



## City of Albuquerque

P.O. BOX 293 ALBUQUERQUE, NEW MEXICO 87103

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

September 21, 1984

Mr. Chris Weiss  
CTS, Inc.  
1100 Alvarado NE  
Albuquerque, New Mexico 87110

RE: GRADING & DRAINAGE PLAN FOR OFFICE & WAREHOUSE SITE 2020  
Zearing (H18-D13)

Dear Chris,

The above referenced plan, dated July 24, 1984, is approved.

Please attach a copy of this approved plan along with the appropriately approved "Drainage Facilities Within City Right-of-Way" document to the construction set prior to release of the building permit.

If I can be of further assistance, please contact me at 766-7644.

Sincerely,

*Billy J. Goolsby*  
Billy J. Goolsby, PE  
Civil Engineer/Hydrology

BJM/BJG/cl

cc: Greg Olson

MUNICIPAL DEVELOPMENT DEPARTMENT

C. Dwayne Sheppard, P.E., City Engineer

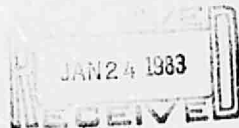
ENGINEERING DIVISION

Telephone (505) 766-7467

AN EQUAL OPPORTUNITY EMPLOYER



811 DALLAS, N.E. • ALBUQUERQUE • NEW MEXICO • 87110 • 505-265-5611



01202  
January 21, 1983

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

Re: Engineer's Drainage Certification  
For Tract D-6

Dear Fred:

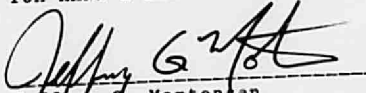
Transmitted herewith for your review are two (2) copies of the Engineer's Drainage Certification for the subject project. This certification has been prepared in accordance with the guidelines set forth in the City of Albuquerque Development Process Manual, Volume II.

Review of the plan reveals minor discrepancies between the approved drainage plan and the as-built conditions. These differences do not affect the overall drainage concept of the site. It is because of this that the site has been found to be in substantial compliance with the approved drainage plan.

If you have any questions or comments concerning this submittal, please do not hesitate to call.

Sincerely,

TOM MANN & ASSOCIATES, INC.

  
Jeffrey G. Mortensen  
Project Engineer

JGM:sh  
Encs.

# **CITY OF ALBUQUERQUE**

ALBUQUERQUE, NEW MEXICO

INTER-OFFICE CORRESPONDENCE

August 4, 1981

REF. NO. 413-D13

TO: Bruno Conegliano, Hydrology Engineer, City Engineer's Office  
FROM: Malcolm W. deVesty, Assistant City Attorney *Mac*  
SUBJECT: ENCROACHMENT AGREEMENT FOR TRACT D-6,  
UNIT #2-A, JEANNEDALE

Enclosed herewith is a copy of a letter  
received regarding the above entitled matter. Please  
brief me on this.

MWdV/dh  
Enclosure

**RECEIVED**

AUG 06 1981

**CITY ENGINEER**

# New Mexico and Arizona Land Company

1614 East Indian School Road • Phoenix, Arizona 85016 • 602/266-5455



A Southwest Resources Company

July 27, 1981

Malcomb DeVest  
Assistant City Attorney  
City of Albuquerque  
P. O. Box 1293  
Albuquerque, New Mexico 87103

Re: Encroachment agreement for Tract D-6,  
Unit #2-A, Jeannedale

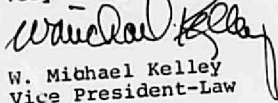
Dear Mr. DeVest:

It is my understanding that, in order to construct improvements within a drainage easement held by the City of Albuquerque across the above property, we must execute an encroachment agreement whereby the City of Albuquerque is relieved from the cost of repair of any damages caused by any repair or maintenance work done by the City within the easement.

I am told that this agreement must be executed before our plans for construction of an office building on that site will be approved by the City of Albuquerque Building Department. I assume that your department has a form encroachment agreement which will suffice and, with that in mind, I request that you send such an agreement to me as soon as possible for execution.

