



# ***City of Albuquerque***

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

May 20, 1993

## **LETTER OF ACCEPTANCE**

Ricardo Roybal  
City of Albuquerque  
P.O. Box 1293  
Albuquerque, NM 87103

MAY 24 1993

**RE: PROJECT NO. 3260.8 , ACADEMY ACRES, UNIT 16,  
(MAP NO. E-18)**

Dear Mr. Roybal:

This is to certify that the construction of the infrastructure listed below has been completed and accepted.

The Project is described as follows:

- Installed approximately 2,700 l.f. of eight inch (8") sewer main, 1,600 l.f. of eight inch (8") waterline with fire hydrants, water and sewer services, and paved roadways to include curbs and gutters which provide for surface drainage on site. Also, constructed twenty feet (20') of concrete drainage channel on Glendora from Forest Hill Dr. to Pino Arroyo.
- The contractor's correction period begins the date of this letter and will be effective for a period of one (1) year.

Sincerely,

Russell B. Givler,  
Chief Construction Engineer  
Public Works Department



# City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

April 16, 1993

Santiago Romero Jr., P.E.  
Santiago Romero Jr. & Assoc.  
6139 Edith Blvd. NE  
Albuquerque, N.M. 87107

RE: DRAINAGE REPORT FOR TRACT A, UNIT 16, ACADEMY ACRES (E-187D47),  
RECEIVED APRIL 9, 1993 FOR FINAL PLAT APPROVAL  
ENGINEER'S STAMP DATED APR. 9, 93

Dear Mr. Romero:

Based on the information included in the submittal referenced above, City Hydrology APPROVES this project for Final Plat.

Engineer's Certification of grade per the DPM checklist will be required for this project.

If I can be of further assistance, You may contact me at 768-2727.

