SUBDIVISION COMMITTEE
METROPOLITAN AREA PLANNING COMMISSION

AGENDA ITEM NO. 3
November 4, 1999

STAFF REPORT
(One-Step Final Plat)

CASE NUMBER: S/D 99-71 -- HARRISON PARK 3rd ADDITION

OWNER/APPLICANT: Harrison Park Associates, Attn: Duane Wadley, 350 N. Rock Road, Wichita, KS 67206

SURVEYOR/ENGINEER: Baughman Company, P.A., 315 Ellis, Wichita, KS 67211

LOCATION: Southeast corner of Lincoln (extended) and Webb

SITE SIZE: 5.70 Acres

NUMBER OF LOTS

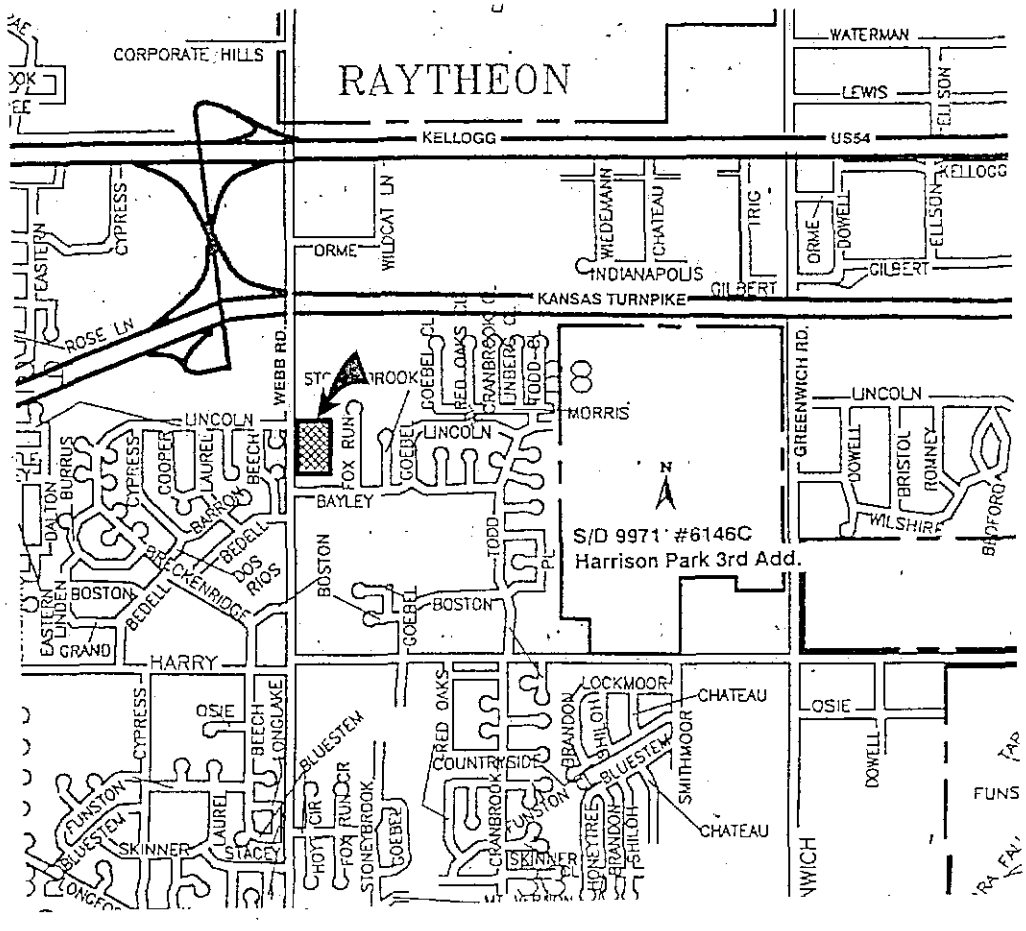
Residential:	
Office:	
Commercial:	2
Industrial:	
Total:	2

MINIMUM LOT AREA: 1.22 Acres

CURRENT ZONING: SF-6, Single-Family Residential

PROPOSED ZONING: NR, Neighborhood Retail
LC, Limited Commercial

VICINITY MAP



Note: This site has been approved for a zone change (Z-3205) from SF-6, Single-Family Residential to LC, Limited Commercial (Lot 2) and NR, Neighborhood Retail (Lot 1) subject to platting. The site is also subject to a Protective Overlay which addresses uses, landscaping, signs, architectural control, lighting, access control and drainage.

