HYDROLOGY J11/D3 2 PLANS

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2 PLANS

CITY OF ALBUQUERQUE

ALBUQUERQUE, NEW MEXICO

May 31, 1979

INTER-OFFICE CORRESPONDENCE

REF. NO._____

TO: Richard S. Heller, City Engineer

FROM: Bruno Congeliano, Assistant City Engr./Hydrology

SUBJECT: COMMENTS ON THE PRELIMINARY PLAT FOR THE SAN MATEO MOBILE HOME PARK

On 5/2/79 Bob Kielich had received a request for comments on the referenced plat dated 5/1/79 with a due date 5/5/79. Since the comments were returned on 5/9/79 they were received by the Planning Department on 5/10/79 and since the hearing have been set for 5/17/79, the City Engineer's comments were not forwarded by Planning to the members of EPC. So EPC approved the plat as submitted without an easement that we need very badly. I think that things can still be fixed because the approval is conditional and subjected to approval of the Drainage Report. I have already alerted Chuck Campbell with Gordon Herkenhoff and Associates of this problem and he indicated that he would try to take care of it. The moral of the story though is that we must have more time for our plat review or that at least Planning check with us if there are any problems when a reply has not been received by us before they send their packages to the members of the EPC.

BC/bb

cc: Bob Kielich,

Drainage —

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

MAYOR
Harry E. Kinney

CHIEF
ADMINISTRATIVE OFFICER
Frank A. Kleinheinz

September 7, 1977

Garcia-Marquez & Associates
2329 Wisconsin, NE
Albuquerque, New Mexico 87110

SUBJECT: WESTWAY HILLS SUBDIVISION, DRAINAGE REPORT

Gentlemen:

I have reviewed the drainage report for Westway Hills Subdivision, and it is approved in concept.

The channel within the 10 foot drainage easement on Lot 17 will have to be lined to carry the runoff from the southwest to the culvert.

Very truly yours,

Bruno Conegliano
Assistant City Engineer-Hydrology

BC/kr

GARCIA-MARQUEZ & ASSOCIATES
ENGINEERING - SANITATION - CIVIL
PLANNING AND SURVEYING

2329 Wisconsin, N.E.
Albuquerque, New Mexico 87110
(505) 293-3312

City of Albuquerque
Albuquerque, New Mexico

Re: Supplement to Engineers Report on Drainage for Westway Hil Subdivision.

We have been asked to give further consideration to the drainage of Westway Hil as regards two specific areas:

1. The amount of, and provision for, water entering the property from the west along Loma Hermosa Drive.

2. The comparison of lot run-off both pre and post development.

There is presently a 10' paved drainage way north from Loma Hermosa Drive along the west boundary of this property. None of the drainage is actually on the tract to be developed. There is no indication that the flow from Loma Hermosa is other than very localized run-off easily handled by the small drainage way. It is not felt that additional easemant from the westerly edge of lots 13, 15, 16, and 17 are necessary because the drainage from this source is small and appears to be entirely to the west of the subdivision.

A detailed grading plan is now included with the engineering drawings. The side and rear of each lot is drained into a small sump or depression that will retain the bulk of the surface water. In addition, the lot to lot grading provide a terracing that will further decrease surface run-off.

It appeared that a portion of Lot 17 has been a natural sump in front of the large culverts crossing Atrisco. We would propose to leave most of the north end of the lot undisturbed in order to retain that portion of the existing run-off that is presently ponded there and on tract 250.

We would offer to dedicate additional easement as necessary to channelize the back lot flow from tract 250 into the inlet of the culvert under Atrisco since the present easement is misaligned.

R.E. NORTON, E.E.

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

MAYOR
David Rusk

RECEIVED
JAN 30 1979
CITY ENGINEERS

January 30, 1979

Nick Kapnison
5301 Central NE
Suite 1600
Albuquerque, NM 87108

Re: AX-78-23, Z-78-147

Dear Mr. Kapnison:

This is to advise that your request for annexation and simultaneous establishment of C-2 zoning for the southerly protions of Tracts 287 thru 290, Unit 8, Town of Atrisco Grant; that portion of Iliff Road adjacent to Tracts 287 thru 290; and, Estancia Drive adjacent to Tract 287, has been approved and signed by the City Council and the Mayor.

