Federal Emergency Management Agency

Washington, D.C. 20472

JAN 11 1985

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

IA-RA-RS (102a)

Community: City of Albuquerque,
Bernalillo County,
New Mexico

Effective Date of this Revision: JAN 11 1985

Community Number: 350002
Suffix Code: C

Honorable Harry E. Kinney
Mayor of the City of Albuquerque
P.O. Box 1293
Albuquerque, New Mexico 87103

Dear Mayor Kinney:

The Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) for the City of Albuquerque, Bernalillo County, New Mexico, have been revised to reflect new flood boundaries along the Arroyo del Pino in the vicinity of the Masters at Tanoan development project, south of San Antonio Drive, N.E. The new boundaries are based upon new hydraulic analysis and new topographic mapping produced by Greiner Engineering Sciences, Incorporated. Lot numbers 7, 8, 9, and 10 of the development project, depicted on plans entitled "Masters at Tanoan," prepared by MSM/SP Group, dated February 21, 1984, are outside of the 100-year flood boundary as a result of the new analysis and mapping. The zone designation remains A0 and the depth of flooding remains 2.0 feet. These changes amend the currently effective FIRM and FBFM Number 350002, Panel 0018, dated October 14, 1983, and will be incorporated into the next physical map revision for the City of Albuquerque, New Mexico.

These modifications have been made pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (P.L. 93-234) and are in accordance with the National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968, P.L. 90-448) 42 U.S.C. 4001-4128, and 44 CFR Part 65.

As required by the legislation, a community must adopt and enforce flood plain management measures in order to ensure continued eligiblity to participate in the National Flood Insurance Program. Therefore, the City of Albuquerque must enforce these regulations using, at a minimum, the elevations and zone designations in the special flood hazard areas as shown on your community's FIRM, including the modifications made by this letter of map revision.

These modifications are effective as of the date of this letter. However, a review of this determination and any requests for changes should be made within 30 days. Any requests for reconsideration must be based on scientific or technical data.

The community number and suffix code listed above will be used for all flood insurance policies and renewals issued for your community.

A Consultation Coordination Officer (CCO) has been designated to assist you with any problems you may have concerning these modifications. The CCO will be the primary liaison between your community and the Federal Emergency Management Agency. Your CCO is:

Mr. Dell Greer, Chief
FEMA, Natural & Technological Hazards Division
Federal Regional Center
800 North Loop 288
Denton, Texas 76201
(817) 387-5811

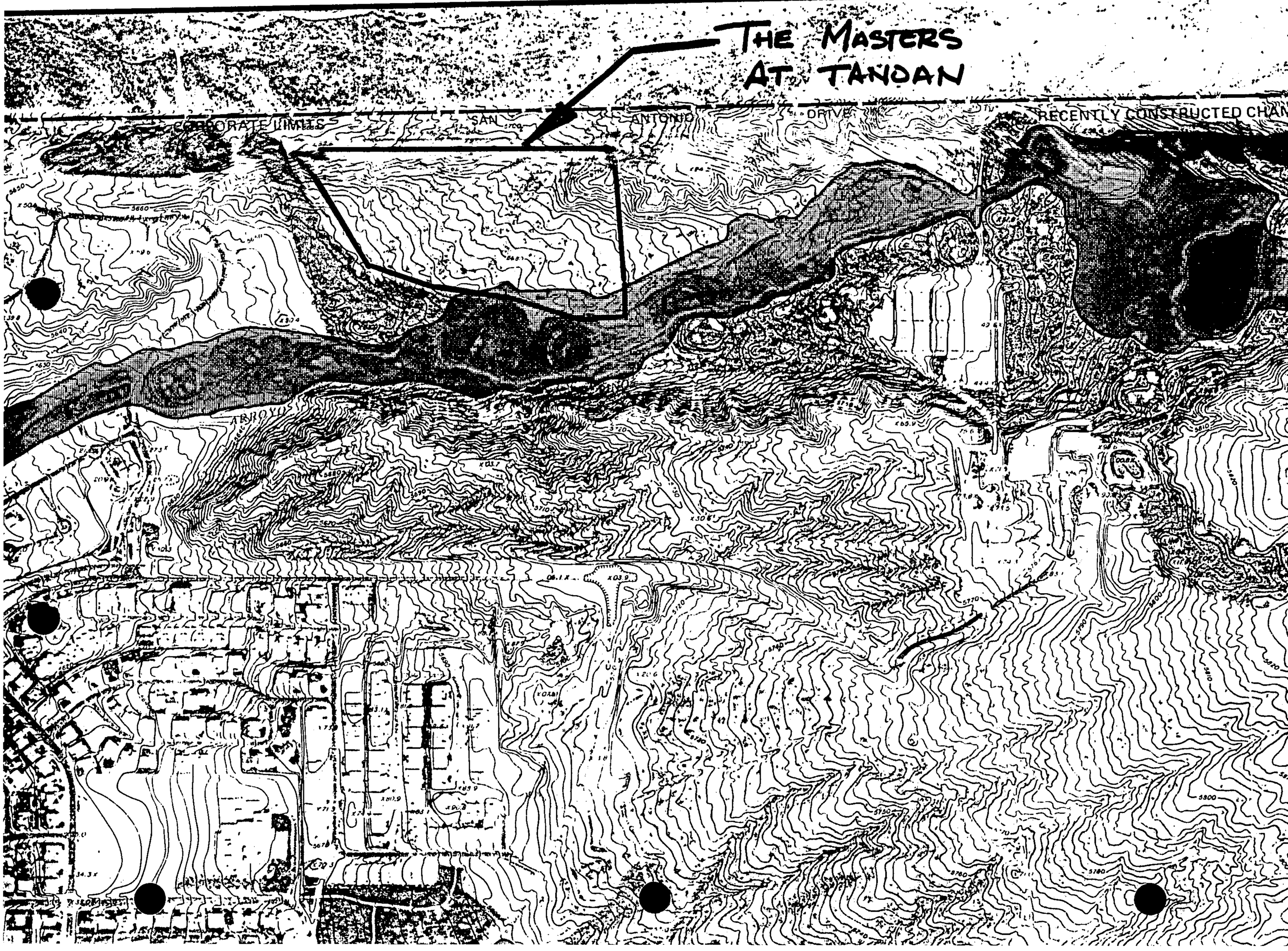
Any questions may be directed to your CCO.

Sincerely,

Brian R. Mrazik, Ph.D.
Chief, Risk Studies Division
Federal Insurance Administration

Enclosures

cc: Mr. Rick Beltramo, Greiner Engineering Sciences, Inc.
Mr. Carlos Montoya, City of Albuquerque


THE MASTERS
AT TANDAN
CORPORATE LIMITS
SAN
ANTONIO
DRIVE
RECENTLY CONSTRUCTED CHAN
ARROYO

AmeriWest Corporation

E21/D016

0013

FJA

C.M.

CARLOS, WERE YOU AWARE OF THIS FLOOD PLAIN REVISION AND DID THE CITY RECEIVE THE EASEMENT? Please advise

RECEIVED
APR 09 1985
CITY ENGINEER

RECEIVED
APR 10 1985
HYDROLOGY SECTION

LD #350

April 8, 1985

City Engineer
Attn: Fred Aguirre
PO Box 1293
Albuquerque, NM 87103

Re: Grant of Temporary Easement--Flood Plain--The Masters at Tanoan

Attached for your information and appropriate action is an affidavit terminating the Temporary Easement--Flood Plain--The Masters at Tanoan.

Sincerely,

AMERIWEST CORPORATION

Cleve E. Matthews
Area Manager

lc

Enclosure: as above

pc: AmeriWest Homes
John Myers, Johnson and Lanphere
Carl Tebbens, Greiner Engineering
Michial Emery, Bohannan-Huston
Mary Hicks, AmeriWest Corporation
File--The Masters #3

City Center: 6400 Uptown Boulevard NE, P.O. Box 25625, Suite 300E, Albuquerque, NM 87125
(505) 883-3450 toll free outside New Mexico: 1-800-545-5088 New Mexico: 1-800-432-6664

85 25595 AFFIDAVIT 806

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

COMES NOW ALLAN L. WHITESEL, being first duly sworn and states:

1. I am a Vice President of AMERIWEST CORPORATION, a New Mexico corporation ("AmeriWest"), and I am authorized to execute this Affidavit in that capacity.

2. On March 15, 1984, AmeriWest granted to the CITY OF ALBUQUERQUE ("City") that certain GRANT OF TEMPORARY EASEMENT - FLOOD PLAIN (the "Easement") which Easement is recorded in the Bernalillo County, New Mexico, real estate records in Book Misc. 99-A, pages 56-58, and encumbers the following-described property ("Easement Property") situate in Bernalillo County, New Mexico:

> Lots 8, 9 and 10 and Tracts D and E, THE MASTERS AT TANOAN, as shown on the plat thereof recorded in the Bernalillo County, New Mexico, real estate records on March 19, 1984.

3. The Easement provides that it shall terminate upon the Federal Emergency Management Agency ("FEMA") flood plain map being amended to show that the Easement Property is not located within the 100 year flood plain, and that AmeriWest shall have the right to record an affidavit to that effect.

4. The Easement Property is no longer within the 100 year flood plain as shown on the FEMA's Flood Insurance Rate Map and Flood Boundary and Floodway Map for the City of Albuquerque, Bernalillo County, New Mexico, as shown on the letter from FEMA to the City, a true and correct copy of which is attached as Exhibit "A" hereto and incorporated herein.

5. The Easement is therefore terminated.

Executed this 25th day of February, 1985.

Allan L. Whitesel
ALLAN L. WHITESEL

SUBSCRIBED AND SWORN TO before me this 25th day of February, 1985, by ALLAN L. WHITESEL.

Lisa K. Cornwell
Notary Public

My commission expires:
10-11-88

OFFICIAL SEAL
LISA K. CORNWELL
NOTARY PUBLIC - STATE OF NEW MEXICO
Notary Bond Filed with Secretary of State
My Commission Expires 10-11-88

EXHIBIT "A"

U 807

RECEIVED

JAN 14

GREINER

Federal Emergency Management Agency

Washington, D.C. 20472

JAN 11 1985

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

IA-RA-RS (102a)

Community: City of Albuquerque, Bernalillo County, New Mexico
Effective Date of this Revision: JAN 11 1985
Community Number: 350002
Suffix Code: C

Honorable Harry E. Kinney
Mayor of the City of Albuquerque
P.O. Box 1293
Albuquerque, New Mexico 87103

Dear Mayor Kinney:

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These modifications are effective as of the date of this letter. However, a review of this determination and any requests for changes should be made within 30 days. Any requests for reconsideration must be based on scientific or technical data.

The community number and suffix code listed above will be used for all flood insurance policies and renewals issued for your community.

A Consultation Coordination Officer (CCO) has been designated to assist you with any problems you may have concerning these modifications. The CCO will be the primary liaison between your community and the Federal Emergency Management Agency. Your CCO is:

Mr. Dell Greer, Chief
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800 North Loop 288
Denton, Texas 76201
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Any questions may be directed to your CCO.

Sincerely,

Brian R. Mrazik, Ph.D.
Chief, Risk Studies Division
Federal Insurance Administration

Enclosures

cc: Mr. Rick Beltramo, Greiner Engineering Sciences, Inc.
Mr. Carlos Montoya, City of Albuquerque

STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED FOR RECORD

'85 APR -3 P3 :00

2167 806-808
PG
DOLORES C. WALLER
COUNTY CLERK & RECORDER
DEPUTY

dlw
1/14/85

Greiner Engineering

Greiner Engineering Sciences Inc.

2601 Wyoming Boulevard, NE
Albuquerque, New Mexico 87112
(505) 292-1936

Formerly MSM Consultants, Inc.

A Greiner Engineering, Inc. Company

October 11, 1984

Carlos Montoya, P.E.
Civil Engineer/Hydrology
Design Hydrology Section
City of Albuquerque
P.O. Box 1293
Albuquerque, New Mexico 87103

RE: Masters at Tanoan Subdivision Letter of Map Revision

Dear Mr. Montoya:

Greiner Engineering Sciences, Inc., representing AmeriWest Corporation is submitting for your review engineering calculations and technical information required for a Federal Emergency Management Agency (F.E.M.A.) Letter of Map Revision. The specific lots addressed are lots 7, 8, 9 and 10, Masters at Tanoan (shown on attached exhibit).

LOCATION

The Masters at Tanoan is located in the City of Albuquerque, New Mexico, Bernalillo County, Section 28, Township 11 North, Range 4 East. The subdivision lies north of and adjacent to the Pino Arroyo and west of the proposed extension of Eubank Blvd. (see Floodway Map No. 350002 0018 dated, Oct. 14, 1983, F.E.M.A., for location of the established floodplain).

LAND USE

Joint land use has been established within the Pino Arroyo main channel, in addition to a dedicated AMAFCA floodway, a private country club golf course occupies the floodplain. Subdivisions will be developed adjacent to north and south flood boundaries of this portion of the Pino Arroyo floodplain. Eubank Blvd., when constructed, will be a principal arterial with a bridge crossing the Pino Arroyo. Currently Eubank is graded for public utility installation and the bridge section is being designed.

BASIS OF REVISION

The original floodplain limits were not established by Step-backwater analysis, but by normal depth calculations. The floodways were then established using approximate AO zones based on depths of 1, 2 or 3 feet. Reasoning for this type of analysis was the constant fluctuation from subcritical flow to supercritical flow and the common occurance of split flows.

This overly conservative method was re-analyzed for this portion of the Pino Arroyo using more sophisticated techniques. Based on our re-analysis, the Masters at Tanoan was never within the actual floodplain limits. Regardless of this point, the existing improved condition places the lots in question well out of the floodplain, therefore, a Letter of Map Revision is necessary.

HYDROLOGIC ANALYSIS

The peak flow for the 100 year design storm is based on the "Northeast Heights Drainage Management Plan" dated April 1975, by Leonard Rice. The flows from this report are the same used in the "Flood Insurance Study" for the Pino Arroyo dated April 14, 1983 (Community No. 350002). This analysis is based on existing conditions as required by F.E.M.A.

HYDRAULIC ANALYSIS

Water surface elevations for the 100 year flood for both the historic and the existing channel conditions were calculated using the U.S. Army Corps of Engineers HEC-2 Step-backwater computer program. Because the channel oscilates between subcritical and supercritical flow, the analysis is based on a subcritical run using critical depth for sections that are supercritical. Thus producing a conservative estimate of floodplain limits in these reaches. Cross-section information is obtained from aerial photograph generated topography for historic conditions and from as-built construction drawings for existing conditions.

Roughness values for this reach ranged from 0.033 to 0.030. These values were obtained from a study by Simons and Li Engineering entitled "Hydraulic and Erosion Analysis of Arroyo Del Pino through the Tanoan Development". Simons and Li's report has been approved by the City of Albuquerque Hydrology Section.

TEMPORARY BERM

The temporary berm shown is constructed within the western portion of the Eubank R/W adjacent to the Masters at Tanoan southern boundary. This berm protects the downstream fill slope along the southern boundary of the Masters at Tanoan. Although intended to be temporary, the berm is constructed to stand as a permanent structure with rip-rap protection and over 5' of available freeboard. The location is such that the flows are confined in the same manner as the proposed Eubank bridge. Upon completion of the bridge the berm will be removed.

Although the berm redirects flow and confines the floodplain, it is still shown within the floodplain. This is so for two reasons. The first reason being that a side flow condition exists immediately downstream of the berm. This flow is non-effective flow and is modeled as such. Because of this side flow condition flood waters exist on both the east and west faces of the berm. The second reason for showing the berm within the flood plain is due to the grading

improvements and side slope protection along the southern boundary of the Masters at Tanoan. These improvements in themselves provide adequate protection without the upstream berm. Therefore, in the event that the berm does fail and water does overtop the berm, the Masters at Tanoan is still protected and out of the flood waters. For the reasons stated above the berm is shown within the 100 year floodplain.

All calculations used in the hydraulic design as well as the subcritical HEC-2 models are attached. The proposed 100 year floodplain boundaries, are shown on the drainage plan also attached.

SUMMARY

Based on the information supplied it is requested that a Letter of Map Revision, Part 65 of the Regulations, be issued for Lots 7, 8, 9 and 10, The Masters at Tanoan.

If you have any questions or require any further information, please call. We look forward to a successful and timely response to this matter.

Sincerely,

GREINER ENGINEERING

Rick Beltramo
Design Engineer III

Dan Morehead P.E. & L.S.
Senior Civil Engineer

RB:tw

Enclosures:
- Request for LETTER, FEMA Form
- Location Map for the City
- Zoning Atlas Page E-21
- FEMA Floodway Map, Panel 18
- FEMA Flood Insurance Rate map, Panel 18
- Exhibit Showing Requested Revision
- HEC-2 Analysis & Calculations
- Recorded plat for the Masters at Tanoan

Job #0640809

cc: Cleve Matthews, AmeriWest Corporation

FEDERAL EMERGENCY MANAGEMENT AGENCY

Washington, D.C. 20472

REQUEST FOR LETTER OF MAP AMENDMENT

The following information is submitted in support of my request that a determination be made as to whether or not a certain land area or structure is within a Special Flood Hazard Area. The property is shown on the Federal Emergency Management Agency Flood Hazard Boundary Map (FHBM) or Flood Insurance Rate Map (FIRM) identified as: Albuquerque, New Mexico
(Community Name)

350002-0018
(Community Number)

(Please check appropriate boxes)

☒ (1) A copy of the recorded deed or recorded plat indicating both the legal description of the property and the official recordation information (deed or plat book volume and page number) and bearing the seal of the Recorder of Deeds.

☒ (2) Topographic information, including contours and elevations of both the lowest finished grade adjacent to the structure and the lowest floor (including basement).

☒ (3) Planimetric information indicating the location of structures on the property.

☒ (4) Certification by a registered professional engineer or licensed land surveyor indicating the type of structure, whether it is elevated on posts, piers, or walls, and whether it is built on a barrier sand dune.

☒ (5) Other (please list).
Location Maps: Albuquerque City Map
Section Map

The above statements and all documents submitted in support of this appeal are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 13 of the United States Code, Section 1001.

