon the above described factors, some projects may rate highly under each category, some may rate well in some categories and less well in others, and some projects may receive no rating within a given category. This system attempts to provide a degree of objectivity to a process that is often as much art as science. However, if carefully followed, the Comprehensive Plan should be implemented, public trust should be enhanced, and limited public funds should be expended in a more efficient manner; hopefully encouraging complimentary investments from other sources.

Finally, both the relative weight placed on a rating category and financial limitation are important elements to the review process. Consequently, it would be helpful if the Board of

# CAPITAL IMPROVEMENT PROGRAM

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## *Appendix B*

Aldermen, as the primary policy makers of the City of the City, would provide guidance on the availability of funds for capital improvements programming. As the process continues over time, the Planning Commission will become better able to make recommendations to the Board of Aldermen; they will better understand the funding limitations, become more ware of the needs for an emergency fund reserve, and, hopefully, become better informed concerning the differences between "planning" decisions and "political" decisions.

# CAPITAL IMPROVEMENT PROGRAM

Appendix B

## RAYMORE, MISSOURI CAPITAL IMPROVEMENTS PROGRAM

### Project Scoring Sheet

1. Project Number: \_\_\_\_\_ (department abbreviation)  
\_\_\_\_\_ (year first proposed);
2. Project Description:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. Project Cost: \_\_\_\_\_
4. Proposed Revenue Sources: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. Composite Priority Score:

The composite score is the sum of the element scores, which are in turn averages of the sub-element scores. Scores are based on a scale of zero to five. A zero means the element or sub-element has little or no bearing on the ranking of the specific project. A five means that within that sub-element, this project rates as well as is possible.

#### Maintenance

Ordinary

Continuation

Imminent

# CAPITAL IMPROVEMENT PROGRAM

Appendix B

## Redevelopment

Support Hwy 58 Widen

Stabilization of Decline

New Construction

## Public Policy Support

Comprehensive Plan

Political Considerations

Geographic Distribution

Timing

## Investment Opportunities

Term

Character of Invest

Leverage

Uniqueness/Innovation



# CAPITAL IMPROVEMENT PROGRAM

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*Appendix B*

**Debt Capacity**

Availability

Revenue Source

# CAPITAL IMPROVEMENT PROGRAM

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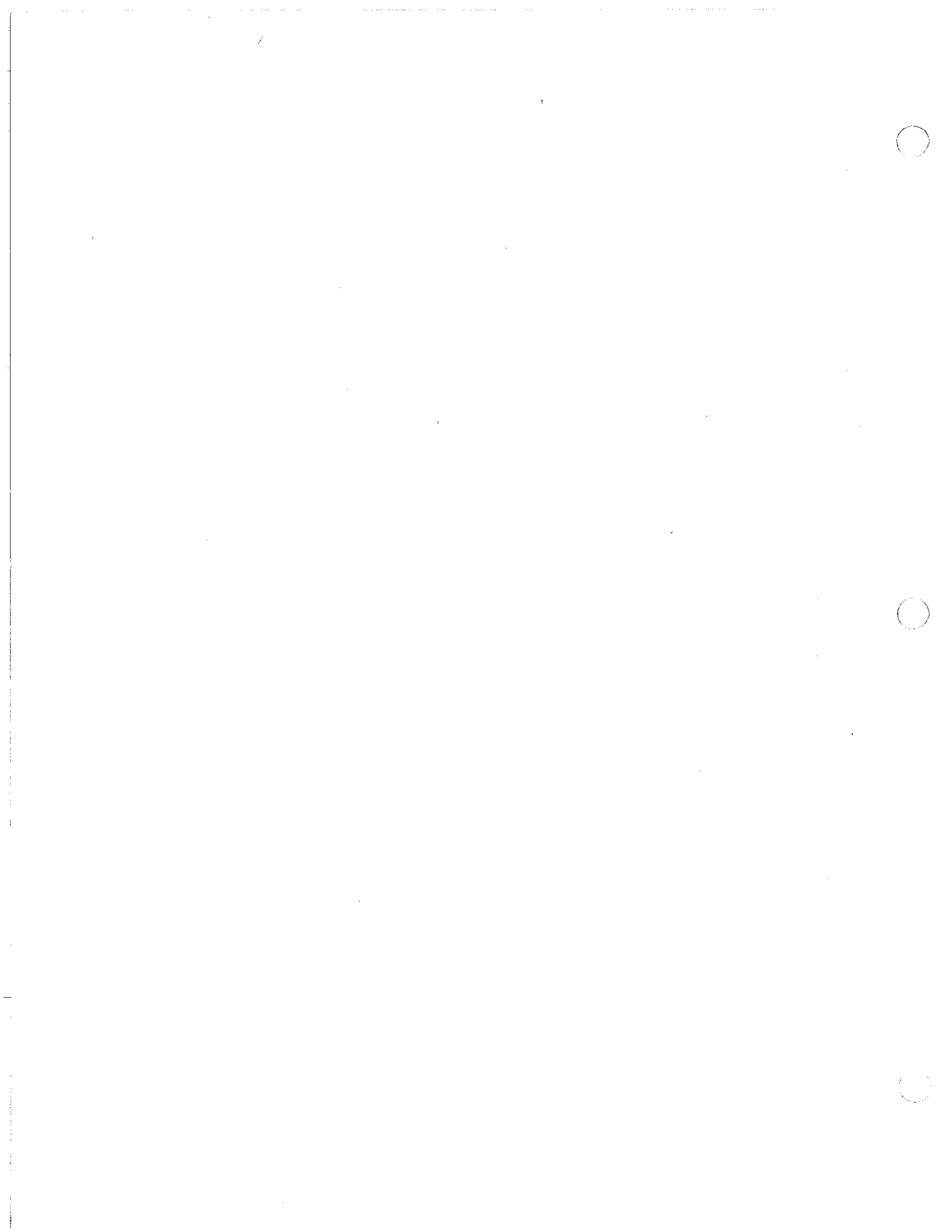
*Appendix B*

