



# *City of Albuquerque*

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 19, 1997

Shahab Biazar  
10209 Snowflake Ct. NE  
Albuquerque, New Mexico 87114

RE: DRAINAGE PLAN FOR DAN & ANGELA ARAGON RESIDENCE (D12-D5)  
ENGINEER'S STAMP DATED 12/15/97

Dear Mr. Biazar:

Based on the information provided on your December 15, 1997 submittal, the above referenced site is approved for Building Permit.

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

Also, prior to the final, Engineer Certification per the DPM checklist will be required.

If I can be of further assistance, please feel free to contact me at 924-3985.

C: Andrew Garcia  
File

Sincerely

*Bernie J. Montoya*  
Bernie J. Montoya CE  
Associate Engineer

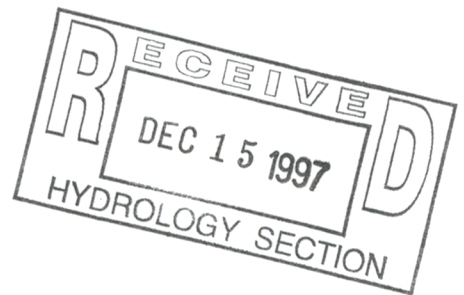
DRAINAGE REPORT  
FOR

*Lot 85  
OF*

*Rancho Sereno  
Subdivision*

Prepared by:

Shahab Biazar  
10209 Snowflake Ct. NW  
Albuquerque, New Mexico 87114



December, 1997

I certify that this report was prepared under my supervision, and I am a registered professional engineer in the state of New Mexico in good standing.

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Shahab Biazar  
PE NO. 13479

## **Location**

Lot 85 of the Rancho Sereno Subdivision is a 2.006 acre lot which was plated as part of the Rancho Sereno subdivision. This lot is located at east end of the Rancho Grande Place. See attached Zone Atlas page number D-12 for location. We are proposing to build a two story house and creating an impervious area of  $\pm 8000$  sf.

## **Purpose**

I, Shahab Biazar, on behalf of Dan and Angela Aragon is preparing this drainage report to present a grading and drainage solution for their proposed house. We are requesting grading and drainage and building permit approval.

## **Existing Drainage Conditions**

The site falls within the Basin D-2 of Rancho Sereno Subdivision Drainage Management Plan (D12/C12 - D1M). See Plate 2 of Rancho Sereno Subdivision Drainage Management Plan for Basin layout (See map pocket for the Basin Layout). According to Plate 2 there are no offsite runoff entering the site. There is a small offsite basin which drains east and then north to an existing v-ditch, and from there it drains to Piedras Marcadas Dam at a flow rate of 1.48 cfs. The on site runoff drains west to an existing v-ditch and then north to Piedras Marcadas Dam at a flow rate of 1.48 cfs.



## **Flood Plain**

The site is located on FEMA Map No. 350002 panel 8 as shown on the attached excerpt. The map shows that the site does not lie within any 100 year flood plains. There is an existing flood to the North of the lot (Piedras Marcadas Dam).

## **Proposed Conditions and On-Site Drainage Management Plan**

The site will maintain its natural drainage patterns. It will be graded in such way to allow the runoff drain around the house and then to exiting v-ditches on the west and north side of the site. This building will increase the runoff by 0.62 cfs, a total runoff of 4.70 cfs. Since the Lot is next to Piedras Marcadas Dam, will not have any impact over the drainage capacity of the existing storm sewer structures. The runoff from this site will be in and out of the existing v-ditches before the peak discharge at the ditches occur. Only  $\pm 5000$  sf of the structures will be built at this time, and the rest of them at a later time.

## **Calculations**

City of Albuquerque, Development Process Manuel, Section 22.2, Hydrology Section, revised January, 1993 was used for runoff calculations. See section runoff calculations of this report for Summary Table for runoff results. See also AHYMO input and summery output file for runoff and ponding calculations.



**RUNOFF SUMMARY TABLE**

**PROPOSED  
DRAINAGE BASINS**

BASIN	AREA (SF)	AREA (AC)	AREA (MI²)
Lot 85	87422.35	2.0069	0.003136
Off-Site	31645.75	0.7265	0.001135

**BASINS RUNOFF CALCULATION RESULTS  
UNDER EXISTING CONDITIONS**

BASIN	Q-100 CFS	Q-10 CFS
Lot 85	4.7	2.07
Off-Site	1.48	0.56

**BASINS RUNOFF CALCULATION RESULTS  
UNDER EXISTING CONDITIONS**

BASIN	Q-100 CFS	Q-10 CFS
Lot 85	4.08	1.54
Off-Site	1.48	0.56

238-6764

**RUNOFF CALCULATIONS**

The site is @ Zone 1

**LAND TREATMENT**

*Proposed*

D = 10.00 %

B = 80.00 %

C = 10.00 %

*Existing*

B = 100 %

**DEPTH (INCHES) @ 100-YEAR STORM**

P<sub>60</sub> = 1.87 inches

P<sub>360</sub> = 2.20 inches

P<sub>1440</sub> = 2.66 inches

**DEPTH (INCHES) @ 10-YEAR STORM**

P<sub>60</sub> = 1.87 x 0.667

= 1.25 inches

P<sub>360</sub> = 1.47

P<sub>1440</sub> = 1.77

See the summary output from AHYMO calculations.

Also see the following summary tables.



AHYMO PROGRAM SUMMARY TABLE (AHYMO\_97) -  
INPUT FILE = LOT85

- VERSION: 1997.02a

RUN DATE (MON/DAY/YR) =12/14/1997

USER NO.= AHYMO-I-9702a0100011K-SH

		FROM	TO			PEAK	RUNOFF	TIME TO		CFS	PAGE = 1
COMMAND	HYDROGRAPH IDENTIFICATION	ID NO.	ID NO.	AREA (SQ MI)	DISCHARGE (CFS)	VOLUME (AC-FT)	RUNOFF (INCHES)	PEAK (HOURS)	PER ACRE	NOTATION	
START										TIME=	.00
RAINFALL TYPE= 1										RAIN6=	2.200
COMPUTE NM HYD	101.00	-	1	.00314	4.70	.138	.82472	1.500	2.342	PER IMP=	10.00
COMPUTE NM HYD	102.00	-	1	.00114	1.48	.040	.66738	1.533	2.037	PER IMP=	.00
START										TIME=	.00
RAINFALL TYPE= 1										RAIN6=	1.470
COMPUTE NM HYD	101.10	-	1	.00314	2.07	.057	.34277	1.533	1.031	PER IMP=	10.00
COMPUTE NM HYD	102.10	-	1	.00114	.56	.014	.22437	1.533	.770	PER IMP=	.00
START										TIME=	.00
RAINFALL TYPE= 1										RAIN6=	2.200
COMPUTE NM HYD	111.00	-	1	.00314	4.08	.112	.66738	1.533	2.031	PER IMP=	.00
START										TIME=	.00
RAINFALL TYPE= 1										RAIN6=	1.470
COMPUTE NM HYD	111.10	-	1	.00314	1.54	.038	.22437	1.533	.768	PER IMP=	.00
FINISH											