



MASTER PLAN

1515 ACRE PARK

*Make no little plans; they have no magic to stir men's blood,
and probably themselves will not be realized; make big plans, aim high
in hope and work, remembering that a noble logical diagram, once
recorded, will never die, but long after we are gone will be a living thing,
asserting itself with ever growing insistency.*

–Daniel Burnham

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July, 2003



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EXECUTIVE SUMMARY

. . . . we are charged with the duty of developing a plan that shall not only meet present, but future wants to undertake important work in a half-hearted manner is the poorest economy, it is far better to plan comprehensively and broadly and proceed with actual construction leisurely than to attempt economy in the original plans.

–George Kessler

In September, 2002, the consulting firm of Landplan Engineering was contracted to prepare a Master Plan for 1515 acres of park land situated east of the dam at Clinton Lake and leased to the City of Lawrence by the Corps of Engineers. This planning project is a response to the recommendations of the “Lawrence Parks and Recreation Comprehensive Master Plan,” finalized in 2000, and to the projected population growth of the City. The Comprehensive Master Plan envisioned the leased 1515 acres as a regional park, to serve recreation demands that cannot be easily served by other city parks. The overarching theme for the Master Plan is to think “long range” – in the range of 20 years – developing a plan that will accommodate both the active and passive uses currently taking place in the area, as well as designate and preserve specific areas for future growth of those activities. It is understood that recreational needs and styles change along with the demographics of any given population, and so, the Master Plan allows for some measure of planning flexibility with the addition of new recreational opportunities. The planning process also brought to the forefront the importance of preservation of large natural areas and open space for passive use and to maintain a healthy environment for plants and animals alike.

The planning project began with a review and analysis of the existing features and general uses of the proposed park site. Figure 1 following this section illustrates these features. The site inventory identifies major viewsheds, drainage patterns, limited excavation zones, surrounding land uses, wetlands and vegetation, as well as current public use areas. In addition, three archeological sites are identified in the southern portion of the leasehold area. With respect to the archeological sites and the proposed park plan as set forth herein, the Kansas City District of the Army Corps of Engineers and the Kansas Historic Preservation Offices have jointly concluded that no archeological survey nor further testing is required prior to implementation of the improvements proposed in the vicinity of sites 14DO22 and 14DO160 and other improvement locations. No further historic properties clearance is required in these areas unless the plans change. However, several proposed locations for improvements as well as any new roadways will require archeological survey prior to any land disturbing activities. Furthermore, Archeological site 14DO23 must be tested for National Register eligibility prior to any development in this area. (See Figure 1 for delineation of these sites and Appendix A for comments regarding these sites from the Army Corps of Engineers.)

The park is generally bounded to the north by the South Lawrence Trafficway (SLT) and Clinton Lake emergency spillway, to the west by Clinton Lake, to the south by Country Road 458 and to the east by private land owners. The area between the emergency dam

spillway and the northern park boundary as shown in Figure 1 is being considered for addition to the leased acreage, pending approval by the Corps of Engineers. The site is bisected by the Clinton Lake outlet channel and the Wakarusa River with a natural riparian corridor along its banks. Approximately 80 percent of the land is currently undeveloped. To the north of the river, southwest of the YSI complex is a small area of restored prairie grasses. Limited fishing access is located along the Clinton Lake outlet channel which feeds into the Wakarusa River. Picnic and playground facilities are located in Outlet Park just south of the outlet channel. Several wetland areas are identified on the site. At the northwest border, along the emergency spillway, the topography rises some 100' from the central area of the park enabling views of Clinton Lake to the west and much of the park lands to the south. Even higher in elevation, the bluffs at the southwest edge of the park offer views that extend to the southern portion of Lawrence.

The area within the leased boundary currently supports a variety of sports and recreational facilities. Presently, the youth sports complex (YSI) in the northeast quadrant of the site includes 21 youth soccer fields, four youth ball fields, and five football fields. Just north of YSI is the Clinton Lake Softball Complex with four adult ball fields. Based on both current and projected needs for the next 20 to 25 years, Lawrence Parks and Recreation staff and local representatives from these sports groups have expressed a strong need to expand the current facilities in order to accommodate the fast growing youth sports programs in Lawrence, as well as to provide more adequate playing fields for older youth and adults. Eagle Bend Golf Course, situated in the middle of the park, occupies an area of approximately 250 acres. In addition to these sports facilities, an off-leash dog area currently occupies land in the northwest portion of the park. South of the golf course, in the middle of the 1515 acre site, Jayhawk Model Masters currently leases approximately 60 acres for a model airplane flight field. All uses with a current presence in the park are included in the Master Plan recommendations. In some cases, the locations or configurations have been adjusted to allow for better overall land-use, and vehicular and utility access.

The outcome of the master planning process is a plan that attempts to balance the community's expressed needs for active recreation facilities and open natural areas for passive use and relaxation. The plan also seeks to take advantage of natural features and views to increase enjoyment for park users. New elements proposed for the park include sports venues for youth and adult soccer (with YSI soccer fields converted to multi-use practice fields), a baseball complex, improved football fields, a reconfigured 4-plex for youth fast-pitch softball, additional adult soccer fields, a wheelchair softball field, and a field house with three gymnasiums. New practice fields are also planned and space is set aside for an additional public golf facility. Two new irrigation lakes are provided to aid with the care of existing and proposed sports fields.

To accommodate open space needs, the plan preserves the riparian corridor along the Wakarusa River, the restored prairie area west of the emergency spillway pilot channel, the wetland cells created by the City in 2000, and the south and north bluff areas at either end of Clinton Dam. As well, a new prairie restoration area is proposed for the southeast portion of the park. New picnic areas are created—one large area with a new lake at the south park entry and another at the north bluff area—enveloping the amphitheater and Sesquicentennial Plaza sites. The created wetland cells near the adult softball complexes are

anticipated to receive improvements that will make the area more attractive and accommodating to park users. An environmental demonstration site is also planned to cater to school groups and the desire to promote stewardship of natural resources.

Other new or expanded park uses include extensive trail developments - both paved multi-use and natural surface hiking trails, an equestrian trailhead and trail to the Corps of Engineers property (tying into the Corps equestrian trails), a community gathering hall, a large covered pavilion and outdoor ice skating rink, a destination playground, skate park, water spray park (or plaza), disc golf course, relocated off-leash dog area, and park entry signs. To accommodate the expanded and new areas, the plan addresses the need for new park drives and parking lots, utility infrastructure for sports facilities, and expanded maintenance complex facilities. Regarding sanitary sewer services, it is recommended that a contained wetlands treatment system be considered for the park in lieu of a forced main extension that would tie the park into the city's treatment system. Also, sanitary and water main extensions are planned.