STAFF COMMENTS:

A. The applicant shall guarantee the extension of sanitary sewer to serve the lots being platted. This guarantee shall be with the County for service through the Four Mile Creek sanitary sewer system. On the final plat tracing, appropriate wording shall be added to the Mayor's signature block indicating the City's agreement to allow a County sewer district to be formed within the City.

B. The applicant shall guarantee the extension of City water to serve this site.

C. If improvements are guaranteed by petition, a notarized certificate listing the petitions shall be submitted to the Planning department for recording.

D. City Engineering needs to comment on the status of the applicant's drainage plan. The Protective Overlay required the site to be graded to drain to Webb Road.

E. Traffic Engineering needs to comment on the access controls. The plat conforms with the Protective Overlay which limits the site to two access openings along Webb, one opening per lot. The north opening must be aligned with Lincoln Street and is to provide two lanes out and one lane in. The plattor's text shall state that the access controls are being dedicated to the City of Wichita. Distances shall be shown for all segments of access control.

F. Traffic Engineering should comment on the need for improvements to Webb Road; particularly the installation of a left turn lane at the existing signal at Lincoln, to improve traffic flow.

G. The Applicant is reminded that in accordance with the Protective Overlay, a 20 foot landscape buffer is required along the north and east property line of Lot 1.

H. The applicant shall submit a copy of the instrument which establishes the pipeline easements on the property, which verifies that the easements shown are sufficient and that utilities may be located adjacent to and within the easements.

I. The applicant's agent shall determine any setback requirements for the pipelines by researching the text of the pipeline agreements. If a setback from the pipeline easements is provided for in the pipeline easement agreements, it shall be indicated on the face of the plat.

J. The MAPC signature block should be revised to reference "Frank Garofalo" as the MAPC Chairman.

K. A Notice of Protective Overlay document indicating the Protective overlay has been filed with the MAPD shall be submitted.

L. This property is within a zone identified by the City Engineers' office as likely to have groundwater at some or all times within 10 feet of the ground surface elevation. Building with specially engineered foundations or with the lowest floor opening above groundwater is recommended, and owners seeking building permits on this property will be similarly advised. More detailed information on recorded groundwater elevations in the vicinity of this property is available in the City Engineers' office.

M. The plattor's text shall include language that a drainage plan has been developed for the plat and that all drainage easements, rights-of-way, or reserves shall remain at established grades or as modified with the approval of the applicable City or County Engineer, and unobstructed to allow for the conveyance of stormwater.

N. The applicant shall install or guarantee the installation of all utilities and facilities which are applicable and described in Article 8 of the MAPC Subdivision Regulations. (Water service and fire hydrants required by Article 8 for fire protection shall be as per the direction and approval of the Chief of the Fire Department.)

O. The applicant's engineer is advised that the Register of Deeds is requiring the name(s) of the notary public, who acknowledges the signatures on this plat, to be printed beneath the notary's signature.

P. To receive mail delivery without delay, and to avoid unnecessary expense, the applicant is advised of the necessity to meet with the U.S. Postal Service Growth Management Coordinator (phone 316-729-0102) prior to development of the plat so that the type of delivery, and the tentative mailbox locations can be determined.

Q. The applicant is advised that various State and Federal requirements [specifically but not limited to the Army Corps of Engineers, Kanopolis Project Office, Rt. 1, Box 317, Valley Center, KS 67147] for the control of soil and wind erosion and the protection of wetlands may impact how this site can be developed. It is the applicant's responsibility to contact all appropriate agencies to determine any such requirements.

R. The owner of the subdivision should be aware of the fact that the development of any subdivision greater than five (5) acres in size may require an NPDES Storm Water Discharge Permit from the Kansas Department of Health and Environment in Topeka. Further, on all construction sites, the City of Wichita requires that best management practices be used to reduce pollutant loadings in storm water runoffs.

S. Perimeter closure computations shall be submitted with the final plat tracing.

T. Recording of the plat within thirty (30) days after approval by the City Council and/or County Commission.

U. The representatives from the utility companies should be prepared to comment on the need for any additional utility easements to be platted on this property.

V. The applicant is reminded that a disk shall be submitted with the final plat tracing to the Planning Department detailing this plat in digital format in Release 13 version of AutoCAD. This will be used by the City and County GIS Department.

