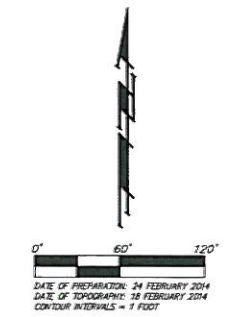
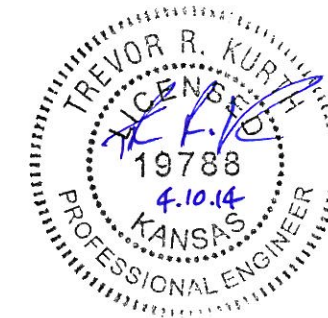


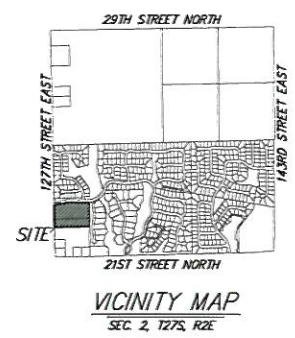
# DRAINAGE PLAN

## HAWTHORNE 5TH ADDITION

### WICHITA, SEDGWICK COUNTY, KANSAS



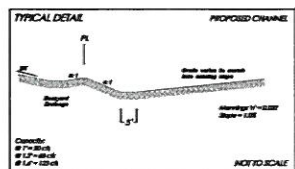
RESERVE "A" IS RESERVED FOR OPEN SPACE, LANDSCAPING, STREETS, DRAINAGE PURPOSES, ENTRY MONUMENTS AND UTILITIES.  
RESERVES "B" & "C" ARE RESERVED FOR OPEN SPACE, LANDSCAPING, ENTRY MONUMENTS, SCREENING WALLS, DRAINAGE PURPOSES AND UTILITIES AS CONFINED TO EASEMENTS.  
RESERVE "D" IS RESERVED FOR OPEN SPACE, LANDSCAPING, SIDEWALKS, DRAINAGE PURPOSES, BERMS, GAZEBOS, PARKING, UTILITIES AS CONFINED TO EASEMENTS, ENTRY MONUMENTS, FENCES, PLAYGROUNDS, CLOTHOUSE AND RELATED APPURTENANCES, AND NEIGHBORHOOD SWIMMING POOL AND RELATED APPURTENANCES. THERE SHALL BE NO BUILDING SETBACK REQUIREMENTS IN SAID RESERVE "D" ALONG ANY PUBLIC RIGHTS-OF-WAY. THE PARKING EASEMENTS WITHIN SAID RESERVE "D" SHALL BE USED EXCLUSIVELY FOR RESIDENTIAL PARKING. NO OBSTRUCTIONS SHALL BE CONSTRUCTED OR PLACED ON OR WITHIN THE PARKING EASEMENT IN SAID RESERVE "D". RESERVE "E" IS RESERVED FOR OPEN SPACE, LANDSCAPING, DRAINAGE PURPOSES, UTILITIES AS CONFINED TO EASEMENT, AND WALLS AS CONFINED TO EASEMENT.



Offsite from West  
24" RCP  
Per Fairmont 3rd  
Drainage Plan  
Q<sub>2</sub> = 25 cfs  
Q<sub>10</sub> = 69 cfs

Offsite from South  
Sheet Flow  
Area = 6.0 acres  
C<sub>1</sub> = 0.80  
Q<sub>2</sub> = 18 cfs  
Q<sub>5</sub> = 22 cfs  
Q<sub>10</sub> = 25 cfs  
Q<sub>100</sub> = 35 cfs

Offsite flow to be directed to the east  
via ditch section as shown.



NOTE: Subdrain trench will be conveyed orally in the provided easement  
during your final change to combined flow and underground storm water  
sewer. Catch flow will be directed to the adjacent section to the  
southernmost lot on the same property. The ditch is built temporary until  
the additional south commercial drainage.

Developed Intensity	2yr	10yr	100yr
Rational C	0.5	0.6	0.7

Basin ID	Area acres	Developed Flowrates		
		2-yr cfs	10-yr cfs	100-yr cfs
1	1.2	2.2	3.0	5.9
2	0.9	1.7	2.8	4.8
3	0.5	1.0	1.6	2.6
4	0.5	1.0	1.6	2.6
5	0.2	0.3	0.5	0.8
6	1.4	2.7	4.4	7.2
7	1.3	2.5	4.0	6.7
8	0.6	1.1	1.9	3.1
9	2.7	4.0	6.5	11
10	0.6	1.1	1.9	3.1
11	1.3	2.5	4.0	6.7
12	0.8	1.5	2.5	4.1
13	0.3	0.6	0.9	1.5
14	0.3	0.6	0.9	1.5
TOTAL	11.3	22.4	37.1	61.3

Table 4-13 Volumetric Runoff Coefficients by Land Use and Hydrologic Soil Group

Land Use	Hydrologic Soil Group A				Hydrologic Soil Group B				Hydrologic Soil Group C			
	A	B	C	D	A	B	C	D	A	B	C	D
Unimproved	0.60	0.50	0.44	0.39	0.60	0.50	0.44	0.39	0.60	0.50	0.44	0.39
Impervious Cover	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90

Basin #	Area (ac)	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	Volumetric Runoff Coeff. (Eq. 4.24)				WQV (cu ft)	
						A	B	C	D		
Total Site	252,912	0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	33,143
Hawthorne	2,010,000	0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	19,567

Basin	Area (ac)	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	Pond Volume @ 100yr	
						Vol (cu ft)	Depth (ft)
North Pond	57000	1.3	20000	0.6	8	7.5	14.25
South Pond	43700	1.0	20000	0.6	8	4.2	12.0
Total	100700	1.0	20000	0.6	8	11.7	26.25

Pond	Volume @ 100yr	
	WQV	Check
35.0	2.5	Yes

NOTES: There is no FEMA SFHA located on this property as of this date per FEMA FIRM Panels 377 & 385 of 700, for Derby, Sedgwick County, Kansas; effective February 2, 2007.

Detention, water quality, and channel protection will be provided in the offsite Hawthorne Addition lake and drainage system. This property was originally proposed to be commercial with its runoff to be conveyed to the east pond via the existing SWIS canal. This property was included in the detention facilities to the east in Hawthorne Addition.

## DRAINAGE PLAN

### HAWTHORNE 5TH ADDITION

Baughman Company, P.A.  
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**Baughman** ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE