HYDROLOGY D19/D5a1 1 PLAN

D19/D5a1

1 PLAN

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

Ken Schultz
Mayor

UTILITY DEVELOPMENT DIVISION
HYDROLOGY SECTION
(505) 768-2650

January 23, 1987

Fred Arfman
Isaacson & Arfman, P.A.
128 Monroe Street, NE
Albuquerque, New Mexico 87108

RE: DRAINAGE PLAN FOR VISTA DEL NORTE COMMERCIAL SITE
(D-19/D5A1) RECEIVED JANUARY 19, 1987

Dear Mr. Arfman:

The above referenced plan dated December 5, 1986, is approved for Building Permit.

Please attach a copy of this approved plan to both sets of construction plans submitted for sign-off by Hydrology.

If you have any questions, call me at 768-2650.

Cordially,

Carlos A. Montoya, P.E.
City/County Floodplain Administrator

CAM/bsj

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

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

March 11, 1985

Rodney E. Peterson
William Matotan & Associates, Inc.
230 Truman Street, NE
Albuquerque, New Mexico 87108

RE: DRAINAGE REPORT FOR SANTA LOUISA APARTMENTS
(D-19/D5A) RECEIVED FEBRUARY 19, 1985

Mr. Peterson:

The referenced plan dated January 21, 1985, is approved.

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

If you have any questions or comments regarding this project, please call me at 766-7644.

Cordially,

Carlos A. Montoya

Carlos A. Montoya, P.E.
City/County Floodplain Administrator

CAM/bsj

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

HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

January 5, 1987

Fred Arfman
Isaacson & Arfman, P.A.
128 Monroe Street, NE
Albuquerque, New Mexico 87108

RE: DRAINAGE PLAN FOR VISTA DEL NORTE COMMERCIAL SITE
(D-19/D5A1) RECEIVED DECEMBER 5, 1986

Dear Mr. Arfman:

I have reviewed the referenced plan dated December 5, 1986, and forward the following comment:

1. Please address depth of flow for the 10 year storm in Louisiana Boulevard. This street is a minor arterial. The Drainage Ordinance requires a twelve foot driving lane and no depth greater than 0.5 feet.

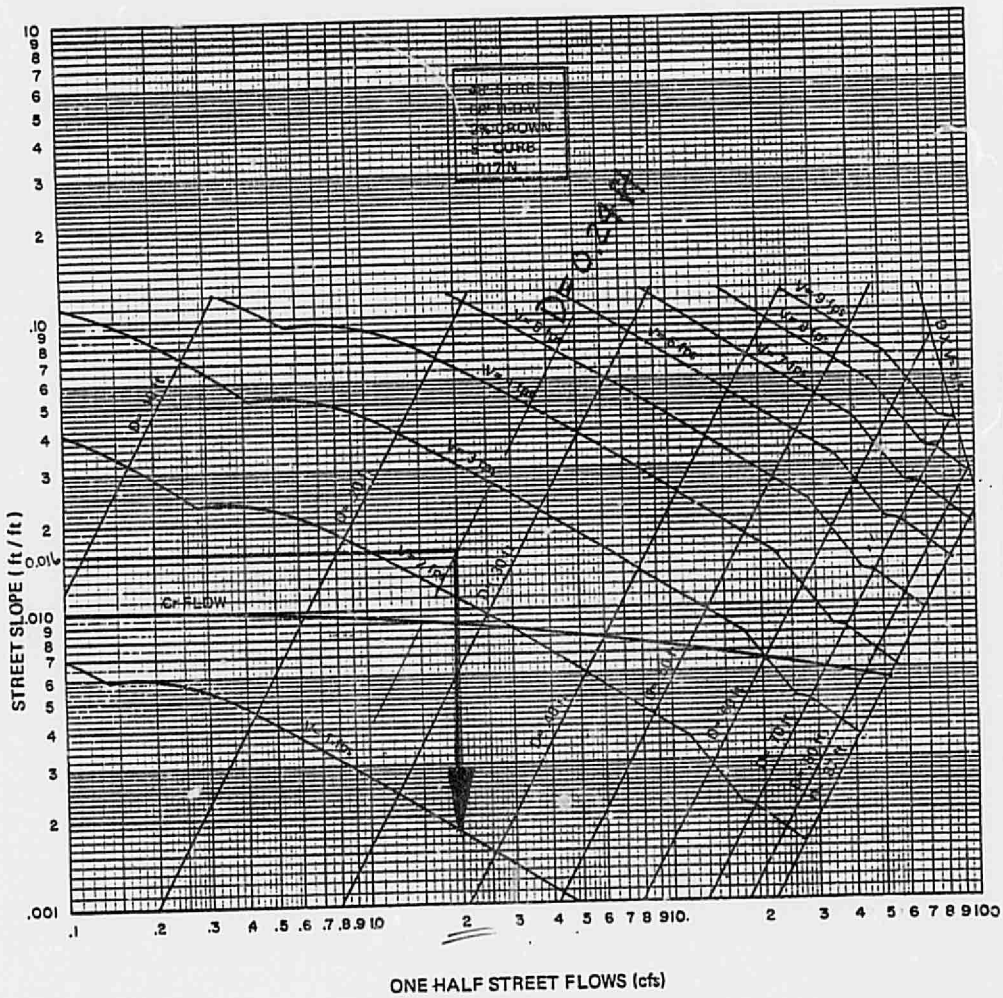
If you should have any questions regarding my review, please call me at 768-2650.

