CHAPTER THREE
PUBLIC FACILITIES

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Public facilities such as water and sewer systems, educational facilities, parks and recreational facilities are vital components of the operation of a city. This chapter will inventory the availability and condition of existing public facilities to determine if they meet the needs of the present and future population of the City of Belton.

SANITARY SEWER FACILITIES

To promote health, safety and environmental quality, as well as growth, an adequate sanitary sewer system must be in place to serve the community. The efficiency and capacity of the system will strongly influence the future well-being of the community. Because the municipal wastewater system is both a technical and capital intensive operation, its oversight, as well as its consideration in the comprehensive plan are crucial so as to avoid potential service and environmental problems.

Sanitary sewer service in Belton is provided by both the City and the Little Blue Valley Sewer District. The City's sewage treatment plant, located in south Belton on the West Fork of East Creek, services the East Creek watershed north of 183rd Street. The land in the Oil Creek watershed which is north and east of the railroad tracks in Belton, is served by the Little Blue Valley Sewer District. A sewer project was completed in 1982 which provided sanitary sewer service to the Martinwood and Dikewood Subdivisions in northeast Belton, previously on individual septic systems.

The City's sanitary sewer system primarily operates by gravity flow to the City's treatment plant or to the Little Blue Valley Sewer System. However, lift stations are employed in some areas to assist in the flow of wastewater where physical constraints make gravity flow prohibitive. Since the 1983 Comprehensive Plan, four lift stations have been abandoned in the Little Blue Valley Sewer District Watershed. The following six lift stations are presently used in Belton:

1) Bel-Ray (Mobile Home Park)
2) Cedar Tree Shopping Center
3) Southview Ford at Markey Road and Frontage Road
4) Cimarron West at Markey Road and C.B. Road

5) Cimarron East at Markey Road and Cimarron Trail
6) Markey Meadows in Markey Meadows Subdivision

The Feasibility Study for Wastewater Interceptor and Treatment Facilities, completed in 1989, estimated the 1987 average daily flow through the City's treatment plant to be .91 million gallons per day (mgd). The peak average measured during this study was 2.86 mgd. Significant inflow and infiltration are experienced throughout Belton's sewage system which contribute to high peak flows. The City is currently pursuing a program of lining defective sewer lines, although these problems will most likely continue given the age of the system and the soil and rock conditions throughout the City.

In 1992, construction will begin on a new treatment plant for the City of Belton. The plant, which will be located at 211th Street and Mullen Road near the confluence of the West Fork and the main channel of East Creek, will be capable of treating 2.45 mgd of wastewater. The plant will also be designed to handle a peak flow of 4,940 gallons per minute (7.1 mgd). A pump station will combine the flow from the 22,300 linear feet of new 27 inch and 30 inch gravity sewer line from the old wastewater treatment facility along the west branch of East Creek and 16,500 linear feet of new 12 inch and 15 inch gravity sewer line along the main channel of East Creek. An 8 inch linear force main will connect the pump station to the new treatment facility.

Wastewater treatment at the City's new treatment facility will be by activated sludge through a sequencing of batch reactor process which include a sequencing of oxidation and settling basins. This operation will alternate between aeration and mixing followed by sludge removal and treated water discharge. In addition, tertiary treatment will be provided by ultraviolet disinfection prior to discharge of the treated water into the main channel of East Creek.

The new treatment facility will be designed to accommodate a projected population of 22,220 in the year 2012. This population will not include those Belton residents that are and will be served in the future by the Little Blue Valley Sewer District facility. The treatment facility will provide service to the proposed annexation areas plus the unincorporated area within the East Creek watershed above 211th Street.

WATER FACILITIES

As with the sanitary sewer system, an abundant source of water together with an efficient distribution system are essential to the growth and development of Belton. A municipal water system consists of three main components: supply, storage and distribution. The integration of these components creates the overall system which is responsible for providing the community's supply of potable water and firefighting capability.

The City of Belton contracts with Kansas City, Missouri to purchase potable water. Two pump stations serve the City in distributing water. The Holmes Street pump station is located south of 155th Street on Holmes Road and contains three 1,000 gallons per minute (gpm) pumps. A second pump station is located south of 155th Street on North Scott. This pump station uses one 1,700 gpm pump, two 1,000 gpm pumps and two 350 gpm pumps.

During 1990, the North Scott pump station and the Holmes Street pump station each pumped 475.6 million gallons and 101.7 million gallons of water respectively for a total of 577.3 million gallons of water used in Belton for the year. The average daily flow in the City of Belton is 1.58 mgd, although in August of 1990, water usage peaked at 60.1 million gallons for the month or an average of 2 mgd.

The City of Belton currently has three water storage facilities in use: a 2 million gallon surface storage tank at the Holmes Street pump station, a 1.5 million gallon elevated tank located southwest of Highway 71 and 58 Highway and a 500,000 gallon elevated tank located west of North Scott, one block north of 58 Highway. A 75,000 gallon elevated storage tank is located adjacent to City Hall, but is currently not in use.

Extensive improvements have been made in the Old Town area to upgrade water main size to a minimum of eight inches. Future improvements will include installing larger pipe to replace the principal mains and closing the loops within the distribution system. Additional extensions of the distribution system will also be needed to meet growth in the future annexation areas.

