Federal Emergency Management Agency

Washington, D.C. 20472

AUG 22 1994

The Honorable Martin Chavez
Mayor, City of Albuquerque
P.O. Box 1293
Albuquerque, New Mexico 87103

Case No.: 94-06-304C
Community: City of Albuquerque, New Mexico
Community No.: 350002

Dear Mayor Chavez:

In a letter dated June 17, 1994, Ms. Jackie S. McDowell, P.E., Consulting Civil Engineer, requested that we issue a Letter of Map Amendment for Lot 29, Block 6, Tract 2, Unit 1, North Albuquerque Acres, in the City of Albuquerque, New Mexico. Ms. McDowell submitted our standard Property and Elevation Information Forms, the recorded deed for the property, a grading plan entitled, "North Albuquerque Acres, Lot 29, Block 6, Tract 2, Unit 1," dated May 1994, prepared by McDowell Engineering, Inc., and supplemental hydrologic and hydraulic calculations. The property in question is shown to be in a Special Flood Hazard Area (SFHA) on the Flood Insurance Rate Map (FIRM) for the City of Albuquerque, New Mexico (National Flood Insurance Program (NFIP) Map Number 350002, Panel 0011 C), and designated Zone AO (depth 1 foot). This area has been identified as being subject to alluvial fan flooding.

Revisions based on the placement of fill in a floodplain are, in most cases, provided for in Section 65.5 of the NFIP regulations (copy enclosed). However, in areas subject to alluvial fan flooding, the provisions of Section 65.5 do not apply (see Paragraph 65.13 (b) of the regulations). Alluvial fan flooding is characterized by high-velocity flows; erosion, sediment transport, and deposition; and unpredictable flow paths. Mitigation strategies that work in riverine floodplains may not afford adequate protection in areas subject to alluvial fan flooding. In particular, elevating on fill does not, by itself, warrant a map revision. Therefore, we do not issue Letters of Map Amendment or Letters of Map Revision based on fill in areas subject to alluvial fan flooding, and we cannot review Ms. McDowell's submittal as a request for a Conditional Letter of Map Revision based on fill.

It should be noted that this does not preclude map changes resulting from analyses and/or data more accurate than those used to develop the NFIP map. Requests for such changes should be submitted through the community and meet the data requirements described in Part 65 (excluding Section 65.5) of the NFIP regulations. The enclosed application/certification forms must be completed and submitted with a Part 65 request. Data submittal requirements for requests dealing with the structural flood-control measures in areas subject to alluvial fan flooding are described in Section 65.13 of the NFIP regulations.

The information submitted included a map depicting a revised floodplain through the project site; therefore, this submittal was also reviewed as a request to revise the FIRM. The hydrologic and hydraulic calculations submitted to support the revised floodplain consist of a photocopy of a

segment of a HEC-2 computer program output pertaining to the project site, labeled "La Cueva Arroyo – Arroyo F." Also calculations were submitted addressing local runoff. The floodplain map and HEC-2 output apparently were obtained from a restudy currently under review by FEMA entitled, "Flood Insurance Restudy for 6 Areas within the City of Albuquerque, Bernalillo County, New Mexico," performed by Resource Technology, Inc. (RTI), for FEMA. The floodplain map and HEC-2 printout are for a portion of a larger watershed that was analyzed in the restudy. Therefore, a floodplain modification at this project site, based on this restudy information, will be contingent upon final review of the entire watershed study.

In addition, a preliminary review of the topographic work maps indicate possible alternate or multiple flow paths through your project site, indicating that the flow may not be confined to a single channel as shown on the revised floodplain map (see enclosed map). As stated above, this is common in areas subject to alluvial fan flooding, and needs to be addressed in any future submittal for this site, as stated in Section 65.13 of the NFIP regulations.

