



CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION



HYDROLOGY SECTION PROJ. NO. _____ DATE: 11/4/82

PLANNING DIVISION NO. _____

CONFERENCE RECAP

SUBJECT: S.W. CORNER OF 1st St. & E. Ave. (150' W x 150')

WHO	REPRESENTING
ATTENDANCE: <u>FRED T. HARRIS</u>	<u>Blanche Lotthauer</u>
<u>RAY CHAMBERS</u>	<u>BLANCHE LOTTHAUER</u>
_____	_____
_____	_____
_____	_____
_____	_____

FINDINGS:

- (1) NO PONDING REQUIRED, DOWNSTREAM CONDITIONS PER THE FFBM INDICATE NO FLOODING PROBLEM
- (2) HOLD HARMLESS AGREEMENT REQUIRED AGAINST ^{POSITIVE} AMEASUREMENT OF THE CHANNEL, IF THE CHANNEL (ADJACENT) IS UNLINED.
- (3) DRAGOFF PLAN REQUIRED PER THE DPM.

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: [Signature]

SIGNED: Ray Chambers

TITLE: _____

TITLE: CCIC

DATE: 11/4/82

DATE: 11/4/82

November 11, 1982

RECEIVED

Mr. Fred Aguirre
Hydrology Section
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

NOV 15 1982

ENGINEERING

Hal. 012

RE: Drainage Plan for Blake's LotaBurger,
Southwest Corner of Juan Tabo and Snow Heights

Dear Fred:

I am enclosing two (2) copies of the drainage plan for one of the sites for Blake's LotaBurger. You will note it follows the general conclusions reached in our conference of November 4.

It was not necessary to check on the schedule for lining the channel adjacent to the site as the contract has been signed and work has started on the project.

We will hope to resubmit our request for building permit sometime next week.

Regards,

Ray
Ray H. Chambers
Partner

RHC:dd
Encls.

CCIC Design Group

architects, engineers, planners, 3500 Indian School Road NE, Albuquerque, NM, 87105 505-266-5521



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 6, 1982

Mr. Ray H. Chambers
CCIC Design Group
3500 Indian School Road NE
Albuquerque, New Mexico 87106

Re: Blake's Lota Burger, Juan Tebo & Lexington, Dated 11/15/82
(File No. H21-D12)

Dear Mr. Chambers:

Attached are my comments (in red) for the referenced project. Please include the information requested in your resubmittal.

Since the arroyo immediately adjacent to the site is presently being improved (that is lined) and there is a flooding problem downstream, this office requests that you explore the possibility of discharging directly into the arroyo. Please investigate the aforementioned and let us discuss your findings.

Your cooperation in this matter is greatly appreciated. Please feel free to call me at 766-7644 regarding any questions.

Sincerely,

Fred J. Aguirre, PE
Civil Engineer/Hydrology

FJA/el

cc: Drainage File
Reading File

Attachment

MUNICIPAL DEVELOPMENT DEPARTMENT

Richard S. Heller, P.E., City Engineer

ENGINEERING DIVISION

Telephone (505) 766-7467

AN EQUAL OPPORTUNITY EMPLOYER



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 11, 1983

Mr. Ray Chambers
CCIC Design Group
3500 Indian School Road NE
Albuquerque, New Mexico 87106

Re: Blake's Lota Burger, Juan Tabo & Lexington, Dated 1/11/83
(File No. H21-D12)

Dear Mr. Chambers:

The referenced drainage report dated January 11, 1983 is approved.

Sincerely,

Fred J. Aguirre, PE
Civil Engineer/Hydrology

FJA/el

cc: Drainage File
Reading File

MUNICIPAL DEVELOPMENT DEPARTMENT

Richard S. Heller, P.E., City Engineer

ENGINEERING DIVISION

Telephone (505) 766-7467

AN EQUAL OPPORTUNITY EMPLOYER

January 5, 1983

Mr. Fred Aguirre, P.E.
Civil Engineering/Hydrology
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

RE: Your Comments on Drainage Plan for Blake's LotaBurger, Dated 11/11/82
Your File #H21-D12

Dear Mr. Aguirre:

I am enclosing two (2) copies of the resubmittal on the subject project which have been changed on the referenced drainage plan. You will note we have addressed all of the points you requested in your checklist.