October 11, 1984
(Date)

(Signature of Applicant)

GREINER ENGINEERING SCIENCES, INC.
Agent for AmeriWest Corporation

THE MASTERS AT TANOAN

ESTATES

UNIT ONE

R-D

ACADEMY ROAD

SU-1

UNIT 14

PASEO

UNIT 6

EUBANK BLVD. NE

SUB'D

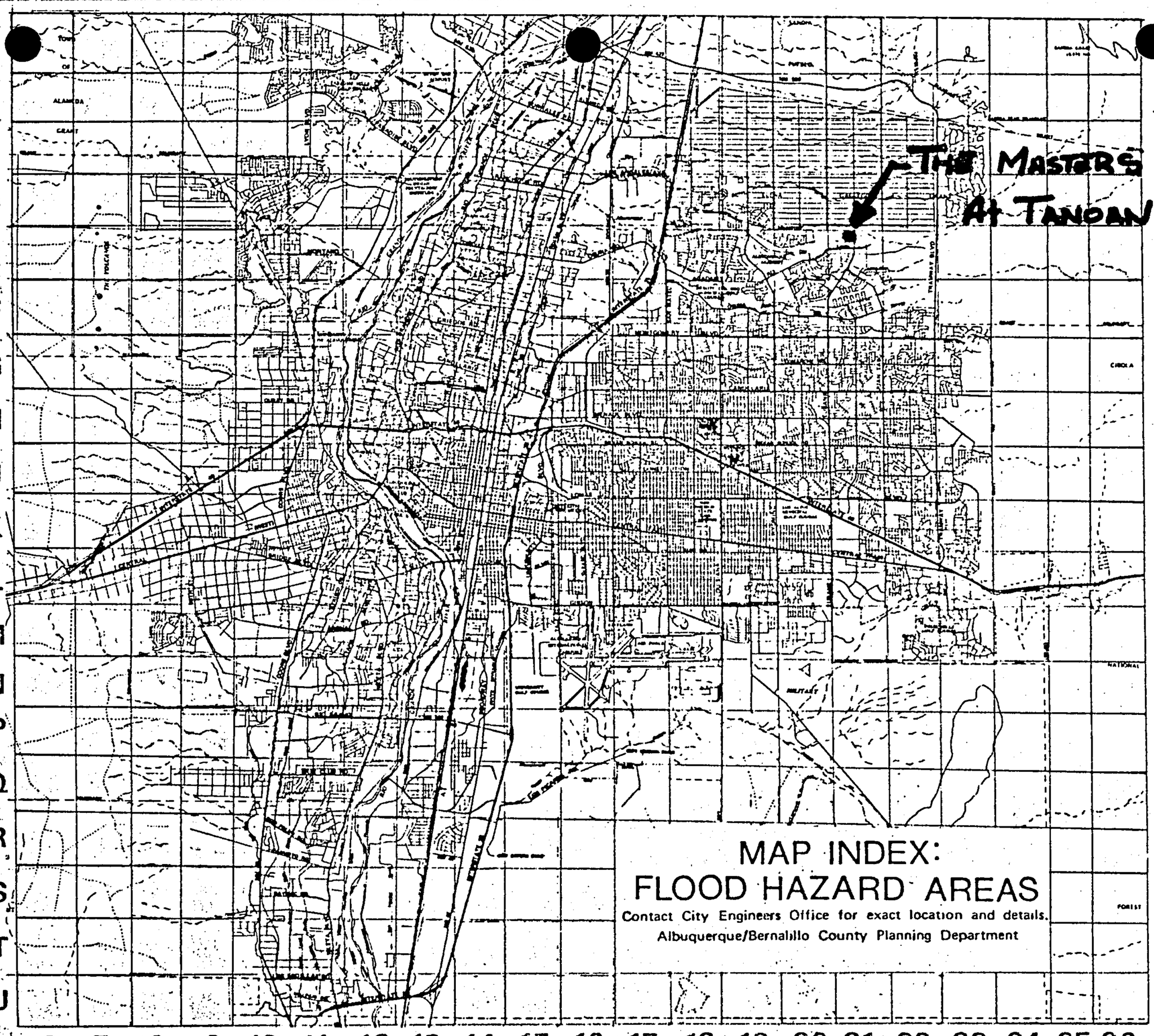
C-2

ACADEMY PLACE

UNIT 5A

UNIT 5

E-21-Z


THE MASTERS
AT TANOAN
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MAP INDEX:
FLOOD HAZARD AREAS
Contact City Engineers Office for exact location and details.
Albuquerque/Bernalillo County Planning Department

Greiner Engineering Sciences, Inc.

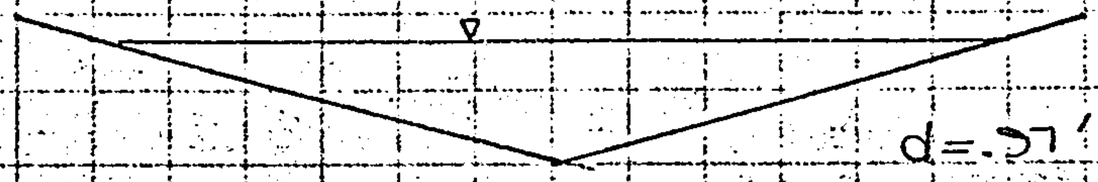
JOB MASTERS AT TALOAKS - FEMA REVISION COMPUTED BY ES DATE 10/10/94

DESCRIPTION 0540809 CHECKED BY _____ DATE _____

SHEET _____ OF _____

WEIR SIDE, DOWNSTREAM OF EXISTING BERM

Calc. maximum flow possible through side flow.



85.07
-84.10
.97'

$$Q_{weir} = CLH^{3/2} = CAH^{1/2} = 3.0 \times \left(\frac{.97' \times 40'}{2}\right) \times (.97)^{1/2} = 57.3 \text{ cfs}$$

Calc downstream capacity for side flow swale.

$$Q = \frac{1.486\sqrt{.015}}{.033} \frac{40' \times .97'}{2} \left(\frac{40 \times .97/2}{40}\right)^{2/3} = 66 \text{ cfs} \quad [ok]$$

Note: The maximum discharge that flows North thru the side flow is 57 cfs. This is conservative since the actual amount is a balanced condition between 57 cfs and 0 cfs because of the interaction between the side flow and the main channel flow.

City of Albuquerque

P.O. BOX 1293 · ALBUQUERQUE, NEW MEXICO 87103

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

October 18, 1984

Federal Emergency Management Agency
Engineering Division
Federal Insurance Administration
ATTN: MAT MILLER
Washington, DC 20472

Dear Mr. Miller:

We have reviewed the attached project and request a Floodway & FIRM map revision.

Sincerely yours,

Carlos A. Montoya
Civil Engineer/Hydrology

CAM/bm

City of Albuquerque

P.O. BOX 1293 · ALBUQUERQUE, NEW MEXICO 87103

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

September 14, 1984

Mr. Daniel Morehead
Greiner Engineering Science
2601 Wyoming Blvd.
Albuquerque, New Mexico 87112

RE: REQUEST FOR FLOOD HAZARD MAP AMENDMENT FOR THE PINO ARROYO BORDERING THE MASTERS AT TANOAN SUBDIVISION

Dear Mr: Morehead:

I have received the above referenced plan and forward the following comments. Our understanding is that the water surface elevations for the Pino Arroyo were originally obtained by using normal depth calculations. We do not want to impose more stringent criteria on you than was originally used, but we have the following concerns on the procedures used.

1. The protection dike intrudes into the Pino Arroya which changes the conditions of the original analysis by increasing water surface elevations and modifying velocities. A normal depth section through the dike/arroyo area will not adequately define the water surface upstream like a backwater calculation would. Also, the downstream conditions will be impacted by this constriction with increased velocity and varying depths or widths created by possible hydraulic jump profile.

2. The divided flows in the arroyo also indicate the need for a backwater anlaysis.

3. Your calculations indicate supercritical flow. We believe that the water surface elevation should not be lower than critical depth.

4. The following information should also be provided for clarity. Location of all cross-sections, profile of the invert of the channel, profile of 100-year water surface.

If you feel that your drawings and information are sufficient for FEMA's review, we will submit them with this letter. However, we cannot submit any accompanying positive recommendations due to our feeling of lack of sufficient analysis.

Sincerely yours,

Carlos A. Montoya
Civil Engineer/Hydrology

CAM/bm

Federal Emergency Management Agency

Washington, D.C. 20472

REQUEST FOR LETTER OF MAP AMENDMENT

The following information is submitted in support of my request that a determination be made as to whether or not a certain land area or structure is within a Special Flood Hazard Area. The property is shown on the Federal Emergency Management Agency Flood Hazard Boundary Map (FHBM) or Flood Insurance Rate Map (FIRM) identified as: Albuquerque, New Mexico (Community Name), 350002-0018 (Community Number).

(Please check appropriate boxes)

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[X] (3) Planimetric information indicating the location of structures on the property.

[X] (4) Certification by a registered professional engineer or licensed land surveyor indicating the type of structure, whether it is elevated on posts, piers, or walls, and whether it is built on a barrier sand dune.

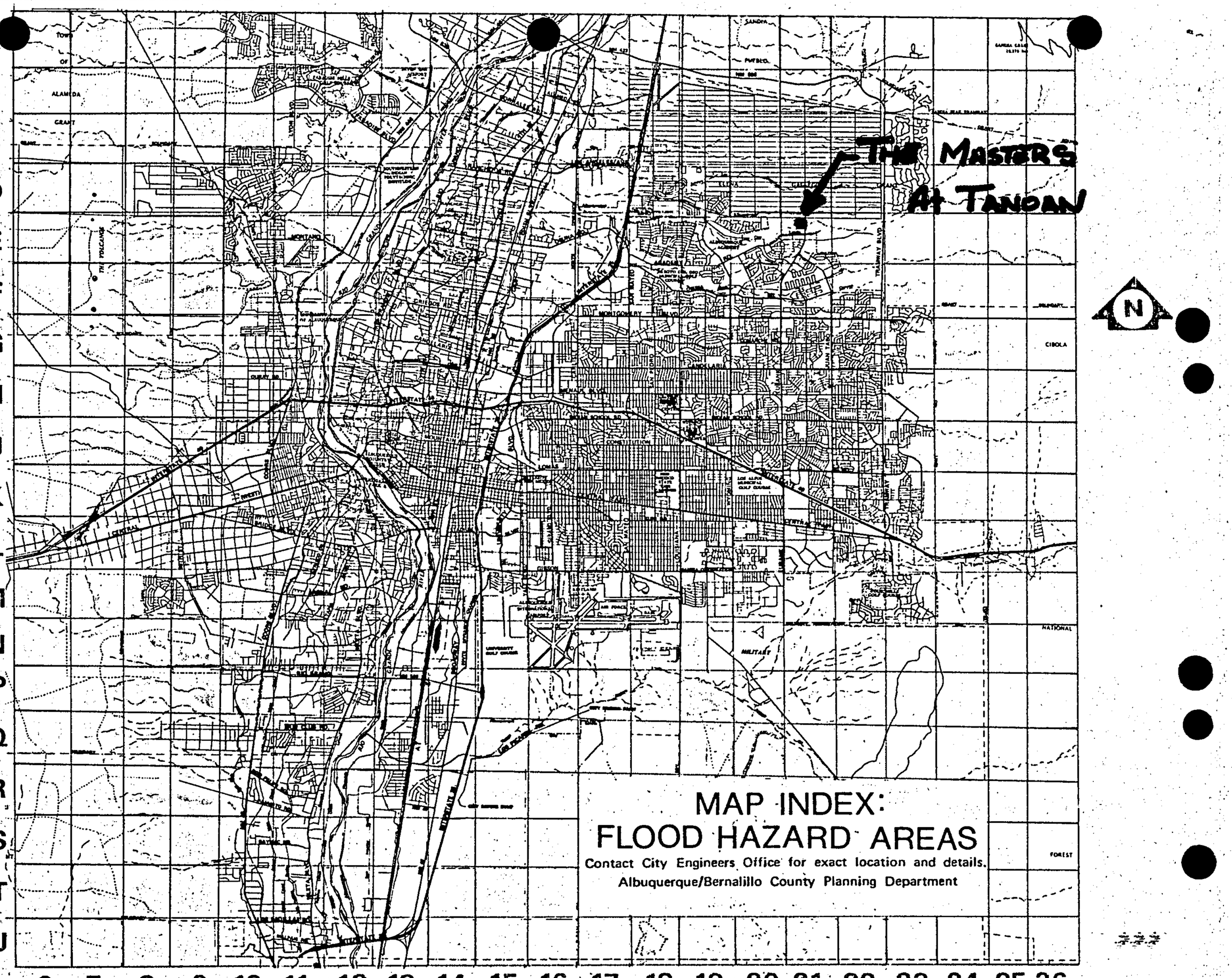
[X] (5) Other (please list)

Location Maps: Albuquerque City Map
Section Map

The above statements and all documents submitted in support of this appeal are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

8/17/84
(Date)

Daniel L Morehead
DANIEL L. MOREHEAD PE & LS
(Signature of Applicant)
GREINER ENGINEERING SCIENCES, INC.
Agent for AmeriWest Corporation


THE MASTERS
AT TANOAN
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MAP INDEX:
FLOOD HAZARD AREAS
Contact City Engineers Office for exact location and details.
Albuquerque/Bernalillo County Planning Department

THE MASTERS AT TANOAN

R-D

ACADEMY ROAD

SU-1

EL

PASEO

UNIT 6

UNIT 5

UNIT 5A

SUB'D

ACADEMY PLACE

EUBANK BLVD. NE

C-2

TABO

LEGAL DESCRIPTION

T 11 N

R 4 E

SEC 20

UNIFORM PROPERTY CODE

1-021-062

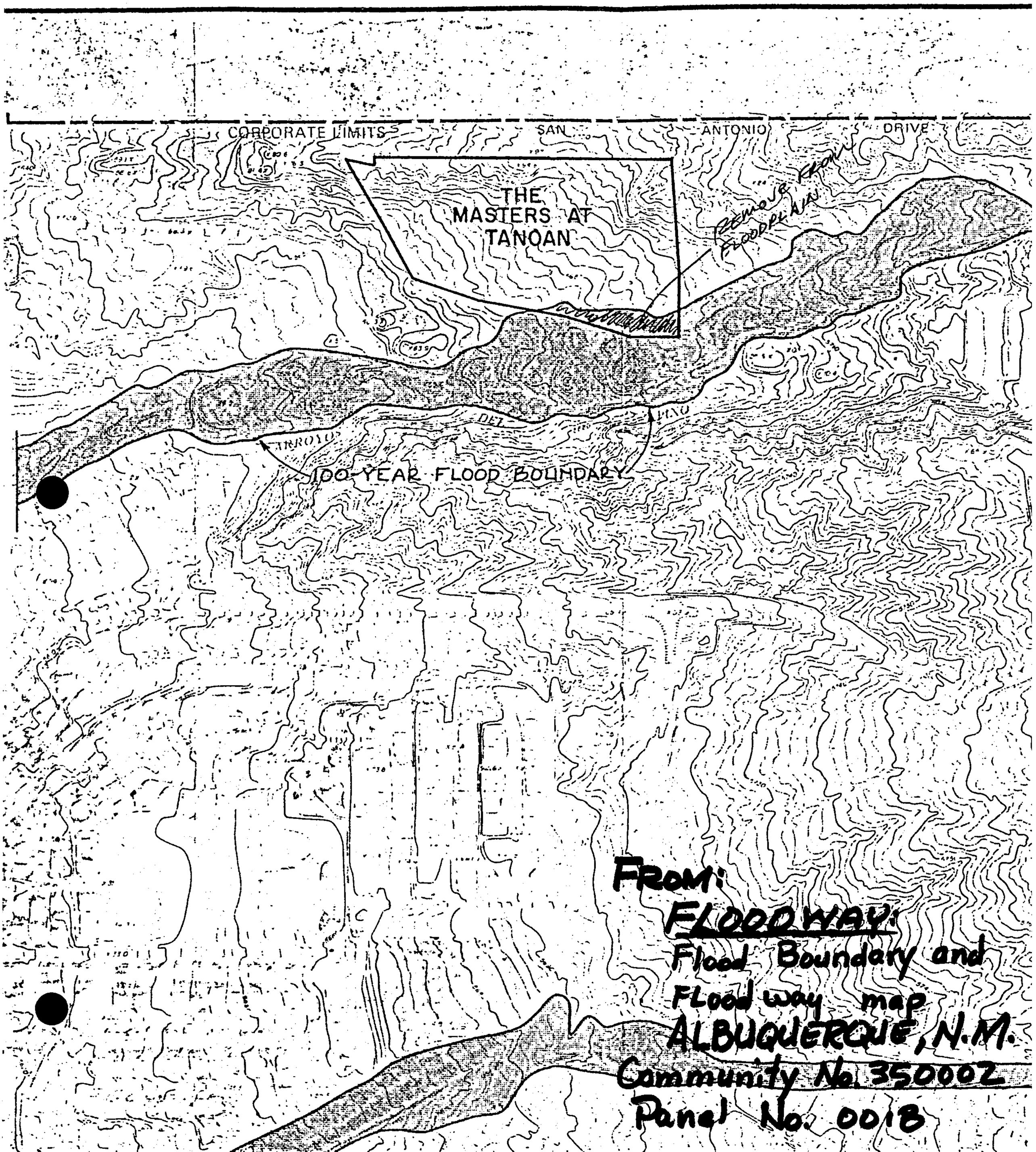
MAP AMENDED THROUGH

JUNE 1988

E-21-Z

ALBUQUERQUE PLANNING DIVISION

MUNICIPAL DEVELOPMENT DEPARTMENT


CORPORATE LIMITS
SAN
ANTONIO
DRIVE
THE
MASTERS AT
TANOAN
REMOVE FROM
FLOODPLAIN
ARROYO
DEL
PINO
100-YEAR FLOOD BOUNDARY
FROM:
FLOODWAY:
Flood Boundary and
Flood way map
ALBUQUERQUE, N.M.
Community No. 350002
Panel No. 0018

THIS RUN EXECUTED 10-OCT-84 09:31:48

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED MARCH 1982
  ERROR CORR -  01,02,03,04,05
  MODIFICATION -  50,51,52,53,54,55
**************************************************

