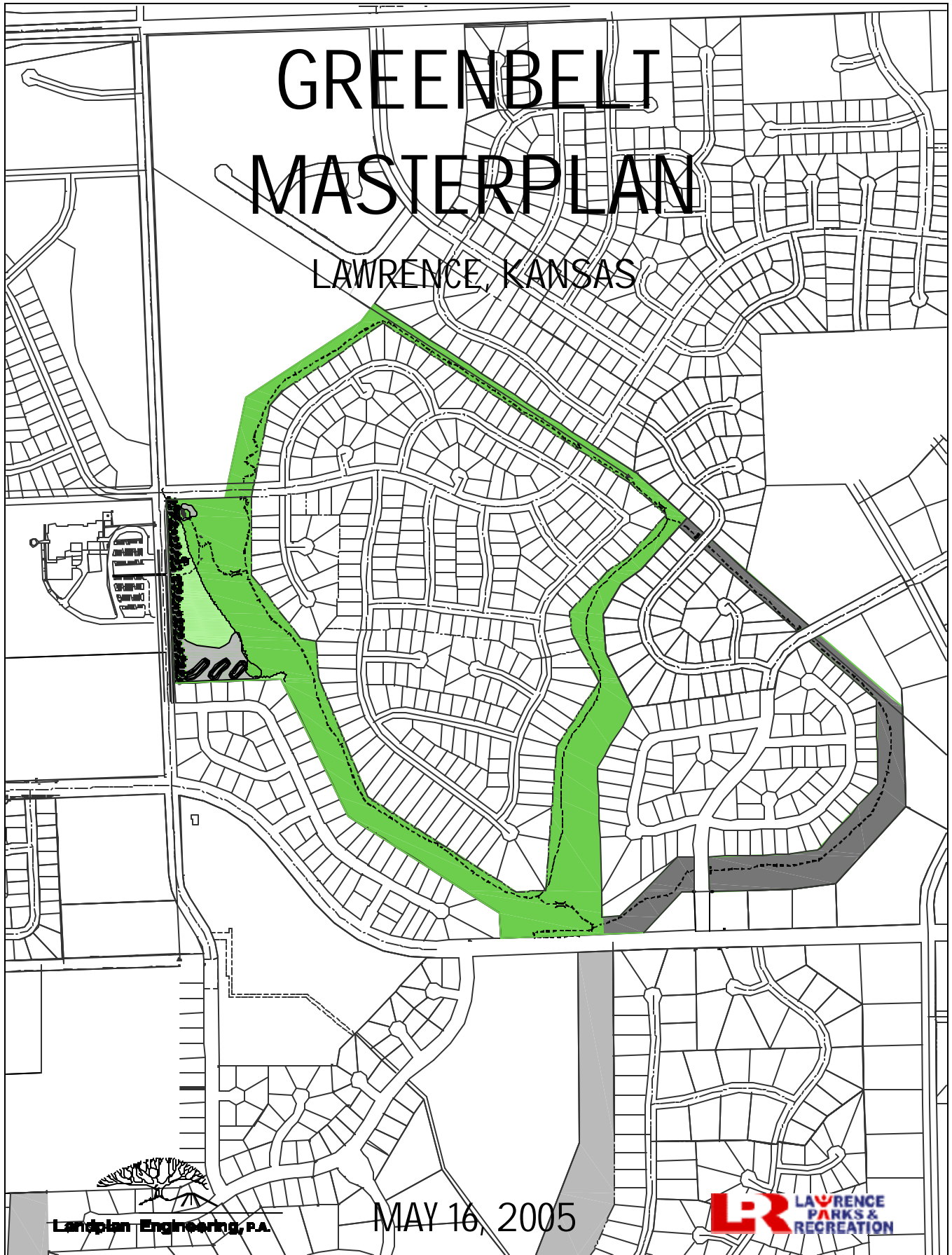


GREENBELT MASTERPLAN

LAWRENCE, KANSAS



Landscape Engineering, P.A.

