HYDROLOGY G17/D10 1 PLAN

G17/D10

1 PLAN

Returned from Fred
4/23/81

APARTMENT DEVELOPMENT COMPANY
1921 CARLISLE, NE ● SUITE A
ALBUQUERQUE, NEW MEXICO 87110

September 15, 1980

RECEIVED
SEP 15 1980
CITY ENGINEER

Mr. Richard Heller, City Engineer
City of Albuquerque
P. O. Box 1293
Albuquerque, New Mexico 87103

Dear Mr. Heller:

The attached drainage study is for our property at Monroe Street and Montgomery Blvd. known as Tract D-2, Vista Grande Land Company Addition. It is closely related to a project the Burns-Peters Group Architects are doing on Tract D-1, which has grading currently being done.

The proposed drainage solutions are identical to those approved for our property at Adams and Candelaria, Tract B, Board of Education Addition.

Thank you for your help and review of this report.

Very truly yours,

Richard H Presley

RICHARD H. PRESLEY
APARTMENT DEVELOPMENT CO.

RHP:mlv

Encl:

RECEIVED
SEP 15 1980
CITY ENGINEER

DRAINAGE REPORT
TRACT D-2
VISTA GRANDE LAND CO. ADDITION

Monroe & Montgomery

Apartment Development Co
1921 Carlisle Blvd NE
Albuquerque, New Mexico 87110
265-5811

Prepared by: Kleston H. Laws
296-0274

KLESTON H. LAWS
NEW MEXICO
5628
LAND SURVEYOR
REGISTERED PROFESSIONAL ENGINEER

The purpose of this drainage report is to provide a detailed and specific criteria for drainage on tract D-2 which will allow development plan approval and issuance of building permits; and to present concepts of drainage for tract D-1 which has been divided and owned by two independant parties which will allow development plan approval.

Offsite drainage:

East of Tracts D-1 & D-2 are 30 acres of mostly undeveloped land. A Grand Central Store has provided ponding and appears to direct most of its runoff to Montgomery or through the ponds to Montgomery. Flows from an undeveloped 30 acres would be about 77 cfs in the design 100 year storm.

Monroe Street is proposed for improvement as shown on plans in the City Engineer's office prepared by Consultants, Inc and detailed in Estimate CP-28-93(116). This 40' wide street with a minimum slope of 0.5 percent will carry 77 cfs with water depths near 0.68 at curb. Therefore the site will be protected from offsite flows when the street is complete. A completed street will be required prior to receiving an occupancy permit for

buildings on Tract D-2.

Existing Conditions:

Currently the offsite and onsite flows move generally west and would eventually flow onto the apartment complex adjacent to Tract D-2.

The existing onsite flows would be:

$Q = (.45)(5.7)(3.063) = 7.9$ for Tract D-2

$Q = (.45)(5.7)(1.532) = 4.0$ for Tract D-1

11.9 for Total

DEVELOPED CONDITIONS:

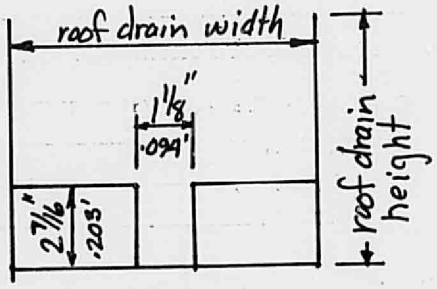
Tract D-1 will be developed with two office buildings and will submit detailed drainage plans acceptable to the City Engineer's office. These two lots will drain directly to Montgomery, and presumably will not pond or retain storm water.

Tract D-2 will develop with 80 apartments in 4 buildings and will drain to the northwest corner then across Tract D-1 in a concrete channel as agreed to by the property owners. This easement is filed with Bernalillo County Clerk and a copy was presented to the City by the Owners of Tract D-1.

Each building is a cast in place concrete structure with eight units around each courtyard. Each 8 units have a roof area of 4403.3 square feet with four roof drains. Each roof drain will have a control flow weir to limit the maximum rate the water can leave the roof.

The NOAA Atlas gives the 6hr-100 year precipitation as 2.4 inches. The one hour precipitation is assumed to be 2 inches which would generate maximum head on the control weir since runoff during the remaining portion of the storm would exceed the rainfall rate.

The control weir will be constructed as shown:



Maximum runoff will be

$Q = 2.68(.094)(.203)^{3/2} = .023$

The maximum for the one hour 2"

rain will be

$$Q = 2.68(.094)\left(\frac{2}{12}\right)^{3/2} = .017$$

and for all 40 roof drains $Q = .686$ cfs.