Sincerely

John P. Curtin, P.E.  
PWD/Hydrology

xc: Fred Aguirre, DRB

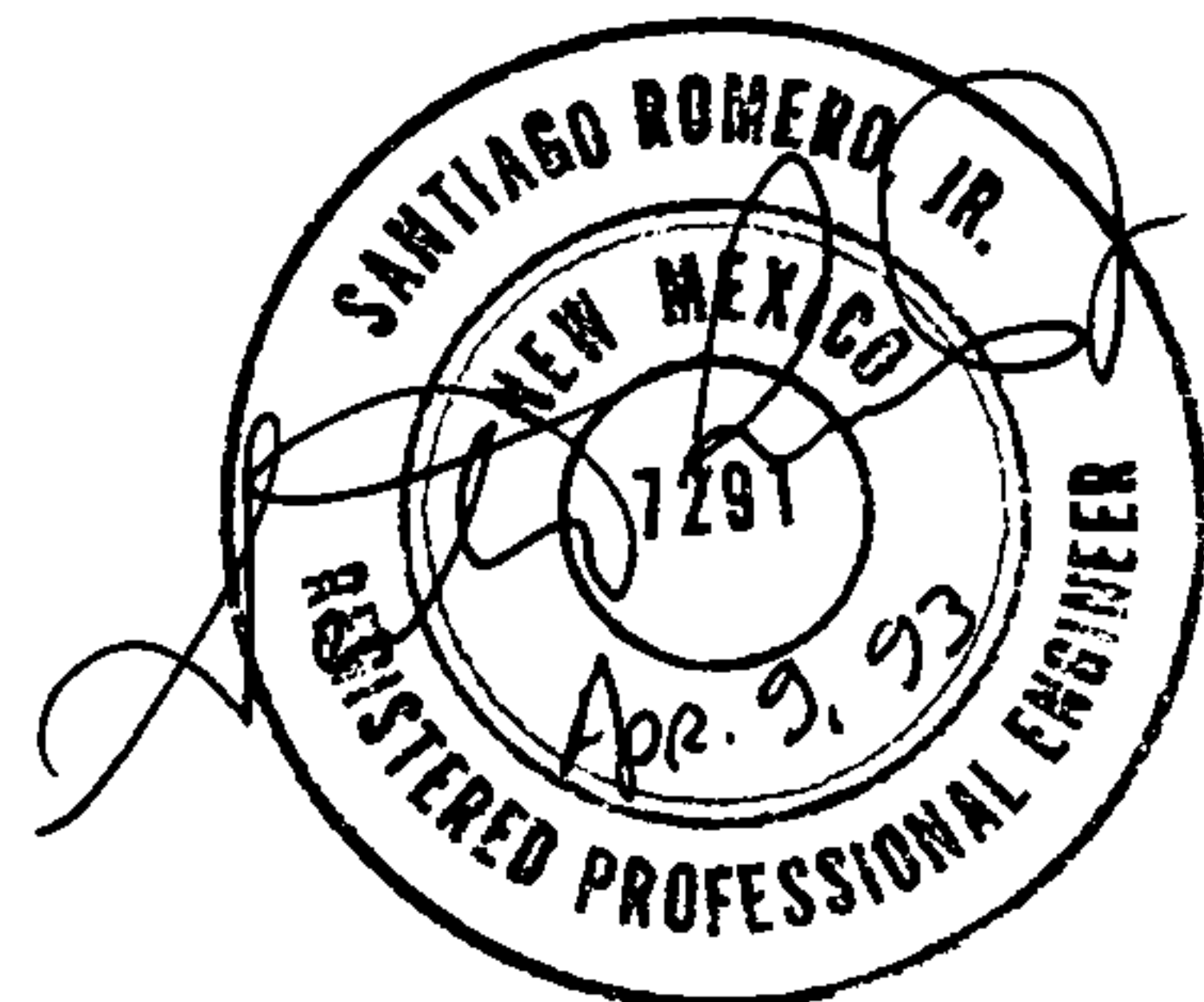
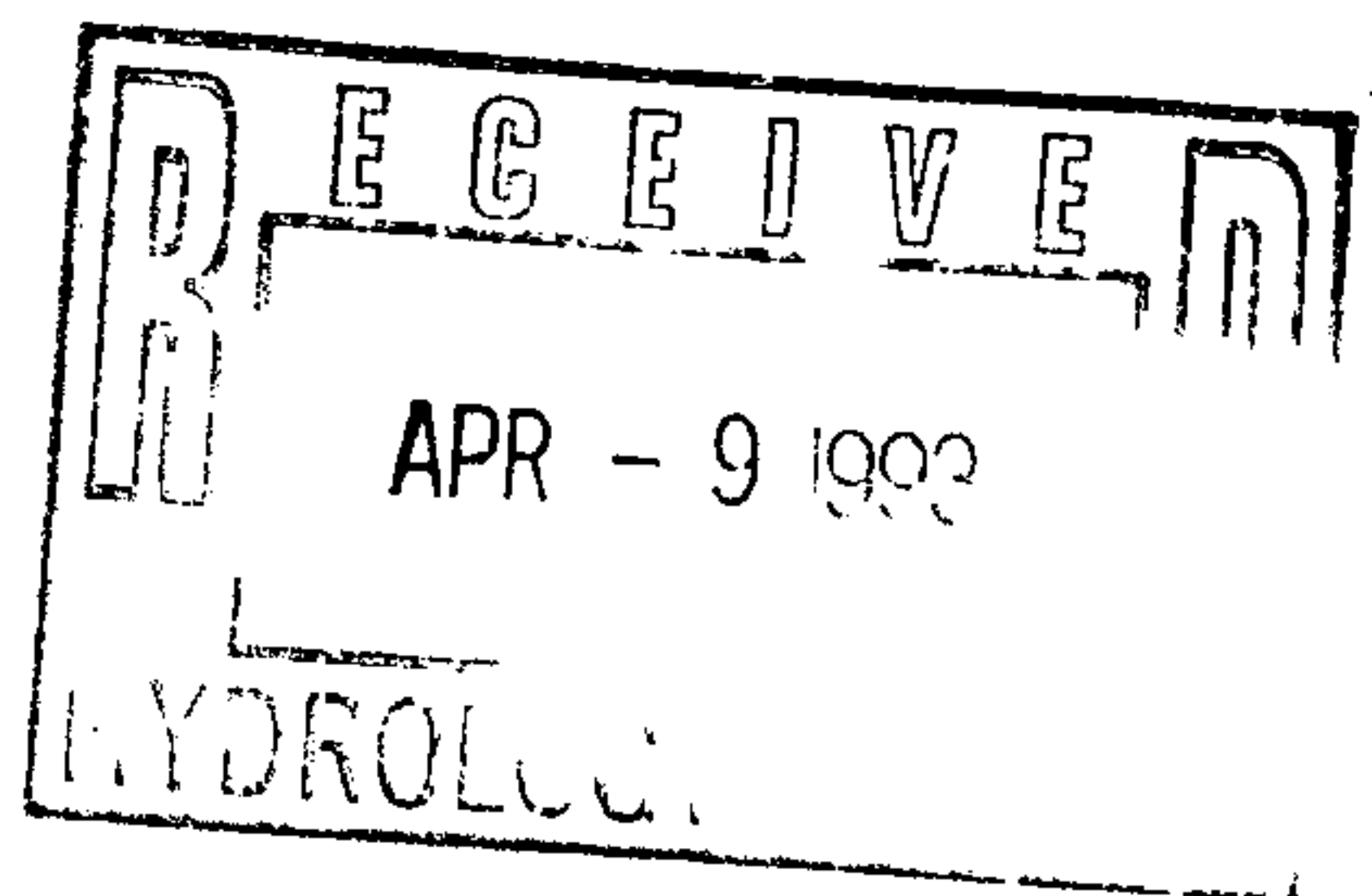
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PUBLIC WORKS DEPARTMENT