MAY 16, 2005

LR LAWRENCE
PARKS &
RECREATION

GREENBELT MASTER PLAN

This is a brief summary of the design process incorporated in the Master Planning of Greenbelt Park. Included in this report are considerations and decisions by the City Commission, Park and Recreation Advisory Board, Parks and Recreation Staff and Landplan Engineering through the following project sequence:

- Site Inventory and Analysis
- City of Lawrence Staff Meeting
- Preliminary Design
- Public Meeting
- Final Master Plan
- Estimate of Probable Cost

SITE INVENTORY AND ANALYSIS

After a collection of site information from City officials and several site visits, a base map was compiled illustrating many existing features. The 42-acre site has several strong amenities to be considered in the design development. Some of these are natural low areas or water ponding, and a perennial stream, and most of the site is wooded. This site is located across from the existing Langston Hughes Elementary School; this end of the park has a large open area and a very large flat area for various activities. The north portion of the site has a gasline easement and two road crossings. The east side of the greenbelt is narrow and has a small drainage ditch. This ditch can be very large during the rainy season of the year. At the southern end of the park are two drainage ditches that collect into one. These ditches then go under 15th Street. The drainage ditch to the north and west connects to the large open space across from Langston Hughes Elementary. The east and west ditches have mature trees along the waterways. The first meeting with the City of Lawrence Parks and Recreation Staff and Landplan Engineering in October of 2004 reviewed various ideas and concerns for the park development. A program of park activities and design criteria was then compiled from the collected information.

PRELIMINARY DESIGN

A public meeting was conducted at the Langston Hughes Elementary School in October 2004. We reviewed the existing site elements with the public at the meeting. We requested from the public the activities they would like to see in the greenbelt park. Using the information from the public meeting, we then developed three alternative concepts that were based on the program and site inventory. These concepts reflected the relationships of the various recreational activities and related facilities

within the park as well as outside the park. A public meeting was held in November 2004 to review the various concepts, provide feedback and select the best alternative.

A combination of two concepts was selected for refinement into the final Master Plan. The combination of the concepts was selected generally because of its relatively low development intensity, thus, minimizing the impact on the park's natural characteristics and reducing potential vandalism. A concept modification was suggested to include additional access into the park from the adjoining neighborhood to the east. As the concept was refined, the basis of the Master Plan was established.

MASTER PLAN

The final Master Plan addresses the desired functions of Greenbelt Park serving as both a neighborhood park and a natural park for the community. The existing site conditions have an important influence on planning for both functions. The park site contains two major valleys which are divided by a heavily vegetated bank from a perennial stream, creating a natural buffer. The park is surrounded by single and multi-family subdivisions that have access provided by means of access easements to the park grounds. Using these easements to access the park is provided in different location throughout the park.

Access to the west portion of the park will be "walk-on" from the existing school. A crosswalk will need to be provided to get to the park safely. This area of the park will include an outside classroom, small playground facility, drinking fountain and small covered picnic area and bench. Part of the site will be left open for other outside activities. The south side of the park will have large berms and native grass to buffer the multi-family from the park. From this section of the park one can go north or south to gain access to the one and a half-mile walking trail of 8' and 6' wide concrete path.

An 8-foot wide concrete pathway will be used to connect 15th Street to the recreational path at the south end of the park. At the intersection of the two valleys, a bridge will be needed to go north and east; this pathway will only be 6' wide based on the existing topography and trees within this area. This will connect to the 8' pathway to the north that returns to the west along an existing 16" gasline easement. This will provide connection to Harvard Road and other subdivisions to the north, following the 8' pathway to the west and south across Harvard Road and back down and across the drainage area to the outdoor classroom.

In conclusion, the final Master Plan is a synthesis of programmatic issues, preliminary development concepts, and public input. The primary goal is to provide a passive park as well as a rest area for the recreation pathway. The adjacent neighborhood will receive a relaxing and enjoyable park of the natural features of Lawrence, Kansas.

The following estimate of probable cost is based on the current unit prices as of May, 2005. Prior to phased implementation, it is recommended that all unit prices be updated for accurate and sufficient budget allocations. Any adjustments in cost should reflect any and all changes made for inflation.