Undersized lines, particularly in the Lacy Estates development area and the Hargis Gardens area, present water distribution problems. Four inch lines in these areas are particularly sensitive to water use demands and pressure variations. Additional fire flow is also needed to serve the commercial development near the U.S. 71 Highway and 58 Highway

interchange, the schools and nursing home adjacent to South Scott Avenue and Cambridge Avenue and the commercial establishments along North Scott Avenue.

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 rest and relaxation as well as a measure of quality of life in the community. This section includes an inventory of existing parks and recreational facilities in the City of Belton. The inventory is compared with national, state and regional standards to establish recommendations for park system improvements.

Different types of parks serve different functions in a community, each having different spatial, locational and equipment needs. Three basic types of parks generally serve a community: regional, community and neighborhood parks.

Regional Parks serve an area consisting of one or more counties and contain at least 100 acres. The primary attraction of a regional park is a large-scale recreational amenity such as a lake or wilderness area.

Community Parks provide separate facilities for quiet and active play. Competitive sports, passive entertainment, large group gatherings, and individual usage are characteristics of city-wide, community parks.

Neighborhood Parks serve 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.

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 a city the size of Belton, the National Recreation and Park Association recommends at least 18 acres of neighborhood parks, 90 acres of community parks and 90 acres of regional parkland. Four neighborhood parks in Belton make-up a total of 43.5 acres which meets the standard number of acres for this park classification. Belton Memorial Park includes 29

acres of parkland, and although by size it is not a community park, it does provide some of the features of a community park facility. Regional park standards are satisfied by the many regional facilities located in and around the Kansas City Metropolitan Area, including Lake Jacomo.

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Table 3.1
Park Land Inventory and National Standards
Belton, Missouri

Neighborhood Parks		**Community Parks**	**Regional Parks**
18 to 36 acres		*90 to 144 acres*	*90 to 180 acres*
Peace Park *.4 acres*			
West Belton Park *4.1* acres			
Cimarron Trails Ball Diamond *5 acres*			Lake Jacomo *5,400 acres*
Cimarron Trails Playground *5 acres*			
Belton Memorial Park *29 acres*			
Total Acres	**43.5**	**0**	**N/A**

Minimum Acres Needed to Meet Standards (1991):

0 acres **90 acres**

Minimum Acreage Needed to Serve 2010 Population:*

27 acres **135 acres**

* Based on Long Term Trend Population Projection (Chapter One)

Source: Recreation, Park and Open Space Standards and Guidelines, 1983;
National Recreation and Park Association
City of Belton

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A comparison to the National Recreational and Park Association standards shows that the City of Belton is currently deficient in the amount of land dedicated to parks. The long term trend population projection also shows that significant efforts should be made to plan for additional park land to meet future needs. Not only is the amount of park land an important planning need, but so to is the location of future parks. Currently, Belton's City parks are located on the west side of Highway 71. Future park facilities should be planned for the east side of the highway to serve residents there. The City of Belton has reserved approximately five acres of land near the Belton Police Station for a future park. Development plans for the Northeast Ward Park include a playground, shelter houses and athletic fields.

The National Recreation and Park Association has also set standards for recreational facilities based on the population of the community. Table 3.2 uses these standards in addition to state and regional facility standards, to compare with Belton's recreational facilities. A comparison to these standards shows that the City is deficient in the provision of several types of recreational facilities including tennis courts, basketball courts, picnic areas and playgrounds. These types of facilities should be incorporated into future park plans for Belton.

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Table 3.2
Standards and Existing Facilities for Recreational Uses
Belton, Missouri

	STANDARDS			BELTON	
Recreational Facility Type	National[1] Facility: Pop.	State[2] Facility: Pop.	Metro Region[3] Facility: Pop.	Facilities Needed By Standards*	Existing[4] Facilities
Hand/Racquetball Courts	1:20,000	1: 5,000	1: 5,000	3	0
Ball Fields	1: 5,000	1: 1,500	1: 1,500	3	7
Soccer/Football Fields	1:10,000	1: 4,000	1: 4,000	3	4
Tennis Courts	1: 2,000	1: 1,500	1: 1,500	1	4
Volleyball Courts	1: 5,000	1: 3,000	1: 3,000	3	0
Basketball Courts	1: 5,000	1: 3,000	1: 1,000	3	2
Horseshoe Pits	N/A	1: 2,000	1: 2,000	9	3
Swimming Pools	1:20,000	800 ft.^{2}	1: 5,000	0	1
Picnic Shelters	N/A	1: 2,000	1: 2,000	9	6
Picnic Tables	1: 125	1: 125	1: 125	145	40
Playgrounds	N/A	1: 1,000	1: 1,000	18	3
Public Golf Course (18 holes)	1:50,000	1:25,000	1:20,000	0	2

*Comparisons are made to the lowest standard.

Sources: [1]National Recreation and Park Association
[2]State of Missouri, Department of Natural Resources
[3]The Open Space, Heritage & Review Committee (Kansas City Metropolitan Region)
[4]City of Belton, Missouri

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