HYDROLOGY E19/D7 1 PLAN

E19/D7

1 Plan

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 6, 1978

Mr. John E. McNerney
Mossman-Gladden, Inc.
P. O. Box 3010
Albuquerque, New Mexico 87110

Subject: Drainage Report Tract M, Unit 2, Bear Canyon Village

Dear Mr. McNerney:

I have reviewed the drainage plan for the above-referenced addition and I am in concurrence with the drainage scheme.

The drainage plan is hereby approved.

Sincerely,

Bruno Conegliano
Assistant City Engineer-Hydrology

BC/fs

cc - Mr. Heller
Mr. Leonard
Drainage File

Mossman-Gladden, Inc. Builders • Realtors
P.O. BOX 3010 • ALBUQUERQUE, NEW MEXICO 87110 • 2703 SAN MATEO BLVD., N.E. • PHONE 505-881 .11

RECEIVED
NOV 21 1978
CITY ENGINEERS

Drainage Report
Tract M, Unit 2, Bear Canyon Village
Mossman-Gladden, Inc.

Location: The North end of Tract M, 2.62 acres bounded by Quemado Drive, Burlison Drive, and Wyoming Blvd., NE (Map ref. E-19-Z).

Topography: Regular, with no abrupt changes in grade; slopes, 4% East to West, less than 1% North to South; sparce range grass cover; cohesionless soil of alluvial granitic origin. No exterior drainages will contribute runoff.

Developement: This area is to be developed as a town house site (R-T zoning) with small lots (average 5500 sq. ft.) on which the homes will occupy 40% of the lot area. Homes will be built in pairs, with common lot line party walls separating the units of each pair. This arrangement will assist in trapping rain water on the lot where it falls.

Hydrology: Rain falling on a house roof and on the lot area from the house front to the rear lot line will be trapped on that lot. Assume a 4 in. per hour rainfall intensity for both developed and undeveloped cases.

Undeveloped: Total area 2.619 acres.
Use Rational formula, Q=CIA
Q = 0.5 X 4 X 2.619 = 5.24 cfs

Developed:
1. Street and drive area, 0.617 acres
   Q = 0.4 X 4 X 0.144 = 2.34 cfs
2. Front landscaped area, 0.144 acres
   Q = .04 X 4 X 0.144 = 0.49 cfs

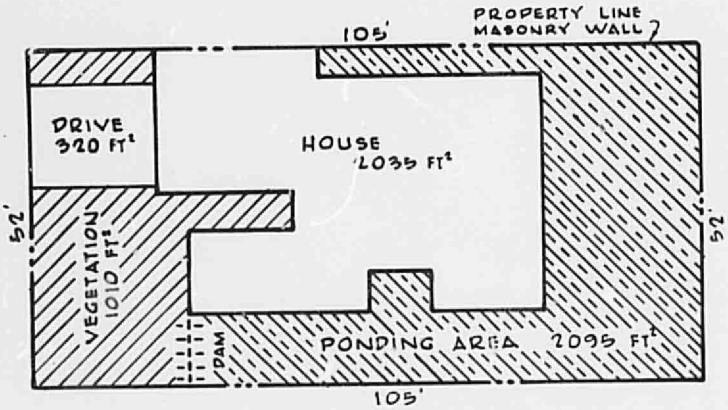
Total developed Q= 2.83 cfs

Net reduction in runoff when completely developed 2.41 cfs

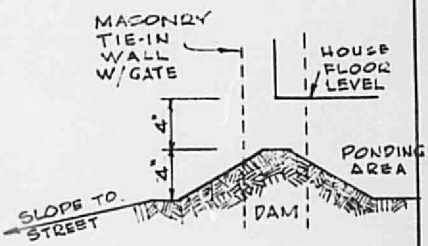
Conclusion: Developement of this tract will result in a reduction in storm water runoff.

Enclosures:
1. Site Plan
2. Topography
3. Area computations
4. Plat
5. Typical Plot Plan

John E. McNerney
John E. McNerney
N.M. Reg. No. 1104



TYPICAL TOWNHOUSE PLOT PLAN
1"=20'



SECTION THROUGH LOW DAM
AT HOUSE FRONT CORNER.
NO SCALE

House Area	2035 sq. ft.
Ponding Area	2095 sq. ft.
Area expected to produce runoff	4130 sq. ft.

Water produced from a 2.5 inch intensity storm in one hour: $4130 \times \frac{2.5}{12} = 860$ cf

Depth of water to be trapped in ponding area: $\frac{860}{2095} = 0.41$ ft. = 5 in.