Publication of this Ordinance (No. 10-1979) occurred on January 26, 1979. The annexation becomes effective five days after that date, January 31, 1979.

Sincerely,

Della Gallegos

Della Gallegos
Secretary

Enclosure (Ord.)

cc: Gerry Falls, 5000 Marble NE, Suite 108; 87110
Leslie Dale Dickenson, 8911 Northeastern, NE; 87112
Richard Nance, 6701 Christy, NE; 87109
Q.R. Kelich, Public Works Dept.
Bruno Conegliano, Public Works Dept.
Real Estate Office
Skeet McCulloch, American Bank of Commerce, 200 Lomas, NE; 87102

ENACTMENT NO. 10-1979
ORDINANCE

ANNEXING THOSE PORTIONS OF TRACTS 287, 288, 289 AND 290, UNIT 8, TOWN OF ATRISCO GRANT LOCATED SOUTH OF INTERSTATE ROAD 40; THAT PORTION OF ILIFF ROAD N.W. ADJACENT TO SAID TRACTS 287 THRU 290; AND ESTANCIA DRIVE ADJACENT TO SAID TRACT 287 TO THE CITY OF ALBUQUERQUE, NEW MEXICO; AND AMENDING THE ZONE MAP OF THE CITY OF ALBUQUERQUE AS SHOWN IN ORDINANCE NO. 80-1975, AS AMENDED.

WHEREAS, the owner of the area to be annexed and hereinbelow described in this ordinance, which land is contiguous to the boundaries of the City of Albuquerque, New Mexico, has heretofore presented a petition properly signed, accompanied by a map of said contiguous territory, petitioning the Governing Body of the City of Albuquerque, New Mexico, to pass and adopt an ordinance annexing said land to the City.

BE IT ORDAINED BY THE COUNCIL, THE GOVERNING BODY OF THE CITY OF ALBUQUERQUE:

Section 1. The following described territory is hereby annexed to and made a part of the City of Albuquerque for all purposes upon filing a copy of this ordinance and map of the territory so annexed in the Office of the County Clerk of Bernalillo County, New Mexico, and publication of this ordinance according to law:

A. Those portions of Tracts 287, 288, 289 and 290, Unit 8, Town of Atrisco Grant located south of Interstate Road 40; that portion of Iliff Road adjacent to said Tracts 287 thru 290; and Estancia Drive adjacent to said Tract 287 as filed in the Office of the County Clerk of Bernalillo County, New Mexico, on December 5, 1944.

Section 2. The zone map referred to in Ordinance No. 80-1975 as amended, is hereby amended as follows:

A. Establishment of C-2 zoning for the area described in Section 1.A. above.

Section 3. EFFECTIVE DATE AND PUBLICATION. This ordinance shall become effective five days after publication in full.

PASSED AND ADOPTED this 2nd day of January, 1979.

/s/ Patrick J. Baca
Patrick J. Baca, President
City Council

APPROVED this 23rd day of January, 1979.

/s/ David Rusk
David Rusk, Mayor
City of Albuquerque

ATTEST:
/s/Mary Lou Cooper
City Clerk/Recorder
HCS-NC Jan. 26, 1979.

AX-78-23
2-78-147

A DRAINAGE REPORT

FOR

WESTWAY HIL SUBDIVISION
ALBUQUERQUE, NEW MEXICO

GARCIA-MARQUEZ & ASSOCIATES
2329-T WISCONSIN N.E.
ALBUQUERQUE, NEW MEXICO

May 25, 1977

Ms. Hilda Cruz
Residential Investment Corp.
PO Box 11489
Albuquerque, New Mexico 87112

Dear Ms. Cruz:

Transmitted herewith please find the drainage study for the proposed Westway Hil Subdivision.

If you have any questions regarding the data submitted, or if we can be of further service, please do not hesitate to call.

Sincerely,

Richard E. Norton P.E. #5059
Consulting Engineer

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I. PURPOSE OF THIS REPORT

The purpose of this report is to determine the runoff characteristics of the area and make recommendations for the economical and safe disposal of storm drainage, after development, without damage to property or danger to life.