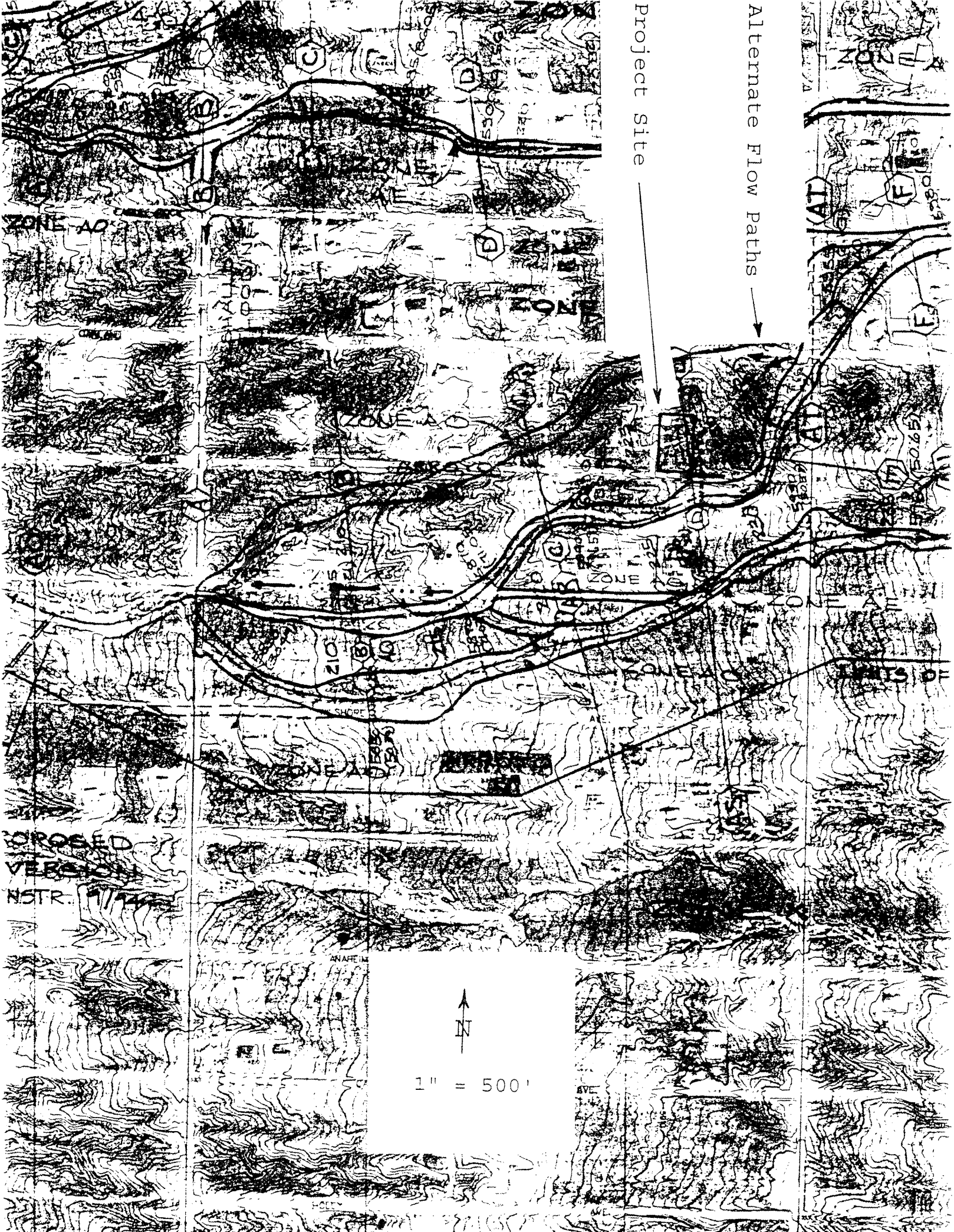
We understand that there is some confusion regarding our map revision process, particularly in areas subject to alluvial fan flooding. We trust that this letter clarifies that process and the reasons we cannot revise the FIRM based on the information and analysis submitted with Ms. McDowell's request. If you have any questions regarding this matter, please contact Mr. Karl Mohr of my staff in Washington, D.C., either by telephone at (202) 646-2770 or by facsimile at (202) 646-4596.

Sincerely

Michael K. Buckley, P.E., Chief
Hazard Identification Branch
Mitigation Directorate

Enclosures

cc: Ms. Jackie S. McDowell, P.E.
Consulting Civil Engineer (w/enclosures)


Project Site
Alternate Flow Paths
ZONE AO
ZONE AE
ZONE A
N
1" = 500'

County of Bernalillo

State of New Mexico

ONE CIVIC PLAZA, N.W.
ALBUQUERQUE, NEW MEXICO 87102
ADMINISTRATION (505) 768-4000
COMMISSION (505) 768-4217
FAX (505) 768-4329

May 31, 1994

Jackie McDowell
McDowell Engineering
7200 Valley Forge Pl. NE
Albuquerque, NM 87109

DRAINAGE PLAN FOR NAA, LOT 29, BLOCK 6, TRACT 2, UNIT 1 (C22-D39)
ENGINEER'S STAMP DATED 5/12/94.

Dear Ms. McDowell:

To develop the subject site within a FEMA 100-year floodplain, you must demonstrate that this development will not adversely affect conditions upstream, downstream, and adjacent to this site.

It is not appropriate to rely on the proposed floodplain revisions until they have been published by FEMA. If you feel that the current FEMA maps are in error, I would recommend that you process a Map Amendment to FEMA.

If you should have any questions, please feel free to contact me at 768-2668.

Sincerely,

Fred J. Aguirre, P.E.
Acting Floodplain Administrator

FJA/dl/WPHYD/8558

c: Bob Foglesong, County PWD
John Kelly, AMAFCA
File

ATTACHMENT NO. 1

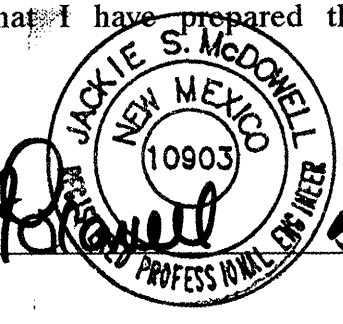
SUPPLEMENTAL CALCULATIONS TO

HOPKINS
NORTH ALBUQUERQUE ACRES
LOT 29
BLOCK 6, TRACT 2, UNIT 1

GRADING & DRAINAGE PLAN

May 12, 1994

I, Jackie S. McDowell, Registered Professional Engineer, No. 10903, hereby certify that I have prepared the attached calculations.