T2      ARROYO DEL PINO FLOODPLAIN AMENDMENT
T3      GREINER ENGINEERING JN 0640809 RLR 10-1-84
T4      ,ARROYO DEL PINO 100-YR HISTORIC
```

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0.	2.	0.	0.	-1.000000	0.00	0.0	0.	5648.000	0.000

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38.000	43.000	1.000	2.000	8.000	53.000	54.000	4.000	200.000	300.000

J6	IHLEQ	ICOPY								
	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

J9	BEGSTA	PROFILE PRINT VARIABLES								
	100.000	0.000	-1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

NC	0.033	0.033	0.030	0.100	0.300	0.000	0.000	0.000	0.000	0.000
QT	2.000	765.000	765.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	10.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	100.000	8.000	65.000	102.000	0.000	0.000	0.000	0.000	5600.000	0.000
GR	55.000	0.000	50.000	45.000	47.000	65.000	46.000	87.000	47.000	102.000
GR	48.000	105.000	49.000	120.000	50.000	140.000	0.000	0.000	0.000	0.000
X1	300.000	12.000	65.000	102.000	175.000	205.000	200.000	0.000	5600.000	0.000
GR	56.000	0.000	54.000	40.000	53.000	65.000	52.000	65.000	51.600	75.000
GR	52.000	87.000	53.000	102.000	53.000	137.000	52.000	150.000	52.000	170.000
GR	53.000	178.000	55.000	188.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	500.000	12.000	85.000	170.000	205.000	190.000	200.000	0.000	5600.000	0.000
GR	67.000	0.000	62.000	30.000	61.000	65.000	59.000	85.000	58.000	95.000
GR	57.500	105.000	58.000	155.000	59.000	170.000	59.000	235.000	57.500	256.000
GR	60.000	280.000	62.000	300.000	0.000	0.000	0.000	0.000	0.000	0.000

X1	700.000	11.000	85.000	145.000	170.000	230.000	200.000	0.000	5600.000	0.000
GR	75.000	0.000	65.000	85.000	64.000	97.000	63.300	115.000	64.000	140.000
GR	65.000	145.000	66.000	165.000	65.000	185.000	65.000	205.000	66.000	220.000
GR	69.000	240.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	800.000	6.000	65.000	130.000	115.000	85.000	100.000	0.000	5600.000	0.000
GR	75.000	0.000	74.000	65.000	67.000	105.000	67.000	130.000	67.000	200.000
GR	73.000	240.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	930.000	9.000	65.000	111.000	105.000	130.000	130.000	0.000	5600.000	0.000
GR	77.000	0.000	75.000	23.000	74.000	54.000	72.000	65.000	71.000	70.000
GR	70.300	90.000	71.000	105.000	72.000	111.000	78.000	160.000	0.000	0.000
X1	975.000	7.000	45.000	90.000	45.000	45.000	45.000	0.000	5600.000	0.000
GR	77.000	0.000	73.000	45.000	72.000	55.000	71.900	75.000	72.000	90.000
GR	75.000	110.000	79.000	155.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	1080.000	8.000	35.000	70.000	100.000	105.000	105.000	0.000	5600.000	0.000
GR	78.000	0.000	77.000	35.000	75.000	50.000	74.900	52.000	75.000	60.000
GR	76.000	70.000	77.000	135.000	77.700	180.000	0.000	0.000	0.000	0.000
X1	1200.000	7.000	30.000	66.000	120.000	115.000	120.000	0.000	5600.000	0.000
GR	84.000	0.000	80.000	30.000	79.000	35.000	78.800	50.000	79.000	60.000
GR	80.000	66.000	85.000	85.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	1250.000	5.000	37.000	75.000	50.000	50.000	50.000	0.000	5600.000	0.000
GR	85.000	0.000	85.000	15.000	80.000	37.000	80.000	45.000	90.000	135.000
X1	1300.000	10.000	110.000	145.000	60.000	45.000	50.000	0.000	5600.000	0.000
GR	89.000	0.000	88.000	25.000	85.000	40.000	84.000	65.000	84.500	110.000
GR	81.600	137.000	83.000	145.000	84.000	155.000	84.000	190.000	86.000	210.000
X1	1325.000	10.000	105.000	145.000	20.000	35.000	25.000	0.000	5600.000	0.000
GR	89.000	0.000	84.000	30.000	84.000	75.000	85.000	90.000	85.000	105.000
GR	83.000	120.000	82.500	125.000	83.000	130.000	85.000	145.000	86.000	160.000
X1	1345.000	8.000	90.000	112.000	20.000	20.000	20.000	0.000	5600.000	0.000
GR	90.000	0.000	86.000	50.000	86.000	80.000	84.000	90.000	83.500	110.000
GR	84.000	112.000	86.500	125.000	87.000	135.000	0.000	0.000	0.000	0.000
X1	1380.000	9.000	140.000	160.000	40.000	30.000	35.000	0.000	5600.000	0.000
GR	95.000	0.000	92.000	75.000	91.000	100.000	86.000	140.000	85.500	160.000
GR	86.000	165.000	87.500	175.000	88.000	195.000	90.000	250.000	0.000	0.000
X1	1420.000	10.000	160.000	210.000	25.000	45.000	40.000	0.000	5600.000	0.000
GR	95.000	0.000	92.000	90.000	92.000	120.000	90.000	160.000	89.000	185.000
GR	88.500	190.000	88.500	210.000	89.000	240.000	90.000	280.000	91.000	300.000

X1	1535.000	10.000	135.000	155.000	115.000	120.000	115.000	0.000	5600.000	0.000
GR	95.000	0.000	92.000	70.000	91.000	110.000	91.000	135.000	88.000	148.000
GR	87.800	150.000	88.000	155.000	91.000	170.000	93.000	265.000	94.000	290.000
X1	1645.000	12.000	240.000	253.000	110.000	110.000	110.000	0.000	5600.000	0.000
GR	100.000	0.000	95.000	55.000	94.000	70.000	94.000	105.000	91.000	130.000
GR	95.000	230.000	93.000	240.000	92.800	248.000	93.000	253.000	93.000	275.000
GR	96.800	295.000	95.600	320.000	99.100	37.000	0.000	0.000	0.000	0.000
EJ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*PROF 1

ILER = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF
OFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR
DETAILS.

CCHV= 0.100 CEHV= 0.300

*SECNO 100.000

3720 CRITICAL DEPTH ASSUMED

100.00	2.84	5648.84	5648.84	5648.00	5649.75	0.91	0.00	0.00	5647.00
765.	44.	690.	32.	11.	87.	9.	0.	0.	5647.00
0.00	3.86	7.95	3.39	0.033	0.030	0.033	0.000	5646.00	52.71
0.008301	0.	0.	0.	0	10	0	0.00	64.94	117.65

*SECNO 300.000

7185 MINIMUM SPECIFIC ENERGY

3720 CRITICAL DEPTH ASSUMED

300.00	1.98	5653.58	5653.58	0.00	5654.12	0.55	2.25	-0.25	5653.00
765.	9.	371.	385.	4.	55.	75.	1.	0.	5653.00
0.01	2.08	6.72	5.12	0.033	0.030	0.033	0.000	5651.60	50.57
0.011198	175.	200.	205.	3	19	0	0.00	130.31	180.89

*SECNO 500.000

7185 MINIMUM SPECIFIC ENERGY

3720 CRITICAL DEPTH ASSUMED

500.00	1.70	5659.20	5659.20	0.00	5659.64	0.44	2.01	0.10	5659.00
765.	0.	490.	164.	0.	105.	47.	1.	1.	5659.00
0.02	0.98	5.74	3.01	0.033	0.030	0.033	0.000	5657.50	82.99
0.010209	205.	200.	190.	5	15	0	0.00	189.33	272.33

*SECNO 700.000

3265 DIVIDED FLOW

7185 MINIMUM SPECIFIC ENERGY

3720 CRITICAL DEPTH ASSUMED

700.00	2.37	5665.67	5665.67	0.00	5666.28	0.61	1.66	0.24	5665.00
765.	4.	696.	65.	2.	107.	26.	2.	2.	5665.00
0.03	1.94	6.53	2.55	0.033	0.030	0.033	0.000	5663.30	79.33
0.008106	170.	200.	230.	4	11	0	0.00	122.39	215.01

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
*SECNO 800.000									
7185 MINIMUM SPECIFIC ENERGY									
3720 CRITICAL DEPTH ASSUMED									
800.00	1.22	5668.22	5668.22	0.00	5668.80	0.58	1.34	-0.29	5674.00
765.	0.	218.	547.	0.	35.	91.	2.	2.	5667.00
0.03	0.00	6.26	6.03	0.033	0.030	0.033	0.000	5667.00	98.01
0.014294	115.	100.	85.	3	11	0	0.00	110.15	208.16
*SECNO 930.000									
7185 MINIMUM SPECIFIC ENERGY									
3720 CRITICAL DEPTH ASSUMED									
930.00	2.63	5672.93	5672.93	0.00	5673.87	0.94	1.24	0.36	5672.00
765.	6.	750.	9.	2.	95.	4.	2.	2.	5672.00
0.04	2.61	7.85	2.62	0.033	0.030	0.033	0.000	5670.30	59.89
0.009539	105.	130.	130.	2	17	0	0.00	58.70	118.59
*SECNO 975.000									
3685 20 TRIALS ATTEMPTED WSEL,CWSEL									
3693 PROBABLE MINIMUM SPECIFIC ENERGY									
3720 CRITICAL DEPTH ASSUMED									
975.00	2.16	5674.06	5674.06	0.00	5674.90	0.84	0.43	0.01	5673.00
765.	18.	684.	63.	6.	89.	14.	3.	2.	5672.00
0.04	2.87	7.65	4.45	0.033	0.030	0.033	0.000	5671.90	33.07
0.009547	45.	45.	45.	20	15	0	0.00	70.66	103.73
*SECNO 1080.000									
3685 20 TRIALS ATTEMPTED WSEL,CWSEL									
3693 PROBABLE MINIMUM SPECIFIC ENERGY									
3720 CRITICAL DEPTH ASSUMED									
1080.00	2.63	5677.53	5677.53	0.00	5678.06	0.53	0.81	0.12	5677.00
765.	8.	471.	286.	5.	69.	76.	3.	3.	5676.00
0.04	1.63	6.82	3.75	0.033	0.030	0.033	0.000	5674.90	16.39
0.007709	100.	105.	105.	20	11	0	0.00	152.78	169.17
*SECNO 1200.000									
3685 20 TRIALS ATTEMPTED WSEL,CWSEL									
3693 PROBABLE MINIMUM SPECIFIC ENERGY									
3720 CRITICAL DEPTH ASSUMED									
1200.00	2.71	5681.50	5681.50	0.00	5682.52	1.01	1.03	0.09	5680.00
765.	29.	721.	15.	8.	87.	4.	3.	3.	5680.00
0.05	3.44	8.27	3.39	0.033	0.030	0.033	0.000	5678.80	18.71
0.008636	120.	120.	115.	20	8	0	0.00	53.01	71.72

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
*SECNO 1250.000									
7185 MINIMUM SPECIFIC ENERGY									
3720 CRITICAL DEPTH ASSUMED									
1250.00	2.15	5682.15	5682.15	0.00	5683.05	0.91	0.40	-0.01	5680.00
765.	46.	656.	63.	10.	82.	14.	3.	3.	5680.00
0.05	4.53	8.05	4.57	0.033	0.030	0.033	0.000	5680.00	27.56
0.009545	50.	50.	50.	2	15	0	0.00	60.31	87.87
*SECNO 1300.000									
3685 20 TRIALS ATTEMPTED WSEL,CWSEL									
3693 PROBABLE MINIMUM SPECIFIC ENERGY									
3720 CRITICAL DEPTH ASSUMED									
1300.00	3.29	5684.89	5684.89	0.00	5685.40	0.51	0.37	0.09	5684.50
765.	104.	474.	186.	39.	70.	49.	4.	3.	5683.00
0.05	2.71	6.75	3.82	0.033	0.030	0.033	0.000	5681.60	42.82
0.007397	60.	50.	45.	20	14	0	0.00	156.05	198.87
*SECNO 1325.000									
7185 MINIMUM SPECIFIC ENERGY									
3720 CRITICAL DEPTH ASSUMED									
1325.00	2.75	5685.25	5685.25	0.00	5685.77	0.51	0.24	-0.03	5685.00
765.	354.	410.	1.	76.	63.	0.	4.	3.	5685.00
0.05	4.66	6.56	1.11	0.033	0.030	0.033	0.000	5682.50	22.49
0.009772	30.	25.	35.	2	10	0	0.00	126.27	118.76
*SECNO 1345.000									
3685 20 TRIALS ATTEMPTED WSEL,CWSEL									
3693 PROBABLE MINIMUM SPECIFIC ENERGY									
3720 CRITICAL DEPTH ASSUMED									
1345.00	3.24	5686.74	5686.74	0.00	5687.48	0.74	0.12	0.10	5684.00
765.	156.	522.	87.	43.	66.	20.	4.	3.	5684.00
0.06	3.62	7.94	4.38	0.033	0.030	0.033	0.000	5683.50	40.77
0.005989	20.	20.	20.	20	11	0	0.00	89.01	129.78
*SECNO 1380.000									
3685 20 TRIALS ATTEMPTED WSEL,CWSEL									
3693 PROBABLE MINIMUM SPECIFIC ENERGY									
3720 CRITICAL DEPTH ASSUMED									
1380.00	2.94	5688.43	5688.43	0.00	5689.19	0.76	0.24	-0.01	5686.00
765.	100.	533.	131.	24.	67.	33.	4.	3.	5686.00
0.06	4.25	7.96	3.99	0.033	0.030	0.033	0.000	5685.50	120.55
0.006939	40.	35.	30.	20	11	0	0.00	86.29	206.84

SECNO / Q / TIME / SLOPE	DEPTH / QLOB / VLOB / XLOBL	CWSEL / QCH / VCH / XLCH	CRIWS / QROB / VROB / XLOBR	WSELK / ALOB / XNL / ITRIAL	EG / ACH / XNCH / IDC	HV / AROB / XNR / ICONT	HL / VOL / WTN / CORAR	OLOSS / TWA / ELMIN / TOPWID	BANK ELEV LEFT/RIGHT / SSTA / ENDST
*SECNO 1420.000									
7185 MINIMUM SPECIFIC ENERGY									
3720 CRITICAL DEPTH ASSUMED									
1420.00	1.70	5690.20	5690.20	0.00	5690.74	0.54	0.52	-0.10	5690.00
765.	0.	367.	398.	0.	59.	72.	4.	4.	5688.50
0.06	1.10	6.24	5.52	0.033	0.030	0.033	0.000	5688.50	155.97
0.012785	25.	40.	45.	17	14	0	0.00	128.07	284.03
*SECNO 1535.000									
7185 MINIMUM SPECIFIC ENERGY									
3720 CRITICAL DEPTH ASSUMED									
1535.00	4.06	5691.86	5691.86	0.00	5692.45	0.59	0.64	0.27	5691.00
765.	93.	433.	240.	36.	58.	53.	4.	4.	5688.00
0.06	2.56	7.41	4.53	0.033	0.030	0.033	0.000	5687.80	75.64
0.005491	115.	115.	120.	3	17	0	0.00	135.15	210.80
*SECNO 1645.000									
7185 MINIMUM SPECIFIC ENERGY									
3720 CRITICAL DEPTH ASSUMED									
1645.00	2.52	5695.32	5695.32	0.00	5695.69	0.37	0.70	-0.03	5693.00
765.	414.	225.	126.	120.	31.	30.	5.	4.	5693.00
0.07	3.32	7.14	4.26	0.033	0.030	0.033	0.000	5692.80	51.49
0.006404	110.	110.	110.	9	11	0	0.00	227.06	278.55

THIS RUN EXECUTED 10-OCT-84 09:37:30

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 HEC2 RELEASE DATED NOV 76 UPDATED MARCH 1982
 ERROR CORR -  01,02,03,04,05
 MODIFICATION -  50,51,52,53,54,55
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T1      ARROYO DEL PINO
T2      GEINER
T3      FLOODWAY
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J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0.	3.	0.	0.	0.000000	0.00	0.0	0.	5649.000	0.000

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	15.000	0.000	-1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*PROF 2

IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

CCHV= 0.100 CEHV= 0.300

*SECNO 100.000

2800 NAT Q1= 83.96 WSEL= 5648.84 ENC Q1= 136.87 WSEL= 5649.84 RATIO= -0.6301
NAT Q1= 170. RATIOS LOB,CH,ROB= 0.0894 0.8036 0.1070 WSEL= 5649.84

3470 ENCROACHMENT STATIONS= 65.0 102.0 TYPE= 4 TARGET= 0.196

100.00	3.00	5649.00	0.00	5648.84	5650.06	1.06	0.00	0.00	5647.00
765.	0.	765.	0.	0.	93.	0.	0.	0.	5647.00
0.00	0.00	8.27	0.00	0.033	0.030	0.033	0.000	5646.00	65.00
0.009437	0.	0.	0.	0	0	0	0.00	37.00	102.00

*SECNO 300.000

2800 NAT Q1= 72.29 WSEL= 5653.58 ENC Q1= 82.47 WSEL= 5654.58 RATIO= -0.1408
NAT Q1= 207. RATIOS LOB,CH,ROB= 0.0646 0.3976 0.5378 WSEL= 5654.58

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 65.0 102.0 TYPE= 4 TARGET= 0.602

300.00	2.84	5654.44	5654.44	5653.58	5655.64	1.19	2.28	-0.16	5653.00
765.	0.	765.	0.	0.	87.	0.	0.	0.	5653.00
0.01	0.00	8.76	0.00	0.033	0.030	0.033	0.000	5651.60	65.00
0.011401	175.	200.	205.	3	11	0	0.00	37.00	102.00

*SECNO 500.000

2800 NAT Q1= 75.71 WSEL= 5659.20 ENC Q1= 160.15 WSEL= 5660.20 RATIO= -1.1153
NAT Q1= 251. RATIOS LOB,CH,ROB= 0.0092 0.6382 0.3526 WSEL= 5660.20

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 85.0 170.0 TYPE= 4 TARGET= 0.362

500.00	1.82	5659.32	5659.32	5659.20	5660.01	0.69	2.40	-0.03	5659.00
765.	0.	765.	0.	0.	115.	0.	1.	0.	5659.00
0.01	0.00	6.66	0.00	0.033	0.030	0.033	0.000	5657.50	85.00
0.012246	205.	200.	190.	3	14	0	0.00	85.00	170.00

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 SECNO      DEPTH     CWSEL     CRIWS     WSELK      EG        HV        HL       OLOSS    BANK ELEV
 Q          QLOB      QCH       QROB      ALOB       ACH       AROB      VOL      TWA    LEFT/RIGHT
 TIME       VLOB      VCH       VROB      XNL        XNCH      XNR       WTN      ELMIN      SSTA
 SLOPE      XLOBL     XLCH      XLOBR     ITRIAL     IDC       ICONT     CORAR    TOPWID     ENDST

*SECNO 700.000
 2800 NAT Q1=     84.97  WSEL=   5665.67  ENC Q1=    162.74  WSEL=   5666.67  RATIO= -0.9153
 NAT Q1=    221.  RATIOS LOB,CH,ROB=  0.0212  0.7367  0.2420  WSEL=   5666.67
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=      85.0      145.0  TYPE=      4  TARGET=      0.263
  700.00      2.30  5665.60  5665.60  5665.67  5666.46      0.87      2.31      0.12  5665.00
     765.        0.     765.       0.       0.      102.       0.         1.        1.  5665.00
    0.02       0.00     7.48      0.00    0.033     0.030     0.033     0.000  5663.30    85.00
0.011540       170.      200.      230.        4        11         0      0.00    60.00   115.00


*SECNO 800.000
 2800 NAT Q1=     63.99  WSEL=   5668.22  ENC Q1=     63.99  WSEL=   5669.22  RATIO=  0.0000
 NAT Q1=    179.  RATIOS LOB,CH,ROB=  0.0000  0.2894  0.7106  WSEL=   5669.22
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=      65.0      137.5  TYPE=      4  TARGET=      0.643
  800.00      2.39  5669.39  5669.39  5668.22  5670.43      1.03      1.11      0.00  5674.00
     765.        0.     635.      130.       0.       76.      18.         2.        1.  5667.00
    0.03       0.00     8.33      7.20    0.033     0.030     0.033     0.000  5667.00    91.32
0.011526       115.      100.       85.       20         8         0      0.00    46.22   137.53


*SECNO 930.000
 2800 NAT Q1=     78.33  WSEL=   5672.93  ENC Q1=    147.80  WSEL=   5673.93  RATIO= -0.8869
 NAT Q1=    159.  RATIOS LOB,CH,ROB=  0.0280  0.9302  0.0418  WSEL=   5673.93
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=      65.0      111.0  TYPE=      4  TARGET=      0.070
  930.00      2.60  5672.90  5672.90  5672.93  5673.93      1.03      1.44      0.03  5672.00
     765.        0.     765.       0.       0.       94.       0.         2.        1.  5672.00
    0.03       0.00     8.14      0.00    0.033     0.030     0.033     0.000  5670.30    65.00
0.011047       105.      130.      130.        0         8         0      0.00    46.00   111.00


*SECNO 970.000
 2800 NAT Q1=     78.30  WSEL=   5674.06  ENC Q1=    138.05  WSEL=   5675.06  RATIO= -0.7632
 NAT Q1=    168.  RATIOS LOB,CH,ROB=  0.0652  0.0230  0.1118  WSEL=   5675.06
```