The roof area is 1.011 acres large.

The impervious area of the parking lots, sidewalks, and pool area is 1.31 acres. Which leaves a pervious area of 0.74 acres

The developed runoff will be:

Roofs		1.01 acres	= .7 cfs
Impervious	(.9)(5.7)	1.31	= 6.7 cfs
Pervious	(.3)(5.7)	0.74	= 1.3 cfs
		3.06	8.7 cfs

This 8.7 cfs is the amount the Burns-Peters Architects planned to convey across Tract D-1.

To reduce flows to the historic flow level or below and to reduce the flooding impact on Montgomery, speed bumps will be placed in the parking lot to detain the flow off the lot and impervious areas.

The channel across Tract D-1 is to have a bottom width of 4 feet and a depth of 8" with a minimum slope

of approximately 1.5 percent. At Montgomery the width will narrow to 3 feet to allow the steel plate for the sidewalk crossing.

Using King's Handbook Table 7-11 the channel capacity for the following assumptions is:

$b = 3'$ $\quad b^{8/3} = 18.7$

$D = .5'$

$D/b = .167$

$K' = .0582$

$S = .015$ $\quad S^{1/2} = .1225$

$n = .013$

$$Q = \frac{K'}{n} b^{8/3} S^{1/2} = \frac{.0582}{.013}(18.7)(.1225) = \cancel{27}\ 10.3 \text{ cfs.}$$

The depth for the design Q is

$$8.7 = \frac{K'}{.013}(18.7)(.1225) \qquad K' = .049$$

$$D/b = .14 \qquad D = 3(.14) = .42' \text{ or } 5''$$

The channel has adequate capacity.

To get the flows into the channel the opening would need to be $8.7 = 2.68(L)(.5)^{3/2}$

$L = 9.18'$

SUMMARY:

The site can be developed and not increase developed flows by:

1. Roof ponding with a control flow weir at the roof drains
2. Using speed bumps to detain runoff from the impervious areas.
3. Providing an opening into the channel at least 9'2" wide.
4. Constructing the drainage channel at least 3' wide and 8" deep, across Tract D-1 to Montgomery Blvd.

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CONVEYANCE OF DRAINAGE EASEMENT

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G17-D

WHEREAS, Robert D. Becker and Geraldine M. Becker, husband and wife own Tract D-1-B, and individually and as General Partners of Gazebo Ventures, Ltd., proposed tranferee of said tract all hereinafter "Gazebo", with proper protection and assurances are willing to grant a water drainage easement;

WHEREAS, Richard H. Presley, a single man; Charles E. Cook and Bette L. Cook, husband and wife; Randall E. Presley, a married man dealing in his sole and separate property; doing business as Apartment Development Company, a New Mexico partnership, hereinafter "ADC", Owners and Developers of Tract D-2, want a water drainage easement across Tract D-1-B to Montgomery Boulevard;

COMES NOW, the undersigned parties for good and valuable consideration, the receipt of which is hereby acknowledged, and mutually agree to the conveyance of a waterway easement over the ten feet adjacent to the westerly boundary of Tract D-1-B, VISTA GRANDE LAND CO.'s ADDITION NO. 2, an addition to the City of Albuquerque, New Mexico, for the benefit and use by Tract D-2 VISTA GRANDE LAND CO.'s ADDITION NO. 2, an addition to the City of Albuquerque, New Mexico, as follows:

1. Gazebo, subject to the current utility easement over the same area of Tract D-1-B, grants and conveys a water drainage easement across the ten feet adjacent to the Westerly boundary of said tract for the limited use of water drainage by Tract D-2.

2. ADC, on behalf of Tract D-2, accepts said easement on the terms and conditions provided herein.

3. The easement provided and the requirements levied on the parcels of land hereto shall be covenants to run with said parcels and be binding on all parties, their heirs, successors, assigns and grantees.

4. ADC, its heirs and assigns, Owner of Tract D-2, shall construct a ditch or waterway and maintain same at its expense sufficient to control a 100-year rain. (Maintain - refers to the broadest sense of the term regarding structure and same shall be kept open for the best possible water flow.)

5. The Owners and occupants of Tract D-1-B shall be indemnified by Tract D-2 for any loss or damage suffered directly or indirectly by water runoff from Tract D-2. RHP

6. Tract D-1-B can use the easement area as long as it does not materially interfere with the water drainage from Tract D-2.

7. Tract D-1-B has approved the structure to be constructed as shown on the site plan dated April 30, 1980, prepared by "the burns peters group", Project No. 79.37.