We were unaware that such an agreement is necessary and, since we are poised for construction, I would like to resolve this matter so that our plans can be approved as soon as possible. Thank you for your cooperation.

Very truly yours,

  
W. Michael Kelley  
Vice President-Law

WMK:tj

cc: H. William Fanning



## City of Albuquerque

P.O. BOX 1203 ALBUQUERQUE, NEW MEXICO 87103

H18-D13

July 22, 1981

Mr. Jeff Mortensen  
Project Engineer  
Tom Mann & Associates, Inc.  
811 Dallas N.E.  
Albuquerque, N.M. 87110

RE: TRACT D-6, GRADING & DRAINAGE PLAN DATED JUNE 18, 1981

The referenced drainage report is approved with the understanding that the proposed French Drains will not be constructed within 15' of any structure. Also, a copy of the completed encroachment agreement must be submitted before the building plans are released.

Please advise the party who will be designing the French Drains about our understanding above. Have them attach copies of the design with their locations to the building plans. Have them include one extra copy for my files.

If you have any questions concerning the above, please feel free to call me.

Sincerely,

Fred J. Aguirre, P.E.  
Civil Engineer

FJA/tsl

MUNICIPAL DEVELOPMENT DEPARTMENT

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

ENGINEERING DIVISION

Telephone (505) 766-7467



811 DALLAS, N.E. • ALBUQUERQUE • NEW MEXICO • 87110 • 505-265-5611

0-120  
July 15, 1981

Mr. Fred Aguirre  
Engineering/Hydrology Division  
City of Albuquerque  
P. O. Box 1293  
Albuquerque, New Mexico 87103

Re: Tract D-6, Grading and Drainage Plan

Dear Fred:

Transmitted herewith are two (2) prints of the revised grading and drainage plan for Tract D-6. This plan has been revised as per our meeting held on the morning of July 15, 1981. As you will note, the following items have been addressed:

1. Drive pads have been constructed to the property line.
2. The property line has been identified.
3. The Zone Atlas page has been listed.
4. Drive pads have been designed so that they are one (1) foot above the flow line of the corresponding curb and gutter.
5. A note has been added stating that "Roof drains shall not drain to the underground parking area."

As you will also note, Tom's stamp has not been dated; however, the revisions referenced above have been dated for documentation purposes. Roof drains have not been shown; however, a note has been added to prevent drainage of these drains to the underground parking area.

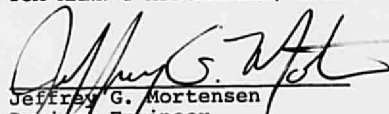
Details concerning the dry well shall be addressed by Mr. William Fanning, the architect for the project. Mr. Fanning is also responsible for the preparation and submittal of the necessary encroachment agreement.

Mr. Fred Aguirre  
Page 2  
July 15, 1981

If you have any further questions or comments concerning this project, do not hesitate to call.

Sincerely,

TOM MANN & ASSOCIATES, INC.



Jeffrey G. Mortensen  
Project Engineer

JGM:bb  
Encs. 2  
xc: Bill Fanning w/enc. (1)



Goldberg - Mann & Associates, Inc.

Engineers - Planners

811 Dallas St., N.E.

Albuquerque, New Mexico 87110

(505) 265-5611

May 29, 1981

0-120

Mr. Charles M. Easterling  
City Engineer/Hydrology  
City of Albuquerque  
P. O. Box 1293  
Albuquerque, New Mexico 87103

Re: Tract D-6, Grading and Drainage Plan


Dear Chuck:

Transmitted herewith for your review are two (2) copies of the subject grading and drainage plan. We have had prior correspondence and meetings concerning this project.

Please review and comment at your earliest convenience. If you have any questions or comments, do not hesitate to call.

Sincerely,

GOLDBERG-MANN & ASSOCIATES, INC.


  
Jeffrey E. Mortensen  
Project Engineer

JGM:bb

Encs.

cc: Bill Fanning

APPROVED IN CONCEPT.  
REQUIRE NEW ENCROACHMENT  
AGREEMENT.

  
6/11/81



Goldberg - Mann & Associates, Inc.