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTR	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 45.0 90.0 TYPE= 4 TARGET= 0.177

975.00	2.25	5674.15	5674.15	5674.06	5675.19	1.04	0.51	0.00	5673.00
765.	0.	765.	0.	0.	93.	0.	2.	1.	5672.00
0.03	0.00	8.20	0.00	0.033	0.030	0.033	0.000	5671.90	45.00
0.011414	45.	45.	45.	20	11	0	0.00	15.00	90.00

*SECNO 1080.000
2800 NAT Q1= 87.13 WSEL= 5677.53 ENC Q1= 106.29 WSEL= 5678.53 RATIO= -0.2199
NAT Q1= 245. RATIOS LOB,CH,ROB= 0.0672 0.4346 0.4982 WSEL= 5679.53
3280 CROSS SECTION 1080.00 EXTENDED 0.31 FEET

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 35.0 70.0 TYPE= 4 TARGET= 0.565

1080.00	3.11	5678.01	5678.01	5677.53	5679.24	1.24	1.16	0.08	5677.00
765.	0.	765.	0.	0.	86.	0.	2.	1.	5676.00
0.03	0.00	8.92	0.00	0.033	0.030	0.033	0.000	5671.90	35.00
0.011041	100.	105.	100.	20	11	0	0.00	35.00	70.00

*SECNO 1200.000
2600 NAT Q1= 82.32 WSEL= 5681.50 ENC Q1= 138.08 WSEL= 5682.50 RATIO= -0.6773
NAT Q1= 156. RATIOS LOB,CH,ROB= 0.0782 0.8828 0.0390 WSEL= 5682.50
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 30.0 66.0 TYPE= 4 TARGET= 0.117

1200.00	2.69	5681.49	5681.49	5681.50	5682.70	1.21	1.32	0.00	5680.00
765.	0.	765.	0.	0.	87.	0.	2.	1.	5680.00
0.04	0.00	8.83	0.00	0.033	0.030	0.033	0.000	5678.80	30.00
0.011040	120.	120.	115.	20	11	0	0.00	34.00	66.00

*SECNO 1250.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

2800 NAT Q1= 78.30 WSEL= 5682.15 ENC Q1= 127.08 WSEL= 5683.15 RATIO= -0.6230
NAT Q1= 158. RATIOS LOB,CH,ROB= 0.0824 0.8043 0.1133 WSEL= 5683.15
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 37.0 75.0 TYPE= 4 TARGET= 0.196

1250.00	2.32	5682.32	5682.32	5682.15	5683.49	1.17	0.58	-0.01	5680.00
765.	0.	765.	0.	0.	88.	0.	3.	1.	5680.00
0.04	0.00	8.68	0.00	0.033	0.030	0.033	0.000	5680.00	37.00
0.011676	50.	50.	50.	2	11	0	0.00	38.00	75.00

*SECNO 1300.000
2800 NAT Q1= 88.90 WSEL= 5684.89 ENC Q1= 108.12 WSEL= 5685.89 RATIO= -0.2155
NAT Q1= 246. RATIOS LOB,CH,ROB= 0.2679 0.4389 0.2932 WSEL= 5685.89
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 110.0 145.0 TYPE= 4 TARGET= 0.561

1300.00	3.72	5685.32	5685.32	5684.89	5686.06	1.20	0.56	0.03	5684.50
765.	0.	765.	0.	0.	85.	0.	3.	1.	5683.00
0.04	0.00	8.96	0.00	0.033	0.030	0.033	0.000	5681.60	110.00
0.011392	60.	70.	45.	20	14	0	0.00	35.00	145.00

*SECNO 1325.000
2800 NAT Q1= 77.39 WSEL= 5685.25 ENC Q1= 94.64 WSEL= 5686.25 RATIO= -0.2229
NAT Q1= 211. RATIOS LOB,CH,ROB= 0.5328 0.4476 0.0196 WSEL= 5686.25
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 105.0 145.0 TYPE= 4 TARGET= 0.552

1325.00	3.42	5685.92	5685.92	5685.25	5687.06	1.14	0.28	0.01	5685.00
765.	0.	765.	0.	0.	89.	0.	3.	1.	5685.00
0.04	0.00	8.58	0.00	0.033	0.030	0.033	0.000	5682.50	105.00
0.011019	30.	25.	35.	20	11	0	0.00	40.00	115.00

*SECNO 1345.000
2800 NAT Q1= 98.85 WSEL= 5686.74 ENC Q1= 109.11 WSEL= 5687.74 RATIO= -0.1038
NAT Q1= 205. RATIOS LOB,CH,ROB= 0.3192 0.5315 0.1493 WSEL= 5687.74

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3280 CROSS SECTION 1345.00 EXTENDED 0.09 FEET

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS: 90.0 112.0 TYPE= 4 TARGET= 0.468

1345.00	3.59	5687.09	5687.09	5686.74	5688.77	1.68	0.25	0.15	5684.00
765.	0.	765.	0.	0.	73.	0.	3.	1.	5681.00
0.04	0.00	10.42	0.00	0.033	0.030	0.033	0.000	5683.50	90.00
0.012364	20.	20.	20.	20	8	0	0.00	22.00	112.00

*SECNO 1380.000
2800 NAT Q1= 91.84 WSEL= 5688.43 ENC Q1= 108.57 WSEL= 5689.43 RATIO= -0.1822
NAT Q1= 193. RATIOS LOB,CH,ROB= 0.1562 0.5613 0.2825 WSEL= 5689.43
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS: 140.0 165.0 TYPE= 4 TARGET= 0.439

1380.00	3.31	5688.81	5688.81	5688.43	5690.36	1.55	0.42	0.02	5686.00
765.	0.	765.	0.	0.	77.	0.	3.	1.	5686.00
0.04	0.00	9.99	0.00	0.033	0.030	0.033	0.000	5685.50	140.00
0.011995	40.	35.	30.	20	11	0	0.00	25.00	165.00

*SECNO 1420.000
2800 NAT Q1= 67.66 WSEL= 5690.20 ENC Q1= 90.49 WSEL= 5691.20 RATIO= -0.3375
NAT Q1= 204. RATIOS LOB,CH,ROB= 0.0207 0.4447 0.5337 WSEL= 5691.20

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS: 160.0 210.0 TYPE= 4 TARGET= 0.556

1420.00	2.45	5690.95	5690.95	5690.20	5691.93	0.90	0.47	0.06	5690.00
765.	0.	765.	0.	0.	96.	0.	3.	1.	5688.50
0.05	0.00	7.94	0.00	0.033	0.030	0.033	0.000	5688.50	160.00
0.011707	25.	10.	45.	20	19	0	0.00	50.00	210.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 1535.000
2800 NAT Q1= 103.24 WSEL= 5691.86 ENC Q1= 103.24 WSEL= 5692.86 RATIO= 0.0000
NAT Q1= 245. RATIOS LOB,CH,ROB= 0.2610 0.3899 0.3491 WSEL= 5692.86

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 135.0 156.9 TYPE= 4 TARGET= 0.578

1535.00	4.48	5692.28	5692.28	5691.86	5694.01	1.74	1.22	0.29	5691.00
765.	0.	721.	44.	0.	67.	8.	3.	2.	5688.00
0.05	0.00	10.80	5.63	0.033	0.030	0.033	0.000	5687.80	135.00
0.010395	115.	115.	120.	2	14	0	0.00	21.92	156.92

*SECNO 1645.000
2800 NAT Q1= 95.59 WSEL= 5696.32 ENC Q1= 95.59 WSEL= 5696.32 RATIO= 0.0000
NAT Q1= 300. RATIOS LOB,CH,ROB= 0.6849 0.1664 0.1487 WSEL= 5696.32
3280 CROSS SECTION 1645.00 EXTENDED 0.63 FEET

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 190.7 253.0 TYPE= 4 TARGET= 0.682

1645.00	3.43	5696.23	5696.23	5695.32	5697.06	0.84	0.95	0.19	5693.00
765.	383.	382.	0.	70.	43.	0.	3.	2.	5693.00
0.05	5.43	8.84	0.00	0.033	0.030	0.033	0.000	5692.80	190.67
0.008620	110.	110.	110.	20	19	0	0.00	62.33	253.00

THIS RUN EXECUTED 10-OCT-84 09:40:02

****
HEC2 RELEASE DATED NOV 76 UPDATED MARCH 1982
ERROR CORR - 01,02,03,04,05
MODIFICATION - 50,51,52,53,54,55
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

,ARROYO DEL PINO 100-YR

SUMMARY PRINTOUT

	SECNO	Q	CWSEL	CRIWS	DEPTH	SSTA	ENDST	TOPWID
*	100.000	765.00	5648.84	5648.84	2.84	52.71	117.65	64.94
	100.000	765.00	5649.00	0.00	3.00	65.00	102.00	37.00
*	300.000	765.00	5653.58	5653.58	1.98	50.57	180.89	130.31
*	300.000	765.00	5654.44	5654.44	2.84	65.00	102.00	37.00
*	500.000	765.00	5659.20	5659.20	1.70	82.99	272.33	189.33
*	500.000	765.00	5659.32	5659.32	1.82	85.00	170.00	85.00
*	700.000	765.00	5665.67	5665.67	2.37	79.33	215.01	122.39
*	700.000	765.00	5665.60	5665.60	2.30	85.00	145.00	60.00
*	800.000	765.00	5668.22	5668.22	1.22	98.01	208.16	110.15
*	800.000	765.00	5669.39	5669.39	2.39	91.32	137.53	46.22
*	930.000	765.00	5672.93	5672.93	2.63	59.89	118.59	58.70
*	930.000	765.00	5672.90	5672.90	2.60	65.00	111.00	46.00
*	975.000	765.00	5674.06	5674.06	2.16	33.07	103.73	70.66
*	975.000	765.00	5674.15	5674.15	2.25	45.00	90.00	45.00
*	1080.000	765.00	5677.53	5677.53	2.63	16.39	169.17	152.78
*	1080.000	765.00	5678.01	5678.01	3.11	35.00	70.00	35.00
*	1200.000	765.00	5681.50	5681.50	2.71	18.71	71.72	53.01
*	1200.000	765.00	5681.49	5681.49	2.69	30.00	66.00	36.00
*	1250.000	765.00	5682.15	5682.15	2.15	27.56	87.87	60.31
*	1250.000	765.00	5682.32	5682.32	2.32	37.00	75.00	38.00
*	1300.000	765.00	5684.89	5684.89	3.29	42.82	198.87	156.05
*	1300.000	765.00	5685.32	5685.32	3.72	110.00	145.00	35.00

	SECNO	Q	CWSEL	CRIWS	DEPTH	SSTA	ENDST	TOPWID
*	1325.000	765.00	5685.25	5685.25	2.75	22.49	148.76	126.27
*	1325.000	765.00	5685.92	5685.92	3.42	105.00	145.00	40.00
*	1345.000	765.00	5686.74	5686.74	3.24	40.77	129.78	89.01
*	1345.000	765.00	5687.09	5687.09	3.59	90.00	112.00	22.00
*	1380.000	765.00	5688.43	5688.43	2.93	120.55	206.84	86.29
*	1380.000	765.00	5688.81	5688.81	3.31	140.00	165.00	25.00
*	1420.000	765.00	5690.20	5690.20	1.70	155.97	284.03	128.07
*	1420.000	765.00	5690.95	5690.95	2.45	160.00	210.00	50.00
*	1535.000	765.00	5691.86	5691.86	4.06	75.64	210.80	135.15
*	1535.000	765.00	5692.28	5692.28	4.48	165.00	186.92	21.92
*	1645.000	765.00	5695.32	5695.32	2.52	51.49	278.55	227.06
*	1645.000	765.00	5696.23	5696.23	3.43	190.67	253.00	62.33

SUMMARY OF ERRORS AND SPECIAL NOTES

CAUTION SECNO= 100.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 300.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 300.000 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 300.000 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 300.000 PROFILE= 2 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 500.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 500.000 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 500.000 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 500.000 PROFILE= 2 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 700.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 700.000 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 700.000 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 700.000 PROFILE= 2 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 800.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 800.000 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 800.000 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 800.000 PROFILE= 2 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 800.000 PROFILE= 2 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 930.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 930.000 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 930.000 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 930.000 PROFILE= 2 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 975.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 975.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 975.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO= 975.000 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 975.000 PROFILE= 2 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 975.000 PROFILE= 2 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 1080.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1080.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1080.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO= 1080.000 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1080.000 PROFILE= 2 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1080.000 PROFILE= 2 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 1200.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1200.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1200.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO= 1200.000 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1200.000 PROFILE= 2 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1200.000 PROFILE= 2 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 1250.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1250.000 PROFILE= 1 MINIMUM SPECIFIC ENERGY

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 CAUTION  SECNO= 1250.000  PROFILE= 2  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO= 1250.000  PROFILE= 2  MINIMUM SPECIFIC ENERGY

 CAUTION  SECNO= 1300.000  PROFILE= 1  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO= 1300.000  PROFILE= 1  PROBABLE MINIMUM SPECIFIC ENERGY
 CAUTION  SECNO= 1300.000  PROFILE= 1  20 TRIALS ATTEMPTED TO BALANCE WSEL
 CAUTION  SECNO= 1300.000  PROFILE= 2  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO= 1300.000  PROFILE= 2  PROBABLE MINIMUM SPECIFIC ENERGY
 CAUTION  SECNO= 1300.000  PROFILE= 2  20 TRIALS ATTEMPTED TO BALANCE WSEL

 CAUTION  SECNO= 1325.000  PROFILE= 1  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO= 1325.000  PROFILE= 1  MINIMUM SPECIFIC ENERGY
 CAUTION  SECNO= 1325.000  PROFILE= 2  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO= 1325.000  PROFILE= 2  PROBABLE MINIMUM SPECIFIC ENERGY
 CAUTION  SECNO= 1325.000  PROFILE= 2  20 TRIALS ATTEMPTED TO BALANCE WSEL

 CAUTION  SECNO= 1345.000  PROFILE= 1  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO= 1345.000  PROFILE= 1  PROBABLE MINIMUM SPECIFIC ENERGY
 CAUTION  SECNO= 1345.000  PROFILE= 1  20 TRIALS ATTEMPTED TO BALANCE WSEL
 CAUTION  SECNO= 1345.000  PROFILE= 2  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO= 1345.000  PROFILE= 2  PROBABLE MINIMUM SPECIFIC ENERGY
 CAUTION  SECNO= 1345.000  PROFILE= 2  20 TRIALS ATTEMPTED TO BALANCE WSEL

 CAUTION  SECNO= 1380.000  PROFILE= 1  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO= 1380.000  PROFILE= 1  PROBABLE MINIMUM SPECIFIC ENERGY
 CAUTION  SECNO= 1380.000  PROFILE= 1  20 TRIALS ATTEMPTED TO BALANCE WSEL
 CAUTION  SECNO= 1380.000  PROFILE= 2  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO= 1380.000  PROFILE= 2  PROBABLE MINIMUM SPECIFIC ENERGY
 CAUTION  SECNO= 1380.000  PROFILE= 2  20 TRIALS ATTEMPTED TO BALANCE WSEL

 CAUTION  SECNO= 1420.000  PROFILE= 1  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO= 1420.000  PROFILE= 1  MINIMUM SPECIFIC ENERGY
 CAUTION  SECNO= 1420.000  PROFILE= 2  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO= 1420.000  PROFILE= 2  PROBABLE MINIMUM SPECIFIC ENERGY
 CAUTION  SECNO= 1420.000  PROFILE= 2  20 TRIALS ATTEMPTED TO BALANCE WSEL