As you asked in your transmittal letter and we discussed with you on the telephone, we have investigated the possibility of discharging directly into the concrete lined arroyo adjacent to the south boundary of the site and have the following information to submit:

- 1) The traffic requirement of our client to have an entry/exit onto Snow Heights Boulevard at the northwest corner of the site precludes any chance of draining the entire site to the south and into the arroyo. We investigated the possibility of reversing the surface flow or directing a portion of the surface flow into the arroyo. In both instances, we encountered slopes that were not acceptable to the movement of traffic.
- 2) The only other possibility would appear to be to install a storm water collection box at the northwest corner of the site. The top would be at elevation 5601; FL. at elevation 5998; and the discharge elevation into the arroyo would be at elevation 5996 (approximate). The flow line of the existing concrete lined arroyo at a point opposite the rear lot line is elevation 5595.0. The pipe would discharge into the arroyo during flood stage under water. Depending on the depth of water in the arroyo (the sides are extended some eight (8) feet above the flow line), the hydraulic gradient, etc., it would be possible to not only restrict the flow, but to reverse it in the storm water collection box. The cost-effectiveness of such a solution is negative as it would be difficult to recommend such an expensive system in return for a non-positive storm drainage answer.

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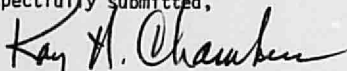
Mr. Fred Aguirre, P.E.
January 5, 1983
Page 2

3) We further investigated the area you have designated as a "flooding problem downstream." The slopes and grades on Snow Heights Boulevard are more than adequate all the way down to the junction with the branch arroyo that drains back into the Embudo. The problem appears to be the manner in which the storm water is channeled into the arroyo and the change in the street cross-section. The present conditions will pond water at the branch arroyo until they are revised, regardless of the quantity of storm discharge.

In view of the preceding information, I would recommend that Blake's LotaBurger be permitted to discharge onto Snow Heights Boulevard, and that the City rework the problem area as discussed.

I hope this will explain the results of our further study, and that the drainage plan as resubmitted will be approved.

Respectfully submitted,



Ray H. Chambers
Partner

RHC:dd
Encls.

582-4

November 11, 1982

Mr. Fred Aguirre
Hydrology Section
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

RE: Drainage Plan for Blake's LotaBurger,
Southwest Corner of Juan Tabo and Snow Heights

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Regards,

Ray H. Chambers
Partner

RHC:dd
Encls.

CCIC Design Group

1000 University Blvd, Suite 100, Albuquerque, NM 87102

DRAINAGE STUDY

FOR

BLAKE'S LOTA BURGER

Lot 1A, Block 96, Snow Heights Addition



Prepared By:
CCIC DESIGN GROUP
3500 Indian School Road, N.E.
Albuquerque, New Mexico 87106

November 11, 1982

INFORMATION SHEET

PROJECT TITLE Blake's Lota Burger TYPE OF SUBMITTAL Drainage Plan

ZONE ATLAS PAGE NO. H-21-Z CITY ADDRESS 11724 Snow Heights Blvd.

LEGAL DESCRIPTION Lot 1-A, Block 96, Snow Heights Addition

ENGINEERING FIRM CCIC Design Group CONTACT Ray Chambers

ADDRESS 3500 Indian School Road, N.E. PHONE 266-5521

OWNER Blake Chanslor CONTACT Blake Chanslor

ADDRESS 3205 Richmond, N.E. PHONE 884-2160

ARCHITECT CCIC Design Group CONTACT Annelle M. Darby

ADDRESS 3500 Indian School Road, N.E. PHONE 266-5521

SURVEYOR Surveying Services CONTACT Jim Gutierrez

ADDRESS 2004 Del Rio, S.W. PHONE 877-2127

CONTRACTOR Licensed CONTACT --

ADDRESS Not Selected PHONE --

DATE SUBMITTED November 11, 1982

BY Ray Chambers

INTRODUCTION

The investigation of the site for a proposed Blake's Lota Burger, Lot 1A, Block 96, Snow Heights Addition to the City of Albuquerque, has been made to analyze the undeveloped drainage contribution as well as the projected storm water flow when the site has been developed in accordance with the drawings.

Site Information: The selected site contains 0.702 acres, all of which will be developed. The topography is sloping from east to west with a difference in elevation of approximately 12 feet in 240 feet. (Slope = 5% overall.) Existing ground cover is very sparse native grasses.

Snow Height Boulevard and Juan Tabo Boulevard are both paved and improved with existing sidewalks and curbs and gutters.

