F21/D7

3 Plans

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION

HYDROLOGY SECTION PROJ. NO. _____ DATE: 10/7/83

PLANNING DIVISION NO. _____

CONFERENCE RECAP

SUBJECT: Tracts F1 & E2 Academy Place (F21)

| | WHO | REPRESENTING |
|---|---|---|
| ATTENDANCE: | Bob Sykes | WCEA & Connels/Davis |
| | F.J. Esquibel | |

FINDINGS:

1. Free discharge into the Bear Canyon arroyo is acceptable if channel is improved (lined) and if downstream conditions capacity is available.
2. Drainage Report required prior to Site Development Plan ~~Approval~~ Sign-off.

The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

| | |
|---|---|
| SIGNED: F.J. Esquibel | SIGNED: Robert Snyder |
| TITLE: | TITLE: Wilson & Co. |
| DATE: 10/7/83 | DATE: 10/7/83 |

# City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

**MAYOR**
*David Rusk*

August 1, 1979

Goldberg Mann & Associates, Inc.
911 Pennsylvania N.E.
Albuquerque, New Mexico 87110

F 21-D7a

RE: SPAIN APARTMENTS

Dear Mr. Mann:

The revised drainage plan submitted for the captioned project has been approved subject to the conditions stated in your letter of July 26, 1979.

Very Truly Yours,

Richard S. Heller
City Engineer

RH/tsl

cc - Bruno Conegliano
Drainage File

Goldberg - Mann & Associates, Inc.
Engineers - Planners
911 Pennsylvania St., N.E. Albuquerque, New Mexico 87110 (505) 265-3521

9-54

July 26, 1979

Mr. Bruno Conegliano
Division of Engineering
P.O. Box 1293
Albuquerque, New Mexico 87103

Re: Spain Apartments

Dear Bruno:

As per our discussions, I have revised the drainage plan for the Spain Apartments. Transmitted herewith are two (2) copies of the revised drainage plan.

I have calculated the size of swales required to convey runoff along Eubank and Spain. Along Eubank a 6' wide by 1' deep swale will be required for a portion of the way. The remainder will require an 8' wide by 1' deep swale. An 8' wide by 1' deep swale will be required along Spain Road. In addition, I have calculated an inflow-outflow hydrograph for the pond. The inflow to the pond will vary between 15 and 26 c.f.s. during the period while the pond would be overflowing. Therefore, I have sized a gravel, wier and rundown to pass that flow over the dikes surrounding the pond. The rundown as shown will be approximately 12' wide and 1' deep.

I believe I have addressed all of your comments, and therefore request that you approve this drainage plan.

Thank you.

Yours truly,

GOLDBERG-MANN & ASSOCIATES, INC.

Thomas T. Mann, Jr., P.E.
President

TTM:pe

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

July 18, 1979

Mr. Thomas Mann
Goldberg-Mann & Associates
2329 Wisconsin N.E.
Albuquerque, New Mexico 87110

Ref: Spain Apartments

Dear Mr. Mann:

I have reviewed the proposed site grading plan for the Spain Apartment Complex. I do not object to the overall scheme but the drainage report will have to include a quantification of the flows conveyed to the ponding area (an in-flow - out-flow hydrograph must be supplied using the 1-hour precipitation intensity - see NOAA Atlas); it must be demonstrated that the flow in the swales along the south, and more particularly along the west side, will be confined. It is my opinion that in order to prevent the runoff from going over the sidewalk along Eubank Blvd., a pipe may be necessary. Further, the grading shown along Eubank seems inconsistent with the requirements for the construction of the sidewalk along the property line.

There are also some questions regarding the obstruction of the line-of-sight for arterials by the embankment at the intersection of Spain and Eubank. Indications will also have to be supplied on the safety provisions that will be provided to protect against breaching of the berm and the flooding of the intersection.

As you are aware, the City concurs with the emptying of the ponding during a 24 hour time period. Therefore, the inlet will have to be designed to convey to the storm sewer the differences between the undeveloped and the developed discharges during the 100-year storm occurences and with small openings for the actual drainage of the pond. A stand pipe inlet seems, therefore, to be the best solution.

If you would like to discuss these matters further, please do not hesitate to contact my office.