PRELIMINARY COST ESTIMATE

Greenbelt Nature Trail

5/10/2005

Prepared By : C.L. Maurer

Checked By :

NO.	ITEM	UNIT	QUANT.	UNIT PRICE	COST	ITEM TOTAL
Greenbelt Nature Site Improvements						
1.	Demolition					\$10,100.00
	Clearing & Grubbing	Ac	5.25	\$1,200.00	\$6,300.00	
	Curb & Gutter	Lf	120	\$5.00	\$600.00	
	Sidewalk Removal	Lf	120	\$10.00	\$1,200.00	
	Irrigation Removal	Ls	1	\$2,000.00	\$2,000.00	
2.	Earthwork/Grading					\$182,000.00
	Excavation	Cy	5000	\$12.00	\$60,000.00	
	Compaction	Cy	5000	\$9.00	\$45,000.00	
	Stripping Topsoil	Sy	12500	\$2.00	\$25,000.00	
	Trail Seeding	Ac	5	\$3,500.00	\$17,500.00	
	Sport Seeding	Ac	11.5	\$3,000.00	\$34,500.00	
3.	Nature Trail					\$353,404.50
	6' Concrete Walk	Lf	2425	\$17.00	\$41,225.00	
	8' Concrete Walk	Lf	8575	\$25.00	\$214,375.00	
	Expansion Joint	Lf	1002	\$2.25	\$2,254.50	
	Signage	Ea	14	\$75.00	\$1,050.00	
	Timber Foot Bridge	Lf	300	\$150.00	\$45,000.00	
	Rip Rap	Sy	500	\$75.00	\$37,500.00	
	Staking	Ls	1	\$12,000.00	\$12,000.00	
4.	Storm Drainage					\$4,200.00
	24" CMP	Lf	80	\$45.00	\$3,600.00	
	24" CMP End Section	Ea	4	\$150.00	\$600.00	
5.	Open Area					\$135,000.00
	Water Fountain	Ea	1	\$2,500.00	\$2,500.00	
	Outdoor Classroom	Ea	1	\$5,000.00	\$5,000.00	
	Picnic Tables w/roof	Ea	5	\$5,000.00	\$25,000.00	
	Playground	Ea	1	\$35,000.00	\$35,000.00	
	Berming	Cy	5000	\$9.00	\$45,000.00	
	Native Grass	Ac	4.5	\$5,000.00	\$22,500.00	
Subtotal						\$684,704.50
Contingency(20%)						\$136,940.90
Total						\$821,645.40

