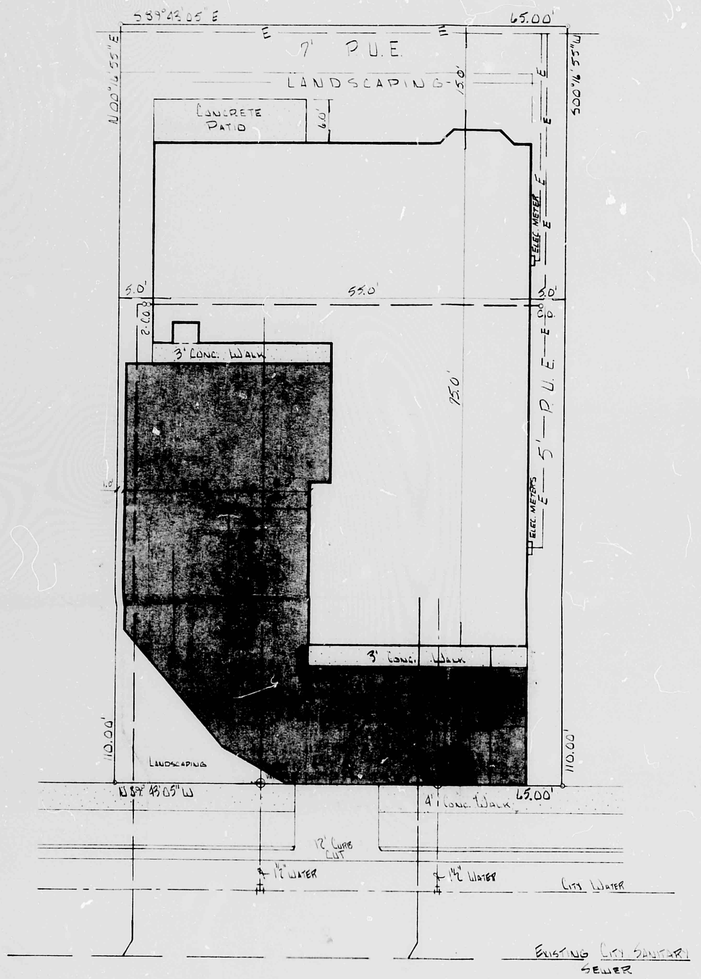
HYDROLOGY

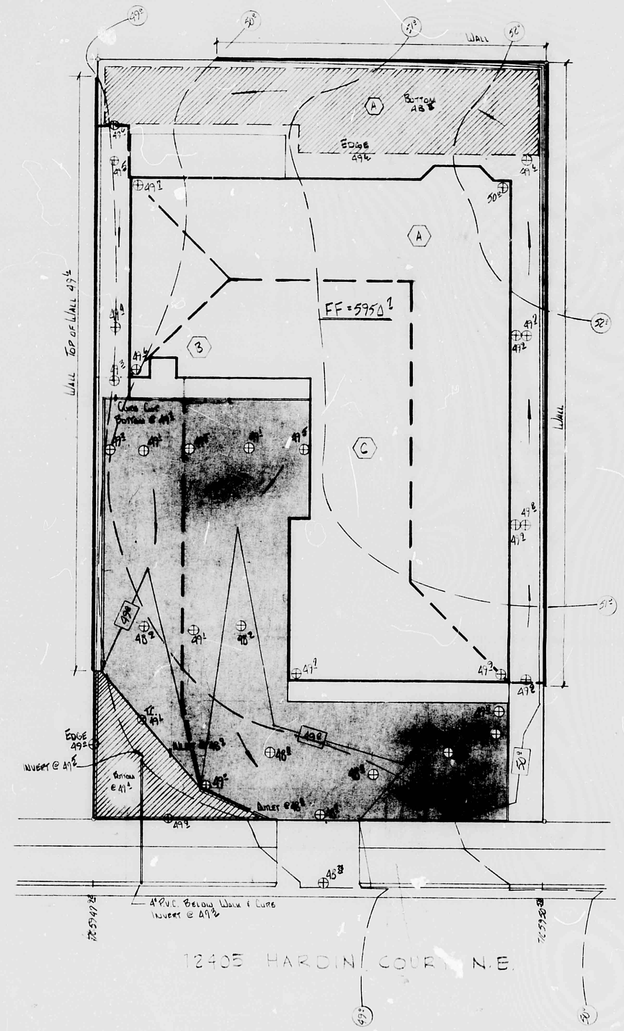
F22/D16

TWO PLANS

ENCHANTMENT ENGINEERING
1517 EUBANK BLVD, NE
ALBUQUERQUE, N.M.



