HYDROLOGY

L22/D23c
TWO PLANS

L22/D23C

DESIGN DATA

401 DORADO PLACE S.E.
LOT # 28
SINGING ARROW SUBDIVISION
DORADO VILLAGE ADDITION

ZONING: R-2 (ATLAS L-22-Z)
FIRE ZONE: 3 (U.B.C.)
SEISMIC: ZONE 2

BUILDING TYPE: 'V'
OCCUPANCY GROUP: R-3
FLOOR AREA: 3,180 ♯ ACTUAL

SOIL BRG.: 2000 P.S.F.
WIND LOAD: 30 P.S.F.
FLOOR LOAD: 40 P.S.F. LIVE
ROOF LOAD - 20 P.S.F. LIVE

CONC.: f_c = 3000 P.S.I.
LUMBER: f_b = 1300 P.S.I. (FRAMING)
STEEL: A-36

1976 U.B.C.
M.P.S. # 4910.1 5TH REVISION

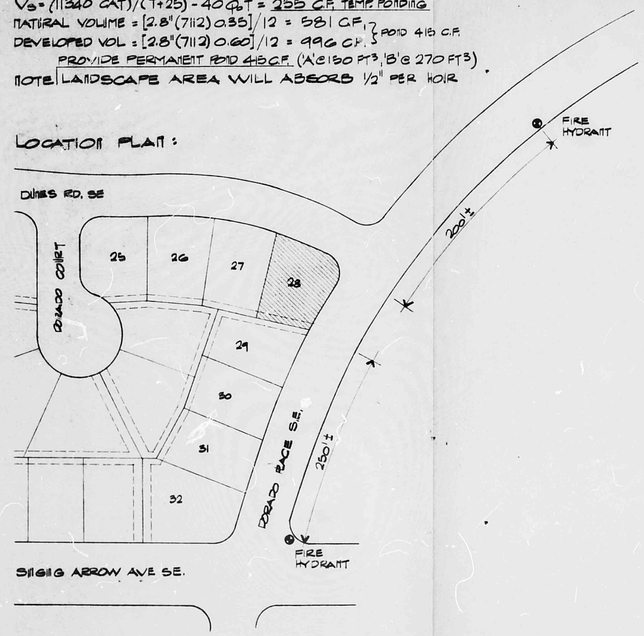
PARKING: REQ'D 6 - ACTUAL 6

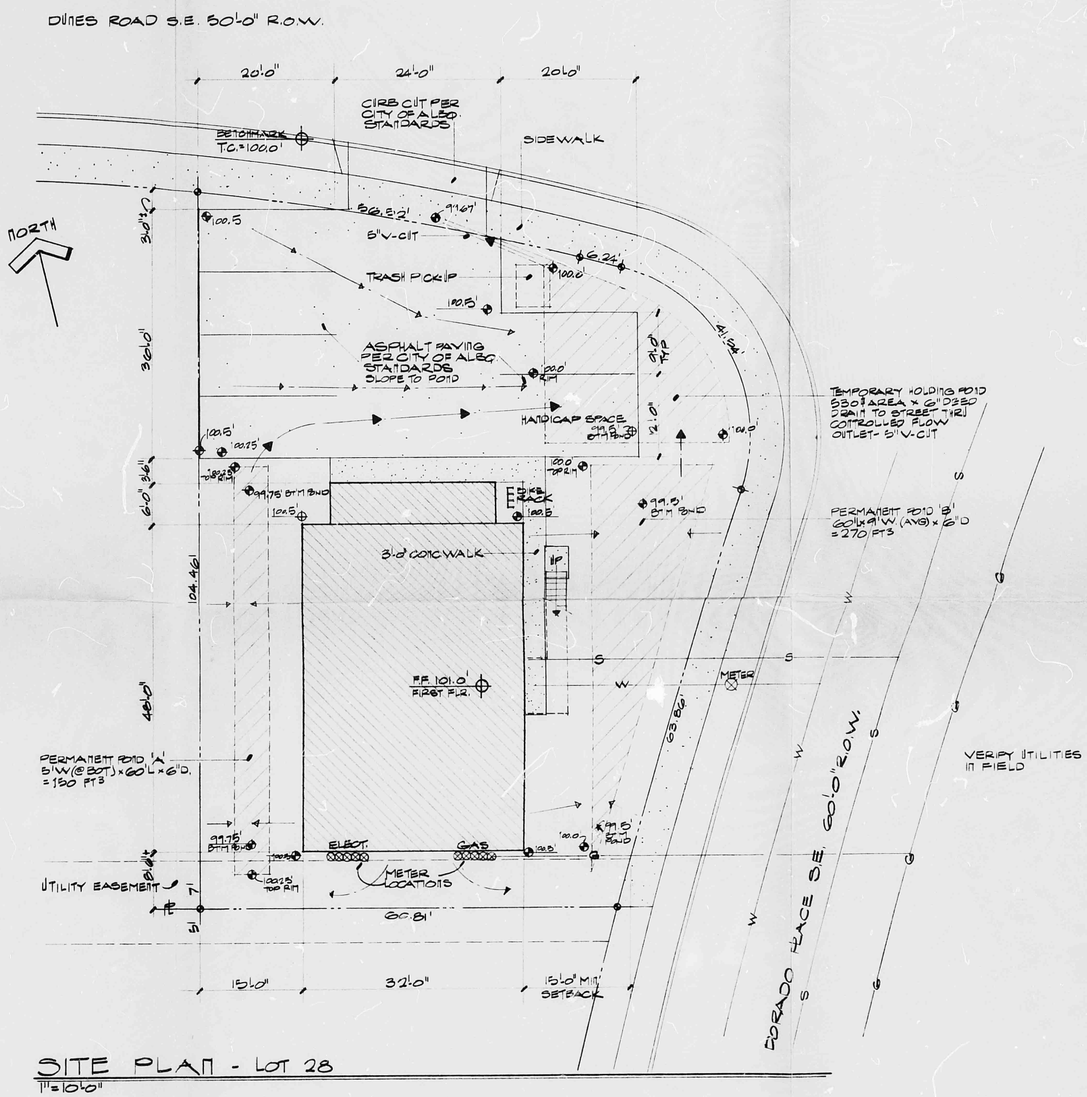
OPEN AREA: REQ'D 2000♯ - ACTUAL 3226♯+

DRAINAGE CALCULATIONS
LOT AREA = 7112♯ = .1632 ac. (PAVED AREA = 3886♯ - LANDSCAPE = 3226♯)

NATURAL RUNOFF = Q_o = CIA
= (0.35)(0.4 X .1632) = .31 CFS
'C' ROOF (ASPHALT) = 0.95 (54%) = .51 } AVERAGE 'C' = .80
'C' LANDSCAPING = 0.20 (46%) = .09
THEN, T = -25 + √(70875) CA/Q_o = 23.1 MINUTES
V_s = (11340 CAT)/(T+25) - 40 Q_oT = 255 C.F. TEMP PONDING
NATURAL VOLUME = [2.8"(7112) 0.35]/12 = 581 C.F.
DEVELOPED VOL. = [2.8"(7112) 0.60]/12 = 996 C.F. } POND 416 C.F.
PROVIDE PERMANENT POND 416 C.F. ('A' @ 150 FT³, 'B' @ 270 FT³)
NOTE: LANDSCAPE AREA WILL ABSORB 1/2" PER HOUR

LOCATION PLAN:





SITE PLAN - LOT 28
1"=10'-0"

401 Dorado PL S.E.

A FOUR-PLEX LIVING UNIT
FOR
HINES HOMES, LTD.