Very truly yours,

Bruno Conegliano
Assistant City Engineer-Hydrology

BC/fs
cc - Dick Heller, Rich Leonard, AMAFCA, Drainage File

Goldberg - Mann & Associates, Inc.
Engineers - Planners
911 Pennsylvania St., N.E. Albuquerque, New Mexico 87110 (505) 265-3521

9-54

June 29, 1979

RECEIVED
JUL 0 1979
CITY ENGINEER

Mr. Bruno Conegliano
Asst. City Engineer/Hydrology
Division of Engineering
P.O. Box 1293
Albuquerque, New Mexico 87103

Re: Spain Apartments

Dear Bruno:

Transmitted herewith are two (2) sets of prints for the drainage plan for the Spain Apartments.

Please review these documents at the earliest possible date. I would appreciate your comments for conceptional approval as soon as you can get them. Final approval would be satisfactory within two (2) weeks, as long as we know that conceptionally you agree with the manner in which I approached this project.

If you have any questions or comments, please do not hesitate to call. Thank you very much for your consideration in this matter.

Yours truly,

GOLDBERG-MANN & ASSOCIATES, INC.

Thomas T. Mann, Jr., P.E.
President

TTM:pe
cc: Pat Affholter

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

MAYOR
Harry E. Kinney

CHIEF
ADMINISTRATIVE OFFICER
Frank A. Kleinhenz

April 20, 1977

Wilson & Co.
1321 San Pedro Dr. N.E.
Albuquerque, New Mexico

Gentlemen:

The concepts and methodology outlined in the drainage report for the property at the N.E. corner of Spain and Eubank are approved.

The construction plans for the individual units will have to indicate the grading of the site to implement the recommendations of the drainage report.

The existing channel to the north of the property will have to be fully lined by the developer to convey the anticipated flows from the east as discussed with your Mr. Sykes.

If we can be of further assistance, do not hesitate to contact us.

Sincerely,

Bruno Conegliano
Assistant City Engineer-Hydrology

BC/fs

cc: Jim Smith, AMAFCA
Mr. Kimmick
Mr. Hensch

WILSON & COMPANY
ENGINEERS & ARCHITECTS

P.O. BOX 3305

1921 SAN PEDRO N.E. ■ ALBUQUERQUE, NEW MEXICO 87110

505 255-4950

ENGINEERS
ARCHITECTS
PLANNERS

April 5, 1977

RECEIVED
APR 06 1977
CITY ENGINEERS

Mr. V. M. Kimmick, City Engineer
City of Albuquerque
P. O. Box 1293
Albuquerque, New Mexico 87103

Re: Drainage Report
Property at NE Corner Spain Road & Eubank Blvd.

Dear Mr. Kimmick:

Enclosed for your review are two copies of the drainage report for the 9.4 acre tract located at the northeast corner of Eubank and Spain Road. Upon approval of the report we will prepare a grading plan that will include the required ponding areas.

I will be glad to discuss this report with you or your representative.

Very truly yours,
WILSON & COMPANY

Robert P. Sykes, P.E.

cc: Dave Kraemer

Enclosures

-sp

# ENGINEER'S DRAINAGE REPORT

FOR

PROPERTY AT THE NORTHEAST CORNER

SPAIN ROAD

AND

EUBANK BLVD. NE

ALBUQUERQUE, NEW MEXICO

WILSON & COMPANY

ENGINEERS & ARCHITECTS

1321 SAN PEDRO DR. NE

ALBUQUERQUE, NEW MEXICO

APRIL 1977

(77-511)

WILSON & COMPANY ENGINEERS ARCHITECTS

ENGINEER'S DRAINAGE REPORT

FOR

PROPERTY AT THE NORTHEAST CORNER

OF

SPAIN ROAD AND EUBANK BLVD. NE

PURPOSE: The purpose of this report is to analyze the property in question and decide if the run-off volume should be controlled or if on-site storage should be provided for the amount of excess run-off produced when the property is developed.

CLIMATOLOGICAL INFORMATION: From the Weather Bureau Publication "Percepitation-Frequency Atlas of the Western United States - Volume IV - New Mexico" it found that the 100 year rainfall at the project site is:

6 Hour = 2.8 Inches
24 Hour = 3.8 Inches

The project in its natural state is lightly vegetated with average slope of about 6% thus a coefficient of run-off value of 0.45 is considered conservative for the property.