II. DESCRIPTION AND LOCATION OF PROJECT

The project consists of 19 residences in Block 249 of the Town of Atrisco Grant. It is bounded on the South by Hancock Street, on the West by a residential development, on the North by Iliff Street and on the East by Artisco Street.

III. CLIMATE

Rainfall in the general Albuquerque area averages 8.7 inches per year with a coefficient of variation of .33 inches based on a 35-year period. Using this coefficient a maximum of 11.5 and a minimum of 5.8 inches can be expected.

IV. SOILS AND VEGETATION

The soils within the area are classified by the United States Soil Conservation Service as belonging to the "Bluepoint Loamy Sand" "Madurez Ulink Sandy Loams."

The Bluepoint Loamy Sand consists of soil formed on alluvial fans. It consist of brown deep loamy sand with permabilities of 6 to 20 inches per hour.

It has a low shrink-swell potential and is ideal for residential building foundations.

The Madurez Ulink Sandy Loams are fine loamy sands. They have a permability of 2 to 6 inches per hour and a low shrink-swell potential.

Present native vegetation consists of a cover of grama and other grasses.

V. DRAINAGE AREA

There are no areas that drain through the proposed development. The development itself will drain north along Atrisco Street and into an arroyo that empties into the Rio Grande. (See exhibit I)

VI. DRAINAGE CRITERIA

The amount of runoff that will be generated by the proposed development was determined by the Engineering Field Manual for Conservation Practices, 1973, United States Department of Agriculture and rainfall data obtained from the National Oceanic and Atmospheric Administration, United States Department of Commerce. A 100-year, 24-hour fall was used in design calculations.

The storm drainage quantities were obtained using the SCS runoff equation of $Q=\frac{(P_1-I_a)^2}{(P_1-I_a)+S}$

Where Q=accumulated volume of runoff in inches depth over the entire area

P_1=accumulated rainfall in inches depth over the drainage area

I_a=initial abstraction including surface storage, interception by vegetation and infiltration prior to runoff, in inches depth over the drainage area

S=potential maximum retention of water by the soil in equivalent inches depth over the drainage area

The emperical relationship between Ia and S is:

$I_a=0.2S$

Since the potential maximum water retention can range from zero on a smooth impervious surface to infinity in deep gravel the S values were converted to runoff curve numbers (CN's) for greater convenience by the following transformation:

$CN=\frac{1000}{1+S}$

Time of Concentration (T_c), Length of watersheet (L) and the difference in elevation between the highest point on the watershed area and the point where the water leaves the area. (H), also enter into the storm drainage runoff. These variables are obtained from the Soil Conservation Service charts, topographic maps and actual field surveys.

The storm drainage calculation for the proposed development area is as follows:

Area=	3.65 Ac.
L=	920 ft.
H=	15 ft.
Rainfall (100 year-24 hour)=	3.8 inches
Tc (hours)=	.15 hr.
CN (weighted)=	.58

Direct runoff (from chart)= .6
cfs/ac./in. (from chart)= .15
Q=.15 (3.65)(.6)= .33 cfs

CONCLUSIONS

There is a four-foot culvert under Atrisco Drive at the North end of the proposed subdivision (see exhibit). The culvert drains the proposed subdivision and the areas to west and southwest of the development area. It flows into the Rio Grande via an arroyo.

It is felt that the low rate of discharge generated by the proposed subdivision will not significantly alter the existing drainage pattern if allowed to empty through the existing culvert into the river. Accordingly the plan is to drain the subdivision north to the culvert and into the river.

VIII. REFERENCES

1. Practices in Detention of Urban Stormwater, A.P.W.A.

2. Flood Plain Information Part I, Albuquerque Arroyos, Albuquerque, New Mexico, Albuquerque Metropolition Arroyo Flood Control Authority, Dept. of the Army, Albuquerque District Corp of Engineers, Albuquerque, New Mexico April 1975.

3. Engineering Field Manuel for Conservation Practices, Revised 10/73 for New Mexico.

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