REVISED  
DRAINAGE REPORT  
FOR  
REPLAT OF TRACT "A", UNIT 16, ACADEMY ACRES  
APRIL 1993

PREPARED FOR:  
THE STROSNIDER COMPANY  
6121 INDIAN SCHOOL ROAD N.E.  
SUITE 275  
ALBUQUERQUE, NEW MEXICO 87110

PREPARED BY:  
SANTIAGO ROMERO JR. & ASSOCIATES, INC.  
6139 EDITH BLVD. N.E.  
ALBUQUERQUE, NEW MEXICO 87107



**DRAINAGE REPORT  
FOR  
REPLAT OF TRACT "A", UNIT 16, ACADEMY ACRES  
THE STROSNIDER COMPANY**

**PURPOSE AND SCOPE:**

This drainage report has been prepared to outline the treatment of storm water flowing to and generated within the Replat of Tract "A", Unit 16, Academy Acres. It has been prepared in accordance with the guideline of the City of Albuquerque's Development Process Manual (DPM), Chapter 22, entitled "Drainage and Flood Control".

**SITE LOCATION AND DESCRIPTION:**

The site is located on Forest Hills Drive, approximately 200 feet east of San Pedro Dr. NE. The site contains approximately 0.35 acres. It slopes from east to west at approximately 5%. The soil on the site consists of Embudo (EmB). The location of the soil type is indicated on the attached copy of the Soil Survey of Bernalillo County prepared by the Soil Conservation Service (Figure 2). This soil type is classified as hydrologic soil Group "B".

**METHOD OF ANALYSIS**

The site consists of 2 basins (A&B). Basin "A", which is within this development, will free discharge to the Pino Arroyo, and will not discharge to Forest Hills Dr.. Basin "B" generates flow to San Pedro Dr. from Forest Hills Dr. only, and this present drainage pattern and flow will remain unchanged.

Peak flow rates for the developed basins were determined by application of the Rational Method.

Rainfall intensity were determined by plates 22.0 D-1 and 22.2 D-2 of the DPM. The 100 year intensity was determined to be 15.73" for Basin "A", and 6.20" for Basin "B" in one hour. See the calculations for Basin "B" in the approved Drainage Report for the Replat of Tract "B", Unit 16, Academy Acres.

**EXISTING DRAINAGE CONDITIONS**

The site slopes from east to west and is bounded on the north by the recently improved Pino Arroyo, on the east by a developed residential subdivision (Academy Acres Unit 16, Replat of Tract "B"), on the south by improved Forest Hills Drive, and on the west by an undeveloped site acquired for right-of-way. The flood plain limits as outlined on the flood maps is now contained within the improved Pino Arroyo channel.

