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

K11 - D15

November 25, 1981

Mr. Joe Allen
Denney-Gross & Associates
2400 Comanche N.E.
Albuquerque, N.M. 87107

RE: BARBOA BUILDING DRAINAGE REPORT

Dear Joe:

The referenced drainage report is approved based on your submittal of November 25, 1981. Please see that copies of the revised plan (dated 11/24/81) are placed in the construction set. Mr. Fred Aguirre will sign off for Hydrology when this is done.

Very truly yours,

Brian G. Burnett
Civil Engineer/Hydrology

BGB/tsl

cc: Robert Baca

DENNEY - GROSS & ASSOCIATES, INC.
2400 COMANCHE ROAD N.E.
ALBUQUERQUE, N.M. 87107
TELEPHONE: (505) 884-0696

LETTER OF TRANSMITTAL

DATE	NOV 17, 1991	F.D. JOB NO.	589.12
ATTENTION			
REASON	BARBOA BLDG TRACT 207, UNIT SIX TOWN OF ATRISCO GRANT		

TO CHUCK EASTERLING
HYDROLOGY - CITY OF ALBQ

RECEIVED
NOV 19 1991
ENGINEERING

GENTLEMEN:

WE ARE SENDING YOU ☐ ATTACHED ☐ UNDER SEPARATE COVER VIA _____ THE FOLLOWING ITEMS:

☐ SHOP DRAWINGS ☐ PRINTS ☐ PLANS ☐ PROJECT ESTIMATE ☐ SPECIFICATIONS
☐ COPY OF LETTER ☐ CHANGE ORDER ☐ _____

COPIES	DATE	NO.	DESCRIPTION
			DRAINAGE RPT & INFORMATION SHEET

THESE ARE TRANSMITTED as checked below.

☒ FOR APPROVAL ☐ APPROVED AS SUBMITTED ☐ RETURN ____ COPIES FOR DISTRIBUTION
☐ FOR YOUR USE ☐ APPROVED AS NOTED ☐ RETURN ____ SIGNED ORIGINALS
☐ AS REQUESTED
☐ FOR REVIEW AND COMMENT ☐ _____
☐ FOR BIDS DUE _____ 19____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS

SIGNED: JOE ALLEN

IF ENCLOSURES ARE NOT AS NOTED, KINDLY NOTIFY US AT ONCE

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

K11 - D15

RECEIVED

NOV 19 1981

ENGINEERING

DRAINAGE REPORT INFORMATION SHEET

PROJECT TITLE BARBOA B.D.G. - PORTION OF TRACT 207 UNIT SIX TOWN OF ATRISCO GRANT ALBQ, N.M

ZONE ATLAS PAGE NO. K-11 CITY ADDRESS COORS RD S.W

LEGAL ADDRESS COORS RD S.W

ENGINEERING FIRM Denney-Gross Inc. CONTACT J. Allen

ADDRESS 2400 Comanche N.E PHONE 884-0696

OWNER NINO BARBOA c/o ROBT. BACA CONTACT R. BACA

ADDRESS 7608 VISTA Del Arroyo 87109 PHONE 293-4504

ARCHITECT/SURVEYOR _____ CONTACT _____

ADDRESS _____ PHONE _____

DATE SUBMITTED Nov. 17 1981

BY Denney-Gross Inc.

DRAINAGE REPORT
PORTION OF TRACT 207, UNIT SIX
TOWN OF ATRISCO GRANT
BERNALILLO COUNTY, NEW MEXICO

NOVEMBER, 1981

Prepared By
Denney-Gross & Associates, Inc.
2400 Comanche Road, N.E.
Albuquerque, New Mexico 87107

DRAINAGE REPORT
PORTION OF TRACT 207, UNIT SIX
TOWN OF ATRISCO GRANT
BERNALILLO COUNTY, NEW MEXICO

NOVEMBER, 1981

Prepared By
Denney-Gross & Associates, Inc.
2400 Comanche Road, N.E.
Albuquerque, New Mexico 87