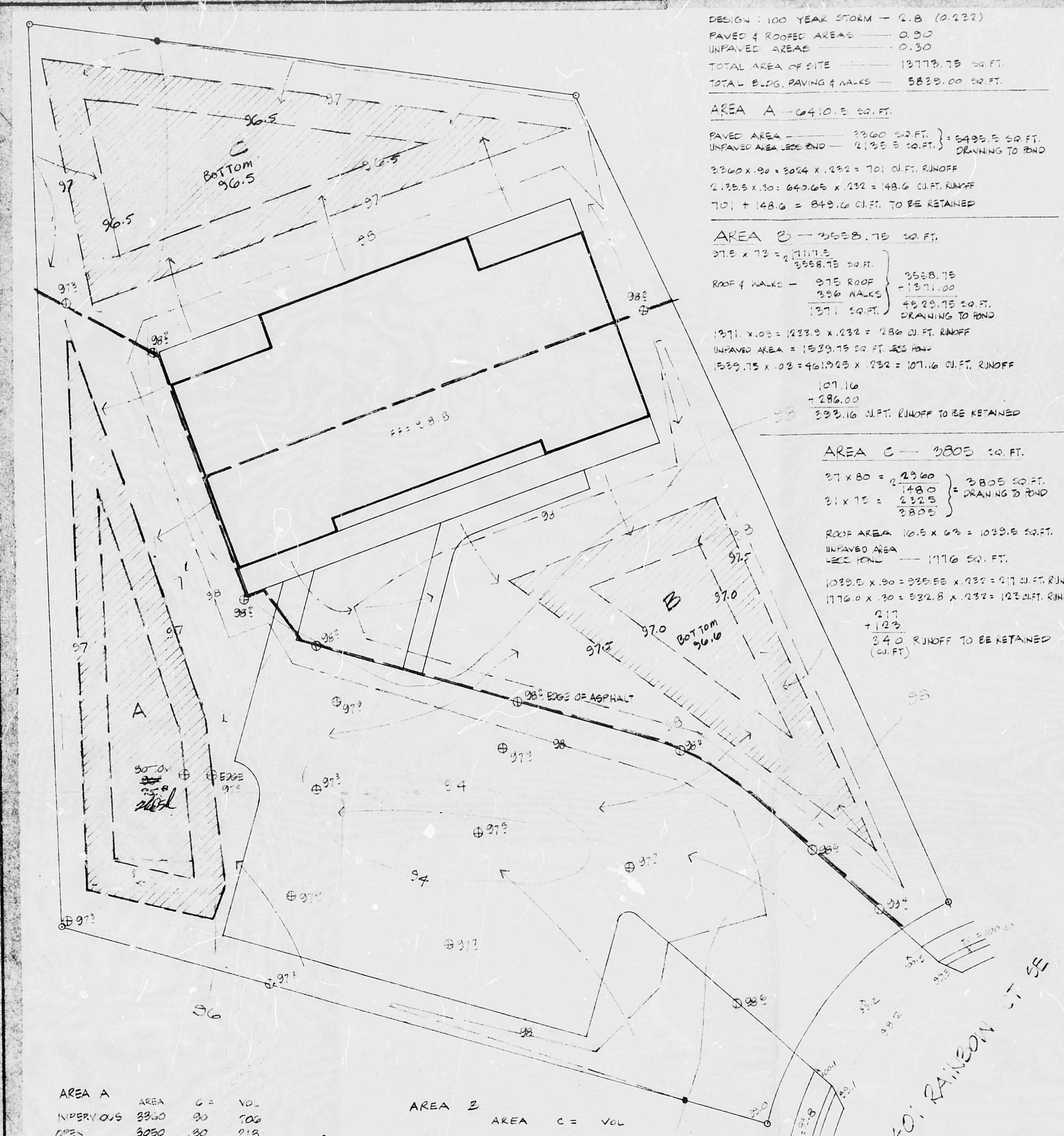
JUNE 1977

SHEET 1

THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT

L22/D23C (2)

PHOTOGRAPHS



DESIGN : 100 YEAR STORM — 2.8 (0.232)
PAVED & ROOFED AREAS ——— 0.90
UNPAVED AREAS ——— 0.30
TOTAL AREA OF SITE ——— 13779.75 SQ. FT.
TOTAL BLDG. PAVING & WALKS — 5838.00 SQ. FT.

