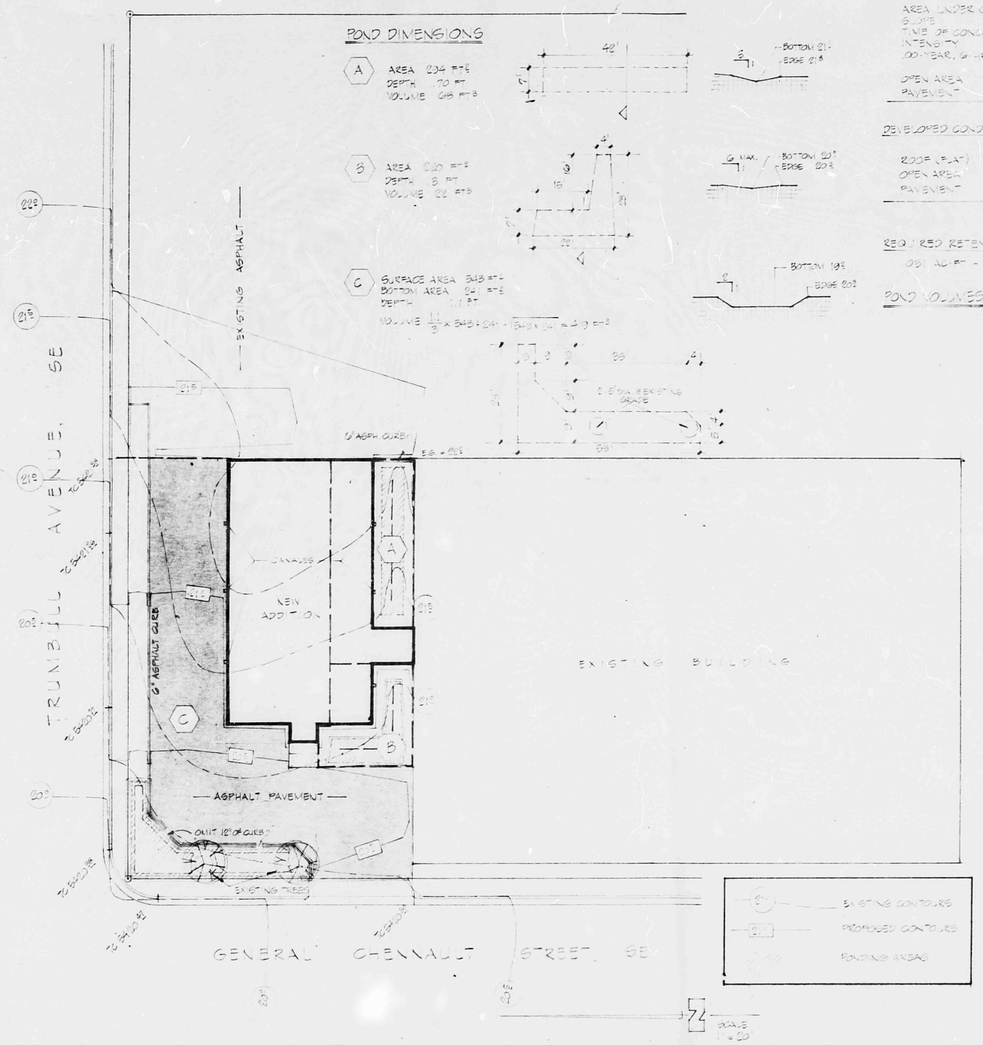
HYDROLOGY

L20/D5
ONE PLAN
NO DOCUMENTS

L 20/D5

1 PLAN
NO DOCUMENTS



POND DIMENSIONS

(A) AREA 234 SF
DEPTH .70 FT
VOLUME 164 CF

(B) AREA 220 SF
DEPTH .8 FT
VOLUME 62 CF

(C) SURFACE AREA 548 SF
BOTTOM AREA 24 SF
DEPTH 1.1 FT
VOLUME $\frac{1.1}{3}$ x 548 + 24 + $\sqrt{548 \times 24}$ = 320 CF

DRAINAGE CALCULATIONS

THIS STUDY COVERS AREA OF NEW ADDITION AND NEW PAVEMENT ONLY.

EXISTING CONDITIONS

AREA UNDER CONSIDERATION .21 ACRE
SLOPE .1 %
TIME OF CONCENTRATION 10 MINUTES
INTENSITY 3.4 IN/HR
100 YEAR, 6 HR PRECIPITATION 2.8 IN

	AC	C	A x C	RATE (CFS)	VOLUME (AC-FT)
OPEN AREA	.171	.40	.0684	2.00	0.81
PAVEMENT	.039	.92	.0359	.94	.0009
				2.08	.0009

DEVELOPED CONDITIONS

ROOF (FLAT)	.080	.87	.0696	.872	.018
OPEN AREA	.054	.40	.0216	.114	.004
PAVEMENT	.077	.92	.0708	.886	.014
				.872	.031

REQUIRED RETENTION

.031 AC-FT - .0009 AC-FT = .031 AC-FT (1,349 CU FT)

POND VOLUMES REQUIRED

(A)

DEVELOPED

	AREA	C=	VOLUME
ROOF	.017	.87	.0008
PAVEMENT	—		
OPEN	.018	.40	.0010
			.0018

EXISTING

OPEN	.0180	.40	.0028

RETENTION
.0018 (DEV) - .0028 (EXIST) = .0009 AC-FT (39 CU FT)

(B)

DEVELOPED

	AREA	C=	VOLUME
ROOF	.015	.87	.0008
PAVEMENT	—		
OPEN	.018	.40	.0011
			.0019

EXISTING

OPEN	.018	.40	.0014

RETENTION
.0019 (DEV) - .0014 (EXIST) = .0005 AC-FT (22 CU FT)

(C)

DEVELOPED

	AREA	C=	VOLUME
ROOF	.056	.87	.0024
PAVEMENT	.077	.92	.0146
OPEN	.022	.40	.0018
			.0184

EXISTING

OPEN	.180	.40	.0034
PAVEMENT	.077	.92	.0142
			.0176

RETENTION
.0184 (DEV) - .0176 (EXIST) = .0008 AC-FT (35 CU FT)

ENCHANTMENT ENGINEERING
5509 E. ELBANK BLVD. NE
ALBUQUERQUE, NEW MEXICO

DRAINAGE PLAN
FOR HABERT CAREER INC.

L20/D5