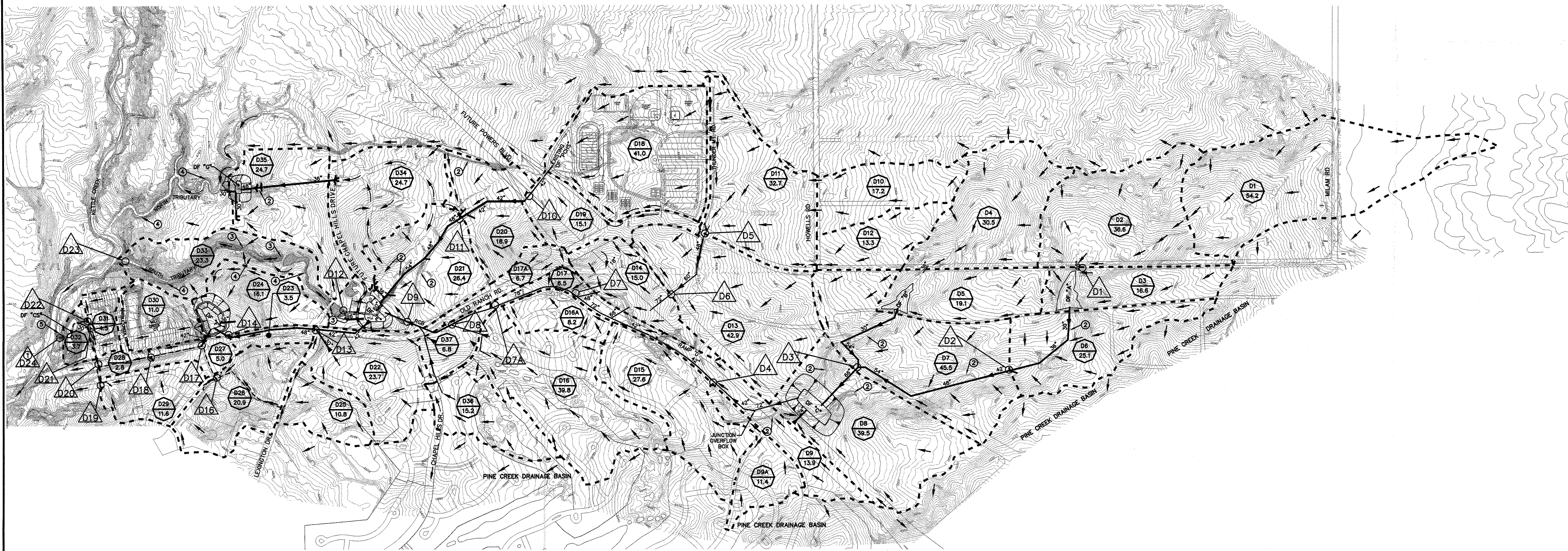


KETTLE CREEK DRAINAGE BASIN OLD RANCH ROAD TRIBUTARY MASTER DEVELOPMENT DRAINAGE PLAN FULLY DEVELOPED CONDITION BASIN MAP AND MASTER PLAN



- KEYED NOTES**
- ANALYSIS POINT D24 REPRESENTS A DIRECT ADDITION OF THE HYDROGRAPHS AT ANALYSIS POINT D23 AND THE OUTLET HYDROGRAPH FROM THE CREEKSIDE ESTATES REGIONAL DETENTION FACILITY. IT DOES NOT REFLECT ANY OTHER FLOW IN KETTLE CREEK.
 - NATURAL CHANNEL IS PROPOSED TO BE ELIMINATED IN THIS AREA. STORM WATER TO BE CONVEYED IN A PROPOSED STORM DRAIN.
 - REMOVE EXISTING EMBANKMENT DOWN TO LEVEL OF PERMANENT POOL. PROTECT REMAINING EMBANKMENT IF PRUDENT TO DO SO IN ORDER TO PROTECT AGAINST EXCESSIVE EROSION.
 - NATURAL CHANNEL PROPOSED TO REMAIN UNIMPROVED IN THIS AREA.
 - DETENTION FACILITY OUTLET AND SPILLWAY ARE PROPOSED TO BE REVEID.