Adjacent Embudo Arroyo: The Embudo Arroyo Drainageway is adjacent to the south boundary of the site. The City of Albuquerque is in the process of placing a concrete liner in the drainageway which will forestall any future meandering or erosion to the site. It is anticipated that the channel lining will be completed before the Lota Burger can be constructed.

On Site Drainage: All improved areas of the site are sloped to drain through a new driveway opening at the northwest corner of the site and onto Snow Heights Boulevard. (See copy of the Site Plan-Exhibit.)

Hydrological storm flow calculations are based on the national runoff formulae; and estimates were made in percentage of areas to determine a composite "C" value for runoff coefficients using the following acceptable numbers:

- a. Asphalt paving, sidewalks and roofs = 0.90
- b. Landscaped and grassed areas = 0.20
- c. Natural ground = 0.40

The runoff volumes are based on a 100 year, 6 hour rainfall of 2.8 inches.
(See attached isopluvial map.)

PRE-DEVELOPED STORM FLOW

Area = 0.702 acres = 30,580 sq. ft.

C = 0.40

tc = 13 min.

I = $189/(t+25) = 5.0$

Q = CIA = (0.40) (5.0) (0.702) = 1.4 cfs.

V = CDA, where D = 2.8" = 0.23'
= (0.40) (0.23) (30580) = 2813 cu. ft.

There are no apparent drainage channels on the existing site and it is assumed the present flow is to the northwest corner of the site where the flow then goes down Snow Heights Boulevard to the west.

DEVELOPED STORM FLOW

Area = 0.702 acres = 30,580 sq. ft.

Composite "C" = 0.83

tc (285') = 6 min.

I = 6.1

Q = CIA = (0.83) (6.1) (.702) = 3.55 cfs.

V = CDA, where D = 2.8" = 0.23'
= (0.83) (0.23) (30,580) = 5838 cu. ft.

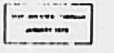
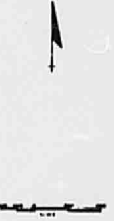
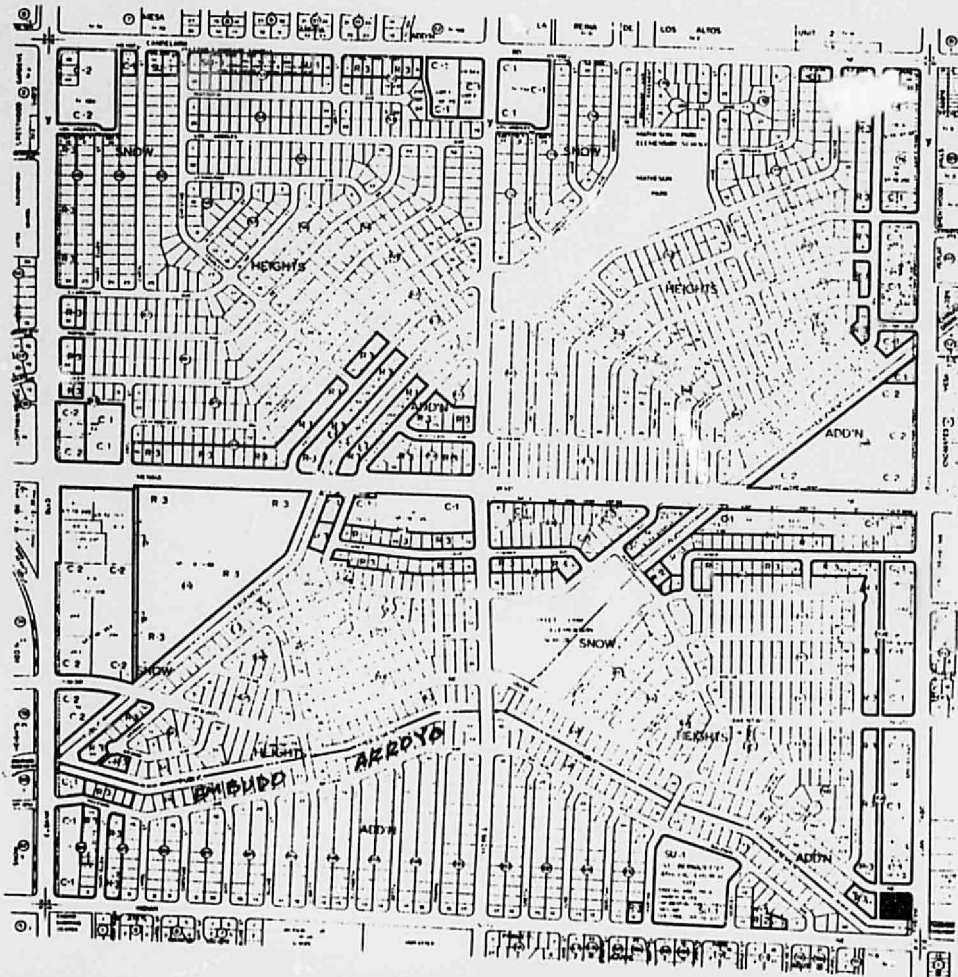
The additional flow generated when the site is developed amounts to 2.15 cfs or 3025 cu. ft.