The park is the proposed location of the Sesquicentennial Plaza, a gift to community residents to commemorate the upcoming 150th birthday of the City of Lawrence in 2004. The consultants worked closely with the Horizon 150 Committee to identify a location for the plaza and to prepare a conceptual design and associated opinion of probable costs to build the plaza. It was established that an outdoor amphitheater was also a desirable destination feature for the park and as the planning process progressed, the amphitheater was conceived as a viable land use in tandem with the Sesquicentennial Plaza as a vehicle to attract visitors to the Plaza. The amphitheater parking area can also be used to accommodate large community festivals and special events when many visitors are concentrated in the area. These features are discussed in detail in later sections of this report.

Both current and projected traffic patterns as they relate to park access are major programmatic factors in the conceptual development of the Master Plan. The City's Transportation 2020 Plan identifies the proposed southerly extension of Wakarusa Drive as a minor arterial connecting to County Road 458. The proposed alignment of Wakarusa Drive along the eastern border of the park will enable an entry into the park just north of the river, allowing access to the entire northeast portion of the park. Furthermore, an internal east/west connector road across the pilot channel links to the lower dam road, thus providing some relief to traffic congestion in the north sports field areas. Projected traffic counts from increased active recreation uses in the current YSI location suggest that sports, such as soccer, that create high volume traffic would be better moved to another location in the park. At such time that Wakarusa Drive is extended south, the Master Plan shows that the current at-grade access to the northern portion of the park from the SLT will by necessity be closed and relocated farther south as shown on the Master Plan.

A Prioritized Projects list has been developed to help guide the process of implementation of the Master Plan over the next 20 years (see Appendix B). Appendix C includes a breakdown of the probable costs of each project and Appendix D outlines the expected operations and maintenance costs for each of the proposed improvements. Appendix E provides additional discussion on traffic concerns and the recommendation to decentralize the active sports use areas.

PROJECT APPROACH

PUBLIC OUTREACH

Integral to the Master Plan development process have been the comments and concerns raised by the general public and special use groups during the public outreach phase. On October 12 and 13 of 2002, representatives from Landplan Engineering attended local weekend soccer and football games at the YSI Complex in an effort to engage Lawrence residents in the planning process. Public comment forms were distributed and conversations initiated regarding the improvements park users would most like to see within the park lands. Another public outreach event was held prior to the Lawrence Planning Commission Meeting on October 23.

A public meeting was held at Holcom Park Recreation Center on October 24 to review the project area and listen to the ideas and concerns of the residents regarding its use and development. Invitations were extended to special interest groups for a meeting to hear the thoughts and concerns of those groups that currently use the park area or may use the area in the future. Those groups included, but were not limited to: adult and youth soccer, baseball, fast-pitch softball, football, remote control airplane, golf, theater, equestrian, disc golf enthusiasts and those with natural resource interests. Those meetings, together with received emails and public comment forms identified several significant planning issues:

- Improved ingress and egress from the YSI and adult softball complex areas.
- Impact on the park from the proposed Wakarusa Drive extension as shown in the City's Transportation 2020 Plan.
- Development of additional sports fields, including youth soccer, adult soccer, youth baseball, and youth softball (with associated parking and access issues addressed). Also, general-use practice areas for all sports.
- Preservation of open space and natural areas.
- Development of an amphitheater and special events area for large community gatherings.
- Incorporation of a "Sesquicentennial Plaza" as part of the Lawrence Sesquicentennial commemorations.
- Other interests that have been noted on several occasions throughout the planning process include nature (walking) trails and bike paths, golf course expansion, an overlook at the south bluff area, gardens and arboreta, and a field house.

Page 6 is a complete list of suggested uses and activities received throughout the public outreach process. From this suggested use list and guided by the major planning issues noted above, two land use concepts were developed and presented at public meetings at East Lawrence Recreation Center on November 18. Following this public meeting, the concepts were refined into a final Master Plan. The proposed final Master Plan was reviewed at a public meeting on February 20 at Holcom Park Recreation Center.

As yet another component of the public outreach activities, a website was developed at the outset of the planning process and linked to the Lawrence Parks & Recreation site. Over the course of the planning process, the website was updated with notices of public meetings along with photographic images of the site, and graphic representations of the concept plans. An email link was available to allow park comments via the website.

1515 ACRE PARK

SUGGESTED USES RECEIVED THROUGH PUBLIC OUTREACH PROCESS

Wakarusa Drive Extension - improved park entrance and circulation
Baseball Stadium
Youth Baseball/Softball Expansion Fields
Youth Soccer Exp. Fields w/ Improved Facilities
Adult Soccer Complex
Amphitheater
Soccer Stadium
Wheelchair Softball Field
Open Space and Native Habitat Preservation
Multi-purpose Practice Fields for all Sports
Overlook Tower at South Bluff
Field House with 3-4 Gyms
Additional Youth Batting Cages
Bike Trails
Golf Course Expansion
Ice Skating Rink - indoor or covered outdoor
Nature Trails
Walking Gardens and Arboretum
Environmental Study Areas
Fishing Access at Outlet Channel
Mountain Bike Trails
River Corridor Buffer
Sesquicentennial Plaza
Special Events Area
Bird Watching Opportunities
Football - Additional Fields
Permeable Surface Parking
Putt-putt Course
Youth/Executive Nine Golf
Adult Softball Expansion
Bike Rental
Disk Golf Course
Equestrian Trail at South End
Horseshoe Pits
Kayaking Course
Large Hall for Community Gathering
Remote Control Cars
Skate Park
Sustainable Development Techniques
Trail Bridge over Wakarusa River
Olympic Training Facilities

PROGRAM DEVELOPMENT

Program development was ultimately the outcome of comments and suggestions received from the general public, park and recreation staff, special use groups and the Horizon 150 Committee in charge of planning upcoming sesquicentennial activities and the associated Sesquicentennial Plaza. Representatives of the sports groups provided valuable input regarding their current and projected facility needs based on the current size of their respective programs together with the anticipated growth of their programs over the next 25 years. The Jayhawk Model Masters provided the planning team information regarding their flight space needs and potential conflicts with surrounding land uses. The Horizon 150 Committee helped to guide the program development for the Sesquicentennial Plaza and its relationship to the outdoor amphitheater. Emails from other parks users suggested an environmental awareness. Thus, a process of prioritizing programmatic elements was developed and refined over the course of the master planning process. At the same time, the program was driven by site analysis and feasibility factors including traffic analysis, natural area opportunities, the constraints and opportunities of the site's topography, drainage, existing wetlands and proximity to Clinton Lake, and limitations dictated by the Corps of Engineers. Each of the proposed uses as identified by the Master Plan program are discussed in detail later in this report.