 CAUTION  SECNO= 1535.000  PROFILE= 1  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO= 1535.000  PROFILE= 1  MINIMUM SPECIFIC ENERGY
 CAUTION  SECNO= 1535.000  PROFILE= 2  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO= 1535.000  PROFILE= 2  MINIMUM SPECIFIC ENERGY

 CAUTION  SECNO= 1645.000  PROFILE= 1  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO= 1645.000  PROFILE= 1  MINIMUM SPECIFIC ENERGY
 CAUTION  SECNO= 1645.000  PROFILE= 2  CRITICAL DEPTH ASSUMED
 CAUTION  SECNO= 1645.000  PROFILE= 2  PROBABLE MINIMUM SPECIFIC ENERGY
 CAUTION  SECNO= 1645.000  PROFILE= 2  20 TRIALS ATTEMPTED TO BALANCE WSEL
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FLOODWAY DATA, ARROYO DEL PINO 100-YR
PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
100.000	37.	93.	8.3	5649.0	5648.8	0.2
300.000	37.	87.	8.8	5654.5	5653.6	0.9
500.000	85.	115.	6.7	5659.3	5659.2	0.1
700.000	60.	102.	7.5	5665.7	5665.7	0.0
800.000	46.	94.	8.1	5669.4	5668.2	1.2
930.000	46.	94.	8.1	5672.9	5672.9	0.0
975.000	45.	93.	8.2	5674.2	5674.1	0.1
1080.000	35.	86.	8.9	5678.0	5677.5	0.5
1200.000	36.	87.	8.8	5681.5	5681.5	0.0
1250.000	38.	88.	8.7	5682.3	5682.1	0.2
1300.000	35.	85.	9.0	5685.3	5684.9	0.4
1325.000	40.	89.	8.6	5686.0	5685.3	0.7
1345.000	22.	73.	10.4	5687.0	5686.7	0.3
1380.000	25.	77.	10.0	5688.8	5688.4	0.4
1420.000	30.	96.	7.9	5691.0	5690.2	0.8
1535.000	22.	75.	10.3	5692.3	5691.9	0.4
1645.000	62.	114.	6.7	5696.2	5695.3	0.9

COMPUTED WATER SURFACE ELEVATIONS
ARROYO DEL PINO 100-YR
PROFILE # 1

SECTION NO.	REACH LENGTH	CWSEL	STATION
100.00	0.00	5648.84	100.00
300.00	200.00	5653.58	300.00
500.00	200.00	5659.20	500.00
700.00	200.00	5665.67	700.00
800.00	100.00	5668.22	800.00
930.00	130.00	5672.93	930.00
975.00	45.00	5674.06	975.00
1080.00	105.00	5677.53	1080.00
1200.00	120.00	5681.50	1200.00
1250.00	50.00	5682.15	1250.00
1300.00	50.00	5684.89	1300.00
1325.00	25.00	5685.25	1325.00
1345.00	20.00	5686.74	1345.00
1380.00	35.00	5688.43	1380.00
1420.00	40.00	5690.20	1420.00
1535.00	115.00	5691.86	1535.00
1645.00	110.00	5693.32	1645.00

STREAM STATION - FLOOD ELEVATION CONTOUR TABLE
,ARROYO DEL PINO 100-YR .
PROFILE # 1

STATION	CWSEL
107.	5649
149.	5650
191.	5651
233.	5652
276.	5653
315.	5654
351.	5655
386.	5656
422.	5657
457.	5658
493.	5659
525.	5660
556.	5661
587.	5662
618.	5663
648.	5664
679.	5665
713.	5666
752.	5667
791.	5668
821.	5669
849.	5670
877.	5671
904.	5672
933.	5673
973.	5674
1003.	5675
1034.	5676
1064.	5677
1094.	5678
1124.	5679
1155.	5680
1185.	5681
1239.	5682
1266.	5683
1284.	5684
1308.	5685
1335.	5686
1350.	5687
1371.	5688
1393.	5689
1415.	5690
1475.	5691
1539.	5692
1571.	5693
1603.	5694

STREAM STATION - FLOOD ELEVATION CONTOUR TABLE
ARROYO DEL PINO 100-YR
PROFILE # 11

STATION	CWSEL
1635.	5695

10-OCT-84 09:42:13 PAGE 1

THIS RUN EXECUTED 10-OCT-84 09:42:14

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED MARCH 1982
  ERROR CORR -  01,02,03,04,05
  MODIFICATION -  50,51,52,53,54,55
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FORTRAN STOP
$ LOG
   ALRENG2      logged out at 10-OCT-1984 09:42:24.01

   Accounting information:
   Buffered I/O count:          2682      Peak working set size:      200
   Direct I/O count:             294      Peak page file size:        597
   Page faults:                 7850      Mounted volumes:              0
   Elapsed CPU time:    0 00:01:01.98      Elapsed time:    0 00:25:55.31
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THIS RUN EXECUTED 10-OCT-84 09:20:58

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**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED MARCH 1982
  ERROR CORR -  01,02,03,04,05
  MODIFICATION -  50,51,52,53,54,55
**************************************************

T1      ARROYO DEL PINO FLOODPLAIN AMENDMENT
T2      GREINER ENGINEERING JN 0440809 KLR 10-1-84
T3      ,ARROYO DEL PINO 100-YR EXISTING CONDITION
```

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0.	2.	0.	0.	-1.000000	0.00	0.0	0.	5618.000	0.000

J2	NPROF	IPLOT	PREVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38.000	43.000	1.000	2.000	8.000	53.000	54.000	4.000	200.000	300.000

J6	IHLEG	ICOPY								
	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

J9	BEGSTA	PROFILE PRINT VARIABLES								
	100.000	0.000	-1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

NC	0.033	0.033	0.030	0.100	0.300	0.000	0.000	0.000	0.000	0.000
QT	2.000	765.000	765.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ET	0.000	0.000	10.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	100.000	8.000	65.000	102.000	0.000	0.000	0.000	0.000	5600.000	0.000
GR	55.000	0.000	50.000	45.000	47.000	65.000	46.000	87.000	47.000	102.000
GR	48.000	105.000	49.000	120.000	50.000	140.000	0.000	0.000	0.000	0.000
X1	300.000	12.000	65.000	102.000	175.000	205.000	200.000	0.000	5600.000	0.000
GR	56.000	0.000	54.000	40.000	53.000	65.000	52.000	65.000	51.600	75.000
GR	52.000	87.000	53.000	102.000	53.000	137.000	52.000	150.000	52.000	170.000
GR	53.000	178.000	55.000	188.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	500.000	12.000	85.000	170.000	205.000	190.000	200.000	0.000	5600.000	0.000
GR	67.000	0.000	62.000	30.000	61.000	65.000	59.000	85.000	58.000	95.000
GR	57.500	105.000	58.000	155.000	59.000	170.000	59.000	235.000	57.500	256.000
GR	60.000	280.000	62.000	300.000	0.000	0.000	0.000	0.000	0.000	0.000

X1	700.000	11.000	85.000	145.000	170.000	230.000	200.000	0.000	5600.000	0.000
GR	75.000	0.000	65.000	85.000	64.000	97.000	63.300	115.000	64.000	140.000
GR	65.000	145.000	66.000	165.000	65.000	185.000	65.000	205.000	66.000	220.000
GR	69.000	240.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	800.000	6.000	65.000	130.000	115.000	85.000	100.000	0.000	5600.000	0.000
GR	75.000	0.000	74.000	65.000	67.000	105.000	67.000	130.000	67.000	200.000
GR	73.000	240.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	930.000	9.000	65.000	111.000	105.000	130.000	130.000	0.000	5600.000	0.000
GR	77.000	0.000	75.000	23.000	74.000	54.000	72.000	65.000	71.000	70.000
GR	70.300	90.000	71.000	105.000	72.000	111.000	78.000	140.000	0.000	0.000
X1	975.000	7.000	45.000	90.000	45.000	45.000	45.000	0.000	5600.000	0.000
GR	77.000	0.000	73.000	45.000	72.000	55.000	71.900	75.000	72.000	90.000
GR	75.000	110.000	79.000	155.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	1080.000	8.000	35.000	70.000	100.000	105.000	105.000	0.000	5600.000	0.000
GR	78.000	0.000	77.000	35.000	75.000	50.000	74.900	52.000	75.000	60.000
GR	76.000	70.000	77.000	135.000	77.700	180.000	0.000	0.000	0.000	0.000
X1	1200.000	7.000	30.000	66.000	120.000	115.000	120.000	0.000	5600.000	0.000
GR	84.000	0.000	80.000	30.000	79.000	35.000	78.800	50.000	79.000	60.000
GR	80.000	66.000	85.000	85.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	1250.000	5.000	37.000	75.000	50.000	50.000	50.000	0.000	5600.000	0.000
GR	85.500	0.000	85.000	15.000	80.000	37.000	80.000	75.000	90.000	135.000
X1	1300.000	10.000	110.000	145.000	60.000	45.000	50.000	0.000	5600.000	0.000
GR	89.000	0.000	88.000	25.000	85.000	40.000	84.000	45.000	84.500	110.000
GR	81.600	137.000	83.000	145.000	84.000	155.000	84.000	190.000	86.000	210.000
X1	1325.000	10.000	105.000	145.000	20.000	35.000	25.000	0.000	5600.000	0.000
GR	89.000	0.000	84.000	30.000	84.000	75.000	85.000	90.000	85.000	105.000
GR	83.000	120.000	82.500	125.000	83.000	130.000	85.000	145.000	95.000	160.000
X1	1345.000	7.000	80.000	105.000	25.000	25.000	20.000	0.000	5600.000	0.000
GR	90.000	0.000	86.000	50.000	86.000	80.000	84.000	90.000	84.100	100.000
GR	85.000	105.000	95.300	125.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	1380.000	7.000	115.000	140.000	45.000	35.000	35.000	0.000	5600.000	0.000
GR	95.000	0.000	92.000	75.000	91.000	100.000	92.000	115.000	85.400	135.000
GR	86.000	140.000	95.700	160.000	0.000	0.000	0.000	0.000	0.000	0.000
X1	1420.000	7.000	160.000	190.000	20.000	30.000	25.000	0.000	5600.000	0.000
GR	95.000	0.000	92.000	90.000	92.000	120.000	90.000	160.000	89.000	185.000
GR	90.000	190.000	95.900	215.000	0.000	0.000	0.000	0.000	0.000	0.000

XJ	1535.000	10.000	135.000	155.000	115.000	120.000	115.000	0.000	5600.000	0.000
GR	95.000	0.000	97.000	70.000	91.000	110.000	91.000	135.000	88.000	148.000
GR	87.800	150.000	88.000	155.000	91.000	170.000	93.000	265.000	94.000	290.000
XI	1645.000	12.000	240.000	253.000	110.000	110.000	110.000	0.000	5600.000	0.000
GR	100.000	0.000	95.000	55.000	94.000	70.000	94.000	105.000	95.000	130.000
R	95.000	230.000	93.000	240.000	92.800	248.000	93.000	253.000	95.000	275.000
GR	96.800	290.000	95.600	320.000	99.100	370.000	0.000	0.000	0.000	0.000
CJ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*PROF 1

IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

CCHV= 0.100 CEHV= 0.300

*SECNO 100.000

3720 CRITICAL DEPTH ASSUMED

100.00	2.84	5648.84	5648.84	5648.00	5649.75	0.91	0.00	0.00	5647.00
765.	44.	890.	32.	11.	87.	9.	0.	0.	5647.00
0.00	3.86	7.95	3.39	0.033	0.030	0.033	0.000	5646.00	52.71
0.008301	0.	0.	0.	0	10	0	0.00	61.91	117.65

*SECNO 300.000

7185 MINIMUM SPECIFIC ENERGY

3720 CRITICAL DEPTH ASSUMED

300.00	1.98	5653.58	5653.58	0.00	5654.12	0.55	2.25	-0.25	5653.00
765.	9.	371.	385.	4.	55.	75.	1.	0.	5653.00
0.01	2.08	6.72	5.12	0.033	0.030	0.033	0.000	5651.60	50.57
0.011198	175.	200.	305.	3	12	0	0.00	130.31	180.89

*SECNO 500.000

7185 MINIMUM SPECIFIC ENERGY

3720 CRITICAL DEPTH ASSUMED

500.00	1.70	5659.20	5659.20	0.00	5659.64	0.44	2.01	0.10	5659.00
765.	0.	600.	164.	0.	105.	47.	1.	1.	5659.00
0.02	0.98	5.74	3.51	0.033	0.030	0.033	0.000	5657.50	82.99
0.010209	205.	200.	190.	5	15	0	0.00	189.33	272.33

*SECNO 700.000

3265 DIVIDED FLOW

7185 MINIMUM SPECIFIC ENERGY

3720 CRITICAL DEPTH ASSUMED

700.00	2.37	5665.67	5665.67	0.00	5666.28	0.61	1.66	0.24	5665.00
765.	4.	696.	65.	2.	107.	26.	2.	2.	5665.00
0.03	1.94	6.53	2.55	0.033	0.030	0.033	0.000	5663.30	79.33
0.008106	170.	200.	230.	4	11	0	0.00	122.39	215.01

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 800.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

800.00	1.22	5668.22	5668.22	0.00	5668.80	0.58	1.34	-0.29	5674.00
765.	0.	218.	547.	0.	35.	91.	2.	2.	5667.00
0.03	0.00	6.26	6.03	0.033	0.030	0.033	0.000	5667.00	98.01
0.014294	115.	100.	85.	3	11	0	0.00	110.15	208.16.

*SECNO 930.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

930.00	2.63	5672.93	5672.93	0.00	5673.87	0.94	1.24	0.36	5672.00
765.	6.	750.	9.	2.	95.	4.	2.	2.	5672.00
0.04	2.61	7.85	2.62	0.033	0.030	0.033	0.000	5670.30	59.89
0.009539	105.	130.	130.	2	17	0	0.00	58.70	118.59

*SECNO 975.000
3685 20 TRIALS ATTEMPTED WSEL>CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

975.00	2.16	5674.06	5674.06	0.00	5674.90	0.84	0.43	0.01	5673.00
765.	18.	684.	63.	6.	89.	14.	3.	2.	5672.00
0.04	2.87	7.60	4.45	0.033	0.030	0.033	0.000	5671.90	33.07
0.009547	45.	45.	45.	20	15	0	0.00	70.66	103.73

*SECNO 1080.000
3685 20 TRIALS ATTEMPTED WSEL>CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

1080.00	2.63	5677.53	5677.53	0.00	5678.06	0.53	0.81	0.12	5677.00
765.	8.	471.	286.	5.	69.	76.	3.	3.	5676.00
0.04	1.63	6.82	3.75	0.033	0.030	0.033	0.000	5674.90	16.39
0.007709	100.	105.	105.	20	11	0	0.00	152.78	169.17

*SECNO 1200.000
3685 20 TRIALS ATTEMPTED WSEL>CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

1200.00	2.71	5681.50	5681.50	0.00	5682.52	1.01	1.03	0.09	5680.00
765.	29.	721.	15.	8.	87.	4.	3.	3.	5680.00
0.05	3.44	8.27	3.39	0.033	0.030	0.033	0.000	5678.80	18.71
0.008636	120.	120.	115.	20	8	0	0.00	53.01	71.72

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 1250.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

1250.00	2.15	5682.15	5682.15	0.00	5683.05	0.91	0.48	-0.01	5680.00
765.	46.	656.	63.	10.	82.	14.	3.	3.	5680.00
0.05	4.53	8.05	4.57	0.033	0.030	0.033	0.000	5680.00	27.56
0.009545	50.	50.	50.	2	15	0	0.00	60.31	87.87

*SECNO 1300.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

1300.00	3.29	5684.89	5684.89	0.00	5685.40	0.51	0.37	0.09	5684.50
765.	104.	474.	186.	39.	70.	49.	4.	3.	5683.00
0.05	2.71	6.75	3.82	0.033	0.030	0.033	0.000	5681.60	12.82
0.007397	60.	50.	45.	20	14	0	0.00	156.05	198.87

*SECNO 1325.000
7105 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

1325.00	2.75	5685.25	5685.25	0.00	5685.77	0.52	0.24	-0.03	5685.00
765.	354.	411.	0.	76.	62.	0.	4.	3.	5685.00
0.05	4.67	6.57	0.04	0.033	0.030	0.033	0.000	5682.50	22.50
0.009823	20.	25.	35.	2	10	0	0.00	122.87	145.37

*SECNO 1345.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

1345.00	3.26	5687.26	5687.26	0.00	5688.06	0.80	0.16	0.11	5686.00
765.	195.	552.	19.	48.	68.	5.	4.	3.	5685.00
0.06	4.08	8.09	3.80	0.033	0.030	0.033	0.000	5684.00	34.27
0.007094	25.	20.	25.	20	11	0	0.00	73.12	109.39

*SECNO 1380.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

1380.00	3.65	5689.04	5689.04	0.00	5690.28	1.24	0.31	0.11	5687.00
765.	32.	684.	49.	8.	74.	10.	4.	3.	5686.00
0.06	4.09	9.30	5.09	0.033	0.030	0.033	0.000	5685.40	107.33
0.008387	45.	35.	35.	20	8	0	0.00	38.95	146.28

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLORL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 1420.000

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

1420.00	3.08	5692.08	5692.08	0.00	5692.75	0.68	0.15	0.08	5690.00
765.	163.	569.	33.	46.	77.	9.	4.	3.	5690.00
0.06	3.58	7.36	3.59	0.033	0.030	0.033	0.000	5689.00	87.66
0.006273	20.	25.	30.	20	15	0	0.00	111.15	198.81

*SECNO 1535.000

3301 HV CHANGED MORE THAN HVINS

1535.00	5.08	5692.88	0.00	0.00	5693.00	0.12	0.19	0.06	5691.00
765.	201.	296.	268.	111.	79.	135.	4.	4.	5688.00
0.07	1.81	3.75	1.99	0.033	0.030	0.033	0.000	5687.80	19.12
0.000944	115.	115.	120.	2	0	0	0.00	209.96	259.39

*SECNO 1645.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

1645.00	2.48	5695.28	5695.28	0.00	5695.69	0.41	0.79	-0.26	5693.00
765.	406.	232.	127.	117.	31.	29.	5.	4.	5693.00
0.08	3.46	7.49	4.44	0.033	0.030	0.033	0.000	5692.80	51.91
0.007191	110.	110.	110.	15	8	0	0.00	226.21	278.12

THIS RUN EXECUTED 10-OCT-84 09:26:31

****
HEC2 RELEASE DATED NOV 76 UPDATED MARCH 1982
ERROR CORR - 01,02,03,04,05
MODIFICATION - 50,51,52,53,54,55
****

T1 ARROYO DEL PINO
T2 GEINER
T3 FLOODWAY

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0.	3.	0.	0.	0.000000	0.00	0.0	0.	3649.000	0.000

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	15.000	0.000	-1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLORL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*PROF 2

IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

CCHV= 0.100 CEHV= 0.300
SECNO 100.000
2800 NAT Q1= 83.96 WSEL= 5648.84 ENC Q1= 136.87 WSEL= 5649.84 RATIO= -0.6301
NAT Q1= 170. RATIOS LOB,CH,ROB= 0.0894 0.8036 0.1070 WSEL= 5649.84

3470 ENCROACHMENT STATIONS= 65.0 102.0 TYPE= 4 TARGET= 0.196

100.00	3.00	5649.00	0.00	5648.84	5650.06	1.06	0.00	0.00	5647.00
765.	0.	765.	0.	0.	93.	0.	0.	0.	5647.00
0.00	0.00	8.27	0.00	0.033	0.030	0.033	0.000	5646.00	65.00
0.009437	0.	0.	0.	0	0	0	0.00	37.00	102.00

*SECNO 300.000
2800 NAT Q1= 72.29 WSEL= 5653.58 ENC Q1= 82.47 WSEL= 5654.58 RATIO= -0.1408
NAT Q1= 207. RATIOS LOB,CH,ROB= 0.0646 0.3976 0.5378 WSEL= 5654.58
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 65.0 102.0 TYPE= 4 TARGET= 0.602

300.00	2.84	5654.44	5654.44	5653.58	5655.64	1.19	2.28	-0.16	5653.00
765.	0.	765.	0.	0.	87.	0.	0.	0.	5653.00
0.01	0.00	8.76	0.00	0.033	0.030	0.033	0.000	5651.60	65.00
0.011401	175.	200.	205.	3	11	0	0.00	37.00	102.00

*SECNO 500.000
2800 NAT Q1= 75.73 WSEL= 5659.20 ENC Q1= 160.15 WSEL= 5660.20 RATIO= -1.1153
NAT Q1= 251. RATIOS LOB,CH,ROB= 0.0092 0.6382 0.3526 WSEL= 5660.20

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 85.0 170.0 TYPE= 4 TARGET= 0.362

500.00	1.82	5659.32	5659.32	5659.20	5660.01	0.69	2.45	-0.03	5659.00
765.	0.	765.	0.	0.	115.	0.	1.	0.	5659.00
0.01	0.00	6.66	0.00	0.033	0.030	0.033	0.000	5657.50	85.00
0.012246	205.	200.	190.	3	14	0	0.00	85.00	170.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 700.000
2800 NAT Q1= 84.97 WSEL= 5665.67 ENC Q1= 162.74 WSEL= 5666.67 RATIO= -0.9153
NAT Q1= 221. RATIOS LOB,CH,ROB= 0.0212 0.7367 0.2420 WSEL= 5666.67
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 85.0 145.0 TYPE= 4 TARGET= 0.263
700.00 2.30 5665.60 5665.60 5665.67 5666.46 0.87 2.31 0.12 5665.00
765. 0. 765. 0. 0. 102. 0. 1. 1. 5665.00
0.02 0.00 7.48 0.00 0.033 0.030 0.033 0.000 5663.30 85.00
0.011540 170. 200. 230. 4 11 0 0.00 60.00 145.00

*SECNO 800.000
2800 NAT Q1= 63.99 WSEL= 5668.22 ENC Q1= 63.99 WSEL= 5669.22 RATIO= 0.0000
NAT Q1= 179. RATIOS LOB,CH,ROB= 0.0000 0.2894 0.7106 WSEL= 5669.22
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 65.0 137.5 TYPE= 4 TARGET= 0.643
800.00 2.39 5669.39 5669.39 5668.22 5670.43 1.03 1.14 0.05 5674.00
765. 0. 635. 130. 0. 76. 18. 2. 1. 5667.00
0.03 0.00 8.33 7.20 0.033 0.030 0.033 0.000 5667.00 91.32
0.011526 115. 100. 85. 20 8 0 0.00 46.22 137.53

*SECNO 930.000
2800 NAT Q1= 78.33 WSEL= 5672.93 ENC Q1= 147.80 WSEL= 5673.93 RATIO= -0.8869
NAT Q1= 159. RATIOS LOB,CH,ROB= 0.0280 0.9302 0.0418 WSEL= 5673.93
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 65.0 111.0 TYPE= 4 TARGET= 0.070
930.00 2.60 5672.90 5672.90 5672.93 5673.93 1.03 1.44 0.03 5672.00
765. 0. 765. 0. 0. 94. 0. 2. 1. 5672.00
0.03 0.00 8.14 0.00 0.033 0.030 0.033 0.000 5670.30 65.00
0.011047 105. 130. 130. 0 8 0 0.00 46.00 111.00

*SECNO 975.000
2800 NAT Q1= 78.30 WSEL= 5674.06 ENC Q1= 138.05 WSEL= 5675.06 RATIO= -0.7632
NAT Q1= 168. RATIOS LOB,CH,ROB= 0.0652 0.8230 0.1118 WSEL= 5675.06

SECNO / Q	DEPTH / DLOB	CWSEL / QCH	CRIWS / QROB	WSELK / ALOB	EG / ACH	HV / AROB	HL / VOL	OLOSS / TWA	BANK ELEV / LEFT,RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 45.0 90.0 TYPE= 4 TARGET= 0.177

975.00	2.25	5674.15	5674.15	5674.06	5675.19	1.04	0.51	0.00	5673.00
765.	0.	765.	0.	0.	93.	0.	2.	1.	5672.00
0.03	0.00	8.20	0.00	0.033	0.030	0.033	0.000	5671.90	45.00
0.011414	45.	45.	45.	20	11	0	0.00	45.00	90.00

*SECNO 1080.000
2800 NAT Q1= 87.13 WSEL= 5677.53 ENC Q1= 106.29 WSEL= 5678.53 RATIO= -0.2199
NAT Q1= 245. RATIOS LOB,CH,ROB= 0.0672 0.4346 0.4982 WSEL= 5678.53
3280 CROSS SECTION 1080.00 EXTENDED 0.31 FEET

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 35.0 70.0 TYPE= 4 TARGET= 0.565

1080.00	3.11	5678.01	5678.01	5677.53	5679.24	1.24	1.16	0.08	5677.00
765.	0.	765.	0.	0.	86.	0.	2.	1.	5676.00
0.03	0.00	8.92	0.00	0.033	0.030	0.033	0.000	5674.90	35.00
0.011041	100.	105.	105.	20	11	0	0.00	35.00	70.00

*SECNO 1200.000
2800 NAT Q1= 82.32 WSEL= 5681.50 ENC Q1= 138.08 WSEL= 5682.50 RATIO= -0.6773
NAT Q1= 156. RATIOS LOB,CH,ROB= 0.0782 0.8828 0.0390 WSEL= 5682.50
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 30.0 66.0 TYPE= 4 TARGET= 0.117

1200.00	2.69	5681.49	5681.49	5681.50	5682.70	1.21	1.32	0.00	5680.00
765.	0.	765.	0.	0.	87.	0.	2.	1.	5680.00
0.04	0.00	8.83	0.00	0.033	0.030	0.033	0.000	5678.80	30.00
0.011040	120.	120.	115.	20	11	0	0.00	36.00	66.00

*SECNO 1250.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	IELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

2800 NAT Q1= 78.30 WSEL= 5682.15 ENC Q1= 127.08 WSEL= 5683.15 RATIO= -0.6230
NAT Q1= 158. RATIOS LOB,CH,ROB= 0.0824 0.8043 0.1133 WSEL= 5683.15
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 37.0 75.0 TYPE= 4 TARGET= 0.196

1250.00	2.32	5682.32	5682.32	5682.15	5683.49	1.17	0.58	-0.01	5680.00
765.	0.	765.	0.	0.	88.	0.	3.	1.	5680.00
0.04	0.00	8.68	0.00	0.033	0.030	0.033	0.000	5680.00	37.00
0.011676	50.	50.	50.	2	11	0	0.00	38.00	75.00

*SECNO 1300.000
2800 NAT Q1= 88.95 WSEL= 5684.89 ENC Q1= 108.12 WSEL= 5685.89 RATIO= -0.2155
NAT Q1= 246. RATIOS LOB,CH,ROB= 0.2679 0.4389 0.2932 WSEL= 5685.89
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 110.0 145.0 TYPE= 4 TARGET= 0.561

1300.00	3.72	5685.32	5685.32	5684.89	5686.56	1.25	0.56	0.03	5684.50
765.	0.	765.	0.	0.	83.	0.	3.	1.	5683.00
0.04	0.00	8.96	0.00	0.033	0.030	0.033	0.000	5681.60	110.00
0.011292	60.	50.	45.	20	14	0	0.00	35.00	145.00

*SECNO 1325.000
2800 NAT Q1= 77.19 WSEL= 5685.25 ENC Q1= 94.55 WSEL= 5686.25 RATIO= -0.2250
NAT Q1= 207. RATIOS LOB,CH,ROB= 0.5425 0.4559 0.0016 WSEL= 5686.25
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 105.0 145.0 TYPE= 4 TARGET= 0.544

1325.00	3.42	5685.92	5685.92	5685.25	5687.06	1.14	0.28	0.01	5685.00
765.	0.	765.	0.	0.	89.	0.	3.	1.	5685.00
0.04	0.00	8.58	0.00	0.033	0.030	0.033	0.000	5682.50	105.00
0.011048	20.	25.	35.	20	11	0	0.00	40.00	145.00

*SECNO 1345.000
2800 NAT Q1= 90.83 WSEL= 5687.26 ENC Q1= 110.21 WSEL= 5688.26 RATIO= -0.2134
NAT Q1= 184. RATIOS LOB,CH,ROB= 0.3695 0.5982 0.0323 WSEL= 5688.26

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 SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS     BANK ELEV
 Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA     LEFT/RIGHT
 TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN       SSTA
 SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID      ENDST

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED

 3470 ENCROACHMENT STATIONS=      80.0      105.0  TYPE=      4  TARGET=      0.402
    1345.00       3.59    5687.59    5687.59    5687.26    5689.14       1.56       0.23       0.12    5686.00
      765.          0.       765.         0.         0.       76.          0.         3.         1.    5685.00
       0.04       0.00      10.02       0.00      0.033      0.030      0.033      0.000    5684.00      80.00
   0.011471        25.        20.        25.         20          8          0       0.00      25.00     105.00

 *SECNO 1380.000
  2800 NAT Q1=       83.53  WSEL=    5689.04  ENC Q1=      121.64  WSEL=    5690.04  RATIO= -0.4562
  NAT Q1=     143.  RATIOS LOB,CH,ROB=  0.0708  0.8501  0.0791  WSEL=    5690.04
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED

 3470 ENCROACHMENT STATIONS=      115.0      140.0  TYPE=      4  TARGET=      0.150
    1380.00       3.76    5689.16    5689.16    5689.04    5690.71       1.55       0.42      -0.01    5687.00
      765.          0.       765.         0.         0.       77.          0.         3.         1.    5686.00
       0.04       0.00      10.00       0.00      0.033      0.030      0.033      0.000    5685.40     115.00
   0.011905        45.        35.        35.         20          8          0       0.00      25.00     140.00

 *SECNO 1420.000
  2800 NAT Q1=       96.59  WSEL=    5692.08  ENC Q1=      124.07  WSEL=    5693.08  RATIO= -0.2845
  NAT Q1=     217.  RATIOS LOB,CH,ROB=  0.3747  0.5709  0.0545  WSEL=    5693.08
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED

 3470 ENCROACHMENT STATIONS=      160.0      190.0  TYPE=      4  TARGET=      0.429
    1420.00       3.21    5692.21    5692.21    5692.08    5693.58       1.38       0.29       0.02    5690.00
      765.          0.       765.         0.         0.       81.          0.         3.         1.    5690.00
       0.04       0.00       9.41       0.00      0.033      0.030      0.033      0.000    5689.00     160.00
   0.011531        20.        25.        30.         20         15          0       0.00      30.00     190.00

 *SECNO 1535.000
  2800 NAT Q1=      249.00  WSEL=    5692.88  ENC Q1=      249.00  WSEL=    5693.88  RATIO=  0.0000
  NAT Q1=     504.  RATIOS LOB,CH,ROB=  0.3176  0.2787  0.4037  WSEL=    5693.88
```