# CAPITAL IMPROVEMENT PROGRAM

Appendix B

## City of Raymore Capital Improvement Projects

The projects to be ranked are:	Opinion of Probable Cost:	Funding Year:
		1994
		1995
		1996
		1997
		1998
		1999



City of Raymore, Missouri Capital Improvement Program																					
Project	Total Project Cost (3) (5) (6)	Local Financial Source (2)	Local Cost	Length of Project (Years)	Interest Rate	Total Local Project Cost	Total Locally Accrued Interest	ANNUAL PAYMENT SCHEDULE OF PRINCIPLE AND INTEREST (1)													
								1995		1996		1997		1998		1999		2000		2001	
								P	I	P	I	P	I	P	I	P	I	P	I	P	I
<b>Start Date: 1995</b>																					
Land Acquisition: Water Storage Tanks and Pump Station (7)	\$60,000	Ent. Fund	\$60,000	1	0.00%	\$60,000	\$0	(\$60,000)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Nature Trail	\$100,000	LWCF & Local	\$16,620	10	6.00%	\$22,581	(\$5,961)	(\$1,261)	(\$997)	(\$1,337)	(\$922)	(\$1,417)	(\$841)	(\$1,502)	(\$756)	(\$1,592)	(\$686)	(\$1,687)	(\$571)	(\$1,789)	(\$469)
Chip and Seal Parking Lots and Driveways	\$49,000	Park	\$49,000	1	0.00%	\$49,000	\$0	(\$49,000)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Annual Infrastructure Study & Upgrade Costs (9)	\$20,000	Ent. & Gen. Fund	\$20,000	1	0%	\$20,000	\$0	(\$20,000)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Start Date: 1996</b>																					
Lucy Webb Rd - Outer Road to Foxridge, Madison to Kurtzwell	\$400,000	TAB	\$200,000	10	6.00%	\$271,736	(\$71,736)	\$0	\$0	(\$15,174)	(\$12,000)	(\$16,084)	(\$11,090)	(\$17,049)	(\$10,125)	(\$18,072)	(\$9,102)	(\$19,156)	(\$8,017)	(\$20,306)	(\$6,868)
Lucy Webb Rd Bicycle Lane - Outer Road to Foxridge, Madison to Kurtzwell	\$200,000	ISTEA & Gen. Fund	\$50,000	10	6.00%	\$67,934	(\$17,934)	\$0	\$0	(\$3,793)	(\$3,000)	(\$4,021)	(\$2,772)	(\$4,262)	(\$2,531)	(\$4,518)	(\$2,275)	(\$4,789)	(\$2,004)	(\$5,076)	(\$1,717)
Hwy. 58 Annual Bond Payment	\$2,500,000	CIPST	\$2,500,000	20	7.12%	\$5,133,209	\$2,634,159	\$0	\$0	\$0	\$85,025	\$0	\$127,538	\$0	\$127,538	\$0	\$127,538	\$0	\$127,538	\$150,000	\$123,750