In addition to programmatic development, Landplan consultants worked closely with Lawrence Parks and Recreation staff throughout the planning process to establish project goals and to facilitate issues involving the Corps of Engineers. Working with staff members, park maintenance and infrastructure requirements were identified and established as an outcome of programmatic decisions, and as a result, feasibility within the parameters of the existing site opportunities and constraints are considered in the development of all proposed sports fields and associated facilities, as well as other land uses within the park. An estimation of operations and maintenance costs, developed in conjunction with the Master Plan, is included in Appendix D.

MASTER PLAN - DESIGN OVERVIEW

TRAFFIC CONTROL/SITE ACCESS

Foremost among issues identified by the site analysis process, public outreach and staff input, are the traffic volumes and ingress-egress capacity of the at-grade interchange at the South Lawrence Trafficway and Wakarusa Drive. (Figure 3 illustrates the current roads and access points into the park and Figure 4 illustrates the future access at the SLT/Wakarusa Drive intersection.) Thus, a major consideration driving much of the Master Plan development has been an analysis of peak traffic ingress-egress trips at full build-out of the proposed park improvements, focusing on the sport field venues. Please refer to the Traffic Summary in Appendix E for further discussion and illustration of these traffic issues and an analysis of potential improvements at the SLT/Wakarusa Drive entry and the proposed east/west connector road.

Transportation 2020 indicates the extension of Wakarusa Drive south to County Road 458 as a minor arterial. (Refer to Figure 5). Thus, the Master Plan recommends that Wakarusa Drive follow an alignment along the east edge of the park property, reconnecting with County Road 458 near the south border of the park. This alignment allows the Banning Corner curve of County Road 458 to be abandoned and, thus, opens this area for a better and more efficient configuration of park features. A new, formal east entry into the park—farther south on Wakarusa Drive—is shown in response to an assumed reconfiguration of the SLT/Wakarusa Drive interchange to a grade separated interchange when Wakarusa Drive is extended. Additionally, a second, new formal entry into the park is shown along the south Wakarusa Drive segment. This entry drive ties into the existing lower dam road. (Refer to the Master Plan, Figure 2).

In an effort to provide a second ingress/egress point into the north park area and to better serve sports field traffic, the abandoned east-west county road (27th Street extended) is reconnected across the emergency spillway (Refer to Figure 2). This road connection has been reviewed and approved by the Corps of Engineers, provided the road material crossing the emergency spillway pilot channel is not a bridge or “permanent” structure.

TRAIL SYSTEMS

Nature

The public outreach process revealed a strong desire for park trails designated for hiking and walking. As a result the Master Plan provides a system of nature trails that serve to link all of the areas designated to remain as natural open space or for passive use such as picnicking and fishing. As an example, trails wind along the riparian corridor of the Wakarusa River, throughout the northern and southern bluff regions, and around the new fishing lake in the southern portion of the park. Figure 6 identifies the hiking and walking trails in yellow.

Multi-use Trails

Park users also requested extended multi-use trails. Since the new park is seen as a major destination along the existing SLT Bike Trail, the public outreach process received requests for bike rental opportunities and security lockers. Given the convenient and central location within the active sports and recreation areas of the northeast region, these bike trail features are included in the Field House situated near the current alignment of the SLT Bike Trail. The following plan identifies additional multi-use trails along the proposed Wakarusa Drive extension and County Road 458. Additionally, multi-use trails wind through the interior of the park serving to connect the major destination points and provide a more leisurely biking experience than the trails along Wakarusa Drive. All of the multi-use trails are shown in red on Figure 6.

Equestrian Trails

Equestrian trails are currently located southwest of the upper dam road within the Corps' Clinton Lake property. The connection with these trails can be seen in the southwest corner of the park boundary. The Master Plan provides an equestrian trailhead and parking lot with a trail connection to the Corps' property trails.

SPORTS FIELDS - Northeast and Southwest

Figures 7,8 and 9 illustrate the proposed configuration of the sports field areas within the Master Plan. Finalization of these locations represents extensive review and discussion with the particular sports organizations, as well as the Parks and Recreation staff. Overall, the Master Plan is responsive to issues centering on traffic concerns, with equal consideration given to the needs of individual sports groups, staff operations and maintenance issues, and comments from the general public. However, traffic concerns as they relate to ingress and egress to and from the park, as well as internal circulation are especially critical to locating the expansion of the active sports fields, most significantly, the adult and youth soccer complex. After several land use concepts were developed and reviewed by staff, special use groups and the general public, it was ultimately agreed that it is in the best interest of all concerned to relocate the soccer expansion activities to the southeast region. This decision is discussed further in the section below.

Youth Baseball and Softball

The baseball complex plan is based on the needs expressed in the 20-year master plan provided by the baseball organizations. The area illustrated includes a youth 4-plex, a practice infield, one-340' field, one-360' field, and one 390' baseball stadium. The existing YSI baseball/softball 4-plex is converted to 200' fields to accommodate youth fast-pitch softball. (Refer to Figure 8.) As indicated in a letter from the Planning Branch of the Corps of Engineers (see Appendix A) archeological survey is required prior to any land disturbance in the proposed location for the proposed baseball complex.

Adult Softball

East of the existing adult softball complex is another proposed adult softball 4-plex. Parking and drive locations are designed to accommodate the needs of both facilities. The area shown as an optional location for the field house could be utilized as overflow parking in the event the field house is located in the area to the south. An optional access drive is shown to the west of the existing 4-plex. The addition of this drive will be considered with the implementation of the Wakarusa Drive extension due to the loss of the existing entry point to the SLT. (Refer to Figure 7.)

Wheelchair Softball

During the public outreach process, the need was identified for a wheelchair softball facility located in Lawrence to serve area residents. Situated between the field house and the adult softball complex, the asphalt field is integrated into a mix of other recreational activities. This area was selected to provide an area that could be programmed as desired by the users of this facility. (Refer to Figure 7.)

Youth & Adult Soccer

It is generally agreed that the soccer fields will continue to account for the largest single portion of the peak traffic levels. In an effort to separate and alleviate the current and

projected traffic flow at the northern sports venues, the Master Plan relocates all future adult and youth soccer field development to the area south of Eagle Bend Golf Course. Consequently, this shift serves to drive other land use reconfigurations as outlined in other sections of this report and illustrated in the Master Plan. The adjacent land use activities are planned to provide “good neighbors” so as not to create conflicts of use. Figure 9 shows the youth and adult soccer complex in detail.

