HYDROLOGY E19/D14 ONE PLAN

E 19-D14

1 PLAN

Mossman-Gladden, Inc. Builders • Realtors
P.O. BOX 3010 • ALBUQUERQUE, NEW MEXICO 87110 • 2700 SAN MATEO BLVD., N.E. • PHONE 505-881-7111

July 20, 1979

RECEIVED
JUL 24 1979
CITY ENGINEER

Mr. Bruno Conegliano
City Engineer's Office
City of Albuquerque
P.O. Box 1293
Albuquerque, New Mexico 87103

Dear Bruno:

Enclosed is a drainage report for a new subdivision to be known as a Replat of Tracts H & J of Unit No. 2 of the Bear Canyon Village Addition.

Very truly yours,

John E. McNerney

John E. McNerney

JEM:dz
Encl.

DRAINAGE REPORT
A Replat of Tracts H and J, Unit No. 2
Bear Canyon Village Addition

Mossman-Gladden, Inc. Owners

Location: A tract of 9.145 acres bounded by Truchas Drive and Burlison Drive, NE on the west and south, and by the Academy Acres subdivision on the north and east. (Map Ref. E-19-Z)

Topography: Sloping and irregular; slopes, east to west 3.5%, north to south 1%. Sparce natural range grass cover. Soil, clean decomposed granitic sand to silty sand (SM-SP). No unusual or problem conditions. No accelerated erosion. A 3.5 acre area at the northeast corner will produce a runoff of approximately eleven cubic feet per second which will be lead through this subdivision in a street, Cielo Grande Loop, that follows the natural course of this drainage.

Siting Method: The homes in this subdivision will be town houses built on small (5500 sq. ft.) lots and will be built with party line walls. To achieve privacy and security, side yards will be enclosed by masonry wall connecting house front corners with side property line walls. Tie-in walls with gates will be built with small threshold type dikes to retain side yard runoff.

Hydrology: Rain falling on house roofs and on back and side yards will be trapped. The only rainfall to be discharged as runoff will be that falling on the areas from house fronts to streets and driveways. These front areas will be landscaped with lawns, trees, shrubs and gardens, thus producing minimum runoff.

Assuming a four inch per hour rain intensity for both historic (undeveloped) and developed cases:

Undeveloped: Total area 9.145 acres.
Rational formula
$Q = ciA$
$= 0.5 \times 4 \times 9.145$ = 18.29 cfs

Developed: Streets, drives and walks, 2.23 acres.
$Q = ciA$
$= 0.9 \times 4 \times 2.23$ = 8.03 cfs

Landscaped areas, 1.31 acres.
$Q = ciA$
$= 0.4 \times 4 \times 1.31$ = 2.10 cfs

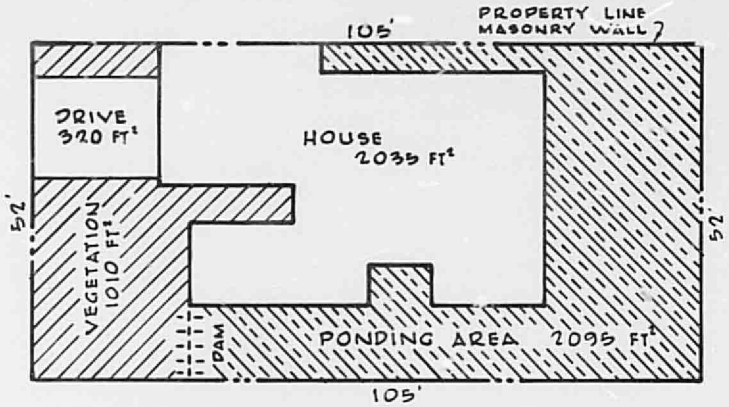
Developed Q Total 10.13 cfs

Net reduction in runoff when developed, 8.17 cfs.

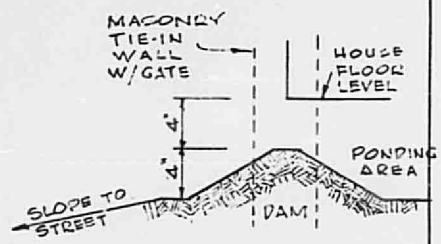
Conclusion: Development of this tract will result in a reduction of storm water runoff.

