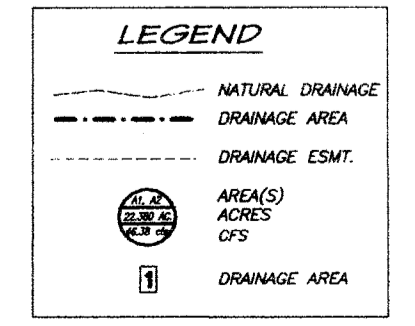
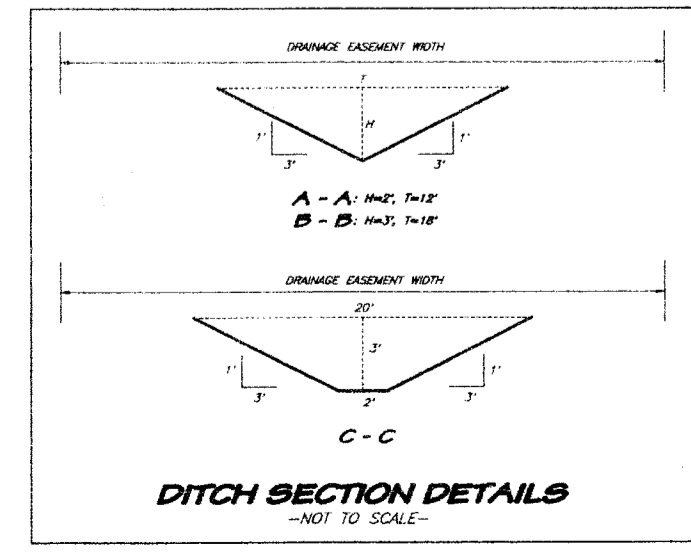


- DRAINAGE NOTES:**
1. THERE IS HEREBY DEDICATED A SIXTEEN-FOOT (16') UTILITY EASEMENT ALONG BOTH SIDES OF ALL STREETS.
 2. ALL RIGHTS-OF-WAY ARE PRIVATE SIXTY-FOOT (60') WIDE UNLESS OTHERWISE INDICATED.
 3. THIS GENERAL DRAINAGE PLAN IS BASED UPON U.S.G.S. QUADRANGLE MAPS AND INITIAL FIELD INSPECTIONS. THE ENGINEER AND THE DEVELOPER RESERVE THE RIGHT TO MAKE MINOR CHANGES AND ADJUSTMENTS TO THE LOCATIONS OF DRAINAGE STRUCTURES TO BETTER CONFORM TO THE NATURAL TERRAIN.
 4. ALL ROAD CULVERTS SHALL CONFORM TO MONTGOMERY COUNTY STANDARDS AND MAY BE EITHER REINFORCED CONCRETE OR CORRUGATED PLASTIC PIPES.
 5. MAX. GRADE OF ROADWAY CULVERTS: (BASED ON 5 FT/S VELOCITY FOR ROADSIDE DITCH DRAINAGE)

REINFORCED CONCRETE	18" RCP	0.0441
18" RCP	18" RCP	0.0441
24" RCP	24" RCP	0.0882
30" RCP	30" RCP	0.1323
36" RCP	36" RCP	0.1764
42" RCP	42" RCP	0.2205
48" RCP	48" RCP	0.2646
54" RCP	54" RCP	0.3087
60" RCP	60" RCP	0.3528
 6. CULVERTS SHALL BE INSTALLED WITH SLOPES AND DISTURBED AREAS WITH BERMS AS SHOWN (CALLED) WITH FERTILIZER 13-13-13 @ 500 LBS/AC.
 7. ALL DRAINAGE EASEMENTS MUST MEET MINIMUM COUNTY GRADE REQUIREMENTS (2.10%).
 8. THIS PROPERTY LOCATED IN ZONE "A" AND IS PARTIALLY WITHIN THE 100-YEAR FLOODPLAIN AS PER TEXAS MAP NO. 4833000A01 DATED 07-JAN-97. IN 1995, ONE LOT IS WITHIN THE 100-YEAR FLOODPLAIN.



- CULVERT CALCULATIONS -

Pipe Location	Basin Area (acres)	Ruoff Coeff.	Time of Concn. (minutes)	Adjusted Runoff (in/hr)	Peak Flowrate (cfs)	Culvert Size (inches)	# of Culverts (pipes)	Capacity per pipe (cfs)	Pipe Capacity (%)
A	1.686	0.402	10	8.7	5.82	18	1	8.84	65.8%
B	13.235	0.249	10	8.7	28.64	24	2	15.71	91.1%
C	21.289	0.262	10	8.7	48.47	36	2	35.34	68.6%
D	3.897	0.340	10	8.7	11.51	24	1	15.71	73.3%
E	0.375	0.650	10	8.7	2.77	18	1	8.84	31.3%
G	1.182	0.558	10	8.7	5.73	18	1	8.84	64.8%
H	2.521	0.532	10	8.7	11.65	18	2	8.84	74.2%
J	2.916	0.336	10	8.7	8.51	24	1	15.71	54.2%
K	2.620	0.392	10	8.7	8.92	24	1	15.71	56.8%
L	10.723	0.357	10	8.7	33.27	24	3	15.71	70.6%
M	0.389	0.662	10	8.7	2.19	18	1	8.84	24.7%
N	30.559	0.291	14	7.7	68.47	36	2	35.34	96.9%
P	41.264	0.299	17	7.2	68.22	36	3	35.34	83.2%
R	19.774	0.250	13	7.8	38.61	24	3	15.71	81.9%
S	9.837	0.270	10	8.7	23.08	24	3	15.71	73.5%
T	1.070	0.620	10	8.7	5.78	18	2	8.84	65.2%
U	3.288	0.402	10	8.7	11.49	18	2	15.71	73.1%
V	33.655	0.254	17	7.2	61.12	36	2	35.34	86.5%
W	13.113	0.307	10	8.7	34.98			15.71	74.2%

30 Apr 2002

MONTGOMERY COUNTY ENGINEER

COUNTY ENGINEER: *Wally Mooney, P.E.*
DATE: 4/13/02



POWERS ENGINEERING
3706 W. DAVIS - CONROE, TEXAS 77604

DRAINAGE PLAN
CROWN OAKS
SECTION THREE

SCALE
--PLAN VIEW--
1" = 30'

SHEET 2 OF 23