Table of Contents

MASTER DESIGN STORM SUMMARY

Default Network Design Storm File, ID SEDGWICK.RNQ Sedgwick24

Return Event	Total Depth in	Rainfall Type	RNF File	RNF ID
2y24h	3.5000	Synthetic Curve	SCSTYPES	TypeII 24hr
5y24h	4.5000	Synthetic Curve	SCSTYPES	TypeII 24hr
100y24	7.9000	Synthetic Curve	SCSTYPES	TypeII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Storage Node ID		Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond ac-ft
NORTH		AREA	2	.262		12.0500	3.75		
NORTH		AREA	5	.408		12.0500	5.93		
NORTH		AREA	100	.971		12.0500	13.96		
*OUT 10		JCT	2	.261		12.4500	.78		
*OUT 10		JCT	5	.408		12.4000	1.32		
*OUT 10		JCT	100	.971		12.4500	2.51		
POND	IN	POND	2	.262		12.0500	3.75		
POND	IN	POND	5	.408		12.0500	5.93		
POND	IN	POND	100	.971		12.0500	13.96		
POND	OUT	POND	2	.261		12.4500	.78	176.53	.099
POND	OUT	POND	5	.408		12.4000	1.32	176.83	.160
POND	OUT	POND	100	.971		12.4500	2.51	177.96	.418

File.... C:\HAESTAD\PPKW\RAINFALL\SEDGWICK.RNQ
Title...

JOB TITLE NOT SPECIFIED
Click Project Summary on the File Menu to enter title

DESIGN STORMS SUMMARY

Design Storm File,ID = SEDGWICK.RNQ Sedgwick24

Storm Tag Name = 2y24h

Data Type, File, ID = Synthetic Storm SCSTYPES.RNF TypeII 24hr
Storm Frequency = 2 yr
Total Rainfall Depth= 3.5000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = 5y24h
Description: Sedgwick County 5-yr 24 hour Duration

Data Type, File, ID = Synthetic Storm SCSTYPES.RNF TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 4.5000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = 100y24
Description: Sedgwick County 100-yr 24 hour Duration

Data Type, File, ID = Synthetic Storm SCSTYPES.RNF TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 7.9000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

DESIGN STORMS SUMMARY

Design Storm File,ID = SEDGWICK.RNQ Sedgwick24

Storm Tag Name   = 2y24h

Data Type, File, ID = Synthetic Storm SCSTYPES.RNF TypeII 24hr
Storm Frequency   = 2 yr
Total Rainfall Depth= 3.5000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name   = 5y24h
Description: Sedgwick County 5-yr 24 hour Duration

Data Type, File, ID = Synthetic Storm SCSTYPES.RNF TypeII 24hr
Storm Frequency   = 5 yr
Total Rainfall Depth= 4.5000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name   = 100y24
Description: Sedgwick County 100-yr 24 hour Duration

Data Type, File, ID = Synthetic Storm SCSTYPES.RNF TypeII 24hr
Storm Frequency   = 100 yr
Total Rainfall Depth= 7.9000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

File.... F:\HYDRO\PROJECTS\HARRISON PARK 3RD - DRAINAGE\PONDPACK\POND.PPW

Elevation (ft)	Planimeter (sq.in)	Area (acres)	A1+A2+sqr(A1*A2) (acres)	Volume (ac-ft)	Volume Sum (ac-ft)
176.00	-----	.1800	.0000	.000	.000
177.00	-----	.2100	.5844	.195	.195
178.00	-----	.2600	.7037	.235	.429

POND VOLUME EQUATIONS

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

File.... F:\HYDRO\PROJECTS\HARRISON PARK 3RD - DRAINAGE\PONDPACK\POND.PPW

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 176.00 ft
Increment = .50 ft
Max. Elev.= 178.00 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Culvert-Circular	CV	--->	TW	176.000	178.000
TW SETUP, DS Channel					

OUTLET STRUCTURE INPUT DATA

Structure ID = CV
Structure Type = Culvert-Circular

No. Barrels	=	2
Barrel Diameter	=	.5000 ft
Upstream Invert	=	176.00 ft
Dnstream Invert	=	173.35 ft
Horiz. Length	=	50.00 ft
Barrel Length	=	50.07 ft
Barrel Slope	=	.05300 ft/ft

OUTLET CONTROL DATA...

Mannings n	=	.0090
Ke	=	.5000 (forward entrance loss)
Kb	=	.037770 (per ft of full flow)
Kr	=	.5000 (reverse entrance loss)
HW Convergence	=	.001 +/- ft

INLET CONTROL DATA...

Equation form	=	1
Inlet Control K	=	.0098
Inlet Control M	=	2.0000
Inlet Control c	=	.03980
Inlet Control Y	=	.6700
T1 ratio (HW/D)	=	1.133
T2 ratio (HW/D)	=	1.280
Slope Factor	=	-.500

Use unsubmerged inlet control Form 1 equ. below T1 elev.
Use submerged inlet control Form 1 equ. above T2 elev.