- GENERAL NOTES:**
- PROPOSED STORM DRAINS SHOWN ON THIS PLAN ARE ONLY INTENDED TO INDICATE GENERAL LOCATIONS AND APPROXIMATE SIZES OF FUTURE FACILITIES. ACTUAL STORM DRAIN SIZES AND LOCATIONS SHALL BE DETERMINED WITH MORE DETAILED ANALYSIS AT THE TIME OF DETAILED DESIGN OF THE FACILITIES. IT IS LIKELY THAT ADDITIONAL FACILITIES NOT SHOWN ON THIS PLAN WILL BE REQUIRED.
 - PROPOSED DETENTION FACILITIES SHOWN ON THIS PLAN ARE ONLY INTENDED TO INDICATE GENERAL LOCATIONS AND LAND AREA REQUIRED FOR THESE FACILITIES. ACTUAL LOCATIONS AND LAND AREA REQUIRED SHALL BE DETERMINED AT THE TIME OF DETAILED DESIGN OF THE FACILITIES.
 - EXCEPT AS OTHERWISE NOTED, THIS PLAN SHALL NOT MODIFY THE REQUIREMENTS OF PREVIOUSLY APPROVED MASTER DEVELOPMENT DRAINAGE PLANS AND FINAL DRAINAGE REPORTS.

**SUB-BASIN DATA SUMMARY
FULLY DEVELOPED CONDITION**

SUB BASIN I.D.	AREA (sq miles)	(acres)	PERCENT IMPERVIOUS	ON	LAG (hours)	Q5 (cfs)	Q100 (cfs)
D1	0.085	54.7	3.0	67.5	0.385	17	72
D2	0.687	36.6	10.0	69.0	0.224	20	72
D3	0.026	16.6	33.3	75.0	0.267	13	40
D4	0.048	30.9	9.3	69.0	0.245	14	56
D5	0.030	19.1	30.3	74.2	0.249	16	29
D6	0.039	25.1	42.7	79.2	0.164	34	86
D7	0.062	39.5	72.3	92.7	0.173	111	205
D8	0.022	13.9	41.1	77.0	0.251	14	37
D9	0.021	11.4	31.8	74.5	0.273	10	30
D10	0.027	17.2	8.3	68.0	0.307	15	27
D11	0.051	32.7	29.6	74.2	0.231	27	81
D12	0.021	13.3	34.2	74.6	0.280	10	31
D13	0.027	17.2	8.3	68.0	0.307	15	27
D14	0.023	15.0	36.7	78.0	0.158	19	49
D15	0.043	27.6	31.0	75.0	0.200	26	75
D16	0.042	39.8	21.0	72.5	0.197	35	88
D16A	0.013	8.2	38.0	75.0	0.143	11	28
D17	0.010	6.5	32.8	76.5	0.117	10	25
D17A	0.011	6.7	53.9	99.0	0.120	21	36
D18	0.084	41.0	38.0	78.3	0.252	38	106
D19	0.024	15.1	40.0	80.9	0.122	25	59
D20	0.030	18.9	80.4	96.5	0.108	62	107
D21	0.041	26.4	86.5	0.157	56	117	
D22	0.037	23.7	40.9	78.5	0.156	31	81
D23	0.005	3.5	56.7	88.0	0.110	8	15
D24	0.025	16.1	25.7	74.5	0.146	16	48
D25	0.017	10.8	53.2	82.2	0.158	18	42
D26	0.033	20.9	30.0	75.5	0.145	24	66
D27	0.008	5.0	46.5	80.0	0.143	8	19
D28	0.004	2.8	49.6	84.0	0.137	15	21
D29	0.018	11.6	37.8	78.2	0.146	15	40
D30	0.017	11.0	25.5	74.4	0.157	11	32
D31	0.007	4.5	40.0	78.5	0.146	9	26
D32	0.006	3.7	5.0	69.5	0.114	4	9
D33	0.036	23.3	10.4	70.2	0.138	18	59
D34	0.039	24.7	36.5	77.0	0.159	30	80
D35	0.039	24.7	40.0	78.0	0.161	32	83
D36	0.024	15.2	19.5	72.0	0.237	10	34
D37	0.011	6.8	93.1	99.0	0.124	23	40
TOTAL	1.269	812.0					

