J. E. VIGIL CO.
8138 Foothill Blvd.
SUNLAND, CA 91040
(818) 352-2352

JOB 13-04 PATRIOT
SHEET NO. OF
CALCULATED BY DATE 7-24-04
CHECKED BY DATE
SCALE

T. 61553 - 22255 MULHOLLAND

REGISTERED PROFESSIONAL ENGINEER
JOHN E. VIGIL
No. 19481
Exp. 9-30-05
CIVIL
STATE OF CALIFORNIA

HYDROLOGY

EXIST UNIMPROVED AREA DRAINS NORTHEASTERLY INTO ABANDONED DWP RESERVOIR, WHICH CARRIES OFFSITE DRAINAGE INTO SAN FELICIANO STORM DRAIN.

THE IMPROVED AREA WILL CONVEY RUNOFF VIA STREETS INTO THE STORM DRAINS WHICH BORDER THE TRACT TO THE WEST AND ALONG FELICIANO. IN OTHER WORDS THE RUNOFF WILL END UP IN THE SAME STORM DRAIN SYSTEM.

A = 270,982 $\square'$ OR 6.22 ACRES

I50 = 1.77 FRO = 1.141 (fig G242, 36+1, 1.77 I50)

t_c = 7 MIN (from fig G261) BPRR = 2.93

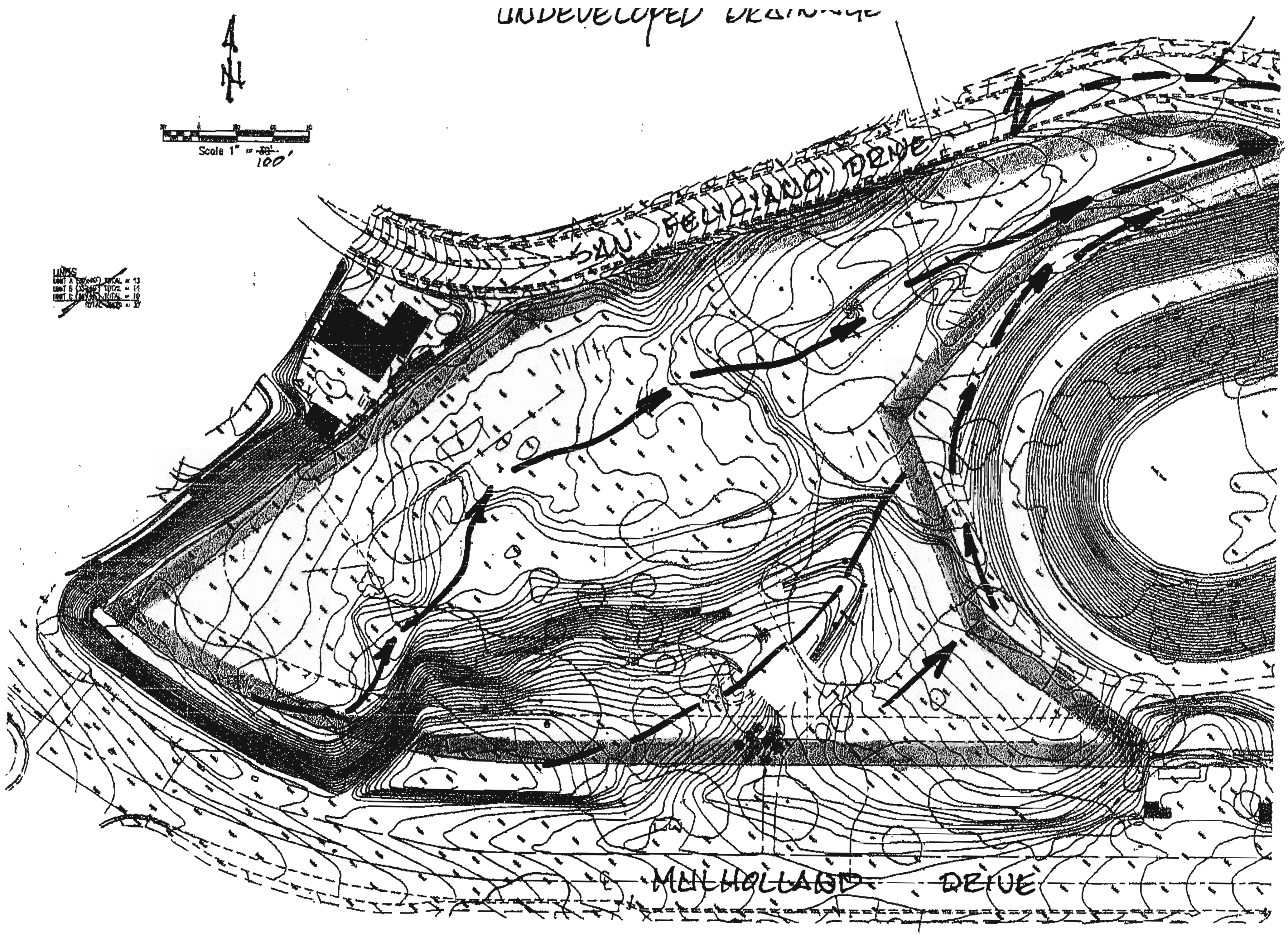
Q_{50} = BPRR × FRO × AREA

= 2.93 × 1.141 × 6.22 = 25.7 CFS.
UNDEVELOPED

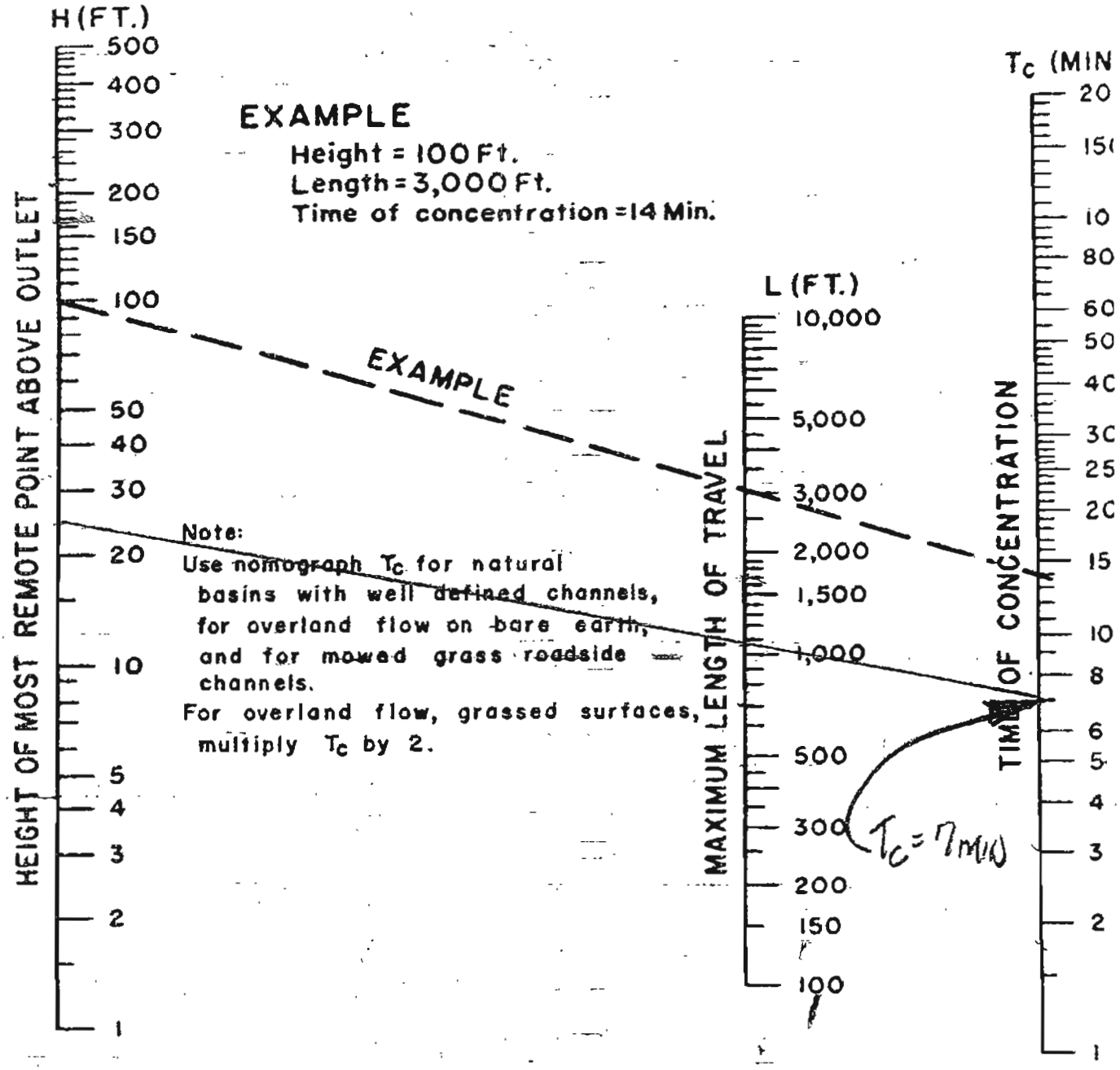
DEVELOPED 70-1, 1.77 I50 FRO = 1.58

$Q_{50(DEV)}$ = 3.14 × 1.58 × 6.22 = 30.9 CFS
DEVELOPED

NET INCREASE = 30.9 - 25.7 = 5.2 CFS


UNDEVELOPED DRAINAGE
N
Scale 1" = 100'
SAN FELICIANO DRIVE
MULHOLLAND DRIVE

TIME OF CONCENTRATION FOR SMALL DRAINAGE BASINS



Based on study by P. Z. Kirpich,
Civil Engineering, Vol. 10, No. 6, June 1940, p. 332