12405 HARDIN COURT N.E.



12405 HARDIN COURT N.E.

DRAINAGE CALCULATIONS

EXISTING

AREA	7150 ft²
SLOPE	3.6 %
NATURAL RUNOFF COEFF.	.40
TIME OF CONCENTRATION	< 10 MIN.
INTENSITY	5.4 IN/HR
100 YR, 6 HR PRECIP.	2.6 IN.
RUNOFF RATE	.349 CFS
RUNOFF VOLUME	619.7 ft³

DEVELOPED

	AREA	C	A x C	RATE	VOLUME
PAVEMENT	2293	.92	2109.6	.262	.0605
ROOF	2930	.85	2490.5	.308	.0123
OPEN	1927	.40	770.8	.076	.0038
				.646	.0266 AC. FT.
					1158.70 ft³

REQUIRED RETENTION

1158.7 − 619.7 = 539.0 ft³ (.0 2 AC FT)

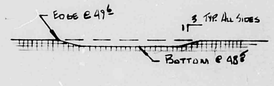
(A) DRAINAGE

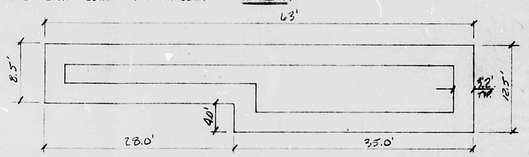
	AREA	C	VOLUME
ROOF	1622.0	.85	298.12 ft³
PAVING	475.0	.92	26.4 ft³
OPEN	1278.0	.40	110.76 ft³
REQ RETENTION			416.28 ft³

AVAILABLE PONDING

SURFACE AREA	=	615.5 ft²
BOTTOM AREA	=	227.5 ft²
DEPTH	=	1.1 ft

$V = \frac{1.1}{3} \times 615.5 + 227.5 + \sqrt{615.5 \times 227.5} = 470.8$ ft³





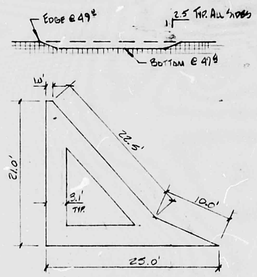
(B) DRAINAGE

	AREA	C	VOLUME
ROOF	210.0	.85	38.68 ft³
PAVING	580.5	.92	115.71 ft³
OPEN	240.0	.40	20.8 ft³
REQ RETENTION			175.19 ft³

AVAILABLE PONDING

SURFACE AREA	=	224.99 ft²
BOTTOM AREA	=	560.0 ft²
DEPTH	=	1.9 ft.

$V = \frac{1.9}{3} \times 224.99 + 42.0 + \sqrt{224.99 \times 42.0} = 189.51$ ft³



(C) DRAINAGE

	AREA	C	VOLUME
ROOF	1098.0	.85	202.22 ft³
PAVING	1517.5	.92	314.4 ft³
OPEN	100.0	.40	8.67 ft³
RUNOFF TO STREET			525.29 ft³