Jackie S. McDowell, P.E 5-12-94 Date

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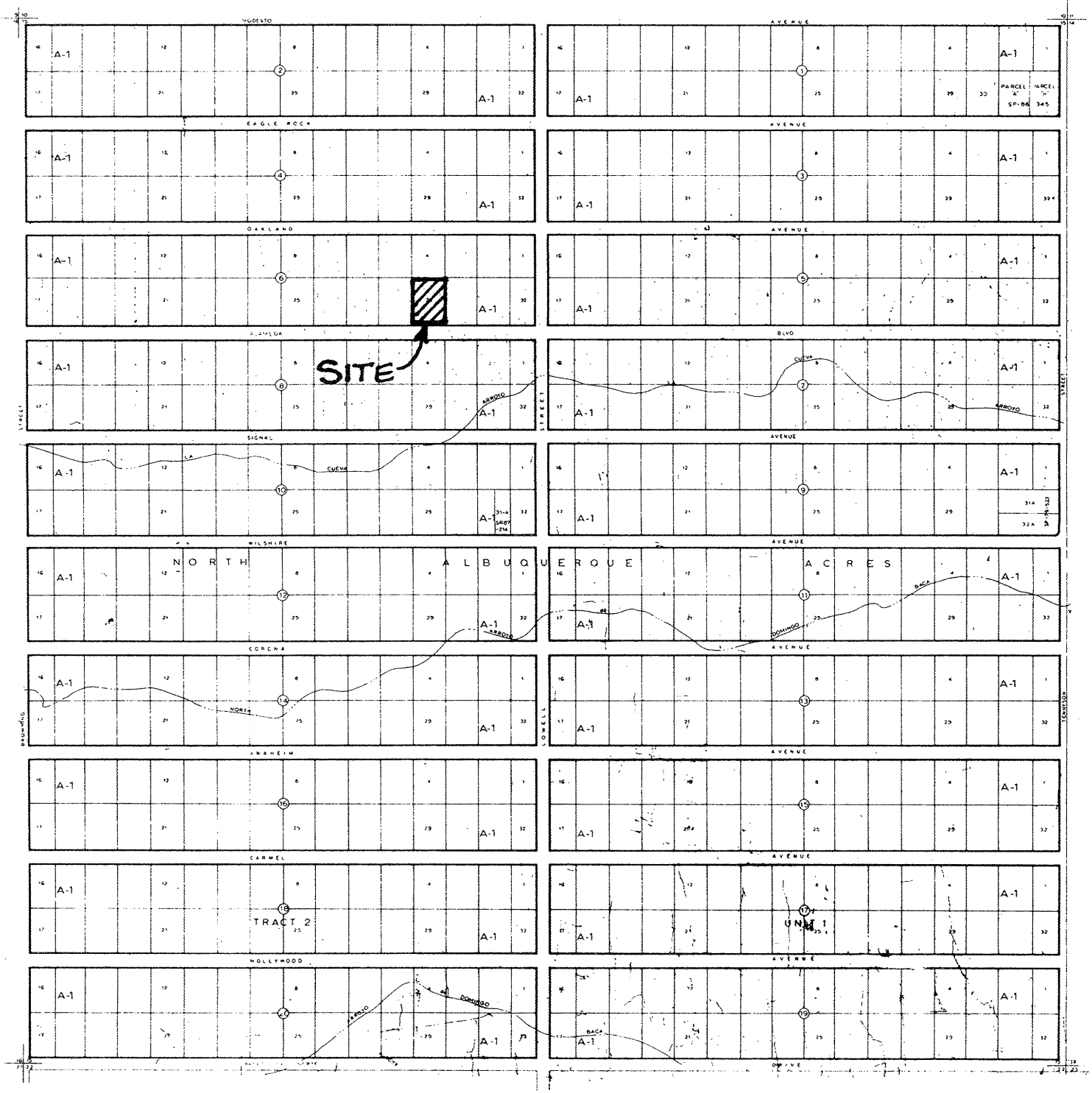
RTI HEC-2 Table	7 & 8