AREA A — 6410.5 SQ. FT.

PAVED AREA ——— 2360 SQ. FT.
UNPAVED AREA LESS POND — 4,135.5 SQ. FT. } = 6495.5 SQ. FT. DRAINING TO POND

2360 X .90 = 2024 X .232 = 701 CU. FT. RUNOFF
4,135.5 X .30 = 649.65 X .232 = 148.6 CU. FT. RUNOFF
701 + 148.6 = 849.6 CU. FT. TO BE RETAINED

AREA B — 3538.75 SQ. FT.

37.5 X 73 = 2737.5
3968.75 SQ. FT.
ROOF & WALKS — 375 ROOF, 336 WALKS — 1371. SQ. FT.
3968.75 − 1371.00 = 2598.75 SQ. FT. DRAINING TO POND

1371. X .03 = 1233.9 X .232 = 286 CU. FT. RUNOFF
UNPAVED AREA = 1539.75 SQ. FT. LESS POND
1539.75 X .03 = 461.925 X .232 = 107.16 CU. FT. RUNOFF
107.16 + 286.00 = 393.16 CU. FT. RUNOFF TO BE RETAINED

AREA C — 3805 SQ. FT.

37 X 80 = 2960
21 X 73 = 1480
4440
3805
} = 3805 SQ. FT. DRAINING TO POND

ROOF AREA 16.5 X 63 = 1039.5 SQ. FT.
UNPAVED AREA LESS POND — 1776 SQ. FT.

1039.5 X .90 = 935.55 X .232 = 217 CU. FT. RUNOFF
1776.0 X .30 = 532.8 X .232 = 123 CU. FT. RUNOFF
217 + 123 = 340 (CU. FT.) RUNOFF TO BE RETAINED

AREA A

	AREA	C =	VOL
IMPERVIOUS	2360	.90	702
OPEN	3050	.30	218
TOTAL (V100)			920 FT³ 8449

POND DATA

SURFACE AREA 1888
BOTTOM AREA 840
DEPTH 1.2 FT

VOL = $\frac{1.2}{3}\left[1888 + 840 + \sqrt{1888 \times 840}\right]$ = ~~880~~ 865 FT³

EXCEEDS REQMT BY 14 FT³

1 | 5 — SIDE SLOPE MAX. @ ALL SIDES

AREA B

	AREA	C =	VOL
IMPERVIOUS	1371	.90	286
OPEN	2187	.30	153
TOTAL (V100)			441 FT³ 250'D 00% RET.

POND DATA

SURFACE AREA 840
BOTTOM AREA 330
DEPTH 0.9

VOL = $\frac{0.9}{3}\left[840 + 330 + \sqrt{840 \times 330}\right]$ = 509 FT³

EXCEEDS REQMT. BY 68 FT³

1 | 5 — SIDE SLOPE MAX. @ ALL SIDES

AREA C

	AREA	C =	VOL
IMPERVIOUS	1040	.90	218
OPEN	2765	.30	194
TOTAL (V100)			412 FT³

POND DATA

SURFACE AREA 1040
BOTTOM AREA 2765
DEPTH 0.5

VOL = $\frac{0.5}{3}\left[1040 + 2765 + \sqrt{1040 \times 2765}\right]$ = 496 FT³

EXCEEDS REQMT BY 84 FT³

1 | 5 — SIDE SLOPE MAX. @ ALL SIDES

APPROVED FOR DRAINAGE
12-7-79
DATE
ADVISE DRAINAGE INSPECTOR WHEN GRADING EXECUTED
SATISFIES CONDITIONAL

1 X 1.5 CU. FT. VOLUME OF SIDE

POND SECTION
1/2" = 1'-0"

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L22/D830