Cordially,

Carlos A. Montoya, P.E.
City/County Floodplain Administrator

CAM/bsj

STREET CAPACITY



REV. 3-83

PLATE 22.3 D-3

four double [illegible]

the arroyo. The arroyo is conceal[illegible]

Boulevard on the east to about 150' west of San Pedro

Boulevard on the west.

The capacity of Louisiana Boulevard from the site to the North Arroyo del Pino is about 80 cfs. (See Calculation Sheet 6 of the appendix.) Louisiana Boulevard is designated as a minor arterial street, requiring one lane dry during the ten year frequency flood. This criteria limits the ten year

flow in the street to four cfs. (See Calculation Sheet 6 of the appendix.) Actual ten year flows are about 80 cfs. (See Calculation Sheets 1 , 3 and 4 of the appendix.)

Approximately ninety-feet downstream from the proposed Santa Louisa Apartments, the runoff from Basin 1 of Loma del Norte (a fully developed subdivision) into Louisiana Boulevard is 40 cfs for the 100 year frequency flood (See Plate 3). This runoff peak discharges into Louisiana Boulevard about sixteen minutes after commencement of the rainstorm. About six-hundred-feet downstream from the Santa Louisa Apartments additional runoff from Loma del Norte Drainage Basin 2 discharges into Louisiana Boulevard. Drainage Basin 2 contributes an additional 69 cfs. However, from this point, runoff flows only about seventy-four-feet before entering the catch basins that drain into the North Arroyo del Pino. The combined runoffs from Santa Louisa Apartments and Basin 2 of Loma del Norte will peak at the Louisiana Boulevard bridge over the North Arroyo del Pino at about the same time. The runoff peak from Basin 1 of Loma del Norte lags

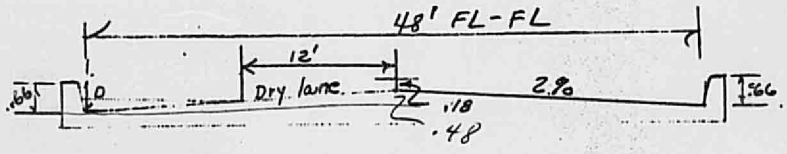
[illegible] of Santa Louisa Apart-

WILLIAM MATOTAN & ASSOCIATES, INC.
ENGINEERS
330 Truman Street, N.E. - Albuquerque, N.M. 87108
Telephone 265-8467

Project: Santa Louisa Apts Sheet 6 of 10
Subject: Storm Drain Comp Job No. 7341R
Comp. by JLG Date 10-17-88 Chk'd ✓ Date 10-18-88

Louisiana street capacity check North of intersection Patricia Drive and Louisiana NE

S = .01



Let D = .67
WP = 49.32
A = 20.16 sq.ft.

$R = \frac{20.16}{49.32} = .4078$

$R^{2/3} = .5541$
V = 2.7

Q = A V
= 20.16 × 2.7 = 54 cfs

let d = .48 i.e. water at crown of street

A = 5.76
V = 2.7

Q = 15.5

Assume one lane dry

A = 1.44 V = 2.7
Q = 3.9 cfs

A = (0.24')(12.0')(0.5) = 1.44
V = 3.4 fps
Q = 4.90 cfs

Assume water .2' above top of curb
A = 29.76 V = 2.7
Q_{100} = 80 cfs

FILE COPY

City of Albuquerque

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Ken Schultz
Mayor

UTILITY DEVELOPMENT DIVISION
HYDROLOGY SECTION
(505) 768-2650

January 23, 1987

Fred Arfman
Isaacson & Arfman, P.A.
128 Monroe Street, NE
Albuquerque, New Mexico 87108

RE: DRAINAGE PLAN FOR VISTA DEL NORTE COMMERCIAL SITE
(D-19/D5A1) RECEIVED JANUARY 19, 1987

Dear Mr. Arfman:

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Cordially,

Carlos A. Montoya

Carlos A. Montoya, P.E.
City/County Floodplain Administrator

CAM/bsj

Isaacson & Arfman, P.A.
Consulting Engineering Associates

RECEIVED
JAN 19 1987
HYDROLOGY SECTION

January 15, 1987

Mr. Carlos A. Montoya, P.E.
Hydrology Section
City of Albuquerque
P.O. Box 1293
Albuquerque, N.M. 87103