DRAINAGE REPORT
PORTION OF TRACT 207, UNIT SIX
TOWN OF ATRISCO GRANT
BERNALILLO COUNTY, NEW MEXICO

NOVEMBER, 1981

Prepared By
Denney-Gross & Associates, Inc.
2400 Comanche Road, N.E.
Albuquerque, New Mexico 87107

DRAINAGE REPORT
PORTION OF TRACT 207, UNIT SIX
TOWN OF ATRISCO GRANT
BERNALILLO COUNTY, NEW MEXICO

I. GENERAL:

The location of the project is shown on the Location Map K-11 (Exhibit A) and it consists of a portion of Tract 207, Unit Six, Town of Atrisco Grant, Bernalillo County, New Mexico.

The site, in existing condition, slopes at around 0.7% to the south. The soil type is indicated on Exhibit C. Total project area is 0.34 acres.

II. FLOOD PLAIN INFORMATION:

This tract is located on Flood Hazard Map No. 20 of the Flood Hazard Boundary Map H-01-37, Department of Housing and Urban Development, Federal Insurance Administration, which shows the tract is not in a designated flood hazard area. Since the site is located so close to the 100-year flood hazard area a more detailed investigation was performed. From City records the 100-year flood hazard elevation is this area is 5,010. Only the ponding area is located within this contour. The finished floor of the proposed structure was placed two feet above this elevation at 5,012.0. See Exhibit D and Exhibit B.

III. OFF-SITE CONTRIBUTING WATERSHED:

No off-site flows enter the site. The site is bounded to the north by Sunset Garden Road with standard curb and gutter to control flow. Coors Road to the east does not have curb and gutter.

When developed, this site will be slightly higher than Coors Road, thus restricting any flows to enter the site. Exhibit D (AMAFCA Topo) shows that the site is higher than the areas to the south and west.

IV. TREATMENT OF RUNOFF:

It is proposed to pond the entire 50-year storm in a pond on the south corner of the site. This pond will be 18-inches deep with 2 feet of 6-inch cobbles on the pond floor (see Exhibit E). A portion of the parking lot area will be used for ponding during the 50-year, 6-hour storm. The pond will be equipped with a concrete overflow spillway designed to convey the 100-year developed discharge along with gravel rundown to control erosion.

V. CRITERIA:

Rainfall from Precipitation Frequency Atlas of the Western United States, Volume IV, New Mexico, for a 50-year, 6-hour storm is equal to 2.0 inches.

Runoff Factor (R) = .80 developed condition. NOTE: The American Society of Civil Engineer's "Manual On the Design And Construction Of Sanitary And Storm Sewers," lists R values for bituminous streets at 0.70 to 0.95 and roofs at 0.75 to 0.95 and flat landscaping from 0.05 to 0.17. Based on the small amount of landscaping R = 0.80 is a just assumption.

I_{100} = 5.4 in/hr

VI. CALCULATIONS:

Storage Required = V = PRA

= [(2.0)(.8)(.34)(43,560)/12] = 1,975 cf

Storage Required = (Area of 5010.5 contour + Area of 5009 contour)(1.5) + (Area of 5009)(2)(.3)*

= [(1540+520)(1.5)] + [(620)(2)(.3)] = 1,992 cf

*.3 equals 30% value stored in rocks

Overflow Spillway Design:

Design Q = RIA = (.8)(5.4)(.34) = 1.5 cfs

$Q = 2.86LH^{1.5}$

$L = .349Q/H^{1.5}$ H = 0.5 ft.

L = 1.48 ft. Use 1.5 ft.

VII. ADDITIONAL INFORMATION:

A. Off-site rates of flow and depth are not applicable because there is not off-site flow entering the site.

B. On-site flow velocities = 2 fps NOTE: "Modern Sewer Design," published by the American Iron and Steel Institute for paved area (sheet flow at 1.0% slope).