Operational & Maintenance Cost worksheet

Facility Greenbelt Park & Trail

Maintenance Mode 5

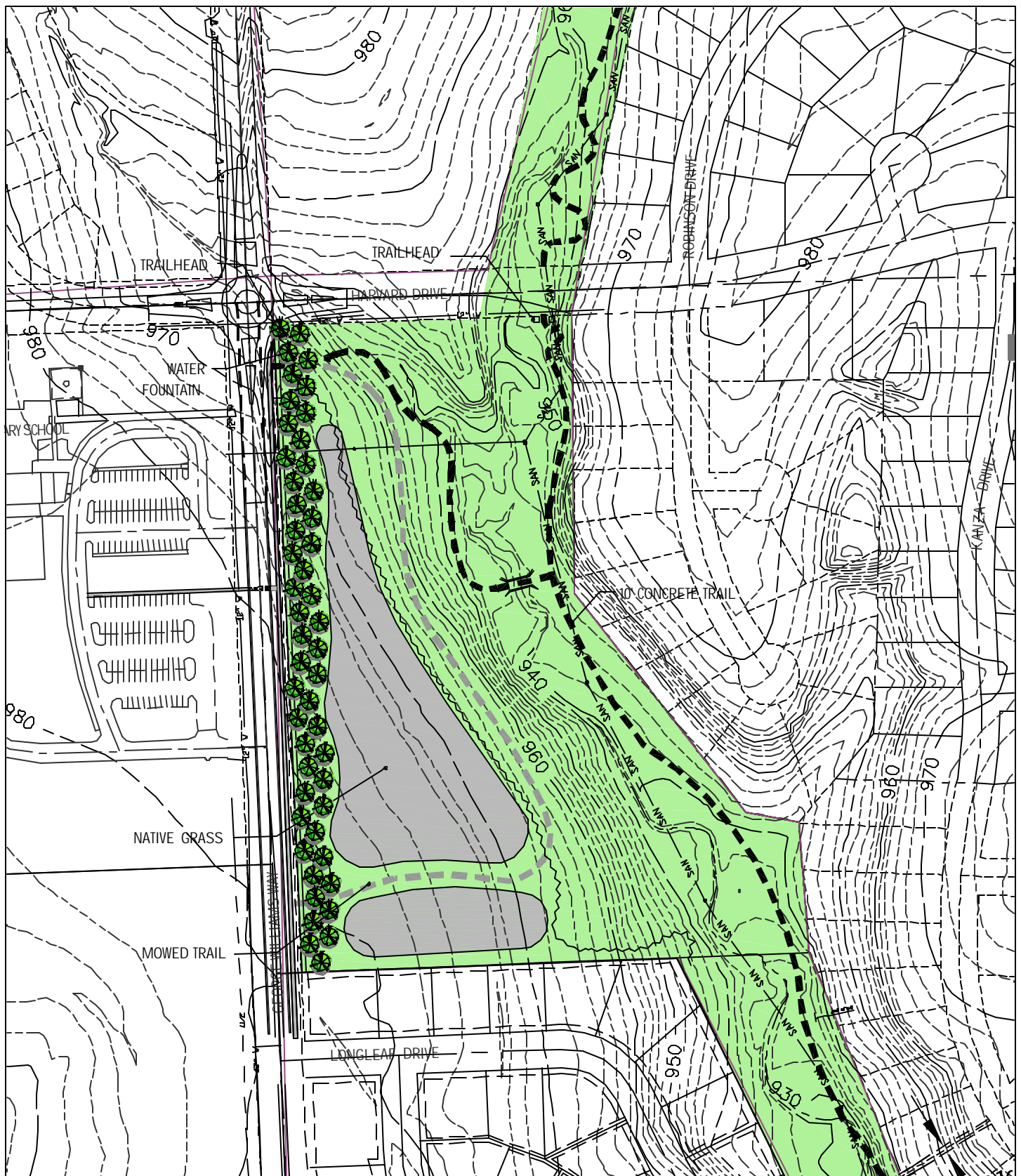
Personnel

	Weeks per year	Average Hours Week	Hours per year	\$ per hour (including benefits)	\$ per year
Mowing- Fulltime	40	3	120	\$ 20	\$ 2,400
General Park Maint Staff	52	2	104	\$ 20	\$ 2,080
Litter	52	2	104	\$ 20	\$ 2,080
Playground Maint	3	3	9	\$ 20	\$ 180
Snow Removal	15	2	30	\$ 20	\$ 600
Trail sweeping	5	2	10	\$ 20	\$ 200
Landscape maintenance -Fulltime	40	3	120	\$ 20	\$ 2,400
Forestry work	40	1	40	\$ 20	\$ 800
Totals			\$ 537		\$ 10,740

Additional Supplies & Materials

General supplies for maintenance & construction	\$ 500.00
Wood chips for playground	\$ 900.00
Seed & Fertilizer	\$ 500.00
Fuel - Gasoline, Diesel	\$ 500.00
Others	\$ -
Totals	\$ 2,400

Total Operating Budget needed **\$ 13,140**



CONCEPT 1



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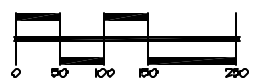
**Civil Engineering
Landscape Architecture
Community Planning
Surveying**