Rev. 1973

Figure G 261

TABLE OF RUNOFF FACTORS – F_{RO}

✳ Zoning Classification	Perm. Class.	1.33 Isohyetal Year frequency					1.55 Isohyetal Year frequency					1.77 Isohyetal Year frequency					1.98 Isohyetal Year frequency				
		1	5	10	25	50	1	5	10	25	50	1	5	10	25	50	1	5	10	25	50
R4, R5, P, PB, CR, C, CM, M, Schools, Playgnds.	100	0.56	0.86	1.00	1.17	1.30	0.65	1.00	1.15	1.36	1.52	0.74	1.14	1.32	1.55	1.73	0.83	1.28	1.49	1.74	1.94
R3 (Level)	70-1	0.50	0.77	0.89	1.04	1.16	0.59	0.90	1.04	1.23	1.37	0.68	1.04	1.20	1.42	1.58	0.77	1.18	1.36	1.60	1.78
RS, RI, RE9	70-2	0.48	0.75	0.87	1.03	1.15	0.56	0.88	1.02	1.21	1.35	0.65	1.02	1.18	1.40	1.56	0.73	1.15	1.33	1.58	1.76
(Hillside)	70-3	0.42	0.65	0.76	0.92	1.03	0.49	0.77	0.91	1.09	1.23	0.56	0.90	1.06	1.27	1.43	0.63	1.03	1.21	1.45	1.62
R2,	60-1	0.46	0.73	0.85	1.00	1.11	0.55	0.87	1.01	1.18	1.31	0.65	1.01	1.16	1.37	1.52	0.74	1.15	1.40	1.55	1.72
RD3 to 6,	60-2	0.41	0.68	0.79	0.95	1.07	0.49	0.81	0.96	1.14	1.28	0.58	0.96	1.12	1.33	1.49	0.68	1.10	1.28	1.52	1.69
RW1, RW2	60-3	0.37	0.57	0.67	0.82	0.93	0.42	0.68	0.82	0.99	1.12	0.49	0.81	0.96	1.16	1.31	0.56	0.93	1.10	1.33	1.50
R1, RD1.5, RD2,	50-1	0.40	0.67	0.79	0.95	1.06	0.49	0.82	0.95	1.14	1.28	0.59	0.97	1.13	1.34	1.49	0.68	1.11	1.29	1.53	1.70
RE11 to 40	50-2	0.33	0.51	0.61	0.78	0.90	0.38	0.62	0.78	0.98	1.13	0.43	0.77	0.95	1.18	1.35	0.49	0.92	1.12	1.38	1.56
(Hillside)	50-3	0.28	0.44	0.51	0.60	0.66	0.33	0.51	0.59	0.70	0.80	0.36	0.58	0.67	0.82	0.97	0.42	0.65	0.77	0.98	1.16
RS, RI, RE9	40-1	0.41	0.66	0.76	0.91	1.02	0.50	0.79	0.92	1.09	1.22	0.59	0.93	1.09	1.28	1.43	0.66	1.08	1.25	1.47	1.62
	40-2	0.29	0.54	0.65	0.80	0.91	0.35	0.68	0.81	0.98	1.12	0.47	0.82	0.97	1.18	1.33	0.56	0.96	1.13	1.36	1.52
(Level)	40-3	0.24	0.37	0.43	0.55	0.64	0.28	0.44	0.54	0.70	0.82	0.32	0.54	0.68	0.86	1.00	0.36	0.65	0.81	1.02	1.18
A1, A2, RA,	35-1	0.34	0.60	0.72	0.87	0.98	0.43	0.74	0.88	1.06	1.19	0.54	0.89	1.05	1.26	1.41	0.63	1.04	1.21	1.45	1.62
RE11 to 40 (Level),	35-2	0.20	0.33	0.47	0.66	0.79	0.23	0.49	0.66	0.87	1.01	0.27	0.66	0.85	1.08	1.22	0.31	0.83	1.03	1.26	1.43
Undevel. Hillside	35-3	0.19	0.30	0.35	0.41	0.46	0.22	0.35	0.40	0.47	0.57	0.26	0.40	0.46	0.60	0.74	0.29	0.45	0.54	0.76	0.92
Park (lawn only)	15-1	0.29	0.53	0.64	0.77	0.87	0.37	0.67	0.79	0.96	1.08	0.47	0.81	0.96	1.16	1.30	0.57	0.96	1.13	1.36	1.52
RPD	15-2	0.11	0.21	0.32	0.48	0.60	0.12	0.34	0.48	0.67	0.81	0.14	0.49	0.66	0.88	1.03	0.19	0.64	0.83	1.08	1.25
	15-3	0.10	0.16	0.18	0.22	0.24	0.11	0.18	0.21	0.25	0.30	0.13	0.21	0.24	0.32	0.43	0.15	0.24	0.29	0.44	0.59

Isohyetal Map – Figure G241.1A
Soil Classifications – Figure G241.2

F_{RO} Values - Figure G 242.2 F to K
✳ Refer to Figure G 241.3 prior to application

STORM DRAIN DESIGN DIVISION – 1973 J.L.B

FIGURE G 242.2