THE CITY OF WICHITA

OFFICE OF ENGINEERING DATE OCTOBER 26, 1979

TO JACK GALBRAITH, CHIEF PLANNER - PLANNING DEPARTMENT

FROM YASH D. DESAI, DRAINAGE CHIEF ENGINEER

SUBJECT DRAINAGE PLAN: OVERBROOK 2ND ADDITION

Reiss and Goodness Engineers have submitted the drainage plan for the subject plat. The plan is satisfactory. The storm sewer outfall is the major drainage channel (presumably to be developed in future) being a tributary of the Four Mile Creek. The developer shall submit guarantees for the construction of the storm sewer and other drainage improvements. Engineer shall submit to Engineering Department the quantities to arrive at a preliminary project cost estimate before the submission of plat for City Commission approval.

I trust this is sufficient information to approve the subject plat. Please call me at Centrex 4235 if you need additional information.

Yash D. Desai, P.E.
Drainage Chief Engineer

YDD/dla

cc: Max Greene, Flood Control & Landfill Director

10-19-79 (1)

OVERBROOK 2ND ADDN.
REVISED GRADING PLAN

DA # 1 4.61 Ac L = 820' = 0.16 MI. F = 36 - 28.5 = 7.5'

$Tc = \left(\frac{11.9 \times 0.16^3}{7.5}\right)^{0.385}$ = .14 HRS 8.6 MIN USE 15 MIN.

$Q_2 = 4.06 \times 0.5 \times 4.61 = 9.4$ cfs
$Q_{100} = 8.98 \times 0.5 \times 4.61 = 20.7$ cfs

20.7 - 9.4 = 11.3 cfs THRU SWALE

DA # 2 3.32 Ac Tc 15 MIN.

$Q_2 = 3.32 \times 0.5 \times 4.06 = 6.7$ cfs
$Q_{100} = 3.32 \times 0.5 \times 8.98 = 14.9$ cfs

CARRY Q_{100} IN STORM SEWER

DA # 3 1.26 Ac Tc = 15 MIN

$Q_2 = 1.26 \times 0.5 \times 4.06 = 2.6$ cfs
$Q_{100} = 1.26 \times 0.5 \times 8.98 = 5.7$ cfs

OVERBROOK SECOND

DRAINAGE COMPUTATIONS

DRAINAGE AREA	CURB INLET INTERCEPTING DRAINAGE	AREA	ACCUM. AREA	C	(Ave) C	T_c	i_2	i_{100}	Q_2	Q_{100}	PIPE SIZE	PIPE SLOPE
3 E		3.46		0.45		31	2.82	6.62	4.39	10.31		
4 E		0.68		0.6		15	4.06	8.98	1.66	3.66		
	Curb Inlet # 8 A		4.14		0.47	31	2.82	6.62	5.49	12.88	18"	0.32%
2 E		2.18		0.6		29	2.97	6.95	3.88	9.09		
	Curb Inlet # 8 B		2.18		0.60	31	2.82	6.62	3.68	8.66	15"	0.32%
5 E		0.55		0.6		15	4.06	8.98	1.33	2.96		
	Curb Inlet # 8		6.87		0.52	31	2.82	6.62	10.09	23.69	24"	0.22%
6 E		1.03		0.6		19	3.70	8.19	2.28	5.06		
	Curb Inlet # 7 A		1.03		0.6	33	2.68	6.30	1.66	3.89	15"	0.5%
7 E		2.17		0.45		19	3.70	8.19	3.61	7.99		
	Curb Inlet # 7		10.07		0.51	33	2.68	6.30	13.84	32.55	24"	0.3%
	End Section # 2								13.84	32.55	DITCH TO POND 6' BOTTOM 4:1 S/S SLOPE = 0.1%	

DRAINAGE AREA	CURB INLET INTERCEPTING DRAINAGE	AREA	ACCUM. AREA	C	(Ave) C	T_c	i_2	i_{100}	Q_2	Q_{100}	PIPE SIZE	PIPE SLOPE
1 S		2.02		0.45		19	3.70	8.19	3.4	7.4		
2 S		0.83		0.60		15	4.06	8.98	2.0	4.5		
4 S		3.74		0.50		23	3.43	7.60	6.4	14.2		
	Curb Inlet #6A & #6B		6.59		0.50	23	3.43	7.60	11.3	25.0	24"	0.24%
3 S		1.13		0.50		15	4.06	8.98	2.3	5.1		
	Curb Inlet #6		7.72		0.50	23	3.43	7.60	13.2	29.3	24"	0.24%
6 S		3.79		0.45		28	3.05	7.04	5.2	12.0		
	Curb Inlet #5A		3.79		0.45	24	3.38	7.48	5.7	12.8	15"	0.5%
5 S		1.57		0.6		15	4.06	8.98	3.8	8.4		
	Curb Inlet #5		13.08		0.50	24	3.38	7.48	22.1	48.9	30"	0.36%
7 S		3.52		0.5		20	3.63	8.03	6.4	14.1		
	Curb Inlet #4		16.60		0.50	24	3.38	7.48	29.7	65.8	30"	0.36%
	Manhole #5								29.7	65.8	30"	0.36%
8 S		2.63		0.45		20	3.63	8.03	4.3	9.5		
	Curb Inlet #3		19.23		0.49	25	3.32	7.36	31.3	69.3	36"	0.24%
10 S		0.88		0.6		15	4.06	8.98	2.1	4.7		
	Curb Inlet #2B		0.88		0.6	26	3.23	7.25	1.7	3.8	15"	0.5%
9 S		2.81		0.5		22	3.49	7.74	4.9	10.9		
	Curb Inlet #2A		3.69		0.52	26	3.23	7.25	6.2	13.9	18"	0.5%
12 S		1.74		0.5		20	3.63	8.03	3.2	7.0		
	Curb Inlet #2		24.66		0.50	26	3.23	7.25	39.8	89.4	36"	0.32%
	Manhole #4								39.8	89.4	36"	0.32%
14 S		2.81		0.6		15	4.06	8.98	6.8	15.1		
	Curb Inlet #1A		2.81		0.6	28	3.05	7.04	5.1	9.9	18"	0.3%
11 S		1.57		0.5		15	4.06	8.98	3.2	7.0		
13 S		3.93		0.45		30	2.89	6.79	5.1	12.0		
	Curb Inlet #1		32.9		0.50	28	3.05	7.04	50.4	116.3	42"	0.24%
	Manhole #3								50.4	116.3	42"	0.24%
	Manhole #2								50.4	116.3	42"	0.24%
	Manhole #1								75.0		54"	0.16%
	End Section #1A & #1B								75.0		DITCH TO POND 10' BOTTOM,4:1 S/S, SLOPE = 1%	