SECNO / Q	DEPTH / QLOB	CWSEL / QCH	CRIWS / QROB	WSELK / ALOB	EG / ACH	HV / AROB	HL / VOL	QLOSS / TWA	BANK ELEV LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	INC	ICONT	CORAR	TOPWID	ENDST

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 120.9 171.7 TYPE= 4 TARGET= 0.506

1535.00	5.87	5693.67	0.00	5692.88	5693.93	0.25	0.23	0.11	5691.00
765.	95.	427.	242.	38.	94.	67.	3.	2.	5688.00
0.05	2.53	4.52	3.63	0.033	0.030	0.033	0.000	5687.80	120.85
0.001077	115.	115.	120.	2	0	0	0.00	50.80	171.65

*SECNO 1645.000
2800 NAT Q1= 90.21 WSEL= 5695.28 ENC Q1= 90.21 WSEL= 5696.28 RATIO= 0.0000
NAT Q1= 290. RATIOS LOB,CH,ROB= 0.6824 0.1690 0.1486 WSEL= 5696.28
3280 CROSS SECTION 1645.00 EXTENDED 0.65 FEET

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 194.6 253.0 TYPE= 4 TARGET= 0.689

1645.00	3.45	5696.25	5696.25	5695.28	5697.13	0.87	0.97	-0.24	5693.00
765.	374.	391.	0.	67.	44.	0.	4.	2.	5693.00
0.06	5.59	8.96	0.00	0.033	0.030	0.033	0.000	5692.80	194.60
0.008778	110.	110.	110.	20	14	0	0.00	58.10	253.00

THIS RUN EXECUTED 10-OCT-84 09:29:10

*****
VER 2 RELEASE DATED NOV 75 UPDATED MARCH 1979
ERROR CORR - 01,02,03,04,05
MODIFICATION - 50,51,52,53,54,55
*****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

,ARROYO DEL PINO 100-YR

SUMMARY PRINTOUT

	SECNO	Q	CWSEL	CRIWS	DEPTH	SSTA	ENDST	TOPWID
*	100.000	765.00	5648.84	5648.84	2.84	52.71	117.65	64.94
	100.000	765.00	5649.00	0.00	3.00	65.00	102.00	37.00
*	300.000	765.00	5653.58	5653.58	1.98	50.57	180.89	130.31
*	300.000	765.00	5654.44	5654.44	2.84	65.00	102.00	37.00
*	500.000	765.00	5659.20	5659.20	1.70	82.99	272.33	189.33
*	500.000	765.00	5659.32	5659.32	1.82	85.00	170.00	85.00
*	700.000	765.00	5665.67	5665.67	2.37	79.33	215.01	122.39
*	700.000	765.00	5665.60	5665.60	2.30	85.00	145.00	60.00
*	800.000	765.00	5668.22	5668.22	1.22	98.01	208.16	110.15
*	800.000	765.00	5669.39	5669.39	2.39	91.32	137.53	46.22
*	930.000	765.00	5672.93	5672.93	2.63	59.89	118.59	58.70
*	930.000	765.00	5672.90	5672.90	2.60	65.00	111.00	46.00
*	975.000	765.00	5674.06	5674.06	2.16	33.07	103.73	70.66
*	975.000	765.00	5674.15	5674.15	2.25	45.00	90.00	45.00
*	1080.000	765.00	5677.53	5677.53	2.63	16.39	169.17	152.78
*	1080.000	765.00	5678.01	5678.01	3.11	35.00	70.00	35.00
*	1200.000	765.00	5681.50	5681.50	2.71	18.71	71.72	53.01
*	1200.000	765.00	5681.49	5681.49	2.69	30.00	66.00	36.00
*	1250.000	765.00	5682.15	5682.15	2.15	27.56	87.87	60.31
*	1250.000	765.00	5682.32	5682.32	2.32	37.00	75.00	38.00
*	1300.000	765.00	5684.89	5684.89	3.29	42.82	198.87	156.05
*	1300.000	765.00	5685.32	5685.32	3.72	110.00	145.00	35.00

	SECNO	Q	CWSEL	CRIWS	DEPTH	SSTA	ENDST	TOPWID
*	1325.000	765.00	5685.25	5685.25	2.75	22.50	145.37	122.87
*	1325.000	765.00	5685.92	5685.92	3.42	105.00	145.00	40.00
*	1345.000	765.00	5687.26	5687.26	3.26	34.27	109.39	75.12
*	1345.000	765.00	5687.59	5687.59	3.59	80.00	105.00	25.00
*	1380.000	765.00	5689.04	5689.04	3.65	107.33	146.28	38.95
*	1380.000	765.00	5689.16	5689.16	3.76	115.00	140.00	25.00
*	1420.000	765.00	5692.08	5692.08	3.08	87.66	198.81	111.15
*	1420.000	765.00	5692.21	5692.21	3.21	160.00	190.00	30.00
	1535.000	765.00	5692.88	0.00	5.08	49.42	259.39	209.96
	1535.000	765.00	5693.67	0.00	5.87	120.85	171.65	50.80
*	1645.000	765.00	5695.28	5690.28	2.48	51.91	278.12	226.21
*	1645.000	765.00	5696.25	5696.25	3.45	194.60	253.00	58.40

SUMMARY OF ERRORS AND SPECIAL NOTES

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CAUTION  SECNO= 100.000  PROFILE= 1  CRITICAL DEPTH ASSUMED

CAUTION  SECNO= 300.000  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO= 300.000  PROFILE= 1  MINIMUM SPECIFIC ENERGY
CAUTION  SECNO= 300.000  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO= 300.000  PROFILE= 2  MINIMUM SPECIFIC ENERGY

CAUTION  SECNO= 500.000  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO= 500.000  PROFILE= 1  MINIMUM SPECIFIC ENERGY
CAUTION  SECNO= 500.000  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO= 500.000  PROFILE= 2  MINIMUM SPECIFIC ENERGY

CAUTION  SECNO= 700.000  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO= 700.000  PROFILE= 1  MINIMUM SPECIFIC ENERGY
CAUTION  SECNO= 700.000  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO= 700.000  PROFILE= 2  MINIMUM SPECIFIC ENERGY