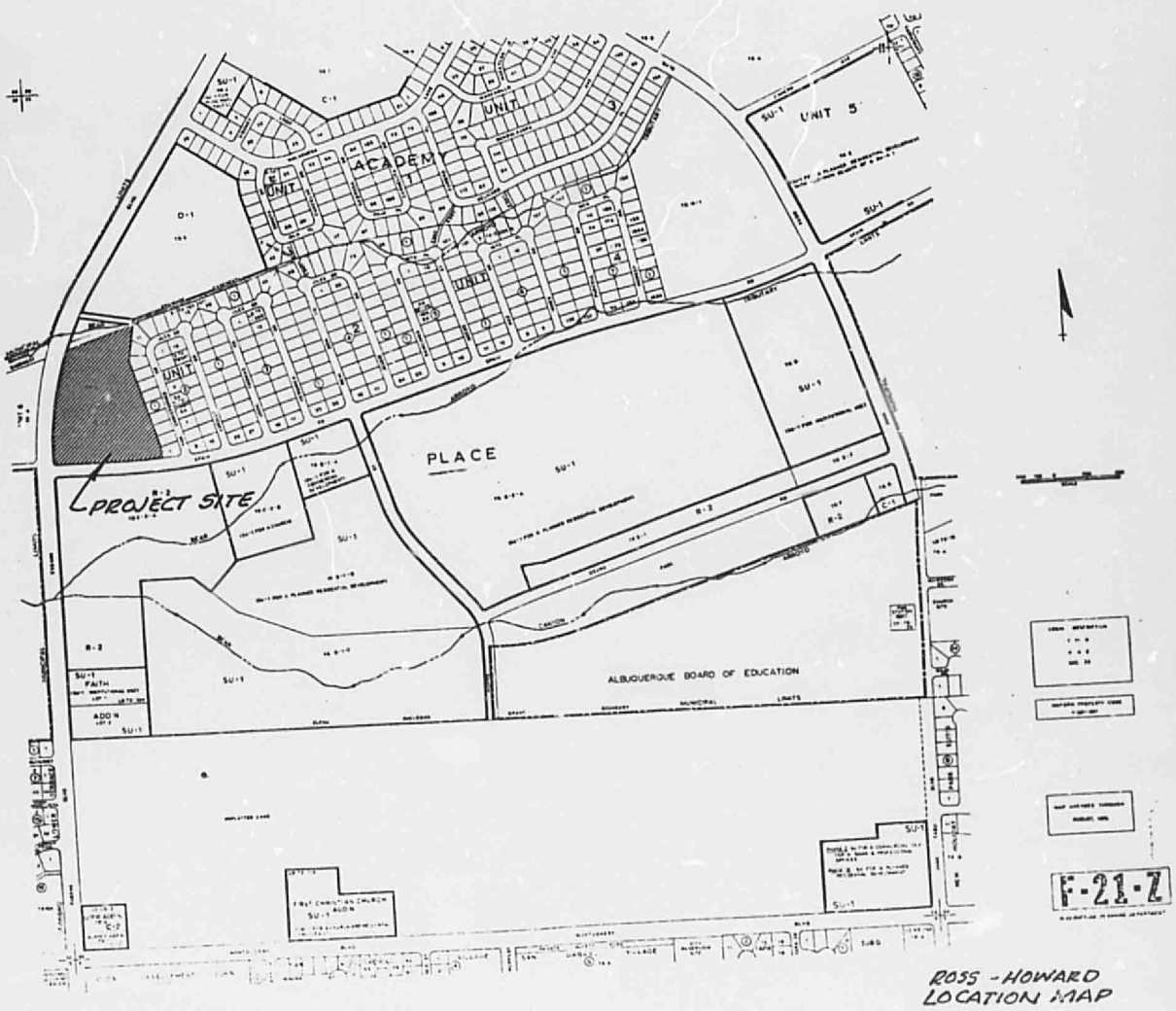
DISCUSSION: The off-site drainage from the north will be intercepted by a drainage ditch. The off-site drainage from the east will be ponded or diverted to Spain Road or the drainage ditch by a wall. It should be safe to assume the discharge will be controlled since this land is governed by the same ordinances as the proposed project.