**ANALYSIS POINT DATA SUMMARY
FULLY DEVELOPED CONDITION**

ANALYSIS POINT	WATERSHED AREA (acres)	(sq miles)	Q2 (cfs)	Q5 (cfs)	Q10 (cfs)	Q25 (cfs)	Q50 (cfs)	Q100 (cfs)	POINT DESCRIPTION
D1	30.8	0.14	11	31	48	79	102	127	TOTAL FLOW
DFA	107.4	0.17	17	44	86	105	134	165	TOTAL POND INFLOW
D2	132.1	0.21	30	64	81	101	116	131	TOTAL FLOW
DFB	49.6	0.08	13	30	44	68	85	103	TOTAL POND INFLOW
D3	227.6	0.36	73	148	198	254	291	330	TOTAL FLOW
DFC	267.1	0.42	139	237	311	405	465	524	TOTAL POND INFLOW
D4	278.5	0.44	47	64	73	85	93	102	TOTAL FLOW
D5	63.2	0.10	19	40	58	88	110	133	TOTAL FLOW
D6	106.1	0.17	90	141	178	238	280	323	TOTAL FLOW
D7	44.1	0.02	15	24	31	41	49	57	TOTAL FLOW
D7A	447.6	0.70	164	263	335	451	532	614	TOTAL FLOW
D8	502.3	0.78	191	310	398	538	637	739	TOTAL FLOW
D9	524.3	0.82	208	337	433	585	692	803	TOTAL FLOW
D10	56.1	0.09	15	25	32	44	54	65	TOTAL FLOW
D11	75.0	0.12	60	85	103	129	147	167	TOTAL FLOW
D1E	625.7	0.98	299	470	596	796	935	1079	TOTAL POND INFLOW
D12	***	0.98	9	77	148	227	417	525	OUTFLOW TO NAT. CHANNEL
D13	***	0.98	9	77	148	227	417	525	TOTAL FLOW
D14	***	0.98	9	77	148	227	417	525	TOTAL FLOW
DFD	***	0.98	9	77	148	227	417	525	TOTAL POND INFLOW
D16	***	0.98	9	77	148	227	417	525	TOTAL FLOW
D17	***	0.98	9	77	148	227	417	525	TOTAL FLOW
D18	***	0.98	9	77	148	227	417	525	TOTAL FLOW
D19	***	0.98	9	77	148	227	417	525	INTERCEPTED FLOW
D20	***	0.98	9	77	148	227	417	525	TOTAL FLOW
D21	***	0.98	9	77	148	227	417	525	TOTAL FLOW IN STORM DRAIN
D22	***	0.98	9	77	148	227	417	525	TOTAL FLOW
DFE	***	0.98	9	77	148	227	417	525	TOTAL POND INFLOW
D23	***	0.98	9	77	148	227	417	525	TOTAL FLOW
D24	***	0.98	9	77	148	227	417	525	TOTAL FLOW FROM "DFCS" & D23
DFG	***	0.98	9	77	148	227	417	525	TOTAL POND INFLOW

• WATERSHED AREAS DO NOT REFLECT THE TRIBUTARY AREA REDUCTION DUE TO THE DIVERSION OF FLOW Q₅ ARE COMPUTED BASED ON THE ACTUAL BASIN AREAS.
** PEAK FLOW DIVERTED TO NATURAL CHANNEL DURING INFREQUENT RUNOFF EVENTS.

LEGEND

- 5660 — EXISTING CONTOUR 10'
- 5660 — EXISTING CONTOUR 2'
- - - DEVELOPED BASIN BOUNDARY
- - - EXISTING STORM DRAIN
- 48" — ESTIMATED STORM DRAIN SIZE PROPOSED STORM DRAIN
- RBC — PROPOSED REINFORCED BOX CULVERT
- DRAINAGE DIRECTION
- D8 — BASIN IDENTIFIER
- 39.5 — BASIN AREA (ACRES)
- D4 — ANALYSIS POINT
- ① — KEYED NOTE REFERENCE

DETENTION FACILITY DATA SUMMARY

DETENTION FACILITY I.D.	PEAK INFLOW (CFS)					PEAK OUTFLOW (CFS)					ESTIMATED PEAK STORAGE (ACRE-FEET)						
	Q2	Q5	Q10	Q25	Q50	Q2	Q5	Q10	Q25	Q50	V2	V5	V10	V25	V50	V100	
A	17	44	66	105	134	165	17	36	45	54	60	85	0	0.1	0.4	1	4
B	13	30	44	68	85	103	13	30	38	47	52	57	0	0.0	0.1	1	4
C	139	237	311	405	465	524	45	60	68	75	81	86	3	7	10	14	21
E	299	470	596	796	935	1079	60	137	213	366	489	600	11	16	19	23	28
F	66	100	123	159	184	208	48	57	61	66	71	76	8	8	8	8	9
G	33	60	81	115	138	162	2	11	23	31	36	41	1	2	2	2	4
CREEKSIDE	83	123	164	192	221	237	37	55	61	73	79	90	3	5	5	6	6
P.C. HIGH SCHOOL	19	38	51	74	90	106	1	6	14	29	33	36	1	1	2	2	3

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE AGENCIES OR ENGINEERING AGENCIES, THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR

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No.	DATE	BY	REVISION
1	10/2002	VSF	REMOVED ROYAL PINE DRIVE STORM SEWER AT POWERS RAMP 'D'

KETTLE CREEK DRAINAGE BASIN
OLD RANCH ROAD TRIBUTARY
MASTER DEVELOPMENT DRAINAGE PLAN
 FULLY DEVELOPED CONDITION
 BASIN MAP AND MASTER PLAN
 SHEET 1 OF 1
 JOB NO. 28877.10