**DEVELOPED DRAINAGE CONDITIONS:**

The site will sheet flow discharge to the Pino Arroyo. No discharge from these lots will be directed to Forest Hills Dr.. Lots will have a solid concrete masonry unit wall with openings at the back wall for discharge of flows. Grade differences between lots or between lots and the Pino Arroyo do not exceed 1 ft. of vertical differences, therefore no retaining walls are required.

**EROSION CONTROL PLAN:**

The Contractor shall be required to prevent the build-up of soils eroded from the site onto existing streets as a result of storm water runoff. The Contractor shall also be required to prevent the loss of soil due to wind.

## DRAINAGE CALCULATIONS

### A. BASIC ASSUMPTIONS

1. Discharge from the proposed subdivision will drain free discharge, sheet flow, into the Pino Arroyo. There will be no discharge to Forest Hills Dr. and no increase to the discharge amount at the intersection of San Pedro Blvd. and Forest Hills Dr. as a result of this development.
2. This subdivision comprises one drainage basin (on-site) and a second basin (off-site).
3. No other off-site flows will be accepted onto this site.

### B. CONTRIBUTING AREAS

1. Basin "A" (On-Site)
  - a) Total Area = 15,232 S.F.
  - b) Paved Area = 1,600 S.F.
  - c) Roof Area = 3,600 S.F.
  - d) Lawn & Landscaping = 10,032 S.F.
2. Basin "B" (Off-Site)  
Forest Hills Dr., previously addressed in the approved drainage report for Tract B, Unit 16, Academy Acres.

$$Q = 8.51\text{cfs}$$

### C. RUNOFF COEFFICIENTS (COMPOSITE C)

$$1. \text{ Basin "A" } = \frac{1600}{15,232} (0.95) + \frac{3,600}{15,232} (0.90) + \frac{10,032}{15,232} (0.33)$$

$$C = 0.53$$

### D. TIME OF CONCENTRATION ( $T_c$ )

$$T_c = 0.0078 \times (L^{0.77} / S^{0.385})$$

1. Basin "A"	=	L = 110	S = 4.01%	$T_c = 6.00 \text{ Min}$	<del>10 min</del> < 10 min
2. Basin "A" (undeveloped)	=	L = 110	S = 1.70%	$T_c = 1.41 \text{ Min}$	

### E. RAINFALL INTENSITY (I)

1. Rainfall Volume 2.3" (100 Yr. Freq.) Plate 22.2 D-1

a) Basin "A"	$I = 2.3 \times 6.84 \times 1.00^{-0.51} = I = 15.73$	> <del>10 min</del> 4.86
b) Basin "A" (undeveloped)	$I = 2.3 \times 6.84 \times 1.41^{-0.51} = I = 13.22$	



F. PEAKFLOW RUNOFF (Q = CIA)

1. Basin "A"

$$Q = 0.53 \times 15.73 \times 0.35 = Q = 2.92 \text{ CFS (Use 3 CFS)}$$

2. Basin "B"

$$Q = 0.80 \times 6.20 \times 1.31 = Q = 8.51 \text{ CFS (As approved in drainage report for the Replat of Tract B, Unit 16, Academy Acres.)}$$

3. Basin "A" (undeveloped)

$$Q = 0.33 \times 13.22 \times 0.35 = Q = 1.53 \text{ CFS}$$

G. STREET FLOW CAPACITY (1/2 STREET WIDTH)

See previously referenced approved drainage report.

H. DRAINAGE CHANNEL

See previously referenced approved drainage report.

I. CONCLUSIONS

1. The street capacity for the adjacent street will not be affected this subdivision.
2. The off-site flows being accepted onto this subdivision in the 18.5' wide channel will not exceed 1' depth. This issue was addressed in the previously approved drainage report for the Replat of Tract B, Unit 16, Academy Acres. Finished floor elevations for residences within this development will not be jeopardized by high water levels resulting during the 100 year event.

# Part of Bernalillo County Soils Map No. 21



FIGURE 2