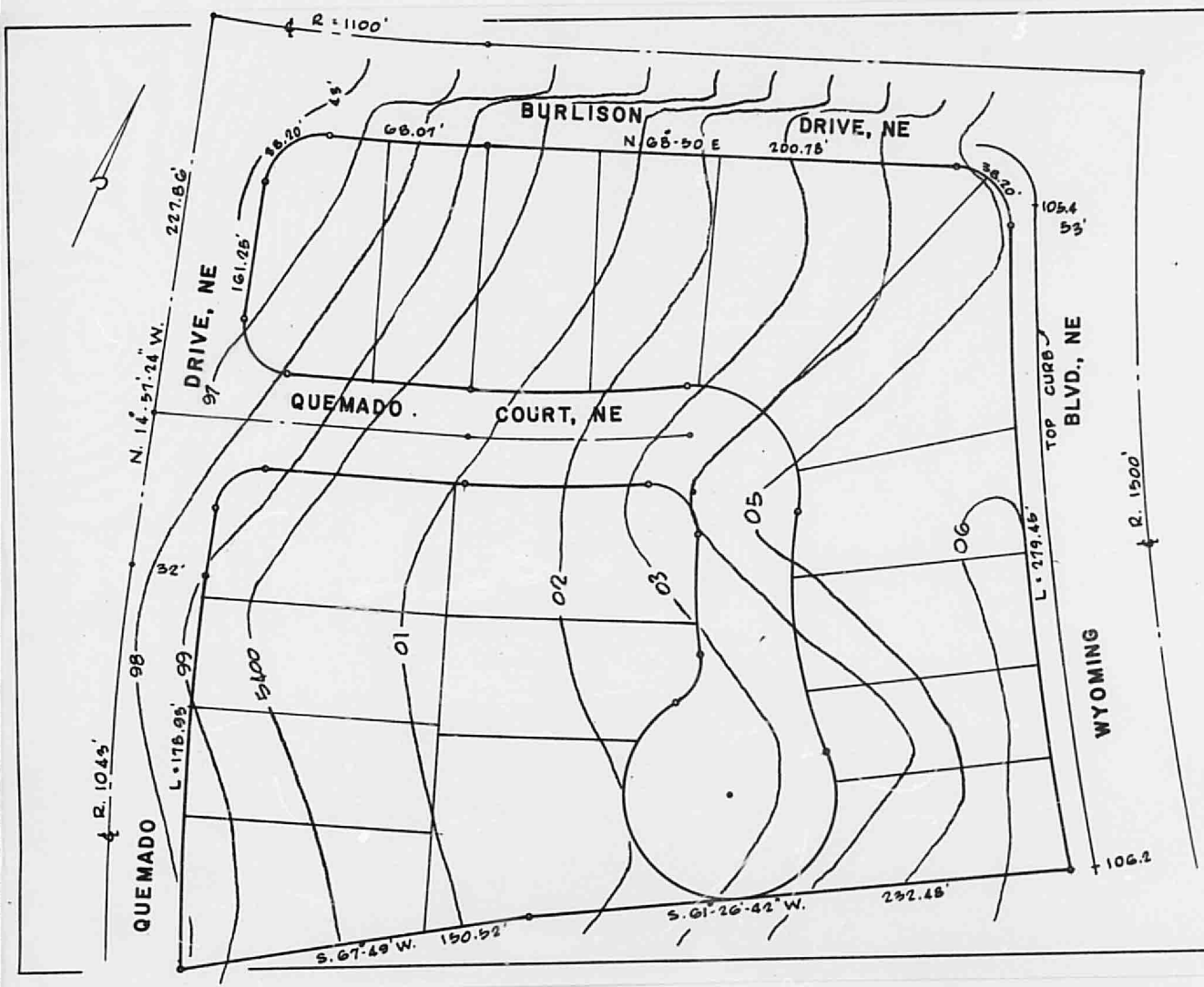
Deducting a 1 in. per hour percolation results in a maximum depth of 4" at the end of one hour.

Plot plan showing proposed ponding area on typical lot in Tract M, Unit 2, Bear Canyon Village Addition.

Typical house site area computations TRACT M
11/16/78

	Lot Areas, □'	House areas	Drive (to Rd)	Landscaped area, house to front Rd	Ponding area 1-(2+3+4)		
BLOCK 6	5449	2080	304	1100	1965		
	4378	1850	360	690	1478		
	5175	2370	380	588	1837		
	5040	2330	330	480	1900		
	8311	2440	440	420	5011		
BLOCK 5	7440	2344	608	460	4028		
	4748	2080	400	600	1668		
	4953	1989	400	1160	1404		
	3903	1983	320	560	1040		
	5001	2080	344	1050	1527		
Total	54398	21546	3886	7108	21858		
1	5436	2114	328	1008	1986		
2	4966	2399	319	504	1684		
3	4787	1789	400	1036	1362		
4	5885	2260	480	555	2590		
5	5872	2053	429	1125	2265		
6	5201	1989	400	696	2116		
7	7344	2195	352	1334	3463		
Total	39491	14999	2765	6258	15466		

Streets
20194 □' 0.464 ac
Drives
6654 □' 0.153 ac
Front landscaped area
13366 □' 0.307 ac
Ponding area
37324 □' 0.857 ac
House area
36545 □' 0.839 ac



TOPOGRAPHY
OF THE NORTHERLY PORTION
(2.62 Ac.) OF TRACT M, UNIT NO. 2
OF THE BEAR CANYON VILLAGE
ADDITION, WITH A PROPOSED
TOWN HOUSE PLAT SUPERIMPOSED.

SCALE, 1" = 50' CITY DATUM

MOSSMAN-GLADDEN 10/3/78

2257