The existing soccer fields located in the YSI complex are to continue in their current use while future fields are developed. This arrangement also allows for phasing the addition of new fields with minimum interruption of current programming. In the future, as new fields are built and in active use, the existing fields will be dedicated to practice and multi-purpose usage. The amenities, number of adult fields, and the size and number of youth fields is in response to requests from the soccer organization and parks and recreation staff. The road along the east of the complex leads to an existing maintenance complex that is to be expanded and will also serve as access to the model airplane field. As indicated by the Corps of Engineers (see Appendix A) archeological survey is required prior to any land disturbance in the proposed location for the adult and youth soccer complex.

Football

Two of the current football fields remain in use with an additional three current soccer fields converted to football for a total of five dedicated fields. This appears to be meet the football programmatic requirements.

Multi-purpose Fields

Flexibility in field usage is desirable by both staff and sports organizations. The Master Plan identifies an area south of the new entry drive north of the river as dedicated to multi-purpose usage by all sports. Programming and use of these fields will accommodate the changing needs and trends of all sports communities and allow for inclusion of other sports who don't need regular dedicated fields, for example, frisbee soccer or cricket. Furthermore, as the youth soccer program shifts to the southern fields, the current soccer fields will extend the flexibility of programming practice fields for soccer, football or other sports.

NATURAL AREAS

More than 40 percent of the park property is dedicated to open space and natural areas, not including the interior portions of the golf course encompassing the Wakarusa River oxbows. The Master Plan strives to preserve these natural areas in a manner that will allow for maximum passive enjoyment by park users and maintain some wild and quiet areas. Collectively, the nature restoration, preservation and demonstration opportunities will help to promote and reinforce a sense of stewardship for all park users and visitors. In areas of planned development, the Plan recommends sustainable construction methods and water quality management techniques such as the use of permeable surface materials where

possible, bioswales in parking lots, restrooms with waterless urinals, and the construction of irrigation lakes in natural drainage areas for sports field irrigation.

Riparian Corridor

A contiguous green riparian corridor is preserved along Wakarusa River. This buffer zone provides passive hiking and walking nature trails that wind along the river banks. Observation blinds are constructed for bird watching. A separate, multi-use trail that connects the east and west sides of the park through the riparian corridor remains away from the river banks.

Wetlands

Several wetland areas are existing on the site. These can be seen in both Figures 1 and 2. The wetland areas are preserved within surrounding natural areas in the southern lakes region of the park. In the northern region, east of the proposed field house complex, the existing wetland created by the City in 2000 is surrounded with a proposed arboretum where visitors may stroll along accessible trails to view and identify a variety of plant and tree species.

Prairie Restoration

As mentioned previously, an area of restored native prairie grasses exists southwest of the pilot channel (see Figure 1). This area is to be preserved and prairie restoration efforts continued. Another location for prairie restoration efforts is identified south of the Wakarusa Drive extension and the proposed new south park entry. This area will provide additional wildlife habitat and buffer the residential areas to the southeast of the park.

Interpretive Opportunities/Environmental Demonstration

The above mentioned arboretum surrounding the north wetlands creates a variety of nature interpretive opportunities as does the Sesquicentennial Plaza (Refer to Figure 13 and the following discussion of the educational aspects of the Plaza concept). In addition, a dedicated environmental demonstration area is located just off the Wakarusa Drive extension east of the Eagle Bend Golf Course. A small parking lot is provided where visitors—individual, families and school groups alike—can conduct environment science learning activities and enjoy demonstration projects of native habitats.

Views/Overlook

The southern portion of the site, including the western bluffs and overlook are dedicated for nature trails, multi-use trails, and picnicking. The overlook, at the highest point on the southern bluffs offers impressive panoramic views of Clinton Lake, the park land and the City of Lawrence (Refer to Figure 2). In order to maintain universal accessibility by all park visitors, this area will be linked to the nature and multi-use trail systems, and also be accessible by vehicles with a small parking lot

From the northern bluffs, where the amphitheater and Sesquicentennial Plaza are proposed, Clinton Lake as well as much of the park land can be seen. Located in the area of the extended lease boundary, the majesty of these viewsheds is a major reason for siting these prominent park features.

PICNIC AREAS - LAKES - FISHING - South

As the centerpiece and anchor of the southern portion of the park, the Master Plan shows the development of two new lakes, one small and one large. Figure 10 illustrates the southern recreational area and associated amenities. From a design perspective, the location of these lakes is a response to the natural topography, adjacent wetlands and drainage patterns of the area and are feasible given the realignment of Country Road 458 and the Wakarusa Drive extension. For the public, the presence of the lakes not only enhances, but in some cases enables a variety of traditional park leisure activities that might normally take place near and around water. These amenities and activities are discussed below.

Large Fishing Lake

A large fishing lake is nestled along the north side of the trees that line the ridge near the southern boundary of the park. In addition to fishing along the banks of the lake, several picnic shelters are located along a nature trail that surrounds the perimeter, each one nestled against the shade and protection offered by a stand of nearby trees. Two more picnic shelters are sited in natural openings in the trees along the ridge to the south of the lake. To the north, the adjoining wetland environment extends the open space opportunities for passive use around the lake and connects visitors to the park trail systems.