Ground Storage Tank and Pumping Station (8)	\$2,400,000	Ent. Fund	\$2,400,000	20	6.00%	\$4,184,859	(\$1,784,859)	\$0	\$0	(\$65,243)	(\$144,000)	(\$69,158)	(\$140,085)	(\$73,307)	(\$135,936)	(\$77,705)	(\$131,538)	(\$82,368)	(\$126,875)	(\$87,310)	(\$121,933)
Annual Infrastructure Study & Upgrade Costs (9)	\$20,000	Ent. & Gen. Fund	\$20,000	1	0%	\$20,000	\$0	\$0	\$0	(\$20,000)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Start Date: 1997</b>																					
Lucy Webb Rd - Foxridge to Madison	\$200,000	TAB	\$100,000	10	6.00%	\$135,868	(\$35,868)	\$0	\$0	\$0	\$0	(\$7,587)	(\$6,000)	(\$8,042)	(\$5,545)	(\$8,525)	(\$5,062)	(\$9,036)	(\$4,551)	(\$9,578)	(\$4,009)
Lucy Webb Rd Bicycle Lane - Foxridge to Madison	\$100,000	ISTEA & Gen. Fund	\$25,000	10	6.00%	\$33,967	(\$8,967)	\$0	\$0	\$0	\$0	(\$1,897)	(\$1,500)	(\$2,011)	(\$1,386)	(\$2,131)	(\$1,266)	(\$2,259)	(\$1,138)	(\$2,395)	(\$1,002)
S. Madison - Lucy Webb Rd to Hubach Hill Rd	\$200,000	CIPST	\$100,000	1	0.00%	\$100,000	\$0	\$0	\$0	\$0	\$0	(\$100,000)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Public Works Complex	\$1,600,000	G.O. Bond	\$1,600,000	10	6.00%	\$2,173,887	(\$573,887)	\$0	\$0	\$0	\$0	(\$121,389)	(\$96,000)	(\$128,672)	(\$88,717)	(\$136,392)	(\$80,996)	(\$144,576)	(\$72,813)	(\$153,250)	(\$64,138)
Kurtzwell Rd. Water Main	\$1,700,000	Ent. Fund	\$1,700,000	20	6.00%	\$2,964,275	(\$1,264,275)	\$0	\$0	\$0	\$0	(\$46,214)	(\$102,000)	(\$48,987)	(\$99,227)	(\$51,926)	(\$96,288)	(\$55,041)	(\$93,172)	(\$58,344)	(\$89,870)
Lighting for Ball Fields	\$144,000	Park	\$144,000	1	0.00%	\$144,000	\$0	\$0	\$0	\$0	\$0	(\$144,000)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Annual Infrastructure Study & Upgrade Costs (9)	\$20,000	Ent. & Gen. Fund	\$20,000	1	0%	\$20,000	\$0	\$0	\$0	(\$20,000)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Start Date: 1998</b>																					
Madison St. - Hwy. 58 to 155th St. (4)	\$3,600,000	CIPST	\$1,800,000	1	0.00%	\$1,800,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$1,800,000)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Elevated Water Storage Tank	\$1,500,000	Ent. Fund	\$1,500,000	20	6.00%	\$2,615,537	(\$1,115,537)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$40,777)	(\$90,000)	(\$43,223)	(\$87,553)	(\$45,817)	(\$84,960)	(\$48,566)