CAUTION  SECNO= 800.000  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO= 800.000  PROFILE= 1  MINIMUM SPECIFIC ENERGY
CAUTION  SECNO= 800.000  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO= 800.000  PROFILE= 2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO= 800.000  PROFILE= 2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION  SECNO= 930.000  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO= 930.000  PROFILE= 1  MINIMUM SPECIFIC ENERGY
CAUTION  SECNO= 930.000  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO= 930.000  PROFILE= 2  MINIMUM SPECIFIC ENERGY

CAUTION  SECNO= 975.000  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO= 975.000  PROFILE= 1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO= 975.000  PROFILE= 1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO= 975.000  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO= 975.000  PROFILE= 2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO= 975.000  PROFILE= 2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION  SECNO= 1080.000  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO= 1080.000  PROFILE= 1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO= 1080.000  PROFILE= 1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO= 1080.000  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO= 1080.000  PROFILE= 2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO= 1080.000  PROFILE= 2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION  SECNO= 1200.000  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO= 1200.000  PROFILE= 1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO= 1200.000  PROFILE= 1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO= 1200.000  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO= 1200.000  PROFILE= 2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO= 1200.000  PROFILE= 2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION  SECNO= 1250.000  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO= 1250.000  PROFILE= 1  MINIMUM SPECIFIC ENERGY
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CAUTION SECNO= 1250.000 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1250.000 PROFILE= 2 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 1300.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1300.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1300.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO= 1300.000 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1300.000 PROFILE= 2 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1300.000 PROFILE= 2 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 1325.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1325.000 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1325.000 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1325.000 PROFILE= 2 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1325.000 PROFILE= 2 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 1345.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1345.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1345.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO= 1345.000 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1345.000 PROFILE= 2 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1345.000 PROFILE= 2 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 1380.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1380.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1380.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO= 1380.000 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1380.000 PROFILE= 2 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1380.000 PROFILE= 2 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 1420.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1420.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1420.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO= 1420.000 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1420.000 PROFILE= 2 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1420.000 PROFILE= 2 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 1645.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1645.000 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1645.000 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1645.000 PROFILE= 2 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1645.000 PROFILE= 2 20 TRIALS ATTEMPTED TO BALANCE WSEL

FLOODWAY DATA, ,ARROYO DEL PINO 100-YR
PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
100.000	37.	93.	8.3	5649.0	5648.8	0.2
300.000	37.	87.	8.8	5654.5	5653.6	0.9
500.000	85.	115.	6.7	5659.3	5659.2	0.1
700.000	60.	102.	7.5	5665.7	5665.7	0.0
800.000	46.	94.	8.1	5669.4	5668.2	1.2
930.000	46.	94.	8.1	5672.9	5672.9	0.0
975.000	45.	93.	8.2	5674.2	5674.1	0.1
1080.000	35.	86.	8.9	5678.0	5677.5	0.5
1200.000	36.	87.	8.8	5681.5	5681.5	0.0
1250.000	38.	88.	8.7	5682.3	5682.1	0.2
1300.000	35.	85.	9.0	5685.3	5684.9	0.4
1325.000	40.	89.	8.6	5685.9	5685.2	0.7
1345.000	25.	76.	10.0	5687.6	5687.3	0.3
1380.000	25.	77.	10.0	5689.1	5689.0	0.1
1420.000	30.	81.	9.4	5692.2	5692.1	0.1
1535.000	51.	199.	3.8	5693.7	5692.9	0.8
1645.000	58.	111.	6.9	5696.3	5695.3	1.0

COMPUTED WATER SURFACE ELEVATIONS
ARROYO DEL PINO 100-YR
PROFILE # 1

SECTION NO.	REACH LENGTH	CWSEL	STATION
100.00	0.00	5648.84	100.00
300.00	200.00	5653.58	300.00
500.00	200.00	5659.20	500.00
700.00	200.00	5665.67	700.00
800.00	100.00	5668.22	800.00
930.00	130.00	5672.93	930.00
975.00	45.00	5674.06	975.00
1080.00	105.00	5677.53	1080.00
1200.00	120.00	5681.50	1200.00
1250.00	50.00	5682.15	1250.00
1300.00	50.00	5684.89	1300.00
1325.00	25.00	5685.25	1325.00
1345.00	20.00	5687.26	1345.00
1380.00	35.00	5689.01	1380.00
1420.00	25.00	5692.08	1405.00
1535.00	115.00	5692.88	1520.00
1645.00	110.00	5695.28	1630.00

STREAM STATION - FLOOD ELEVATION CONTOUR TABLE
ARROYO DEL PINO 100-YR
PROFILE # 1

STATION	CWSEL
107.	5649
149.	5650
191.	5651
233.	5652
276.	5653
315.	5654
351.	5655
386.	5656
422.	5657
457.	5658
493.	5659
525.	5660
556.	5661
587.	5662
618.	5663
648.	5664
679.	5665
713.	5666
752.	5667
791.	5668
821.	5669
849.	5670
877.	5671
904.	5672
933.	5673
973.	5674
1003.	5675
1034.	5676
1064.	5677
1094.	5678
1124.	5679
1155.	5680
1185.	5681
1239.	5682
1266.	5683
1284.	5684
1308.	5685
1332.	5686
1342.	5687
1360.	5688
1379.	5689
1388.	5690
1396.	5691
1404.	5692
1525.	5693
1571.	5694

STREAM STATION - FLOOD ELEVATION CONTOUR TABLE
'ARROYO DEL PINO 100-YR
PROFILE # 1

STATION	CWSEL
1617.	5695



KEY TO MAP

500-Year Flood Boundary
100-Year Flood Boundary
Zone Designations*
100-Year Flood Boundary
500-Year Flood Boundary

ZONE B / ZONE B

Base Flood Elevation Line With Elevation In Feet** — 513

Base Flood Elevation in Feet Where Uniform Within Zone** — (EL 987)

Elevation Reference Mark — RM7 ×

River Mile — • M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

INITIAL IDENTIFICATION:
AUGUST 20, 1976
FLOOD HAZARD BOUNDARY MAP REVISIONS:
DECEMBER 4, 1979

FLOOD INSURANCE RATE MAP EFFECTIVE:

SHEET INDEX

	1	2	3	4	5	
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	
26	27	28	29	30	31	
32	33	34	35	36	37	
38	39	40	41			
42	43	44	45			
46	47	48				
	49	50				

MATCH LINE TO ADJOINING MAPS

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program at (800) 638-6620.

SCALE 1"=500'
500 0 500

REFERENCE MARK	ELEVATION (FT. NGVD)	DESCRIPTION OF LOCATION
RM 30	5644.10	City of Albuquerque (ACS) standard brass tablet, stamped "I-E21", set in top of concrete post projecting 0.3', located 53' northwest of the centerline of Eubank Boulevard and 380' northeast of Malaguena Lane.
RM 31	5868.41	City of Albuquerque (ACS) standard brass tablet, stamped "HARRY" set in top of a concrete post flush with ground, located 125' east of the centerline of Danube Drive, 0.2 miles north of Manitoba Street, and 4.5' northwest of the northwest corner of a block fence.
RM 32	6009.16	United States Coast and Geodetic Survey (USC&GS) standard brass tablet, stamped "Tumble, 1969", set in top of a concrete post projecting about 0.2', located 930' west of Tramway Road, about 45' north of San Antonio Drive, 90' east of a guy wire, and 116' northeast of the north power pole of pylon No. ER/45.

NATIONAL FLOOD INSURANCE PROGRAM

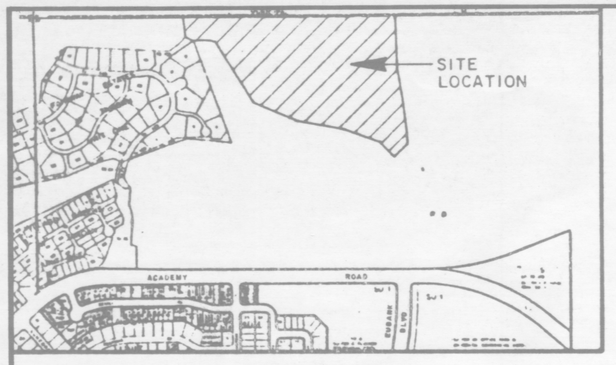
FIRM
FLOOD INSURANCE RATE MAP

CITY OF
ALBUQUERQUE, NEW MEXICO
BERNALILLO COUNTY

PANEL 18 OF 50

COMMUNITY-PANEL NUMBER
350002 0018
EFFECTIVE DATE:

Federal Emergency Management Agency



VICINITY MAP
Scale: 1" = 800' (Approx.)

Replat Data

D.R.B. Case Number	S-84-03
Zone Atlas Number	E-21
Gross Acreage	16.8626
Total Number Tracts Created	4
Total Mileage of Private Streets Created	0.398
Date of Survey	1-27-84
Total Number Lots Created	27

CERTIFICATION

I, Jeryl Hart, Jr., New Mexico Registered Land Surveyor Number 7474, certify that this Plat was prepared by me or under my supervision and that an actual field survey was performed on the Tract shown hereon, and that this Plat shows all easements of record and that this Plat meets the minimum requirements of the Albuquerque Subdivision Ordinance and is true and correct to the best of my knowledge and belief.

Jeryl Hart, Jr. NMRLS No. 7474 — Date 2/21/84
For MSM/SP Group

APPROVED BY:

Traffic Engineer, Transportation Department — 2-28-84 Date
Parks and Recreation Department — 2/23/84 Date
Chief City Surveyor, Engineering Division — 2/27/84 Date
Water Resources Department — 2/28/84 Date
Property Management — 2/27/84 Date
Albuquerque Metropolitan Arroyo Flood Control Authority — 3/12/84 Date
City Engineer, Engineering Division — 3/12/84 Date
City Planner, Albuquerque/Bernalillo County Planning Division — 3/16/84 Date
Public Service Company of New Mexico — 2/27/84 Date
Mountain Bell — 2/27/84 Date
Gas Company of New Mexico — 2-27-84 Date

THE MASTERS AT TANOAN

CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO

BEING
A REPLAT
OF
A PORTION
OF
TRACT F
TANOAN PROPERTIES

SITUATE WITHIN
SECTION 28
TOWNSHIP 11 NORTH, RANGE 4 EAST
NEW MEXICO PRINCIPAL MERIDIAN

FEBRUARY, 1984

State of New Mexico } SS
County of Bernalillo
This instrument was filed for record
on the 8:06 day of MAR 1984
and was recorded in Vol C23
Folio 114 142
of the records of said County
Witness My Hand and Seal of Office
Clerk & Recorder
Deputy

DESCRIPTION OF EASEMENTS

1. UTILITY EASEMENTS: Utility easements on the plat are granted for the common and joint use and benefit of:

   (a) The City of Albuquerque for installation, service and maintenance of water and sewer lines, valves, pumps and/or other related equipment and facilities reasonably necessary to deliver potable water to the residents of the subdivision and provide a liquid waste disposal system in accordance with the plans and procedures of the City of Albuquerque;

   (b) The Public Service Company of New Mexico for installation, maintenance and service of electrical lines, transformers and other equipment and related facilities reasonably necessary to provide electric service to the residents of the subdivision, including the rights of ingress and egress and the right to trim interfering trees;

   (c) The Gas Company of New Mexico for installation of natural gas lines, valves and other equipment and facilities reasonably necessary to provide natural gas to the residents of the subdivision;

   (d) Mountain Bell for the installation, service and maintenance of all telephone lines, switching equipment and other related equipment and facilities reasonably necessary to provide telephone service to the residents of the subdivision;

   (e) Albuquerque Cable Television, Inc., for the purpose of installation, service and maintenance of such line or cable as is reasonably required to provide cable TV service to the residents of the subdivision;

   (f) Tanoan Community Association, for the purpose of installing, maintenance and service to the residents of the subdivision;

2. DRAINAGE EASEMENTS: Drainage easements are granted to the City of Albuquerque, except where indicated as private, for the benefit of all owners of the subdivision or indicated on the plat for the passage, containment or diversion of surface waters; and between individual property owners as indicated on the plat by reference or notation.

3. ACCESS EASEMENTS: The City of Albuquerque is hereby granted an access easement over and across Tract "C" for the purpose of allowing its various operating departments to provide service to the residents of the subdivision in the same manner and to the same extent as though Tract "C" was a dedicated public street. "Operating departments" as referred to above shall include but shall not be limited to the department of the City providing the following services; (1) Police protection; (2) Fire protection; (3) Water resources; (4) Solid refuse and liquid disposal; (5) Animal control; (6) City planning functions; and (7) Traffic engineering and control. All owners of the subdivision are granted the right to access their property over and across Tract "C".

4. In Tract "C" the City of Albuquerque shall have the exclusive right to place underground utility lines within six (6) feet of the centerline of a water or sewer line except for perpendicular crossings or where written approval has been obtained from the City of Albuquerque. Gas Company of New Mexico, Public Service Company of New Mexico and Mountain States Telephone and Telegraph are excepted from compliance with the requirements of the first sentence in this paragraph.

5. Tracts "A & B" are easements for private Landscaping/Drainage purposes.

6. Tract "D" is an easement for drainage and private pedestrian access and utility easement.

GENERAL NOTES:

1. Bearing basis is N.M. State plane.
2. N/R indicates non-radial.
3. All lots and parcels within this subdivision are subject to declaration of restrictive covenants filed separately from this plat.
4. There is a 5 foot minimum drainage easement adjacent and parallel to all sides of each lot.
5. Monumentation- After subdivision improvements are completed it is the developer's responsibility to monument centerline P.C.s, P.T.s and intersection points in lieu of block control per City of Albuquerque subdivision requirement.

S-84-3

DEDICATION & FREE CONSENT

The undersigned owner of the land hereon shown does hereby consent to the subdivision of the land shown hereon, THE MASTERS AT TANOAN, City of Albuquerque, Bernalillo County, New Mexico, being a portion of Tract F of the AMENDED SUMMARY PLAT OF TANOAN PROPERTIES, Albuquerque, New Mexico, filed in the office of the County Clerk, of Bernalillo County, New Mexico, on June 25, 1982 (Vol. C19, Folio 180), and being more particularly described as follows:

Beginning at the Northwest corner of the herein described Tract from whence A.C.S. Monument Brass Cap 1-D21 bears N 83° 01' 51"W, a distance of 1337.75 feet;

Thence along the southerly line of Tract 153, FAIRWAY ESTATES AT TANOAN, UNIT ONE, S 66° 42' 25"E, 61.54;

Thence continuing 64.77 feet along a curve to the left, whose radius is 162.04 feet and whose chord bears S 78° 09' 31"E, 64.34 feet through a central angle of 22° 54' 11" to a point being the Southeast corner of said Tract 153;

Thence N 00° 23' 24"E, 40.00 feet to a point being the Northeast corner of said Tract 153 and being a point on the southerly line of Tract 155, TANOAN PROPERTIES;

Thence along said line S 89° 36' 36"E, 1189.96 feet to a point on the centerline of Eubank Boulevard N.E., and being the Northeast corner of the Tract herein described;

Thence S 00° 23' 24"W, 30.00 feet along said centerline;

Thence continuing 262.52 feet along a curve to the left, whose radius is 1400.00 feet and whose chord bears S 04° 58' 55"E, 262.13 feet through a central angle of 10° 44' 37";

Thence continuing 257.14 feet along a curve to the right, whose radius is 1400.00 feet and whose chord bears S 05° 05' 30"E, 256.78 feet through a central angle of 10° 31' 25";

Thence continuing S 00° 10' 12"W, 164.36 feet to the Southeast corner of the Tract herein described;

Thence leaving said centerline of Eubank Boulevard N.E., N 89° 49' 48"W, 78.00 feet to a point on the west R/W line of Eubank Blvd. N.E.

Thence leaving said R/W line S 81° 19' 31"W, 109.54 feet;

Thence N 73° 04' 03"W, 336.62 feet;

Thence N 81° 08' 40"W, 311.71 feet;

Thence N 69° 50' 33"W, 281.22 feet;

Thence N 29° 13' 24"W, 561.76 feet to the Northwest and beginning corner of the Tract herein described and containing 16.8626 acres (734,533 sq.ft.) more or less.

The subdivision of the land hereon described is with the free consent and in accordance with the desires of the undersigned owners and proprietors thereof, and said owners and proprietors do hereby dedicate the public rights-of-way shown hereon, together with all easements shown on this plat, the use of which easements shall be limited to those uses specified in the legend on this cover sheet.

AMDEC

Allan L. Whitesel 2/22/84
Allan L. Whitesel, Vice President

State of New Mexico)
County of Bernalillo)

The foregoing instrument was acknowledged before me this 22nd day of February, 1984, by Allan L. Whitesel, Vice President of AMDEC, a New Mexico corporation, on behalf of said corporation.

12-6-86
EXPIRES

Notary Public

MSM/SP Group
CONSULTING ENGINEERS • SURVEYORS • PLANNERS
2601 Wyoming Blvd., N.E. Albuquerque, New Mexico 87112
(505) 292-1936

DRAWN BY: K.M.		FILE NO. 0690337
FLD BK 1640	THE MASTERS AT TANOAN	SCALE 1"=100'
CHECKED BY: K M		DATE 2-14-84
APPROVED BY:		SHEET NO. 1 of 2

REVISED 2-21-84 KM

84 19078

A.C.S. MONUMENT BRASS CAP 1-D21
NEW MEXICO STATE PLANE
COORDINATES (CENTRAL ZONE)
X = 415,462.45 FT.
Y = 1,513,473.51 FT.
DELTA ALPHA = -0°09'46"
COMBINED SCALE FACTOR = 0.99963855
ELEV. = 5637.38 FT. (3RD ORDER)

NORTH ALBUQUERQUE ACRES
TRACT 3 UNIT 2
FILED 6-8-31
D-133

C93
119 242

Scale: 1" = 100'

SAN ANTONIO ROAD N.E.