DOWNSTREAM OFFSITE DRAINAGE

The additional storm drainage will flow down Snow Heights Boulevard approximately 2800 feet to the junction with the north drainage of the Embudo Arroyo. (See attached zone map.) The storm water will then drop into the concrete lined arroyo through existing curb cuts and join the AMAFCA overall drainage system.

RECOMMENDATION

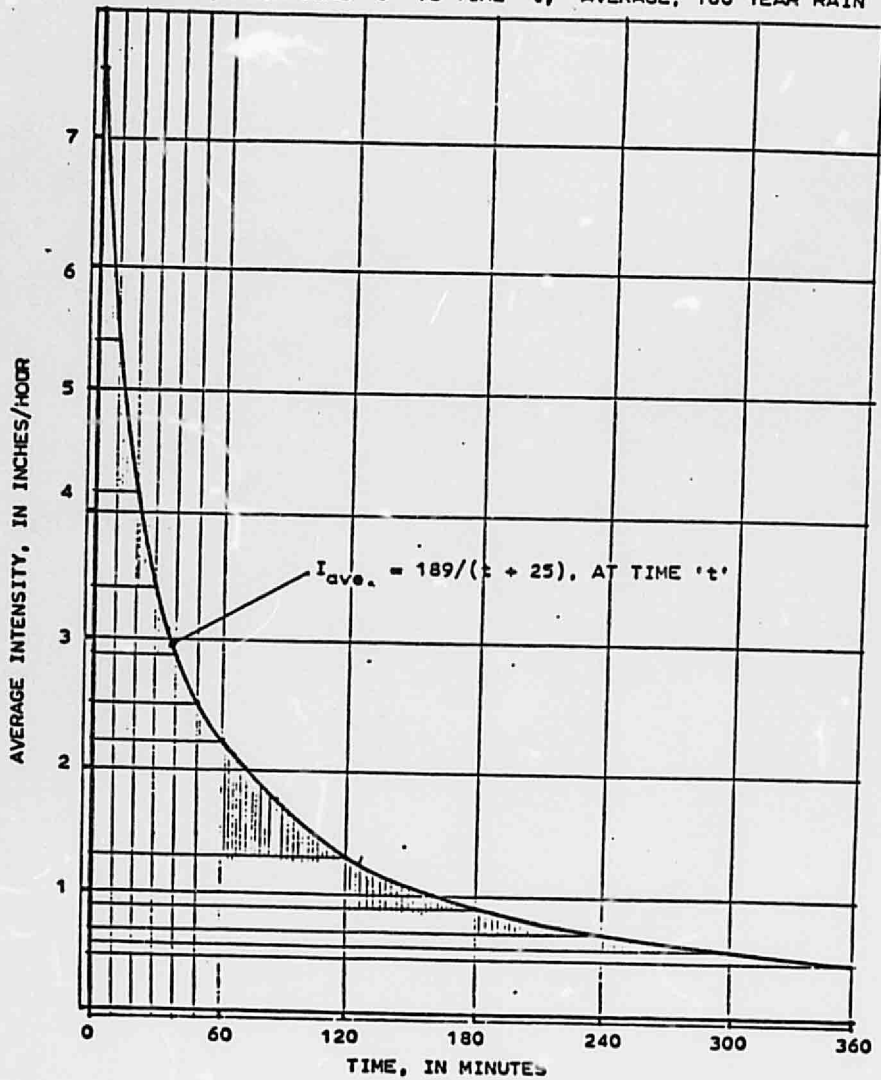
As the FHBM indicates no flooding problems along the route of the additional 2.15 cfs of storm water, it is proposed to use no on-site ponding, and to release the storm flow as it accumulates into Snow Heights Boulevard.