John E. McNerney
Reg. P.E. & L.S. No.1104

Encl.
1. Site Plan
2. Topography
3. Area Computations
4. Plat
5. Typical Plot Plan



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 Tracts H & J, Unit 2, Bear Canyon Village Addition.

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

September 7, 1979

E19-D14

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

SUBJECT: REPLAT OF TRACT H AND J, UNIT 2, BEAR CANYON VILLAGE ADDITION

Dear John:

I have reviewed the drainage plan for the captioned development and I can't approve it as submitted.

The major question regards the offsite drainage for the parcel east of this development. The proposed plat indicates a ten foot drainage easement which should be adequate to collect the offsite flow west of Wyoming; nevertheless, there is a need for concurrence from the owner of the land east of this property to the collection and the conveyance of his flow to that location. I believe that a letter of consent from said owner which could be recorded, would go a long way towards solving this problem. The orthophoto maps indicate a ponding area in the bed of the former arroyo crossing this development. Unfortunately, I do not have a development plan for the land east of this tract. Therefore, in compliance with the AMAFCA Resolution 72-2 and more specifically with Section 6B, the offsite drainage area and flow must be quantified and adequate information on the method of collection and conveyance through this parcel must be supplied. Further, it is now a requirement of the City Planning Department that prior to the signature of the plat, a site grading plan be submitted to the City Engineer's Office, demonstrating that the concepts outlined in the drainage report have been incorporated. Submission of this information will allow approval of the drainage report.

Very truly yours,

Bruno Conegliano
Assistant City Engineer - Hydrology

BC:bm
CC: Richard Leonard, AMAFCA
Richard Heller
"Rip" Orr
Drainage File

Mossman-Gladden, Inc. builders • realtors
P.O. BOX 3010 • ALBUQUERQUE, NEW MEXICO 87190 • 2700 SAN MATEO BLVD., N.E. • PHONE 505-881-7111

September 14, 1979

Mr. Bruno Conegliano
City Engineer's Office
City Hall
P.O. Box 1293
Albuquerque, New Mexico 87103

Dear Bruno:

Enclosed is a letter from the Rev. Kent Faris, Pastor of the Academy Baptist Church.

Mr. Faris is aware of the drainage situation at his Church property and has agreed to cooperate with Mossman-Gladden, Inc. in leading runoff water from his property to the easement provided in our replat of Tracts H and J of Bear Canyon Village.

Assuming that all of the area drainage into this easement, 3.33 acres, will be building and parking, the maximum runoff to be expected will be 12 cubic feet per second. The channel provided will pass 15 cfs at a depth of 0.2 feet.

Very truly yours,

John E. McNerney

John E. McNerney

JEM:dz
Encl.

September 14, 1979

Mr. Bruno Conegliano
City Engineer's Office
City of Albuquerque
P.O. Box 1293
Albuquerque, New Mexico 87103

Dear Mr. Conegliano:

It is our belief that the drainage easement shown on a Replat of Tracts H and J of Unit No. 2 of Bear Canyon Village will be adequate and located properly to suit our drainage requirements.

As shown on our development plan, the proposed drainage easement is situated at the low point of our site. Collecting runoff from our property and directing it into this outlet will present no problem.

We will cooperate with Mossman-Gladden, Inc. to be sure that drainage from our property is directed into the easement provided.

Kent Faris

Rev. Kent Faris
Pastor, Academy Baptist Church

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

September 19, 1979

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

SUBJECT: REPLAT OF TRACT H AND J, UNIT 2, BEAR CANYON VILLAGE ADDITION

Dear John:

I have received the information requested in my letter dated September 7, 1979. The Drainage Report is therefore hereby approved.

The grading plan will have to be expanded in the sense of showing a temporary diversion channel conveying the offsite flow from Tract A-1 to the proposed drainage easement. A temporary desilting facility will also have to be constructed to prevent sediment being conveyed onto Cielo Grande Loop, N. E.

If you have any questions on the above, please don't hesitate to call.

Very truly yours,

Bruno Conegliano
Asst. City Engineer-Hydrology

BC:bm
CC: R. E. Leonard, AMAFCA
R. S. Heller
Drainage File

P 8 7 8