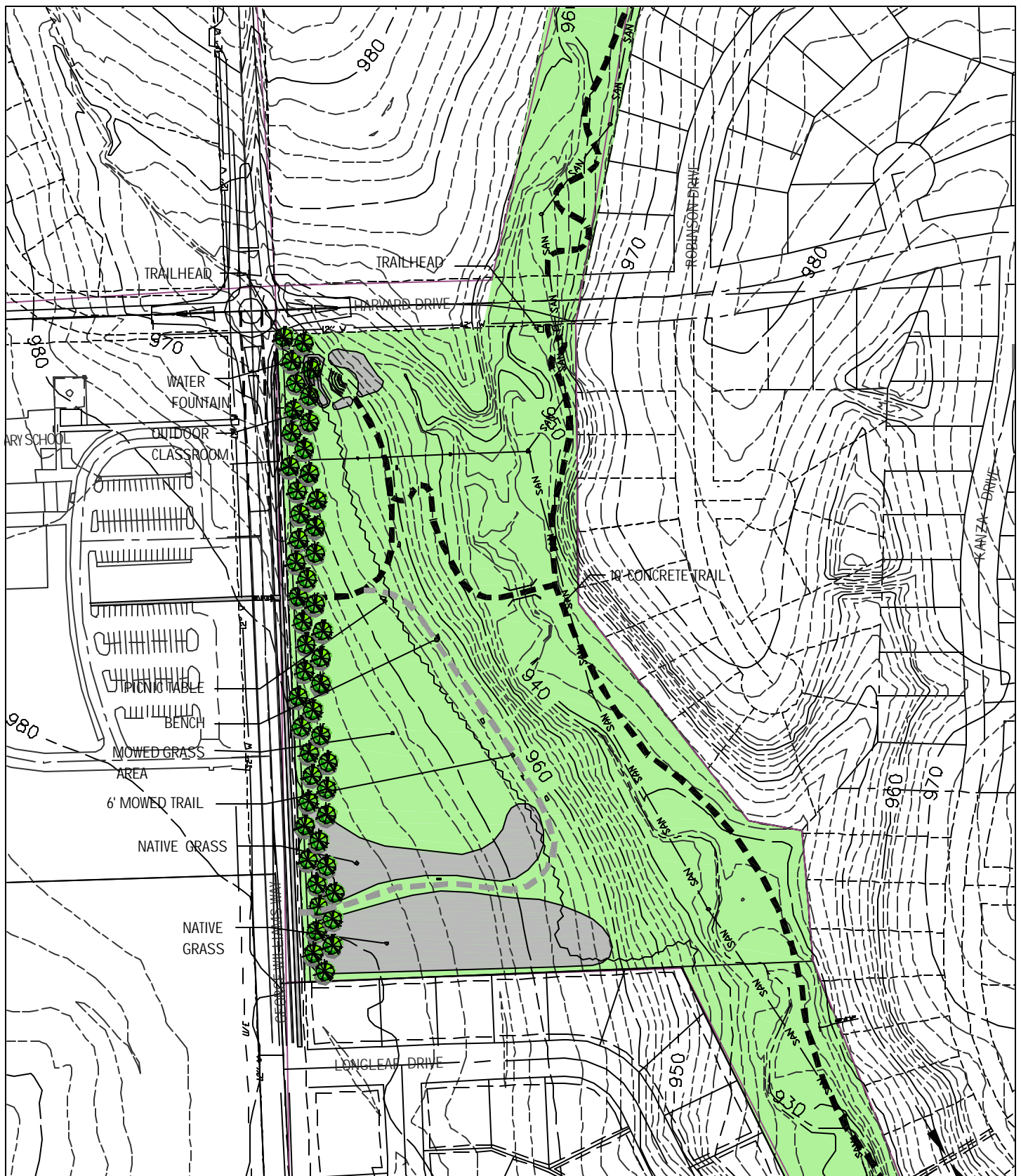
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Fax: (785) 622-5470

Ernestine Esteban-Belley
1800 Quince, Suite 400
Kansas City, Missouri 64105
Tel: (816) 581-1204
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North





CONCEPT 2



Landplan Engineering, P.A.