Engineers - Planners

811 Dallas St., N.E.

Albuquerque, New Mexico 87110

(505) 265-5611

April 15, 1981

0-120

Mr. Charles M. Easterling  
Hydrology Engineer  
City of Albuquerque  
P. O. Box 1293  
Albuquerque, New Mexico 87103

RECEIVED  
APR 20 1981  
CITY ENGINEER

Re: Tract D-6, Jeannedale and Indian School Road

Dear Chuck:

To further continue our discussion concerning Tract D-6 at Jeannedale and Indian School, we have performed further calculations as you requested.

In Indian School Road our calculations indicate that the critical depth is greater than the normal depth; therefore, we will have supercritical flow. The froude number is approximately 3.8 which would indicate the potential for a strong hydraulic jump. Analyzing the depth of the jump indicates that the maximum downstream depth would be less than 2.5 feet.

Looking at Jeannedale indicates that the normal depth is less than the critical depth, which again gives us supercritical flow; however, the two numbers are fairly close together and the froude number is calculated to be 1.74. Therefore, there is some question as to whether or not a jump will even form as a result of the flows coming out of Jeannedale. A review of the channel also indicates that the normal depth is less than the critical depth, thereby again establishing supercritical flow.

It is my opinion from looking at these calculations and reviewing them with Richard Heggen, that the flow from Jeannedale is not as posed a problem to our property; the main problem comes from the flow in Jeannedale and Indian School combining and creating some type of a jump that will angle across the intersection as the water tries to turn into the channel. Therefore, it is my opinion that the construction of a 33-foot wide channel downstream does not affect the intersection. The flows into the channel do not substantially raise the water surface in the channel as indicated by our previous calculations. The main concern that I see is that the retaining walls leading into the channel and adjacent to the intersection should be constructed high enough to retain the water in the intersection and not allow it to enter private

Mr. Charles M. Easterling  
Page 2  
April 15, 1981

property. Therefore, I feel that the top of the wall should be constructed to an elevation of 5237.0 beginning at the west end of the existing curb return and continuing until the 33-foot wide channel is defined. Then the wall height should remain at least 2 1/2 feet above the invert of the channel for the remainder of the property. City datum has been referenced for vertical control.

I request that you approve the narrowing of the channel based on these findings so that we can complete our construction drawings and submit them to you for a permit. If you have any questions or comments, please do not hesitate to call. Thank you.

Yours truly,

GOLDBERG-MANN & ASSOCIATES, INC.



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

5/5/81

TTM:bb

Enc.

xc: H. William Fanning, Architect



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0120

July 20, 1982

Mr. Robert Kielich  
Assistant City Engineer/Design  
City of Albuquerque  
P. O. Box 1293  
Albuquerque, New Mexico 87103

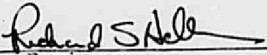
Re: New Mexico and Arizona Land Company Building

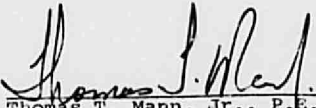
Dear Bob:

I have been contacted by Rod Dillon of Summit Construction concerning the New Mexico and Arizona Land Company Building on Indian School and Jeannedale.

Our drainage plan calls for the removal and relocation of a drop inlet on the north and west side of the drainage easement that adjoins their south boundary. I concur with Mr. Dillon that the drop inlet is not necessary. Trickle waters will go ahead and enter the drainage easement and be picked up near the freeway, rather than go into this inlet. I do not feel that this is a critical item and that the drop inlet could be deleted.

If you and the Hydrology Section concur, your signature below will be acknowledgment of the deletion of this item from the project. Should you have any questions or comments, please do not hesitate to call. Thank you.

  
City Engineer  
City of Albuquerque

  
Thomas T. Mann, Jr., P.E.  
Tom Mann & Associates, Inc.