Covered Pavilion/Outdoor Skate Rink

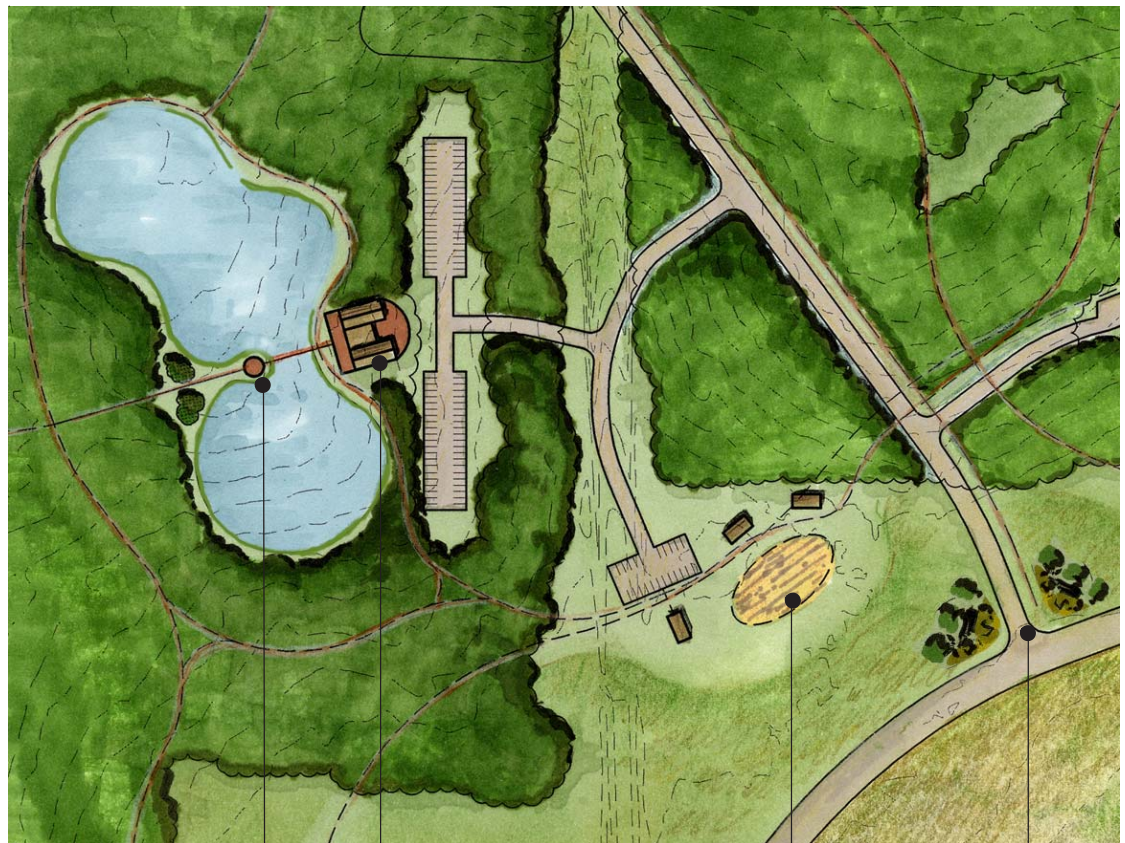
An outdoor ice skating rink was suggested during the public outreach portion of the project. In response to that idea, a walkway through the trees to the south connects the large fishing lake with a proposed covered pavilion and a non-refrigerated "natural" ice skating rink. The structure, which also houses restrooms, covers half of the skating rink providing shelter and seating for skaters during the winter months as well as for general park visitors during the rest of the year. Nearby, sand volleyball courts and horseshoe pits offer summer time activities. The area is easily accessed from the newly created southern park entrance and like all of the amenities in the area, the associated parking lot is sited in a natural clearing.

Destination Playground

A large playground is located just across the road from the pavilion and outdoor skating rink. With its own dedicated picnic shelters and restroom facilities, the playground is conceived as a destination point for park visitors where children would enjoy a wide range of playground activities and structures, and where the entire family could picnic and access the park's trail systems and nearby lakes.

Community Gathering Hall

Across the entry drive to the west of the fishing lake is a smaller lake as seen in the illustration below. The lake, surrounded by trees, is sited within an existing natural clearing requiring minimal tree removal. A proposed community gathering hall and gazebo forms the focal point of the lake. With a large covered deck overlooking the lake, the hall would be an enclosed, conditioned structure conceived to accommodate large community events. A pedestrian bridge extends over the water and connects the hall to a small gazebo on the other side of the lake. Located at the end of a peninsula that juts halfway across the water, the gazebo could be rented for weddings or other special events. The parking lot is also sited along a natural clearing in the trees.



Gazebo

Community Gathering Hall

New Park Entry

Destination Playground

AMPHITHEATER - Northwest

The area to the north of the proposed east/west connector road is the proposed site of a 5,000 seat outdoor amphitheater on the proposed additional leased park land. Figure 12 illustrates this area of the park. The location for the amphitheater is a natural outcome of the topography of the site. (Refer to Figure 11). The amphitheater is placed high on the slopes near the emergency spillway, and nestled close to a large stand of native trees. Views from the seating area extend over the dam giving the lake a sense of presence for the visitor. Traffic access can be provided from the east or west. Service access to the stage is provided by a drive leading from the lower dam road through a natural break in the trees. This same stand of trees, in turn, provides a natural backdrop for the stage. The Corps of Engineers has agreed to make the current service road available for joint use with the public. Although the road would need improvements for such usage, this arrangement will reduce the amount of new road necessary for access to the amphitheater and the plaza. In the hillsides surrounding the amphitheater and Plaza, there are hiking trails and picnic tables for visitors to use.

The amphitheater facility is proposed to support both cultural and civic events such as outdoor concerts, theater performances, or other public gatherings and festivals and was a popular suggestion with staff and public alike. As such, combining the amphitheater with the Sesquicentennial Plaza is an effort to create a popular destination within the park and provide a large number of visitors for the Sesquicentennial Plaza. Permanent parking and a drop-off are designed to lead visitors to the amphitheater through the Sesquicentennial Plaza with the lower hillside designated for grassy overflow parking. Trees are planted in rows in an effort to direct where cars are parked. The effect is a "green" parking lot. The trees will also serve to shade the hillside and create a pleasant area for large outdoor community events. Further overflow parking is available on the adjacent corner of the lower dam road and the proposed east/west connector road. Both the amphitheater and plaza are designed to be universally accessible by all visitors.

SESQUICENTENNIAL PLAZA - Northwest

As I live and learn I dream a world

- Langston Hughes

In January, 2003, the Concept Plan illustrated on the following page for the Sesquicentennial Plaza was presented to the Lawrence 150 Committee at the Lawrence Public Library. An educational opportunity to commemorate the 150 year history of Lawrence, the poetic words of Langston Hughes are the inspiration for the concept of the Sesquicentennial Plaza design – conceived as a landscape narrative – a Community celebration that invites participation and provides a place to remember the past, to learn from the present, and to fill with dreams of the future.

In its form the Plaza is a simple expression . . . 150 elements laid end to end to form a circle 160 feet in diameter. The geometry is meant to make the plaza easily comprehensible by the visitor, but meaning is also inherent in its reference to ritual and gathering, as a place to tell stories.