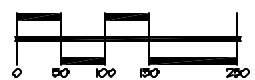
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Surveying**

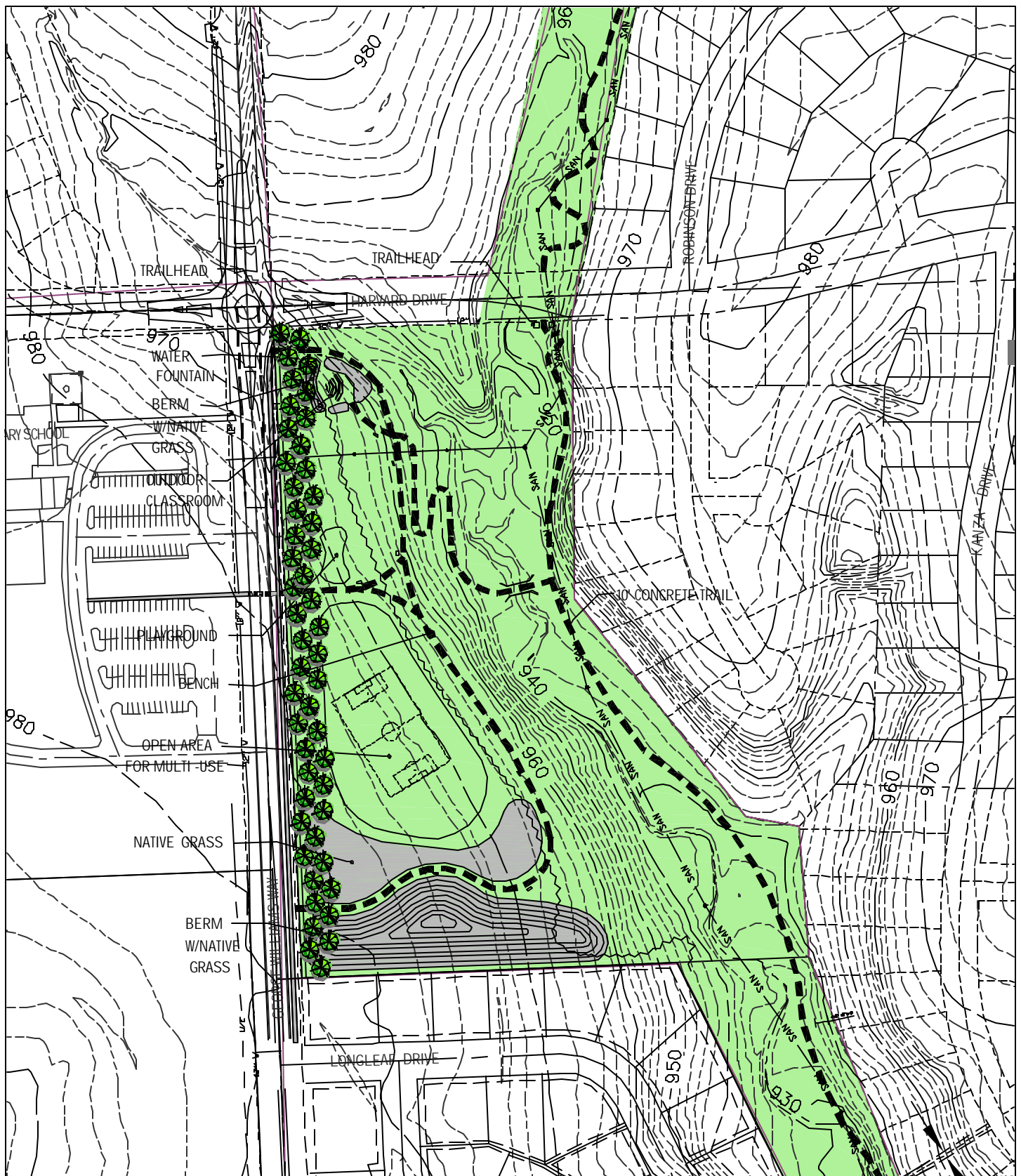
1274 Veterans Ave
Lynchburg, VA 24504
Tel: (757) 444-7228
Fax: (757) 444-7470

Electronic Exchange Building
1800 Green Lane 400
Roanoke, VA 24060
Tel: (540) 321-1004
Fax: (540) 321-1044



North





CONCEPT 3



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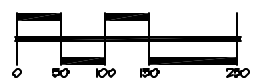
**Civil Engineering
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1214 Veterans Ave
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Fax: (785) 434-5470