TRACT 154

TRACT 152
FILED 10-28-80
C17-117

TRACT 153
FILED 10-28-80
C17-117

TRACT 136A

TRACT 155
FILED 6-25-82
C19-180

S 83° 01' 51" E
1337.75

N 00° 23' 24" E
40.00

S 89° 36' 36" E

TRACT B
PRIVATE DRAINAGE & LANDSCAPING EASEMENT

150' P.N.M. EASEMENT

S 00° 23' 24" W
30.00

1189.96

MASTERS DRIVE

N 29° 13' 24" W

Δ = 22° 54' 11"
R = 162.04
L = 64.77

S 66° 42' 25" E
61.54

TRACT A
PRIVATE DRAINAGE & LANDSCAPING EASEMENT

10' PUBLIC UTILITY EASEMENT

TRACT F

20' PRIVATE DRAINAGE & PUBLIC UTILITY EASEMENT

S 32° 33' 09" E
26.34

S 32° 33' 09" E
53.66

S 89° 00' 00" W
143.60
(PRIVATE DRIVE)

15' PUBLIC UTILITY & PEDESTRIAN ACCESS ESMT.

LANDSCAPED AREA INCLUDED IN TRACT C.

10' PRIVATE DRAINAGE EASEMENT

SEE DETAIL "A" BELOW

5' PRIVATE DRAINAGE EASEMENT

OPEN SPACE - 4

TRACT C
PRIVATE DRAINAGE AND ACCESS & PUBLIC UTILITY EASEMENT

561.76'
N 69° 50' 33" W

281.22'
N 81° 08' 40" W

311.71'
N 73° 04' 03" W

336.62'

TRACT D
PRIVATE DRAINAGE AND PEDESTRIAN ACCESS & PUBLIC UTILITY EASEMENT

OPEN SPACE - 4
AMENDED SUMMARY PLAT OF TANOAN PROPERTIES
FILED 6-25-82
(VOL. C19, FOLIO 180)

S 81° 19' 31" W
109.54

N 89° 49' 48" W
78.00

TRACT E

78' WIDE TRACT DEDICATED BY THIS PLAT AS PUBLIC R/W
1.279 ACRES

EUBANK BLVD. N.E.

Δ = 10° 44' 37"
R = 1400.00
L = 262.52

Δ = 10° 31' 25"
R = 1400.00
L = 257.14

TRACT P
AMENDED SUMMARY PLAT OF TANOAN PROPERTIES
FILED 6-25-82
(VOL. C19, FOLIO 180)

S 00° 10' 12" W
164.36

SEE DETAIL "B" BELOW

AREA TABLE

LOT	ACREAGE
1	0.451
2	0.526
3	0.478
4	0.423
5	0.421
6	0.418
7	0.415
8	0.403
9	0.463
10	0.479
11	0.487
12	0.523
13	0.513
14	0.600
15	0.421
16	0.379
17	0.401
18	0.448
19	0.529
20	0.541
21	0.555
22	0.484
23	0.518
24	0.554
25	0.503
26	0.454
27	0.483
Tract A	0.143
Tract B	0.124
Tract C	1.713
Tract D	0.677
Tract E	1.279
Tract F	0.057
Total =	16.863 Ac.

CURVE DATA TABLE

No.	DELTA	RADIUS	LENGTH
1	56° 36' 36"	160.00	158.08
2	51° 30' 00"	155.00	139.32
3	16° 30' 00"	800.00	230.38
4	90° 00' 00"	165.00	259.18
5	15° 18' 00"	740.00	197.61
6	19° 30' 00"	291.00	99.04
7	12° 02' 29"	291.00	61.16
8	07° 27' 31"	291.00	37.87
9	48° 30' 00"	168.00	142.26
10	11° 41' 24"	168.00	34.28
11	11° 41' 24"	168.00	34.28
12	09° 42' 00"	485.00	82.11
13	02° 38' 38"	485.00	22.38
14	07° 03' 22"	485.00	59.73
15	87° 00' 00"	70.00	106.29
16	24° 28' 40"	70.00	29.90
17	62° 11' 20"	70.00	76.39
18	96° 41' 03"	15.00	25.31
19	172° 24' 31"	20.00	60.18
20	90° 00' 00"	14.10	22.15
21	101° 41' 24"	15.00	26.62
22	09° 48' 36"	168.00	28.74
23	158° 30' 00"	5.00	13.83
24	153° 00' 00"	5.00	13.3
25	15° 18' 36"	168.00	44.8
26	49° 15' 02"	144.38	124.10
27	56° 36' 36"	175.62	173.52
28	07° 21' 34"	144.38	18.54
29	07° 20' 34"	835.00	48.72
30	04° 09' 26"	835.00	60.59
31	19° 30' 00"	276.00	93.93
32	24° 54' 41"	55.00	23.91
33	65° 05' 19"	55.00	62.48
34	17° 50' 11"	169.00	52.61
35	37° 39' 49"	169.00	99.29
36	03° 10' 16"	814.00	45.06
37	06° 01' 44"	814.00	85.65
38	05° 53' 31"	814.00	83.71
39	09° 50' 49"	179.00	27.64
40	37° 42' 52"	179.00	117.83
41	31° 44' 37"	179.00	99.17
42	11° 41' 42"	179.00	36.54
43	48° 07' 05"	70.00	58.79
44	06° 58' 10"	70.00	8.35
45	70° 09' 54"	42.00	51.43
46	50° 42' 32"	42.00	37.17
47	44° 45' 48"	42.00	32.81
48	39° 40' 48"	70.00	48.48
49	15° 59' 45"	84.00	23.45
50	04° 17' 03"	754.00	56.38
51	09° 00' 59"	754.00	118.65
52	01° 59' 59"	754.00	26.32
53	11° 48' 00"	354.12	72.93
54	16° 58' 19"	190.00	56.28
55	09° 03' 22"	190.00	30.03
56	22° 28' 19"	190.00	74.52
57	90° 00' 00"	56.00	87.96
58	51° 30' 00"	141.00	126.74
59	06° 20' 20"	786.00	86.96
60	09° 30' 55"	786.00	130.53
61	00° 38' 45"	786.00	8.86
62	84° 52' 43"	151.00	223.69
63	05° 07' 17"	151.00	13.51
64	87° 00' 00"	56.00	85.03
65	04° 44' 27"	726.00	60.07
66	10° 33' 33"	726.00	133.79
67	02° 40' 52"	471.00	22.04
68	07° 01' 08"	471.00	57.70
69	07° 19' 51"	1478.00	189.11
70	03° 24' 46"	1478.00	88.03
71	04° 24' 33"	1322.00	101.73
72	06° 08' 52"	1322.00	141.08
73	05° 46' 36"	84.00	8.47
74	10° 31' 25"	1322.00	242.81
75	10° 44' 37"	1478.00	277.14
76	01° 24' 28"	814.00	20.00

LEGEND:
* SET 5/8" REBAR W/CAP, LS 7474
** FOUND 5/8" REBAR W/ALUMINUM CAP IN CONCRETE, LS 4972

DETAIL "A"
Scale: 1" = 50'

DETAIL "B"
Scale: 1" = 50'

Sheet 2 of 2

S-84-3

MSM/SP Group
CONSULTING ENGINEERS • SURVEYORS • PLANNERS
2601 Wyoming Blvd., N.E. Albuquerque, New Mexico 87112
(505) 292-1936

DRAWN BY: K.M., B.C.
FILE NO. 0690337

THE MASTERS AT TANOAN
(FILING DATE 3-19-84)

LOT 6
FINISH
PAD EL.=74.7

LOT 7
FINISH
PAD EL.=76.3

LOT 8
FINISH
PAD EL.=79.8

LOT 9
FINISH
PAD EL.=84.0

LOT 10
FINISH
PAD EL.=89.5

LOT 11
FINISH
PAD EL.=89.8

Typical Private Drainage, Pedestrian Access, And Public Utility Easement (See Plat Dated 3-19-84)

Note: Slump Block Wall Built Along Rear Lot Line

Due To Differences In Analysis Techniques, The Tie Between The Historic Floodplain And The Revised, Existing Floodplain Is Approximate.

TANOAN GOLF COURSE

PINO ARROYO

Top of Berm

Toe of Slope

Water Surface Limits

Ineffective Flow

Weir Side Flow

Ineffective Flows

Dike Protected With Rip-Rap

Stream Invert Line

100-YEAR FLOOD BOUNDARY
PER F.E.M.A. PANEL 350002
0018C EFFECTIVE 10/14/84

SCALE: 1"=50'

EUBANK ROAD

FLOOD HAZARD MAP REVISION

FOR

LOTS 7, 8, 9, & 10;
THE MASTERS AT TANOAN

REASON FOR REQUEST:

To Remove Lots 7, 8, 9 & 10, The Masters at Tanoan from the 100 year Special Flood Hazard Area.

HISTORY: The floodway boundary shown was determined by Bohannan-Huston, Inc., Albuquerque, New Mexico and was made effective October 14, 1983. The hydraulic method used to establish these boundaries within this reach of the Pino Arroyo was normal depth calculations based on data developed on Leonard Rice Consulting Water Engineers, Inc., Northeast Heights Drainage Management Plan, Vol. 1, April 1975.

CURRENT: Shown is the as-constructed configuration of a berm constructed to redefine the Pino floodway and the grades for lots 7, 8, 9 & 10, The Masters at Tanoan. Floodway boundaries for the current conditions were established using the HEC-2 Step-backwater analysis. The results show that the water surface elevation expected during the 100-year event will be well below the as-constructed grades of these lots.

For information purposes flood elevations have been interpolated and shown.

Base map topo information from aerial photogrammetry flown 5-9-84 by Thomas R. Mann & Assoc., Inc.

LEGEND

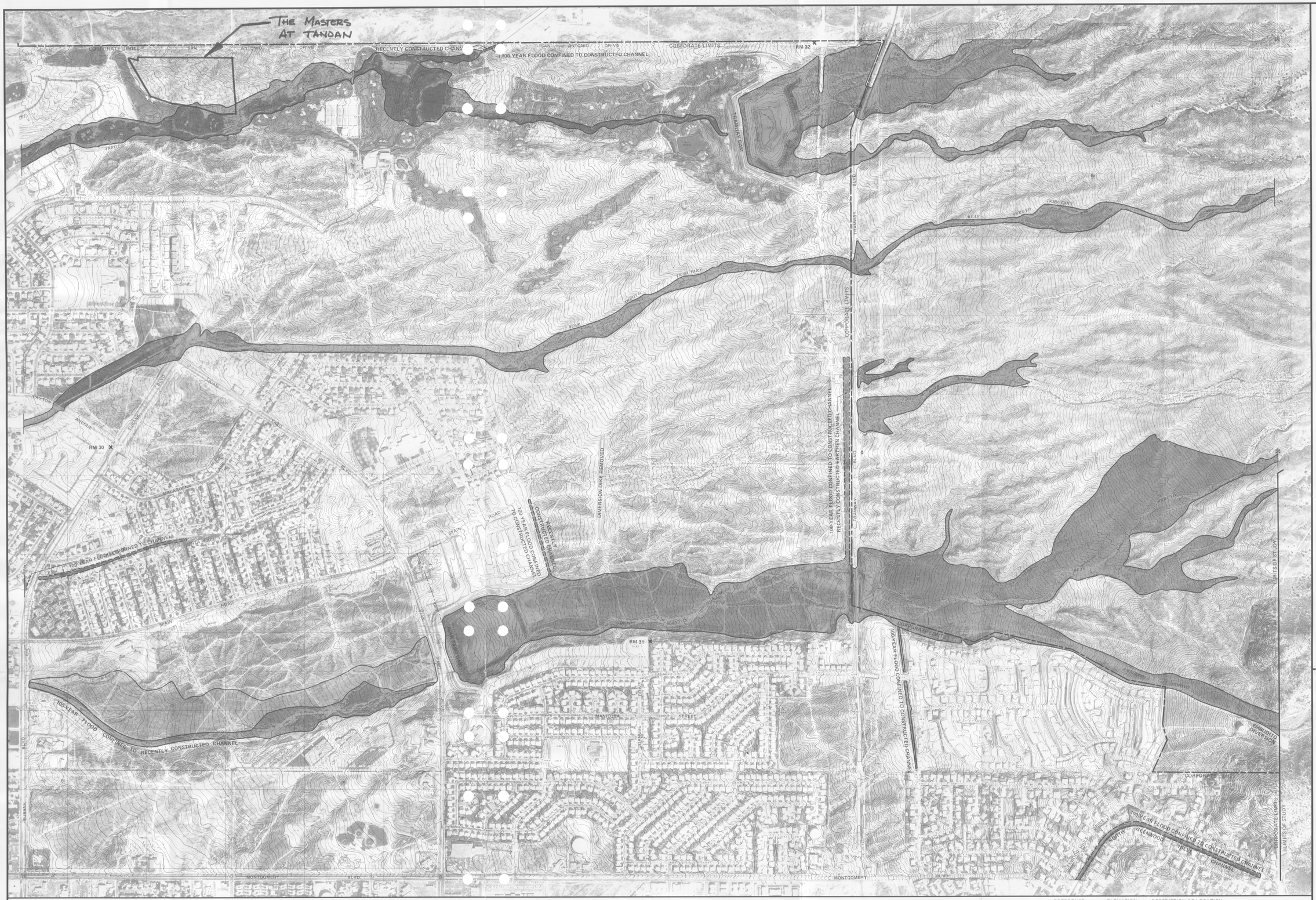
- 100-Year Flood Boundary Per F.E.M.A. Panel 350002 0018C (Effective 10-14-83)
- 86 — As-Constructed Elevation Contour (Based On Field Data 7-27-84) By Greiner Engineering
- Property Line
- Lot Line
- As-Constructed Dike With Spot Elevation (963 (Top of Berm); 958.1 (Top of Slope))
- Proposed Amended Flood Plain Limit (Limits of Main Channel; Beg. of Offset; Angle Pt.)
- HEC-2 Cross-Section

CERTIFICATE

I hereby certify that the information presented is based on as-constructed information obtained by field survey July 27, 1984 and aerial photo May 9, 1984 and is true and correct to the best of my knowledge.

GREINER ENGINEERING SCIENCES, INC.
CONSULTING ENGINEERS • SURVEYORS • PLANNERS
2601 Wyoming Blvd., N.E. Albuquerque, New Mexico 87112
(505) 292-1936
Formerly WSM Consultants Inc
A Greiner Engineering Inc Company

DRAWN BY: J.W.	TANOAN COMMUNITIES	FILE NO. 0640809
DESIGNED BY: R.B	MASTERS F.E.M.A. STUDY	SCALE 1" = 50'
CHECKED BY: D.M.		DATE 10-10-84
APPROVED BY: D.M.		SHEET NO.



KEY TO MAP

500-Year Flood Boundary
100-Year Flood Boundary
FLOODWAY FRINGE
FLOODWAY
100-Year Flood Boundary
500-Year Flood Boundary
Approximate 100-Year Flood Boundary
Cross Section Line (A — A)
Elevation Reference Mark RM7 ×
River Mile •M1.5

NOTES TO USER

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Insurance Administration.

This map was prepared to facilitate floodplain management activities only; it may not show all special flood hazard areas in the community or all planimetric features outside of the floodplain. Refer to the latest official Flood Insurance Rate Map for any additional areas of special flood hazard.

For adjoining map panels, see separately printed Index To Map Panels.

LEGEND

INDEX CONTOUR ·4350·
INTERMEDIATE CONTOUR
DEPRESSION CONTOUR
SPOT ELEVATION ×43.5
HORIZONTAL CONTROL POINT △
VERTICAL CONTROL POINT ○
HORIZONTAL – VERTICAL CONTROL POINT ⧋
PHOTOCENTER
MATCH LINE TO ADJOINING MAPS

E-21/D12-3

SHEET INDEX

	1	2	3	4	5	
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	
26	27	28	29	30	31	
32	33	34	35	36	37	
38	39	40	41			
42	43	44	45			
46	47	48				
		49	50			

SCALE 1"=500'
500 0 500

NATIONAL FLOOD INSURANCE PROGRAM

FLOODWAY
FLOOD BOUNDARY AND FLOODWAY MAP

CITY OF
ALBUQUERQUE, NEW MEXICO
BERNALILLO COUNTY

PANEL 18 OF 50

COMMUNITY-PANEL NUMBER
350002 0018
EFFECTIVE DATE:

Federal Emergency Management Agency

THIS MAP WAS PRODUCED FROM TOPOGRAPHY GENERATED BY BOHANNAN–HUSTON, INC., ALBUQUERQUE, NEW MEXICO, AND FROM EXISTING TOPOGRAPHY ACQUIRED BY THE CITY OF ALBUQUERQUE AND THE ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY.
HORIZONTAL AND VERTICAL CONTROL DATA SURVEYED BY BOHANNAN–HUSTON, INC. AND THE CITY OF ALBUQUERQUE OR ITS AUTHORIZED AGENT.
TOPOGRAPHY COMPILED FROM VERTICAL AERIAL PHOTOGRAPHY EXPOSED IN PRECISION AERIAL CAMERAS BY BOHANNAN–HUSTON, INC. AND BY THE AUTHORIZED AGENTS OF THE CITY OF ALBUQUERQUE AND THE ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY.

ORTHOPHOTOGRAPHY ACCOMPLISHED FROM VERTICAL AERIAL PHOTOGRAPHY EXPOSED IN A ZEISS RMK/A, LENS SERIAL NO. 98144, ON 10-8-80.
STEREOCOMPILATION AND FINAL DRAFTING ACCOMPLISHED BY BOHANNAN–HUSTON, INC., AND BY AUTHORIZED AGENTS OF THE CITY OF ALBUQUERQUE AND THE ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY. PHOTOGRAPHIC REPRODUCTION ACCOMPLISHED BY BOHANNAN–HUSTON, INC.
2-FOOT CONTOUR INTERVAL ESTABLISHED ON NATIONAL GEODETIC DATUM OF 1929.

REFERENCE MARK	ELEVATION (FT. NGVD)	DESCRIPTION OF LOCATION
RM 30	5644.10	City of Albuquerque (ACS) standard brass tablet, stamped "1-E21", set in top of concrete post projecting 0.3', located 53' northwest of the centerline of Eubank Boulevard and 380' northeast of Malaguena Lane.
RM 31	5868.41	City of Albuquerque (ACS) standard brass tablet; stamped "HARRY" set in top of a concrete post flush with ground, located 125' east of the centerline of Danube Drive, 0.2 miles north of Manitoba Street, and 4.5' northwest of the northwest corner of a block fence.
RM 32	6009.16	United States Coast and Geodetic Survey (USC&GS) standard brass tablet, stamped "Tumble, 1969", set in top of a concrete post projecting about 0.2', located 930' west of Tramway Road, about 45' north of San Antonio Drive, 90' east of a guy wire, and 116' northeast of the north power pole of pylon No. ER/45.