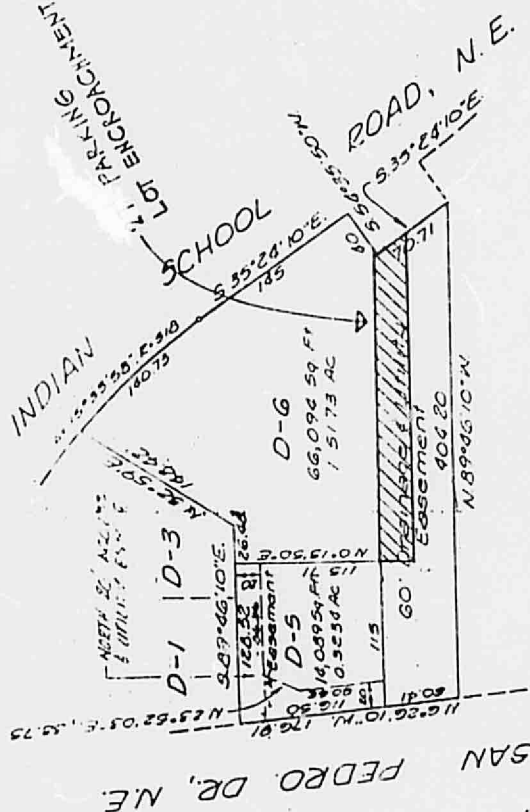
TTM:bb  
cc: Rod Dillon

*Handwritten notes:*  
RGP  
CE/Hydrology  
10/14

Clerk & Recorder  
County Clerk

**LEGAL DESCRIPTION**

TRACT D-6, UNIT 2-A  
DALE J. BELLAMAH'S JEANNEDALE  
AN ADDITION TO THE CITY OF ALBUQUERQUE, N.M.



Scale: 1"=100'

**DEDICATION:**

THE UNDERSIGNED OWNERS OF THE LAND HEREON SHOWN DO HEREBY CONSENT TO THE RE-PLAT OF THE LAND HEREON SHOWN, TRACT D-6, UNIT 2-A, DALE J. BELLAMAH'S JEANNEDALE, AN ADDITION TO THE CITY OF ALBUQUERQUE, NEW MEXICO, AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT OF SAID ADDITION FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO, ON OCT. 26, 1971, NOW COMPRISING TRACT D-6, UNIT 2-A, AND HEREBY CERTIFY THAT THIS RE-PLAT IS THEIR FREE, ACT AND DEED.

DALE BELLAMAH LAND CO., INC.

PRESIDENT

G.E. BOYLE

RAVIS B. SHAW ASSISTANT SECRETARY

STATE OF NEW MEXICO  
COUNTY OF BERNALILLO  
FILED

AUG 23 10 42 AM '81

BY: JIMMY C. FORD  
CO. CLERK & RECORDER  
DEPUTY

ACKNOWLEDGEMENTS

STATE OF NEW MEXICO )  
COUNTY OF BERNALILLO ) ss.

The foregoing instrument was acknowledged before me this  
17TH day of August, 1981, by  
Robert L. Menk, Chairman and Chief Executive Officer of  
New Mexico & Arizona Land Co.  
(Name of Corporation) ARIZONA  
corporation, on behalf of said corporation.

Margaret Overstreet  
Notary Public

My Commission Expires:

12-1-82

STATE OF NEW MEXICO )  
COUNTY OF BERNALILLO ) ss.

The foregoing instrument was acknowledged before me this  
day of 19 by

(Name of Acknowledging person or partnership)

On behalf of (Name of Partnership)  
a partnership.

Notary Public

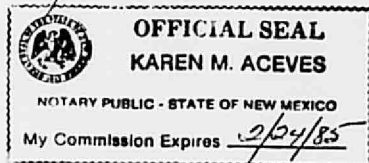
My Commission Expires:

STATE OF NEW MEXICO )  
COUNTY OF BERNALILLO ) ss.

The foregoing instrument was acknowledged before me by  
James C. Tanaka on this 20th day of August, 1981.  
Karen M. Aceves  
Notary Public

My Commission Expires:

8/24/85



STATE OF NEW MEXICO )  
COUNTY OF BERNALILLO ) ss.

The foregoing instrument was acknowledged before me this  
day of 19 by

Chief Administrative Officer of the State of Arizona  
pal corporation, on behalf of said corporation.

Notary Public

My Commission Expires:

against any and all claims, actions, suits or proceedings of any kind brought against said parties for or on account of any matter arising from the encroachment by the User or the User's failure to maintain, modify, or remove the encroachment under this Agreement.