LEGAL DESCRIPTION

T 11 N

R 4 E

SEC 15

UNIFORM PROPERTY CODE
1-022-064

ORD NO. 213

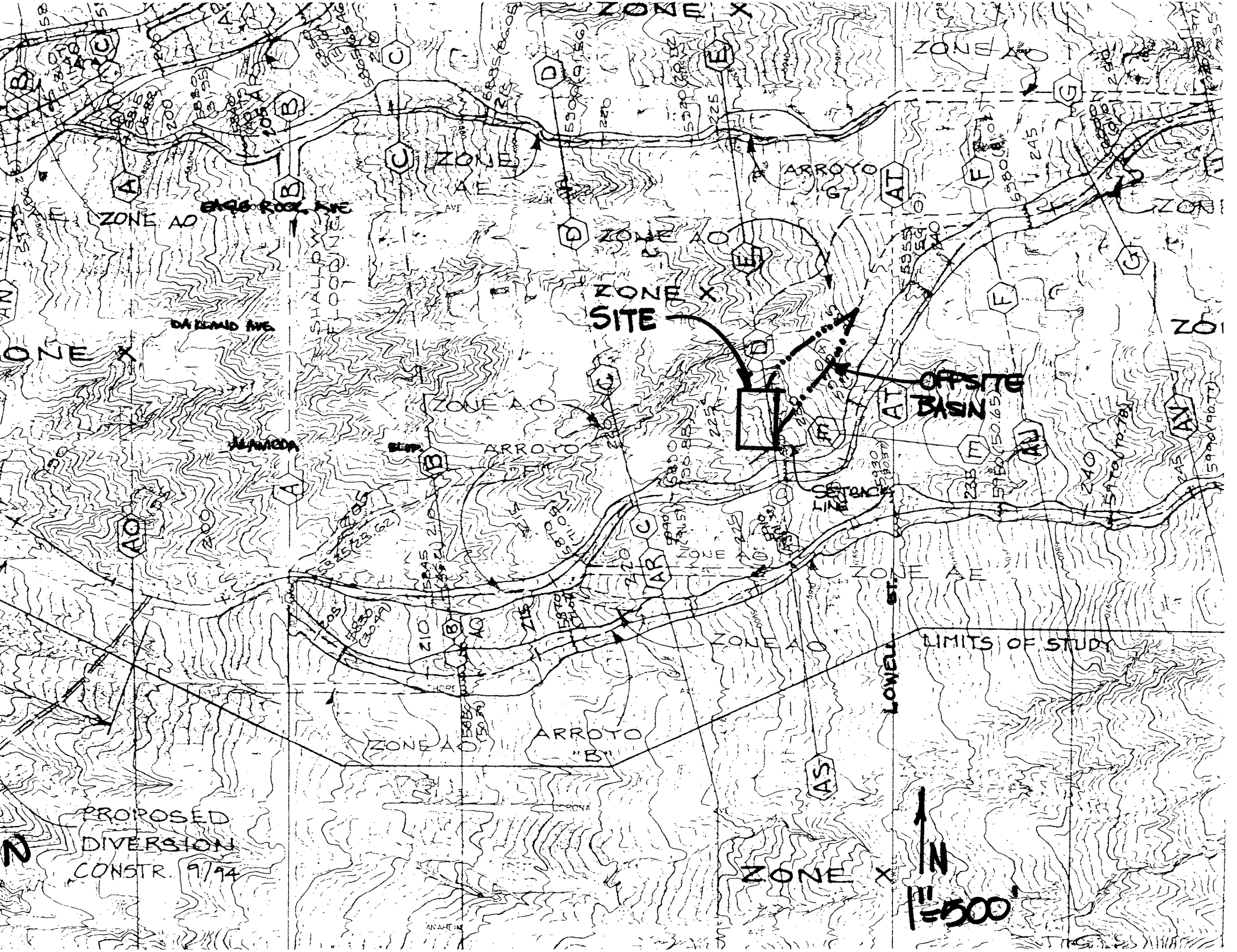
COUNTY ZONING MAP

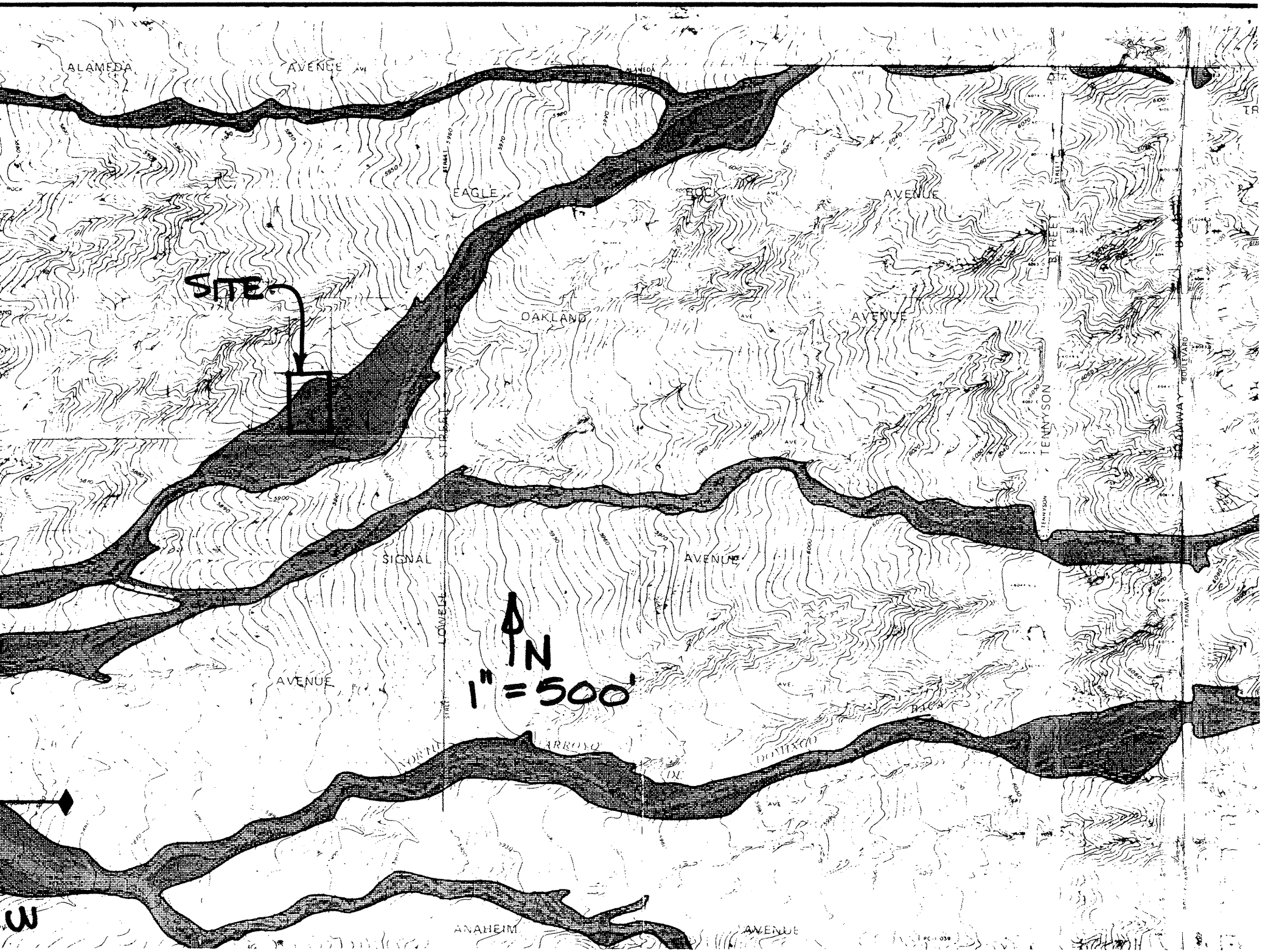
ADOPTED 4-27-73

COUNTY COMMISSION CHAIRMAN

MAP AMENDED THROUGH
DECEMBER, 1989

C-22-Z


ZONE X
ZONE AO
ZONE AE
ARROYO G
EAGLE ROCK AVE
DIAMOND AVE
ZONE X
SITE
OFFSITE BASIN
ZONE AO
ARROYO
SETBACK LINE
ZONE AE
LOWELL ST
LIMITS OF STUDY
ZONE AO
ARROYO "B"
PROPOSED DIVERSION CONSTR. 9/94
ZONE X
N
1"=500'


ALAMEDA
AVENUE
EAGLE ROCK
AVENUE
SITE
OAKLAND
AVENUE
TENNYSON STREET
BOULEVARD
TRAMWAY
SIGNAL
AVENUE
LOWELL STREET
N
1" = 500'
AVENUE
ARROYO
DURANGO
ANAHEIM
AVENUE
W

Project: HOPKINS NAA LOT 129 - ONSITE BASIN Project No.: HOP0194L

12-May-94

Calculations: Total Basin

Calculations are based on "Section 22.2 Hydrology of the Development Process Manual, Volume 2, Design Criteria for the City of Albuquerque, New Mexico, January 1993 - basins < 40 acres".