The total site comprises 9.35 acres and the average run-off factor for the proposed developed property is 0.55. The following is a tabulation of the run-offs for various storm duration and run-off factors:

| 100 Year Storm | C - Factor 0.45 | 0.55 | DIFFERENCE |
|---|---|---|---|
| 6 Hr. | 42,765 | 52,268 | 9,503 |
| 24 Hr. | 58,038 | 70,936 | 12,898 |

There development proposes 38 lots of which it is likely that the 9 lots fronting Spain Road will not be graded with a ponding area therefore for 29 lots, for 6 hour storm, the ponding area required would be 20' x 35' x 0.5' = 350 cu.ft./lot. For 24 hour storm the ponding area required for 29 lots would be 20' x 45' x 0.5' = 450 cu.ft./lot.

RECOMMENDATIONS: It is proposed that a ponding area of at least 500 cubic feet be provided on at least 29 lots.




ROSS - HOWARD
LOCATION MAP

COMP. Robert F. Sykes

CK.

DATE 4 April 1977

WILSON & COMPANY
ENGINEERS & ARCHITECTS
BOX 3305
ALBUQUERQUE
NEW MEXICO

LOC. Albuquerque FILE 77-511

PROJ. Ross-Howard SHEET 1

SUBJ. Drainage Report OF 2

Planned residential development located at the northeast corner of Spain & Eubank Blvd NE.

Area = 9.35 Acres
Natural Slope = 6%
From handbook - Barren Ground runoff coefficient C = 0.45

From publication "Precipitation-Frequency Atlas of the Western United States - Volume IV - New Mexico"

6 hour 100 year percipitation = 2.8"

24 hour 100 year percipitation = 3.8"

Compute volume storage required to store additional run-off due to development for both 6 hour & 24 hour 100 year rainfall.

Undeveloped Runoff

$Q_{100}$ 6hr = $(9.35)(43560)\left(\frac{2.8}{12}\right)(.45)$ = 42,765 cuft.

$Q_{100}$ 24hr = $(9.35)(43560)\left(\frac{3.8}{12}\right)(.45)$ = 58,038 cuft.

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Developed Run-off

Roofs
Area = $(8)(51)(52.5)$ = 21,420 ft²
$(30)(67)(52.5)$ = 105,525 ft²
126,945 ft² = 2.91 Ac.

Drives = $(16)(25)(38)$ = 15,200 ft² = 0.35 Ac.

Streets & Sidewalks = $(940)(40)$ = 37,600 = 0.86 Ac

Landscaping = 9.35 − 4.12 = 5.23 Ac

COMP. R.F.S

CK.

DATE 4 April 77

WILSON & COMPANY
ENGINEERS & ARCHITECTS
BOX 3205
ALBUQUERQUE
NEW MEXICO

LOC. Albuquerque FILE 77-511

PROJ. Ross-Howard SHEET 2

SUBJ. Drainage-Report OF 2

Developed "C" Factor

Roofs $= \left(\frac{2.91}{9.35}\right)(.85) = 0.26$

Sts, Drives & Sidewalk $= \left(\frac{1.21}{9.35}\right)(.90) = 0.12$

Landscaping $\left(\frac{5.23}{9.35}\right)(.30) = 0.17$

C $= 0.55$

Developed Run-off

$Q_{100}$ 6 hr $= (9.35)(43560)\left(\frac{2.8}{12}\right)(0.55) = 52,268\ ft^3$

$Q_{100}$ 24 hr $= (9.35)(43560)\left(\frac{3.8}{12}\right)(0.55) \quad 70,936\ ft^3$

6 hr 100 yr Storage Req $= 52,268 - 42,765 = 9503\ ft^3$

Assume 9 Lots Along Spain will not have storage volume provided

6 Hr Storage Req'd per Lot $\frac{9503}{29} = 328\ ft^3$

Storage $= 20 \times 35 \times .5 = 350\ ft^3$

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24 hr 100 yr Storage Req'd $= 70,936 - 58,038 = 12,898\ ft^3$

Assume 9 Lots Along Spain will not have Storage provided

24 Storage Req'd. per Lot $= \frac{12898}{29} = 445\ ft^3$

Storage $= 20 \times 45 \times .5 = 450\ ft^3$