The elements and materials that together construct the plaza are also simple reflecting the naturalistic surroundings of the location. The layout radiates from the center with walkways that lead to the amphitheater, to the gardens, to the parking, and to hiking/walking trails in the surrounding landscape. The outer perimeter is made of a series of 150 elements, each approximately three feet across. Each element commemorates one of the 150 years of the City of Lawrence and together they form a history lesson, a vehicle for marking time by telling the stories that shaped the town and its people. Suggested topics include:

- Historical events
- Historical figures from politics, military, the arts, education
- Cultural diversity – immigrant, Native American, a “Free” state

The elements are conceived as simple markers in the ground plane of equal size, designed and created by area school, community and civic organizations, each year depicting some significant detail or event or item of community interest. Some markers could be more elaborate, mosaics for example, to signal years of particular significance, or some could be raised off the ground to become seating. Inside this outer ring is a second circle. Together, they form a path approximately six feet wide around the entire plaza. Another six feet of free space allows for comfortable viewing. While the outer circle depicts cultural history, the inner circle describes the natural history. Suggested topics include:

- Unique location at the edge of the great tall grass prairie
- Formation by glaciers at the nexus of two rivers
- Diversity of flora and fauna

Situated high on the slopes at the north end of the newly acquired park lands, views from the plaza include a sweeping expanse of the park to the south, as well as Clinton Lake to the west and a glimpse of southern portion of Lawrence to the east. The plaza circle is bisected to create two levels accessed on either side by gently sloping ramps or through the middle by seat walls that step down in tiers. At the base is a mosaic map of Douglas County offering further historical and geographic interpretation. A large garden area surrounds the lower half between the plaza and the amphitheater where native plant species and sculptural elements offer opportunities for extended learning and enjoyment for visitors. Leading from the upper half, pathways extend into the surrounding landscape and picnic areas where future elements will mark the years ahead and visitors are invited to enjoy a balance of reflection and projection.

GOLF COURSE EXPANSION - Northwest

An area for future expansion of the public golf facility is located north of Eagle Bend Golf Course. The area designated traverses the outlet channel/Wakarusa River and will accommodate a championship length 18 hole course. The most likely cart path connection route will be an alignment which follows the lower dam road, just above the Clinton Lake outlet structure. In the event of expansion, the existing driving range will be relocated to the south of the existing clubhouse. The clubhouse and parking will be expanded to serve both courses. A halfway house for refreshments and restrooms is proposed in the northern portion of the expansion area to serve patrons playing this course. As with the baseball complex and the adult and youth soccer complexes, an archeological survey will be required prior to any land disturbance in the area proposed for golf course expansion. (See Appendix A).

FIELD HOUSE - Northeast

A programmatic request from parks and recreation staff was the addition of a field house with three to four gyms. The field house area is conceived as a complex of indoor and outdoor recreational activities and would include a bike rental and locker facilities for the SLT Bike Trail. Figure 7 illustrates the northeastern portion of the park with the field house and adjacent facilities. This location was selected for the field house given the current infrastructure and surrounding active land uses. An alternative location for the building is identified as the parking lot area north of the existing adult softball complex, together with an optional access road. The maintenance complex adjacent to the field house is to be expanded to the north of its existing footprint to accommodate the increased development. (Refer to Figure 7).

SPRAY PARK - Northeast

Another feature included in the plan is a spray park—a paved “play ground” plaza with water jets of various configurations—that would operate during the summer months. The spray park is located east of the field house parking lot. It is conceived as a public access facility that would not require full-time staffing. (Refer to Figure 7).

SKATE PARK-Northeast

Located near the field house is a skate park. This facility is conceived to be made of concrete skate structures (ramps, stairs, walls, half-pipes, etc.). The skate park would be non-supervised as is the norm with municipal skate parks. (Refer to Figure 7).

MODEL AIRPLANE FIELD - Southeast

Presently, the Jayhawk Model Masters leases an area of approximately 65 acres from the Corps for a model airplane flying field. In meetings with representatives from the Club, it was determined that their needs could equally be served with a slight relocation in the same general vicinity. The club requires flight space that does not conflict with traffic and maintains a buffer from wetland areas that may attract high numbers of birds. The new model airplane field—approximately 62 acres—is located as a stand-alone area slightly north and east of its present location with shared-use road access along side the proposed future soccer expansion. The runway is situated to avoid conflicts with surrounding uses.

OFF LEASH DOG AREA - Southwest

Given the proposed development in the northern area of the park with the outdoor amphitheater and Plaza along with the traffic considerations associated with the proposed east/west collector road, the present off-leash dog area is relocated to the southern region where there is no development planned. South of the dam road, surrounded by open space, this area provides a parking lot and approximately 20 acres of fenced, leash free dog area.

DISC GOLF - Southwest

Disc golf is an increasingly popular recreation activity. The area identified in the Plan, south of the soccer expansion area, is a location well suited to the needs of this sport with trees, variation in topography and easy access for a small parking lot off the lower dam road.

MAINTENANCE FACILITIES

In order to accommodate the proposed new development, the Master Plan recommends expansion of two maintenance facilities currently in operation in the park. These expansion activities consist of enlarging the existing facility in the northeast area just west of the proposed field house. This facility would expand to the north of the existing footprint and house maintenance equipment and materials to service the northern sports fields. The second facility to be expanded is currently located at the south edge of Eagle Bend Golf Course and is accessed by the road to the current model airplane flight field. The Master Plan shows this road as a joint-use road providing access to both the model airplane field and the maintenance facility.

IRRIGATION LAKES

Two irrigation lakes for the purpose of sports field irrigation are proposed in the Master Plan. In the north, a lake is proposed to the west of the existing YSI soccer fields and is fed by the drainage area that runs along the west border of the adult softball complex. This lake will provide an irrigation source for the northern sports fields including adult softball, football, baseball, youth softball, and the multi-purpose practice fields. A second lake is located in a natural drainage channel along the south edge of the proposed soccer complex. This lake will provide a source for soccer field irrigation.

SANITARY AND WATER MAINS

To accommodate the proposed park uses, a system of sanitary sewer mains and water supply mains has been conceptualized. The sanitary mains are designed to allow for segmental additions to service particular park use areas. Also, the proposed sanitary system collects all mains on the south side of Wakarusa River at a pump station to be located in the east-central portion of the park. From this point the sanitary effluent would be directed via a force main to tie into the municipal sanitary collection system in the northeast portion of the park.

An alternative to creating the forced main from a pump station on the south side of Wakarusa River, it is recommended that future detailed design explore the option of a contained wetlands treatment facility that would serve the sanitary treatment needs of the southern portion of the park.