Precipitation Zone = 4

Depth at 100-year, 6-hour storm: (Table A-2) P = 2.90 inches

Land Treatments:

From Table 5 - Percent Treatment D

Single Family Residential =

7*SQR((N*N) +(5*N))

where N = units/acre

N = ---------- = ------, ok < 6 N = 0.00

Therefore Percent Treatment D = 0.00%

(includes local streets)

Areas: (acres)	Existing	Proposed	
Treatment A	0.88	0.38	43%
Treatment B	0.00	0.18	20%
Treatment C	0.00	0.17	19%
Treatment D	0.00	0.15	17%
Total (acres) =	0.88	0.88	

Volume	100 year Existing	100 year Proposed	10 year Existing	10 year Proposed	2 year Existing	2 year Proposed
Volume (acre-feet) =	0.06	0.10	0.02	0.05	0.00	0.02
Volume (cubic feet) =	2,556	4,148	894	2,057	64	816

Total Q(p), cfs:	100 year Existing Q(p)*A	100 year Proposed Q(p)*A	10 year Existing Q(p)*A	10 year Proposed Q(p)*A	2 year Existing Q(p)*A	2 year Proposed Q(p)*A
Treatment A	1.94	0.84	0.77	0.33	0.04	0.02
Treatment B	0.00	0.53	0.00	0.26	0.00	0.07
Treatment C	0.00	0.63	0.00	0.38	0.00	0.17
Treatment D	0.00	0.79	0.00	0.54	0.00	0.33
Total Q (cfs) =	1.94	2.78	0.77	1.51	0.04	0.58

Project: HOPKINS NAA LOT 129 - OFFSITE BASIN Project No.: HOP0194L

12-May-94

Calculations: Total Basin

Calculations are based on "Section 22.2 Hydrology of the Development Process Manual, Volume 2, Design Criteria for the City of Albuquerque, New Mexico, January 1993 - basins < 40 acres".

Precipitation Zone = 4

Depth at 100-year, 6-hour storm: (Table A-2) P = 2.90 inches

Land Treatments:

From Table 5 - Percent Treatment D
Single Family Residential =
7*SQR((N*N) +(5*N))
where N = units/acre
N = ---------- = -----, ok < 6 N = 0.00
Therefore Percent Treatment D = 0.00%
(includes local streets)

Areas: (acres)	Existing	Proposed	
Treatment A	0.95	0.41	43%
Treatment B	0.00	0.19	20%
Treatment C	0.00	0.19	20%
Treatment D	0.00	0.16	17%
Total (acres) =	0.95	0.95	

Volume	100 year Existing	100 year Proposed	10 year Existing	10 year Proposed	2 year Existing	2 year Proposed
Volume (acre-feet) =	0.06	0.10	0.02	0.05	0.00	0.02
Volume (cubic feet) =	2,759	4,476	966	2,219	69	878

Total Q(p), cfs:	100 year Existing Q(p)*A	100 year Proposed Q(p)*A	10 year Existing Q(p)*A	10 year Proposed Q(p)*A	2 year Existing Q(p)*A	2 year Proposed Q(p)*A
Treatment A	2.09	0.90	0.83	0.36	0.05	0.02
Treatment B	0.00	0.55	0.00	0.28	0.00	0.07
Treatment C	0.00	0.71	0.00	0.43	0.00	0.19
Treatment D	0.00	0.84	0.00	0.57	0.00	0.35
Total Q (cfs) =	2.09	3.01	0.83	1.63	0.05	0.63

McDowell Engineering, Inc.

7200 Valley Forge Pl. NE
Albuquerque, New Mexico 87109
Tele: (505)828-2430

Project: Hopkins NAA Lot #29
Project No.: HOP0194L Date: 5-12-94
Subject: Flood Plain Setback
By: DSM Sheet 1 of 1

According to the new 1993 RTI Flood Plain Maps, the South Arroyo is located approximately 60 feet from the southeast property corner.

The RTI study indicates that this arroyo (LA CUEVA ARROYO) (Arroyo "F") has a 100-year flowrate of ~~963~~ 970 cfs @ cross section D-D. The setback distance from the arroyo (using the 6'/100 cfs rule) is $\frac{970}{100} \times 6 = 58'$ ✓ OK

The 100-year Energy Grade Line @ Cross Section D-D is 5910.09 feet. The house Finished Floor is set @ 5913.00 (3 feet above the arroyo Energy Grade Elevation).

Attached is a computer HEC 2 printout from the RTI study listing information about the La Cueva Arroyo (Arroyo "F").