**City of Raymore, Missouri  
Capital Improvement Program**

Project	Total Project Cost (3) (6)	Local Financial Source (2)	Local Cost	Length of Project (Years)	Interest Rate	Total Local Project Cost	Total Locally Accrued Interest	ANNUAL PAYMENT SCHEDULE OF PRINCIPLE AND INTEREST (1)														
								1996		1997		1998		1999		2000		2001				
								P	I	P	I	P	I	P	I	P	I	P	I			
<b>Start Date: 1998 continued</b>																						
Municipal Services & Public Safety Building	\$2,050,000	G.O.. Bond	\$2,050,000	10	6.00%	\$2,785,293	(\$735,293)	\$0	\$0	\$0	\$0	\$0	\$0	(\$155,529)	(\$123,000)	(\$164,861)	(\$113,668)	(\$174,753)	(\$103,777)	(\$185,238)	(\$93,291)	
Construct Two Ball Fields - Phase I	\$63,700	Park	\$63,700	1	0.00%	\$63,700	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$63,700)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Annual Infrastructure Study & Upgrade Costs (9)	\$20,000	Ent. & Gen. Fund	\$20,000	1	0%	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$20,000)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>Start Date: 1999</b>																						
163rd St. - Madison to Kentucky	\$3,800,000	CIPST	\$550,000	1	0.00%	\$550,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$550,000)	\$0	\$0	\$0	\$0	\$0	
Construct Two Ball Fields - Phase II	\$63,700	Park	\$63,700	1	0.00%	\$63,700	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$63,700)	\$0	\$0	\$0	\$0	\$0	
Swimming Pool	\$1,500,000	G.O.. Bond	\$1,500,000	10	6.00%	\$2,038,019	(\$538,019)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$113,802)	(\$90,000)	(\$120,630)	(\$83,172)	(\$127,868)	(\$75,934)	
Adaptive Reuse - Police Station	\$250,000	G.O.. Bond	\$250,000	10	6.00%	\$339,670	(\$89,670)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$18,967)	(\$15,000)	(\$20,105)	(\$13,862)	(\$21,311)	(\$12,656)	
Foxridge Dr. - Hwy. 58 to 163rd St.	\$2,200,000	CIPST	\$340,000	1	0.00%	\$340,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$340,000)	\$0	\$0	\$0	\$0	\$0	
Annual Infrastructure Study & Upgrade Costs (9)	\$20,000	Ent. & Gen. Fund	\$20,000	1	0%	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$20,000)	\$0	\$0	\$0	\$0	\$0	
<b>Start Date: 2000</b>																						
Foxridge Dr. - Multi-Purpose Trail	\$16,500	LWCF & ISTE A	\$16,500	10	6.00%	\$22,418	(\$5,918)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$1,252)	(\$990)	(\$1,327)	(\$815)	
Kurzweil - 163rd St. to Hwy. 58	\$2,500,000	CIPST	\$400,000	1	0.00%	\$400,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$400,000)	\$0	\$0	\$0	
Trees per Park Master Plan	\$62,250	Park	\$62,250	1	0.00%	\$62,250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$62,250)	\$0	\$0	\$0	
Community Center	\$3,085,000	G.O.. Bond	\$3,085,000	10	6.00%	\$4,191,527	(\$1,106,527)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$234,053)	(\$185,100)	(\$248,096)	(\$171,057)	
Annual Infrastructure Study & Upgrade Costs (9)	\$20,000	Ent. & Gen. Fund	\$20,000	1	0%	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$20,000)	\$0	\$0	\$0	
<b>TOTAL PRINCIPLE (based on 1994 dollars)</b>								(130,261)		(105,547)		(531,765)		(2,363,837)		(1,615,415)		(1,397,772)		(820,453)		
<b>TOTAL INTEREST</b>									(997)		(74,897)			(232,751)		(429,685)		(505,877)		(653,464)		(602,320)
<b>TOTAL PRINCIPLE AND INTEREST</b>									(\$131,258)		(\$180,443)		(\$764,516)		(\$2,793,522)		(\$2,121,291)		(\$2,051,236)		(\$1,422,774)	
<b>TOTAL PRINCIPLE - G.O.. Bonds and TAB (based on 1994 dollars)</b>								0		(15,174)		(145,080)		(309,292)		(441,652)		(702,204)		(744,336)		
<b>TOTAL INTEREST - G.O.. Bonds and TAB</b>								0	0		(12,000)		(113,090)		(227,386)		(298,828)		(457,429)		(415,297)	
<b>TOTAL PRINCIPLE AND INTEREST - G.O.. Bonds and TAB</b>								\$0		(\$27,174)		(\$258,149)		(\$536,678)		(\$740,480)		(\$1,159,633)		(\$1,159,633)		

- (1) Assumed: One equal payment per year paid at the end of each year for the length of the project.
- (2) See Table A.1 for a legend describing abbreviations.
- (3) Includes costs to other agencies in addition to those of the municipality.
- (4) Assumed that since majority of east side of road is developed, the City would pay 50 percent of cost of street improvements. Developers on west side of street would pay remaining 50 percent of street improvement costs. Right of way acquisition costs for the east side of the street have not been included.
- (5) In all locations, it is assumed that the City would pay 100 percent of traffic signalization costs at locations indicated.
- (6) All construction project costs include an allowance of 30 percent for engineering, construction services, and contingencies.
- (7) Pump Station sizing base on firm capacity to serve 35,000 population at 100 gpcd with maximum day peaking factor of 1.7.
- (8) Costs do not include land acquisition.
- (9) Annual Infrastructure & Upgrade Costs include funding for:  
Stormwater Management Study/Plan, replacement of undersized water and sewer lines; and an Inflow/Infiltrations Study.