C. Pond Landscaping. The pond bottom shall be covered by 6-inch cobble rock.

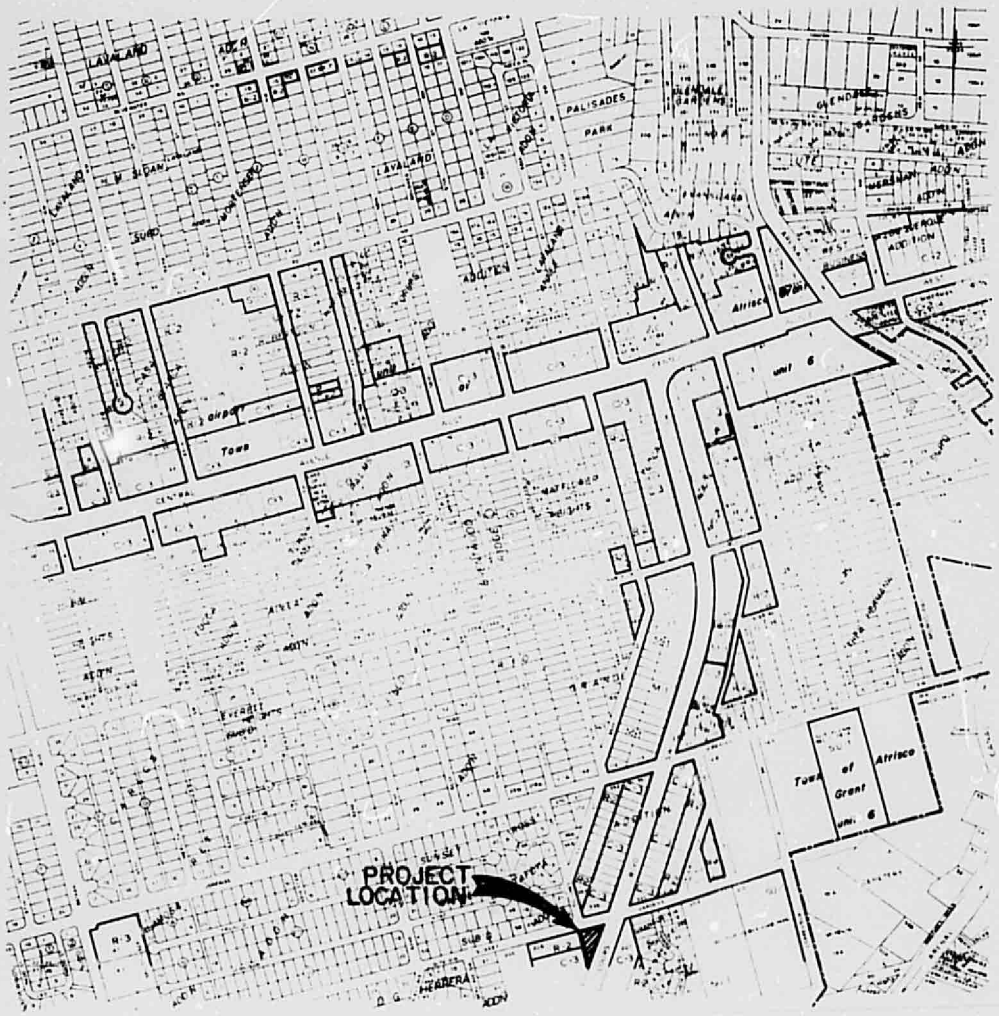
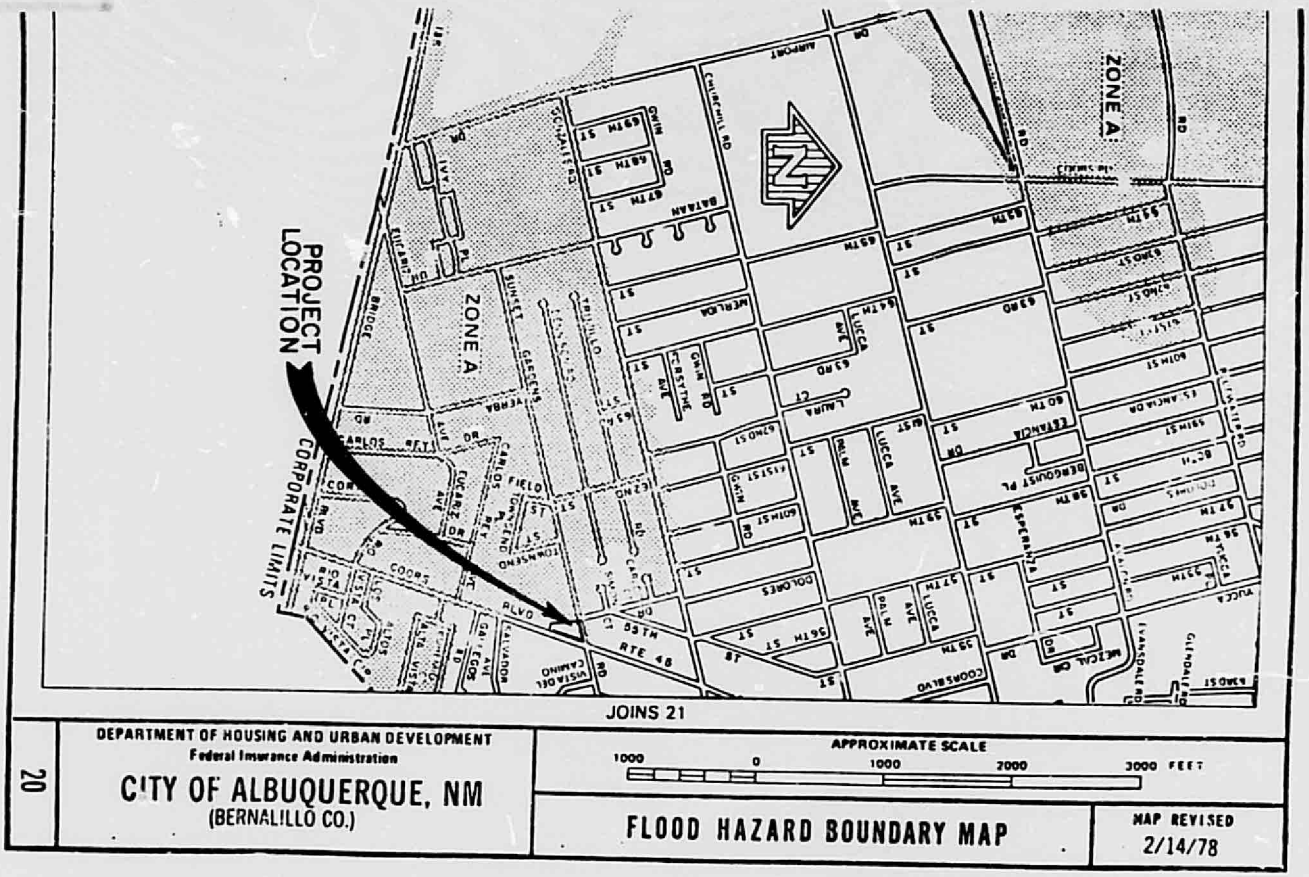