LA CUEVA ARROYO — ARROYO F

Run Date: 16DEC93 Run Time: 10:44:44 HMVersion: 6.51 Data File: C-F.HC2

	SECNO	ELMIN	CUMDS	CWSEL	CRIWS	EG	XLCH	TOPWID	Q	QLOB	QROB	VCH	DEPTH
	27225.000	6103.00	6905.00	6105.83	6105.98	6106.78	565.00	39.95	468.00	0.00	0.00	7.85	2.83
	27225.000	6103.00	6905.00	6106.57	6106.74	6107.78	565.00	50.39	830.00	0.00	0.00	8.85	3.57
	27225.000	6103.00	6905.00	6106.77	6106.96	6108.07	565.00	52.64	953.00	0.00	0.00	9.16	3.77
	27225.000	6103.00	6905.00	6107.25	6107.49	6108.75	565.00	57.91	1281.00	0.00	0.00	9.85	4.25
†	26400.000	6058.70	6080.00	6060.31	6061.04	6063.21	825.00	44.17	460.00	0.00	0.00	13.67	1.61
†	26400.000	6058.70	6080.00	6060.65	6061.66	6064.90	825.00	52.81	824.00	0.00	0.00	16.54	1.95
†	26400.000	6058.70	6080.00	6060.75	6061.86	6065.36	825.00	55.07	963.00	0.00	0.00	17.23	2.05
†	26400.000	6058.70	6080.00	6061.02	6062.32	6066.48	825.00	60.43	1335.00	0.00	0.00	18.74	2.32
†	25915.000	6041.99	5595.00	6043.04	6043.04	6043.40	485.00	133.11	460.00	0.00	0.00	4.84	1.05
†	25915.000	6041.99	5595.00	6043.47	6043.61	6043.90	485.00	147.45	824.00	0.00	0.00	5.31	1.48
†	25915.000	6041.99	5595.00	6043.58	6043.61	6044.07	485.00	151.02	963.00	0.00	0.00	5.63	1.59
†	25915.000	6041.99	5595.00	6043.60	6043.61	6044.51	485.00	151.75	1335.00	0.00	0.00	7.65	1.61
†	25340.000	6017.13	5020.00	6018.29	6018.66	6019.51	575.00	77.06	460.00	0.00	0.00	8.87	1.16
†	25340.000	6017.13	5020.00	6018.43	6019.12	6021.06	575.00	85.42	824.00	0.00	0.00	13.00	1.30
†	25340.000	6017.13	5020.00	6018.53	6019.30	6021.31	575.00	88.28	963.00	0.00	0.00	13.37	1.40
	25340.000	6017.13	5020.00	6019.10	6019.63	6020.84	575.00	101.22	1335.00	0.00	0.00	10.59	1.97
†	24720.000	5990.99	4400.00	5992.64	5992.68	5993.12	620.00	96.01	460.00	0.00	0.00	5.57	1.65
†	24720.000	5990.99	4400.00	5993.11	5993.11	5993.72	620.00	112.86	824.00	0.00	0.00	6.25	2.12
†	24720.000	5990.99	4400.00	5993.25	5993.25	5993.91	620.00	116.04	963.00	0.00	0.00	6.50	2.26
	24720.000	5990.99	4400.00	5993.32	5993.98	5994.47	620.00	117.37	1335.00	0.00	0.00	8.61	2.33
†	24220.000	5970.40	3900.00	5971.99	5972.25	5972.84	500.00	112.01	460.00	0.00	0.00	7.37	1.59
†	24220.000	5970.40	3900.00	5972.18	5972.59	5973.53	500.00	142.92	824.00	0.00	0.00	9.32	1.78
†	24220.000	5970.40	3900.00	5972.24	5972.59	5973.81	500.00	146.91	963.00	0.00	0.00	10.04	1.84
†	24220.000	5970.40	3900.00	5972.57	5972.59	5973.82	500.00	172.61	1335.00	0.00	0.00	8.95	2.17
†	23110.000	5921.00	2790.00	5922.87	5923.01	5923.65	1110.00	57.65	460.00	0.00	0.00	7.12	1.87
†	23110.000	5921.00	2790.00	5923.49	5923.63	5924.47	1110.00	68.53	824.00	0.00	0.00	7.94	2.49
†	23110.000	5921.00	2790.00	5923.68	5923.83	5924.73	1110.00	71.94	963.00	0.00	0.00	8.20	2.68
	23110.000	5921.00	2790.00	5923.88	5924.30	5925.46	1110.00	75.48	1335.00	0.00	0.00	10.08	2.88
	22660.000	5906.42	2340.00	5908.34	5908.49	5909.02	450.00	83.67	456.00	0.00	0.00	6.61	1.92
†	22660.000	5906.42	2340.00	5908.64	5909.21	5909.81	450.00	90.39	821.00	0.00	0.00	8.71	2.22
†	22660.000	5906.42	2340.00	5908.74	5909.31	5910.09	450.00	92.85	970.00	0.00	0.00	9.33	2.32
	22660.000	5906.42	2340.00	5909.25	5909.56	5910.45	450.00	117.26	1381.00	0.00	0.00	8.82	2.83
	22020.000	5880.60	1700.00	5882.83	5883.25	5884.09	640.00	41.41	456.00	0.00	0.00	8.99	2.23
	22020.000	5880.60	1700.00	5883.62	5883.93	5884.80	640.00	69.30	821.00	0.00	0.00	8.69	3.02
	22020.000	5880.60	1700.00	5883.83	5884.13	5885.04	640.00	76.52	970.00	0.00	0.00	8.84	3.23
	22020.000	5880.60	1700.00	5884.07	5884.61	5885.84	640.00	84.90	1381.00	0.00	0.00	10.67	3.47
†	21025.000	5845.45	705.00	5847.07	5847.22	5847.77	995.00	72.34	456.00	0.00	0.00	6.69	1.62
	21025.000	5845.45	705.00	5847.41	5847.56	5848.57	995.00	81.10	821.00	0.00	0.00	8.62	1.96
	21025.000	5845.45	705.00	5847.53	5847.57	5848.85	995.00	83.15	970.00	0.00	0.00	9.22	2.08
†	21025.000	5845.45	705.00	5847.56	5847.57	5850.17	995.00	83.41	1381.00	0.00	0.00	12.97	2.11