RE: Vista Del Norte Commercial Site
NE Quadrant of Louisiana Blvd. & San Antonio
(D-19/D5A1)

Dear Carlos:

Our office is responding to your review comment of our December 5, 1986 submittal of the drainage plan for the above referenced project. We were asked to address depth of flow for the 10 year storm in Louisiana Blvd. In response to your request, we offer the following comments and recommendations:

1. Lousiana Blvd. is typical of many of the North-South minor arterials in the City of Albuquerque. It more or less parallels the natural contours of the City and has a relatively flat slope (actual s = 0.016 ft/ft). Presently the commercial site is undeveloped and Louisiana Blvd. must convey approximately 70 cfs of storm water flow for the 100 yr. event. This equates to a gutter flow depth of 0.6 feet. This results in a centerline depth of flow of (0.60 - 0.48) 0.12 ft.

2. This same point was addressed in the approved report of the proposed Santa Louisa Apartments, which were to be constructed on the subject site. The report, prepared by William Matotan & Associates, Inc., and approved by the City on March 11, 1985, has an analysis that Louisiana Blvd. has a capacity of 80 cfs (I & A has it at 94 cfs due to actual slope of 0.016 ft/ft) and limits the ten year flow to 4 cfs. This analysis is found attached. Our office interprets the ordinance differently in this case since no median is present. A 12 foot dry driving lane is possible by using 6 feet of driving surface on both sides of the centerline. This equates to a flow depth of 0.36 feet at the gutter. From C.O.A. Plate 22.3 D-2, a one-half street section flow of 6 cfs is derived. This is far from official compliance, but perhaps a more realistic flow rate.

128 Monroe, NE • Albuquerque, NM 87108 • (505) 268-8828

3. From item 2 above, it can be safety stated that no nuisance flows cross the driving surface of Louisiana Blvd.

4. The subject site is at the most southerly end of the drainage basin. Undeveloped and/or developed storm water discharging this site will have little impact on the existing downstream condition, which should be considered historical since the improvements were finalized prior to the adoption of the drainage resolution which required the "12 foot dry driving lane."

5. It is our recommemdation that the solution to this apparent problem is the construction of a public storm drain system in Louisiana Blvd. This would be an area-wide benefit and should be placed in a Special Assessment District on an area benefit basis. We strongly feel that the last piece of undeveloped property (i.e.: subject site) should not be responsible to correct the public deficiency of storm water conveyance in Louisiana Blvd.

I truly hope that the above response addresses those points which concern your office. Please consider them and allow this development to proceed through the plan check process, where it is currently being held up pending the resolution of this single item.

Very truly yours,
Isaacson & Arfman, P.A.

Fred C. Arfman

Fred C. Arfman, P.E.

FCA/aq

Attachments

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

January 5, 1987

Fred Arfman
Isaacson & Arfman, P.A.
128 Monroe Street, NE
Albuquerque, New Mexico 87108

RE: DRAINAGE PLAN FOR VISTA DEL NORTE COMMERCIAL SITE
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Cordially,

Carlos A. Montoya, P.E.
City/County Floodplain Administrator

CAM/bsj

Pre-design
not found
on file.
ok to
process

DRAINAGE INFORMATION SHEET

PROJECT TITLE: VISTA DEL NORTE ZONE ATLAS/DRNG. FILE #: D-19/DS-A1

LEGAL DESCRIPTION: TRACT "A-2-1" OF LOMA DEL NORTE, UNIT NO. 2

CITY ADDRESS: UNKNOWN

ENGINEERING FIRM: ISAACSON & ARFMAN, P.A. CONTACT: FRED C. ARFMAN

ADDRESS: 128 MONROE ST. N.E. PHONE: 268-8828

OWNER: GARY WATSON CO. CONTACT: GARY WATSON

ADDRESS: 5814 CARLISLE N.E. PHONE: 881-7007

ARCHITECT: DEKKER & ASSOC. CONTACT: DALE DEKKER

ADDRESS: 600 1ST. ST., N.W. PHONE: 247-2888

SURVEYOR: ALBUQUERQUE SURVEYING CO. CONTACT: FRED SANCHEZ

ADDRESS: 2119 MENAUL BLVD. PHONE: 884-2036

CONTRACTOR: JACK WILGER CONST. CONTACT: JACK WILGER

ADDRESS: PHONE: 881-7007

PRE-DESIGN MEETING:

X YES

___ NO

X COPY OF CONFERENCE RECORD SHEET PROVIDED

RECEIVED DEC 05 1986 HYDROLOGY SECTION

DRB NO. ___

EPC NO. ___

PROJ. NO. ___

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

X DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

___ GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

___ SITE DEVELOPMENT PLAN APPROVAL

___ FINAL PLAT APPROVAL

X BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER ___ (SPECIFY)

DATE SUBMITTED: DECEMBER 5, 1986

BY: FRED C. ARFMAN, P.E.