APPENDIX A

Environmental Site Resources



FIGURE 1

APPENDIX B

Prioritized Project List

1550 Acre Park Master Plan

4/1/2003

Prioritized List of Projects

Description	Estimated Cost (2003 prices)
Years 1-5	
Provide circular access to YSI - Park Drive Section A-1	\$ 226,834
Adult soccer - 3 fields south of golf course (one large flat area -2 year grow-in)	\$ 80,000
Arboretum	\$ 166,523
Improve intersection at SLT & Wakarusa - Park Drive Section A-3	\$ 86,210
Sesquicentennial Plaza	\$ 300,000
Access road/walk to Plaza (until amphitheater is built)	\$ 45,000
Multi Use Practice Area	\$ 100,000
Trail Development	\$ 50,000
Access Drive & Parks for Adult Soccer - Park Drive - Section H-1	\$ 131,090
Total	\$ 1,185,657
Years 6-10	
Community Gathering Hall / Parking / Road / Pond	
Amphitheater	
27th Street from YSI to Dam- Park Drives - Section A-2	
Access Road to Plaza	
Move Dog Park away from traffic of 27th street	
Baseball 4-plex Complex	
Girls Fastpitch Complex - Alter existing YSI baseball	
Field House	
Trail Development	
Paved Bike Trails North of the River	
Years 11- 20	
Improve road below Dam - Park Drive Section C-1	
Move Model Airplane Field to permanent location (access from County rd 458)	
Youth Soccer Fields 5 additional fields near Adult Fields	
Roads to access Soccer - Park Drives Section H2 & H3	
Skate Park	
Spray Park	
Trail Development	
Overlook	
After Wakarusa Drive is extended	
Nature Area at South End of Park	
Baseball Complex Expansion	
Paved Trails South End of Park	
Destination Playground	
Wetland Development	
Environmental Demonstration Area	
Golf Course Expansion	
Off Lease Dog Park at South End of Park	

APPENDIX C

Probable Project Costs

1515 ACRE PARK MASTERPLAN			
Estimation of Probable Operations Costs (per year)			
*All costs in 2003 dollars			
FACILITY NAME/Expense Category	Cost per category	Units	Total Operations Costs
Amphitheater/Special Events Area			
Operational Staff	\$46,000	1	\$46,000
Utilities	\$10,000	1	\$10,000
TOTAL			\$56,000
Baseball Complex			
Operational Staff	\$80,000	1	\$80,000
Utilities (2 buildings)	\$10,000	1	\$10,000
TOTAL			\$90,000
Community Gathering Hall & Small Lake			
Operational Staff	\$28,000	1	\$28,000
Utilities	\$15,000	1	\$15,000
TOTAL			\$43,000
Covered Pavilion/Outdoor Skate Rink			
Utilities	\$700	1	\$700
TOTAL			\$700
Destination Playground			
Utilities	\$500	1	\$500
TOTAL			\$500
Environmental Demonstration Area			
Utilities	\$500	1	\$500
TOTAL			\$500
Field House			
Operational Staff	\$135,000	1	\$135,000
Utilities	\$80,000	1	\$80,000
TOTAL			\$215,000
Football Complex			
Utilities	\$3,000	1	\$3,000
TOTAL			\$3,000
Golf Course (Existing 18-holes plus 18-hole expansion)			
Clubhouse (Personnel and Expenses)	\$450,000	1	\$450,000
TOTAL			\$450,000
North Sports Area - Irrigation Lake			
Utilities	\$9,000	1	\$9,000
TOTAL			\$9,000
Skate Park			
Utilities	\$300	1	\$300
TOTAL			\$300
Soccer - Adult Complex			
Operational Staff	\$47,000	1	\$47,000
Utilities	\$5,000	1	\$5,000

	TOTAL			\$52,000
Soccer - Irrigation Lake				
Utilities	\$8,000	1		\$8,000
	TOTAL			\$8,000
Soccer - Youth Complex				
Operational Staff	\$126,000	1		\$126,000
Utilities	\$20,000	1		\$20,000
	TOTAL			\$146,000
Softball - Adult Complex (w/ Expansion)				
Operational Staff	\$90,000	1		\$90,000
Utilities	\$40,000	1		\$40,000
	TOTAL			\$130,000
Softball - Wheelchair Accessible Field				
Utilities	\$2,500	1		\$2,500
	TOTAL			\$2,500
Softball - Youth 4-Plex Renovations				
Operational Staff	\$65,000	1		\$65,000
Utilities	\$15,000	1		\$15,000
	TOTAL			\$80,000
Spray Park				
Utilities	\$6,000	1		\$6,000
	TOTAL			\$6,000
	TOTAL YEARLY OPERATIONS COSTS			\$1,292,500





APPENDIX D

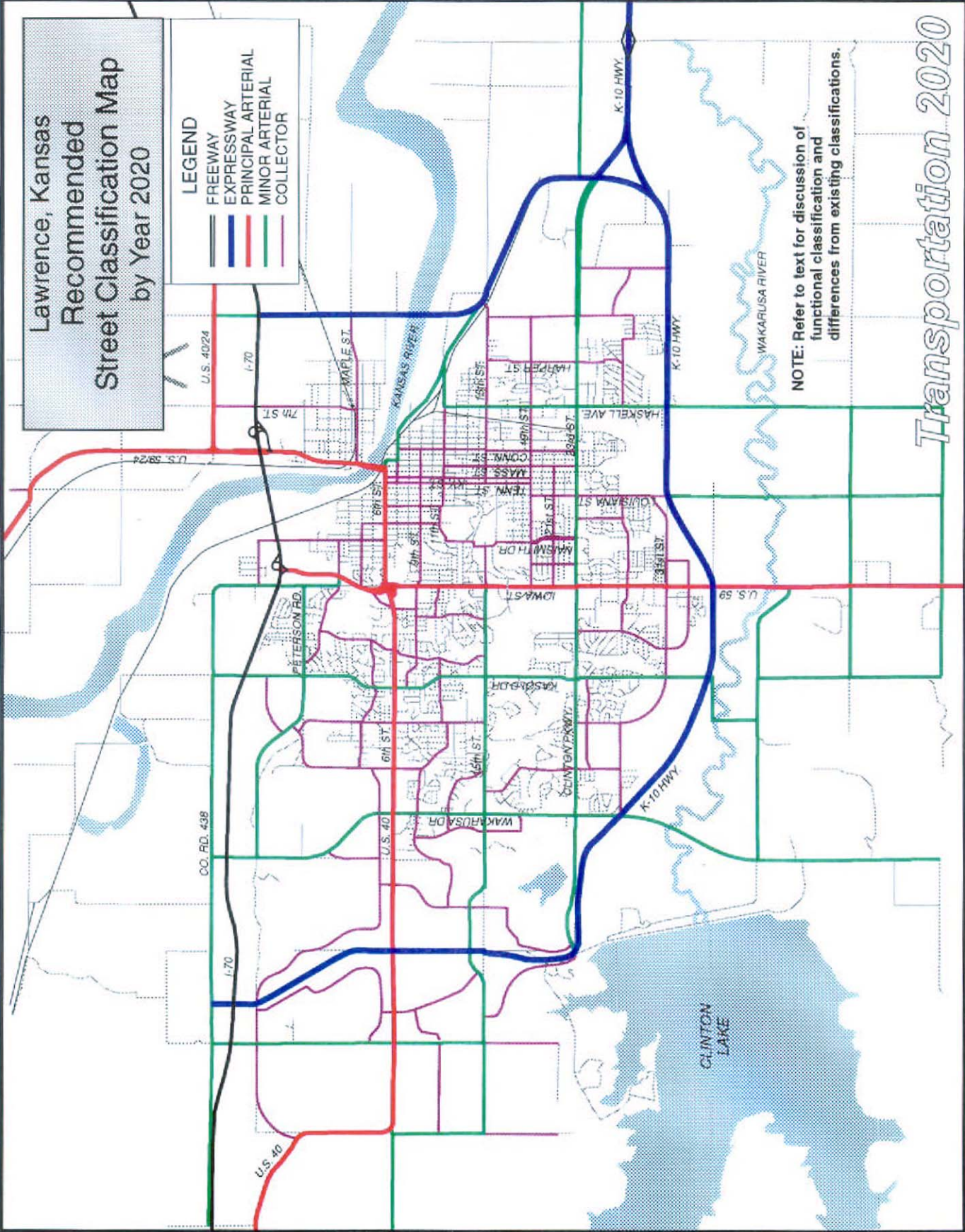
Probable Operational Staff and Maintenance Costs