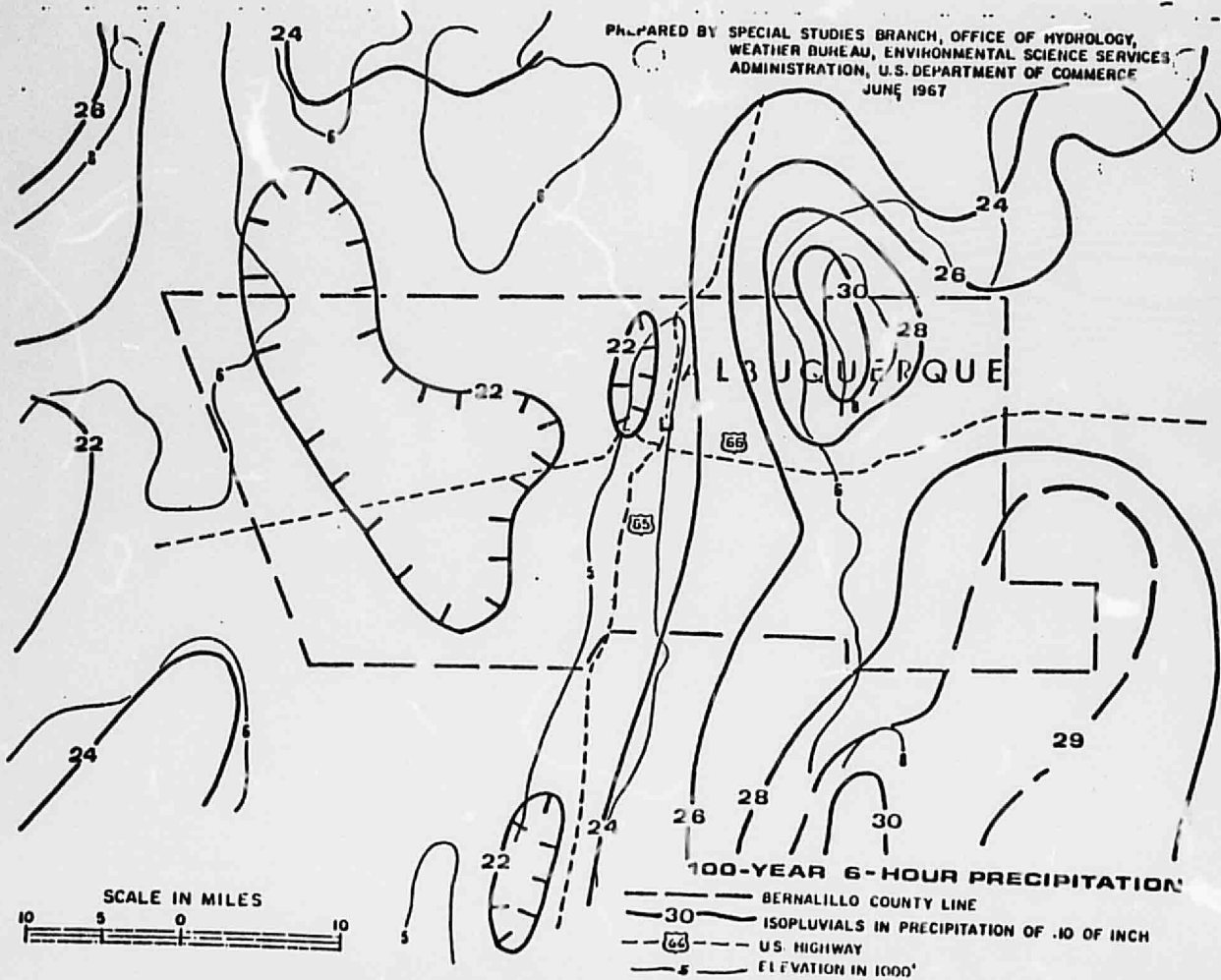
H-21-Z

INTENSITY

ALBUQUERQUE
INTENSITY, FROM TIME '0' TO TIME 't,' AVERAGE; 100 YEAR RAIN



PREPARED BY SPECIAL STUDIES BRANCH, OFFICE OF HYDROLOGY,
 WEATHER BUREAU, ENVIRONMENTAL SCIENCE SERVICES
 ADMINISTRATION, U.S. DEPARTMENT OF COMMERCE
 JUNE 1967



SCALE IN MILES