#### REMOVAL

The User shall remove, modify, maintain, or cause same to be done and cause the premises to be returned to its original condition within Twenty-one (21) DAYS after receipt of written notice from the City. Notice shall be considered to have been received within six days after the notice is mailed if there is no actual evidence of receipt. In the event the User shall fail to comply with the Notice after the receipt of same, the City may undertake the project, at the expense of the User, and enter upon the property of the User as may be necessary to do so. The City shall assess the charge for same and any other expenses and damages arising therefrom to the User and file a lien therefor on the real property of the User.

#### LIABILITY

The City shall not be liable for any damages to the User's property or the improvement that may result from the maintenance, removal or any modification of the improvement.

#### NOTICE

The written notice provided for herein shall be accomplished by mailing same to:

New Mexico and Arizona Land Company  
1614 East Indian School Road  
Phoenix, Arizona 85016

The User may change said address by giving written notice, certified mail, return receipt requested, to the City Engineer, at 400 Marquette, N.E., Albuquerque, New Mexico 87102.

#### COVENANT RUNNING WITH THE PROPERTY

The obligation of the User set forth herein shall be binding upon the User, his heirs, and assigns, and the property of the User as described herein and will run with said property until released by the City.

By: Robert L. Frank

Robert L. Frank

Title: Chairman & Chief Exec. Off.  
New Mexico & Arizona Land Co.

REVIEWED BY THE LEGAL  
DEPARTMENT:

Patricia W. deVost  
Assistant City Attorney

CITY OF ALBUQUERQUE

James J. Gualdi  
B.C. Chief Administrative Officer  
by C.H.C.

ATTEST:

Cynthia L. Ludi  
Deputy City Clerk

6100 Indian School Rd. NE

81 46302

REAL PROPERTY ENCROACHMENT AGREEMENT

THIS AGREEMENT made this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_  
by and between the City of Albuquerque, a New Mexico municipal  
corporation, (City) and New Mexico and Arizona Land Company (User).

RECITAL

The User is the owner of certain real property located at \_\_\_\_\_  
in Albuquerque, New  
Mexico, and more particularly described as follows:

Tract D-6, Unit 2-A, Dale J. Bellamah's Jeannedale  
An addition to the City of Albuquerque, New Mexico

The City is the owner of certain real property, easement,  
or public right-of-way adjoining or abutting the above described  
property of the user. The User wishes to encroach upon the  
City's property by constructing an improvement thereon or on  
already encroached upon the City property as follows:

Construct a parking area adjoining an office building on the northerly 27'  
of the 60' drainage easement which runs entire length of the southern  
side of this property.

A sketch of the proposed or existing improvement is attached  
hereto and made a part of this Agreement.

The City is agreeable to the encroachment of said improve-  
ment provided that the User comply with the provisions and  
covenants contained herein.

NOW THEREFORE, in consideration of the mutual covenants  
contained herein, it is agreed by and between the City and User  
that the User may construct and/or maintain, at his own expense,  
the improvement described herein.

RESPONSIBILITY

The User shall be responsible for the construction and/or  
maintenance of said improvement and it shall conform to all  
laws and ordinances and administrative regulations applicable  
thereof. Said improvement shall not constitute a hazard to the  
health or safety of the general public and shall not interfere  
with the city's use of the property.

INDemnIFICATION AND HOLD HARMLESS

The User shall agree to defend, indemnify, and hold harm-  
less, the City, its officials, agents and employees from and

Q-120  
4/14/81

Assume weir condition at worst condition

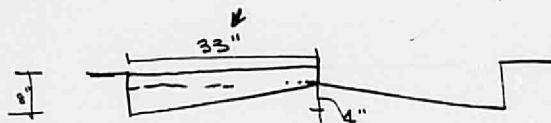
$$Q = 3.33 L H^{1.5} \quad Q = 352 \text{ cfs} \quad L = 53'$$

$$352 = 3.33(53) H^{1.5} \quad H = 2.18'$$

bottom of weir varies 0.10

$$\therefore \text{assume bottom weir} = 34.7 + 2.18 = 36.88 = \text{water surface}$$