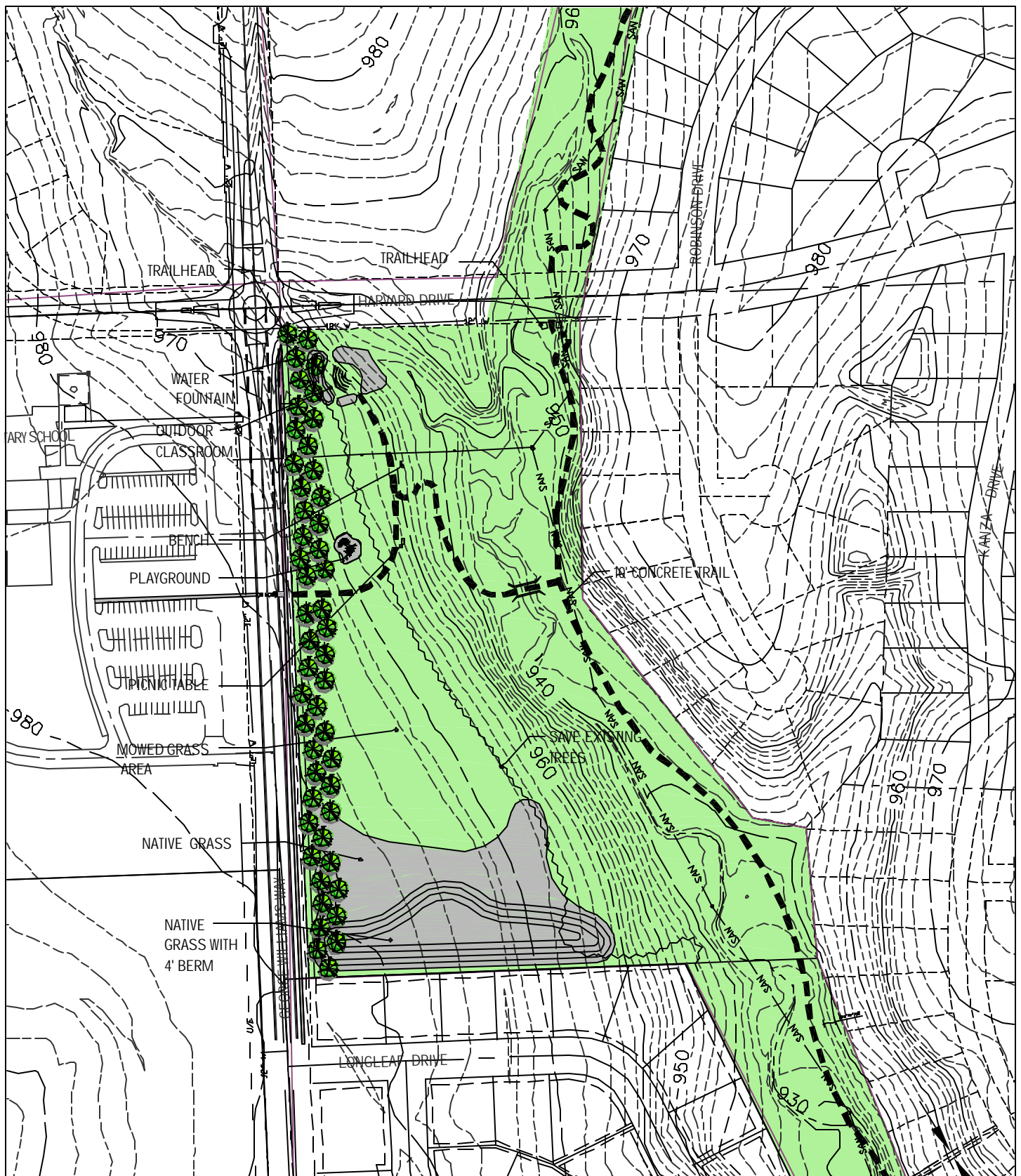
Electronic Exchange Building
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Kansas City, Missouri 64116
Tel: (816) 221-1004
Fax: (816) 221-2644



North



Scale: 1"=100'



CONCEPT 4



Landplan Engineering, P.A.

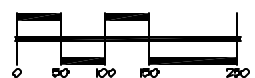
**Civil Engineering
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Fax: (540) 981-2644



North



Scale: 1"=100'