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...
At T1 Elev = 176.57 ft ---> Flow = .49 cfs
At T2 Elev = 176.64 ft ---> Flow = .56 cfs

Structure ID = TW
Structure Type = TW SETUP, DS Channel

FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...

Maximum Iterations	=	30
Min. TW tolerance	=	.01 ft
Max. TW tolerance	=	.01 ft
Min. HW tolerance	=	.01 ft
Max. HW tolerance	=	.01 ft
Min. Q tolerance	=	.10 cfs
Max. Q tolerance	=	.10 cfs

Index of Starting Page Numbers for ID Names

Worksheet
Worksheet for Pressure Pipe

Project Description	
Project File	untitled.fm2
Worksheet	jh;ok
Flow Element	Pressure Pipe
Method	Manning's Formula
Solve For	Discharge

Input Data		
Pressure at 1	2.00	feet H20
Pressure at 2	0.00	feet H20
Elevation at 1	100.00	ft
Elevation at 2	99.80	ft
Length	50.00	ft
Mannings Coefficient	0.013	
Diameter	15.00	in

Results		
Discharge	13.5491	cfs
Headloss	2.20	ft
Energy Grade at 1	103.03	ft
Energy Grade at 2	100.83	ft
Hydraulic Grade at 1	102.00	ft
Hydraulic Grade at 2	99.80	ft
Flow Area	1.23	ft^2
Wetted Perimeter	3.93	ft
Velocity	11.04	ft/s
Velocity Head	1.89	ft
Friction Slope	0.043998	ft/ft

Baughman

TRANSMITTAL

TO:	FROM:
Scott Lindebak	Trevor Kurth
COMPANY:	DATE:
City of Wichita	9-20-06
ADDRESS:	PROJECT:
7th Floor City Hall	Harrison Park 3rd Revised
CITY/ STATE:	PROJECT NUMBER:
Wichita	

RE:
Harrison Park 3rd Drainage Plan

VIA: DELIVERY

We are sending you ☒ ATTACHED ☐ UNDER SEPARATE COVER

☒ PLANS ☐ PRINTS ☐ SHOP DRAWINGS ☐ SAMPLES ☐ SPECS
☐ COPY OF LETTER ☐ CHANGE ORDER ☐ DISK ☐ OTHER

COPIES	DATE	DESCRIPTION
1	9-20-06	Harrison Park Revised Drain Plan

☐ URGENT ☒ FOR APPROVAL ☐ FOR YOUR INFO ☒ FOR REVIEW & COMMENT
☐ APPROVED, AS NOTED ☐ REVISE AS NOTED ☐ REVISE AND RETURN
☐ AS REQUESTED ☐ PLEASE REPLY ☐ FOR BIDS DUE ☐

NOTES/ COMMENTS:

SIGNED:_____
Trevor R. Kurth, I.E.

Copy: file

ENGINEERING
SURVEYING
PLANNING
LANDSCAPE ARCHITECTURE

Baughman Company, P.A.
315 Ellis Street
Wichita, Kansas 67203
P 316.262.7271
F 316.262.0149

Worksheet
Worksheet for Pressure Pipe

Project Description	
Project File	untitled.fm2
Worksheet	jh;ok
Flow Element	Pressure Pipe
Method	Manning's Formula
Solve For	Discharge

Input Data		
Pressure at 1	1.00	feet H20
Pressure at 2	0.00	feet H20
Elevation at 1	100.00	ft
Elevation at 2	99.80	ft
Length	50.00	ft
Mannings Coefficient	0.013	
Diameter	15.00	in

Results		
Discharge	10.0067	cfs
Headloss	1.20	ft
Energy Grade at 1	102.89	ft
Energy Grade at 2	101.69	ft
Hydraulic Grade at 1	101.00	ft
Hydraulic Grade at 2	99.80	ft
Flow Area	1.23	ft^2
Wetted Perimeter	3.93	ft
Velocity	8.15	ft/s
Velocity Head	1.03	ft
Friction Slope	0.023999	ft/ft

CLOSURE - HARRISON PARK 3RD ADD.

****
L001
****

1		N	5000.000	E	5000.000	S	0+00
N 00-46'01.0"W	620.020						
2		N	5619.964	E	4991.701	S	6+20.020
N 88-55'42.0"E	400.140						
3		N	5627.448	E	5391.771	S	10+20.160
S 00-45'14.0"E	620.170						
4		N	5007.332	E	5399.931	S	16+40.330
S 88-56'59.0"W	399.998						
1		N	5000.000	E	5000.000	S	20+40.328

LENGTH= 2040.328 AREA= 248077.342 SF 5.695 ACRES