8. ADC shall defray the cost of the sidewalk and curb cut, as well as the cost to install the necessary drain and metal plate cover providing access to Montgomery Boulevard.

9. The agreement is binding upon the heirs, assigns or other parties acquiring an interest in these properties, this easement being a covenant and restriction by and between Tract D-1-B and Tract D-2.

MADE THIS 23rd DAY OF JUNE, 1980, IN ALBUQUERQUE, NEW MEXICO.

Robert D. Becker
GAZEBO VENTURES, LTD.
A New Mexico Limited Partnership
by Robert D. Becker, its
General Partner

Richard H. Presley
APARTMENT DEVELOPMENT COMPANY
A New Mexico Partnership
by Richard H. Presley, its
Gen Partner

Robert D. Becker
ROBERT D. BECKER

Richard H. Presley
RICHARD H. PRESLEY

Geraldine M. Becker
GERALDINE M. BECKER

Charles E. Cook
CHARLES E. COOK

N/A
RANDALL E. PRESLEY

N/A
BETTE L. COOK

SUBSCRIBED AND SWORN TO before me this 23RD day of June, 1980, by Robert D. Becker and Geraldine M. Becker.

NOTARY PUBLIC **

My Commission Expires:

OCT 15, 1982

SUBSCRIBED AND SWORN TO before me this 23RD day of June, 1980, by Richard H. Presley.

NOTARY PUBLIC

My Commission Expires:

OCT 15, 1982

SUBSCRIBED AND SWORN TO before me this ___ day of June, 1980, by Charles E. ~~and Bette L. Cook~~ Cook

NOTARY PUBLIC

My Commission Expires:

OCT 15 1982

SUBSCRIBED AND SWORN TO before me this ____ day of June, 1980, by Randall E. Presley.

N/A
NOTARY PUBLIC

My Commission Expires:

N/A

**This acknowledgement supersedes the above acknowledgement with the circled #1 and #2:

SUBSCRIBED AND SWORN TO before me this 24TH day of June, 1980, by Robert D. Becker and Geraldine M. Becker.

William N. Campbell
NOTARY PUBLIC

My commission Expires:

2-14-81

STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED FOR RECORD

'80 JUN 25 P4 :10

Misc 781 PG. 320-321
BK.
TENNY C. RULH
CO.C

Tenny Rulh

MEMORANDUM OF PARTNERSHIP AGREEMENT

OF

APARTMENT DEVELOPMENT COMPANY
A GENERAL PARTNERSHIP

80 32133

This document is a Memorandum of that certain PARTNERSHIP AGREEMENT of APARTMENT DEVELOPMENT COMPANY, a GENERAL PARTNERSHIP, dated February 27, 1979. The General Partnership is composed of Charles E. Cook, Randall E. Presley and Richard H. Presley, all General Partners.

The Partnership Agreement provides that any two (2) of the three Partners are authorized to sign on behalf of and to bind the Partnership in all matters, including but not limited to, the sale, assignment, pledge, or mortgage of Partnership assets, the acquisition of and any resulting encumbrances on any real estate acquired by the Partnership, and any note, mortgage, or contract undertaken by the Partnership.

The entire Partnership Agreement is kept at 1921 Carlisle Boulevard N.E., Albuquerque, New Mexico, and is available there for inspection.

IN WITNESS WHEREOF, the undersigned General Partners have affixed their signatures, this 3rd day of ~~May~~ JUNE, 1980. RHP.

Charles E. Cook
CHARLES E. COOK

Randall E. Presley
RANDALL E. PRESLEY

Richard H. Presley
RICHARD H. PRESLEY

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this 3 day of June, 1980 by CHARLES E. COOK.

Notary Public

My Commission Expires:
10/1/83

STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED FOR RECORD

JUN 4 4 10 PM '80

BK _____ PG _____
TENNY C. CULP
CO. CLERK & RECORDER
_____ DEPUTY

STATE OF CALIFORNIA)
) ss.
COUNTY OF ORANGE)

The foregoing instrument was acknowledged before me this 3rd day of June, 1980 by RANDALL E. PRESLEY.

Pamela Ruth Frisbie
Notary Public

My Commission Expires:
April 6, 1984

OFFICIAL SEAL
PAMELA RUTH FRISBIE
NOTARY PUBLIC - CALIFORNIA
ORANGE COUNTY
My Comm. Expires April 6, 1984

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this 3 day of June, 1980 by RICHARD H. PRESLEY.

Consuelo Chavez
Notary Public

My Commission Expires:
10/1/83

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