APPENDIX E

Traffic Analysis

Lawrence, Kansas
 Recommended
 Street Classification Map
 by Year 2020

- LEGEND**
-  FREEWAY
 -  EXPRESSWAY
 -  PRINCIPAL ARTERIAL
 -  MINOR ARTERIAL
 -  COLLECTOR



NOTE: Refer to text for discussion of functional classification and differences from existing classifications.

Traffic Summary – Master Plan for 1515-Acre Leased Parkland

Introduction

As part of the planning process a series of public meetings were held to gather input regarding activities and or facilities desired within the 1515 acre leased parkland. This process identified the proposed sports uses in the northeast quadrant of the park. One of the main issues raised during the process was the existing traffic problems at the intersection of Wakarusa Drive and the South Lawrence Trafficway associated with peak use of the existing sports facilities on the weekends. With additional sports field development proposed in the northeast quadrant of the park as shown on the attached plan the future traffic volumes using the intersection would increase and the existing traffic problem magnified. This traffic summary examines the impacts and ability of the Wakarusa Drive – South Lawrence Trafficway intersection to accommodate the existing and additional traffic associated with the proposed development of additional sports fields in the northeast quadrant of the park.

Assumptions

The impact analysis was conducted based on the following

- The estimated vehicle trips generated by the proposed uses shown on the proposed sports field plan were calculated based on existing traffic counts taken during weekend tournaments for soccer and adult softball play to establish a trip rate per field and multiplied by the number of additional proposed sports fields.
- The above generates 45 two-way trips per field with a 45% - 55% directional distribution of inbound and outbound movements respectively (20 inbound, 25 outbound)
- It was assumed that during the peak hours of tournaments all fields, except for practice fields are active with frequency of one game every hour.
- The distribution of the site-generated trips will be similar to the existing patterns in the area. Existing weekend turning movement counts at the Wakarusa Drive – SLT intersection were used to determine the distribution.

Existing and Proposed Park Use

The present sports fields in the park include:

- Twenty one Youth Soccer fields
- Four Youth Ball fields
- Four Adult Ball fields
- Five Football Fields

The proposed Sports Field Plan incorporates the following

- Fourteen additional Youth Soccer fields
- Nine additional Youth Ball fields
- Four additional Adult Ball fields
- Two additional Football field
- Four new Adult Soccer fields

Trip Generation and Distribution

Using the trip generation rate of 45 trips/hour per field (20 inbound, 25 outbound) mentioned earlier, the proposed additional sports fields (33 new fields) would have the potential to generate 1485 vehicles per hour (668 inbound and 817 outbound) during the peak hour of a tournament weekend.

The estimated vehicle trips were distributed through the Wakarusa Drive – SLT intersection consistent with the existing weekend traffic pattern at the intersection.

Geometric Configuration at Wakarusa Drive – SLT intersection

Existing Lane Configurations

- North approach and south approach each consist of one lane shared by all movements
- West approach consists of one through-lane and one exclusive left-turn lane
- East approach consists of one through-lane, one exclusive left-turn lane and one exclusive right-turn lane

Proposed Lane Configurations (Refer to Figure 3)

- North approach will consist of one exclusive left-turn lane and one through-lane also shared by right-turn movements
- South approach will consist of one exclusive left-turn lane, one exclusive right-turn lane and one through lane
- West approach will consist of one exclusive left-turn lane, one exclusive right-turn lane and one through lane
- East approach will remain unchanged

Analysis

Level of service was calculated at the Wakarusa Drive – SLT intersection for three cases

- Case one – existing geometrics and existing weekend sports field traffic
- Case two – proposed geometrics combining existing and future estimated sports field traffic
- Case three – proposed geometrics combining existing and future estimated sports field traffic. With case three it was also assumed 27th Street would be extended west to the lower Dam road as a secondary access point. Under this assumption 30% of the estimated future sports field traffic was diverted west to the lower Dam road and the remaining 70% assigned to the Wakarusa Drive – SLT intersection.

Conclusions

The level of service was calculated for each case at the Wakarusa Drive – SLT intersection based on the existing signal timings for the intersection.

Case One

The north and south approaches of the intersection operate at level of service F and experience excessive delays associated with long vehicles queues.

Case Two

The north and south approaches of the intersection operate at level of service F and experience excessive delays associated with long vehicles queues (vehicle queues calculate in excess of 2000 feet for the south approach)

Case Three

The north and south approaches of the intersection operate at level of service F and experience excessive delays associated with long vehicles queues.

The analysis shows the north and south approaches of the intersection operate at level of service F in all cases and experience excessive delays and long vehicle queues. In order to alleviate the future demand at the intersection associated with sports field traffic it is recommended that some of the sports fields be relocated to another section of the park served by other roadways as shown in the Master Plan.