Indian School



$$S = 0.02$$

$$S^2 = 0.1414$$

$$A = 33 \times 0.33 = 11.0/2 = 5.5$$

$$P = 53.33 \quad P^2 = \left( \frac{5.5}{53.33} \right)^{2/3} = 0.30$$

$$Q = \frac{1.49}{0.13} (5.5) 0.30 (0.1414) = 26.7 \times 2 = 53$$

$$A = 5.5 + (33 \times 0.167) = 11.0 \quad P = 33.5 \quad P^2 = \left( \frac{11.0}{33.5} \right)^{2/3} = 0.47$$

$$Q = \frac{1.49}{0.03} (11.0) 0.47 (0.1414) \times 2 = 168 \text{ cfs} > 150 \text{ cfs} \quad d_n = 0.50 \quad V_n = 15.23$$

$$F_r = \frac{15.23}{\sqrt{32.2 \times 0.50}} = 3.80 \quad \frac{V_n}{A} = 3.5 \times 0.5 = 1.75 \quad \frac{V_n}{A} = 50(0.5) = 2.5$$

$$Z = \frac{Q}{\sqrt{g}} = \frac{150}{\sqrt{32.2}} = 26.43$$

assume  $T = 66$

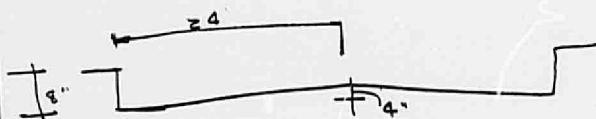
$$26.43 = A \sqrt{\frac{A}{T}}$$

$$26.43(66)^{1/2} = A^{1.5}$$

$$A = 36.51$$

$$36.51 > 22.0 \quad \therefore d_c > d_n$$

Scenario



$$A = 24 \times .33 \times 2 = 4$$

$$P = 24.33$$

$$R^{2/3} = \left( \frac{4}{24.33} \right)^{2/3} = 0.299$$

$$Q = \frac{1.49}{0.013} (4) 0.299 (0.1288) = 17.6 \text{ cfs.} \quad \times 2 = 35.2$$

$$S = 0.0166$$

$$S_{4\%} = 0.1288$$

$$A = (4)^2 + 0.33 \times 48 = 24$$

$$P = 49.33$$

$$R^{2/3} = \left( \frac{24}{49.33} \right)^{2/3} = 0.617$$

$$\frac{1.49}{0.013} (24) 0.617 (0.1288) = 213 \text{ cfs.}$$

$$A = (4)^2 + 0.167 \times 48 = 16$$

$$P = 48 + 10 = 49.0$$

$$R^{2/3} = \left( \frac{16}{49} \right)^{2/3} = 0.472$$

$$\frac{1.49}{0.013} (16) 0.472 (0.1288) = 111.5 \text{ cfs.}$$

$$\underline{d_n = 6''} \text{ @ curb}$$

$$V_n = 6.97 \text{ fps}$$

$$\bar{F} = \frac{6.97}{\sqrt{12.2 \times 0.5}} = 1.74$$

$$Z = \frac{Q}{\sqrt{g}} = A \sqrt{D} = A \sqrt{\frac{A}{T}}$$

$$\frac{102}{\sqrt{12.2}} = 17.98$$

$$\text{assume } T = 48'$$

$$17.98 = A \sqrt{\frac{A}{48}} \quad A = 25.35$$

$$25.35 - 8.0 = 48 \text{ y.} \quad y = 0.36'$$

$$\underline{d_c = 0.69'} \text{ @ curb.}$$

Q-120

4/12/81

channel

$$2 \cdot Q / \sqrt{g} = \frac{252}{\sqrt{32}} = 44.4$$

$$2 \cdot A \sqrt{\frac{A}{T}} \quad T = 33'$$

$$44.4 = A^{3/2} / (33)^{1/2} \quad A = 40.97$$

$$A @ d_n = 32 \frac{85}{100}$$

$$\therefore d_c = 0.71 + 0.30 + 0.64 = 1.65'$$