EXHIBIT "A"

K-11-Z

EXHIBIT "B"


PROJECT LOCATION
CORPORATE LIMITS
ZONE A
ZONE A
JOINS 21
20
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
Federal Insurance Administration
CITY OF ALBUQUERQUE, NM
(BERNALILLO CO.)
APPROXIMATE SCALE
1000 0 1000 2000 3000 FEET
FLOOD HAZARD BOUNDARY MAP
MAP REVISED
2/14/78

(Joins sheet 20)

MWA—Madurez-Wink association, gently sloping. This mapping unit is about 55 percent a Madurez fine sandy loam that has 1 to 5 percent slopes and 25 percent a Wink fine sandy loam that has 1 to 7 percent slopes. It is on the East and West Mesas.

The gently sloping Madurez soil is mainly on slightly convex piedmont fans. It has the profile described as representative of the Madurez series. The gently sloping Wink soil is on the sides of low ridges. It has a profile similar to that described as representative of the Wink series, but the surface layer is about 4 inches thick.

Included in this unit in mapping are areas of Bluepoint, Pajarito, and Latene soils, which make up about 20 percent of the unit.

Runoff is slow, and the hazard of soil blowing is moderate to severe.

(Joins sheet 40)

AMAFCA TOPO

K - 11

EXHIBIT "D"