SITE PLAN & DRAINAGE

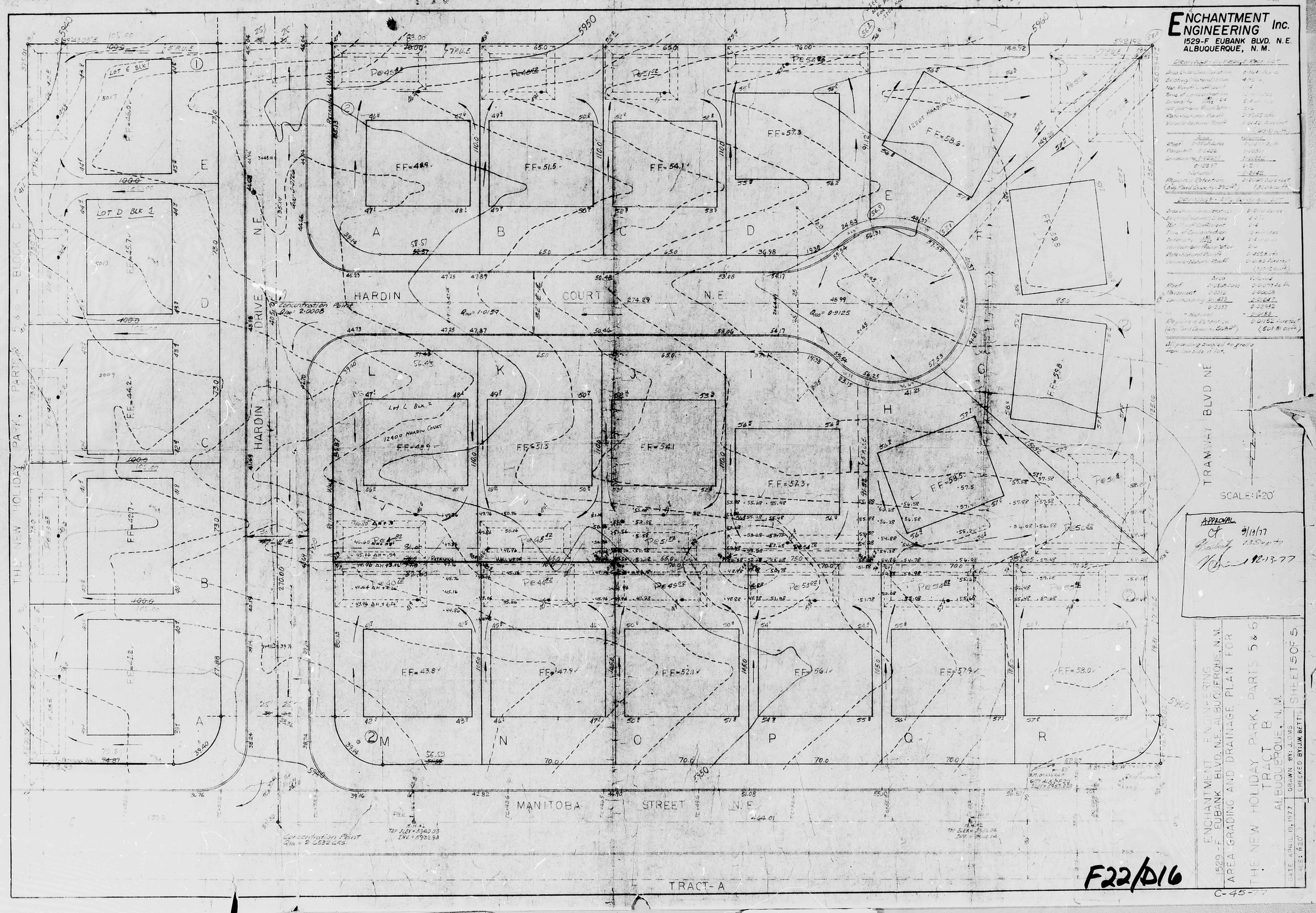
SCALE 1" = 10'

BLDG. CONST. TYPE.	V-N
ZONING	R-2
OCCUPANCY GROUP	R-1
SEISMIC ZONE	1
ROOF L.L.	20 PSF
FLOOR L.L.	40 PSF
WIND LOAD HORIZ.	25 PSF
CONC. STRENGTH f'c	3500 PSI

LOT 8'
BLOCK-2
NEW HOLIDAY PARK
PARTS 8 & 9
ALBUQUERQUE, NEW MEXICO
HARDIN CONSTRUCTION

⊕ PROPOSED SPOT ELEVATIONS
(50) EXISTING CONTOURS
[50] PROPOSED CONTOURS
PONDING AREAS

(2) F22/D16



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