LA CUEVA ARROYO - ARROYO F

Run Date: 16DEC93 Run Time: 10:44:44 HMVersion: 6.51 Data File: C-F.HC2

	SECNO	ELMIN	CUMDS	CWSEL	CRIWS	EG	XLCH	TOPWID	Q	QLOB	QROB	VCH	DEI
	20320.000	5819.02	0.00	5819.87	5819.99	5820.36	705.00	151.03	456.00	0.00	0.00	5.61	0.
	20320.000	5819.02	0.00	5820.16	5820.31	5820.76	705.00	178.31	821.00	0.00	0.00	6.23	1.
	20320.000	5819.02	0.00	5820.26	5820.42	5820.91	705.00	187.06	970.00	0.00	0.00	6.48	1.
*	20320.000	5819.02	0.00	5820.62	5820.67	5821.22	705.00	215.33	1381.00	0.00	0.00	6.18	1.

DRAINAGE PLAN

SCOPE:

Pursuant to Bernalillo County Ordinance No. 90-6, Section 11.E, the Drainage Plan shown hereon outlines the drainage management criteria for controlling developed runoff on and exiting the project site. A single family home is proposed on the property, with associated access, landscaping, and utility improvements.

EXISTING CONDITIONS:

Presently the 0.88 acre site is partially developed with an existing volleyball court and tree landscaping. The site is bounded on the west by a developed residential lot, on the north and east by undeveloped residential lots, and on the south by Alameda Boulevard (Richfield Avenue) NE. The residential lot across Richfield Avenue, south of the property, is currently undeveloped. The site is well vegetated with native grasses and shrubs. Site topography slopes from the northeast to the southwest at approximately 5 percent. Offsite flows currently enter the property from the north and east. The offsite basin, as shown on the Floodway and Offsite Drainage Map above, produces less than 10 cfs, and therefore, no drainage easement will be dedicated to AMAFCA.

As shown by Floodway Map No. 11 of 50, dated October 14, 1983, the site lies within a 100-year flood plain. This area of the County has recently been restudied by Resource Technology, Inc. (RTI) for FEMA. The floodway map shown above was taken from the RTI FEMA Restudy of North Albuquerque Acres Flood Insurance Study Work Map, Area #5, dated December 31, 1993. As shown on the new Flood Plain Map, this site does not lie within a 100-year flood zone. There is a flood plain (arroyo) located approximately 60 feet from the southeast property corner. According the RTI study, the 100-year flow in this arroyo, at cross section D-D, is 963 cfs. The setback (using 6' of setback per 100 cfs) is 58 feet. Therefore, this site is not located within the setback area, and no drainage restrictions or drainage easements are required for the development of the property. We realize that the RTI Restudy has not been formally approved by FEMA yet, but we feel the information is quite a bit more accurate than the 1983 maps and reflects the actual conditions for this area at this time. We are therefore recommending that this new 1993 map be the basis for flood plain determination.

PROPOSED CONDITIONS:

As shown by the Plan, the home site is located near the southerly portion of the lot positioned on a small knoll. Flows from the offsite basin will continue to cross the site as is presently doing so. The total amount of developed flow (100-year, 6-hour storm) from the offsite basin is 3.01 cfs. On site flows will drain around the home via swales, and flow to the southwest. All roof drainage will discharge from the roof to the lot and be directed around the structure to existing drainage paths. Access will be taken from Richfield Avenue. Bernalillo County currently maintains this road at this location.

Supplemental calculation have been provided to the Bernalillo County Public Works Department identified as Attachment No. 1.

The plan shows the proposed location of the septic drain field. The residence will obtain domestic water from a shared well located at the northeast corner of Lot 28, west of the site.

CALCULATIONS:

The calculations shown hereon define the 100 year-6 hour design storm falling within the project area under existing and developed conditions. The Hydrology is per "Section 22.2, Hydrology of the Development Process Manual, Volume 2, Design Criteria, for the City of Albuquerque, New Mexico in cooperation with Bernalillo County, New Mexico and the Albuquerque Metropolitan Arroyo Flood Control Authority, dated January, 1993.

PROPERTY ADDRESS:

Alameda Boulevard (Richfield Avenue) NE

LEGAL DESCRIPTION:

Lot 29, Block 6, Tract 2, Unit 1, North Albuquerque Acres

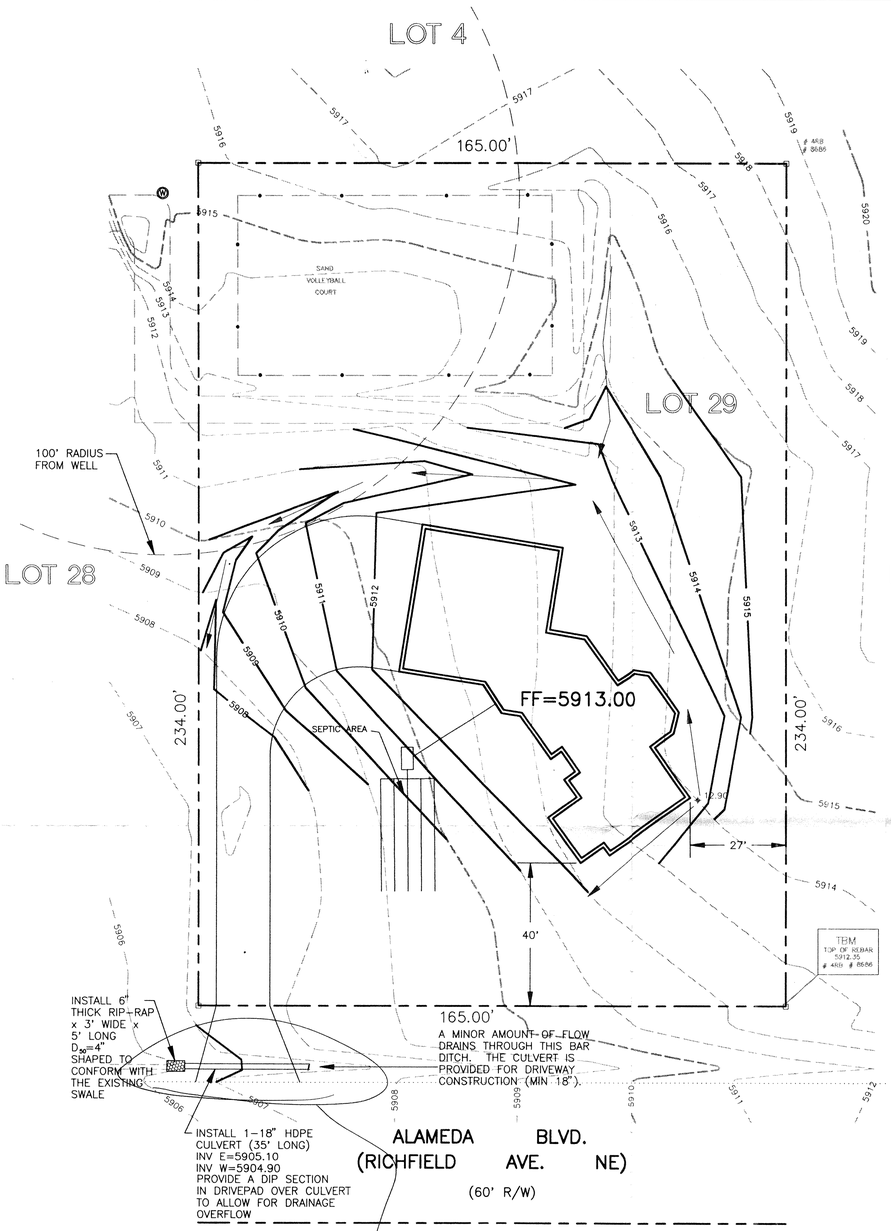
PROJECT BENCHMARKS:

TBM:
Top of Rebar @ SE property corner
#4 Rebar, LS 8686
Elevation = 5912.35 feet

ACS BM: ACS 2-C21
Elevation = 5834.1 feet

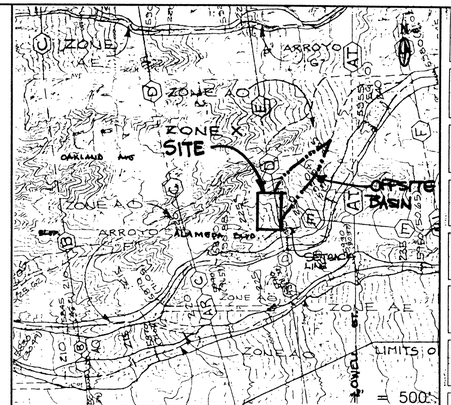
SURVEY:

Topographic survey provided by Southwest Surveying Company, Inc., dated April 1994.



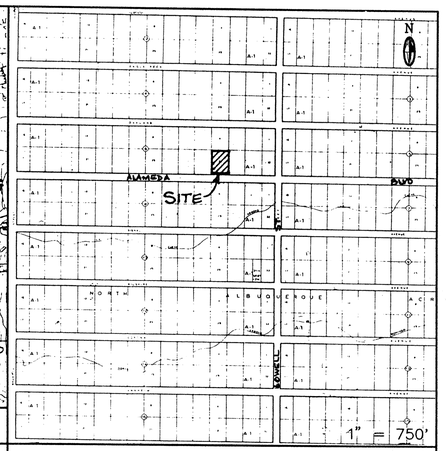
LOT 29, BLOCK 6
WITHIN
TRACT 2, UNIT 1
NORTH ALBUQUERQUE ACRES
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

Show grading associated with culvert installation



THE TOPOGRAPHY SHOWN DOES NOT REFLECT RECENT DEVELOPMENT, BUT THE DRAINAGE BASINS REMAIN UNCHANGED

FLOODWAY AND OFFSITE DRAINAGE MAP



VICINITY MAP ZONE ATLAS: C-22

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.

NOTE:
NO FENCING SHALL BE CONSTRUCTED WITHIN ANY DRAINAGE EASEMENT AREA UNLESS SPECIFICALLY APPROVED BY THE BERNALILLO COUNTY PUBLIC WORKS DEPARTMENT. ANY FUTURE FENCING ALONG THE PERIMETER PROPERTY LINES MUST ADDRESS HOW OFFSITE FLOWS ARE CONVEYED THROUGH THE SITE AND BE APPROVED BY THE BERNALILLO COUNTY PUBLIC WORKS DEPARTMENT.

TITLE AND LEGAL DESCRIPTION

LOT NUMBERED TWENTY-NINE (29) IN BLOCK NUMBERED SIX (6) OF TRACT NUMBERED TWO (2), UNIT ONE(1) OF THE NORTH ALBUQUERQUE ACRES AN ADDITION TO THE CITY OF ALBUQUERQUE, NEW MEXICO.

ELEVATIONS PER CONTROL STATION DATA:
STATION: 2-C21
ACS
ELEVATION: 5834.1'

APPROVED:

Drainage Engineer Date
AMAFCA

Robert Foglesong Date
Surface Water Hydrologist
Bernalillo County

LEGEND

	EXISTING	PROPOSED
CONTOUR	5672	5669
PROPERTY LINE		
ROAD		

JACKIE S. McDOWELL NEW MEXICO 10903 REGISTERED PROFESSIONAL ENGINEER
5-12-94

RECEIVED MAY 12 1994 HYDROLOGY DIVISION

ENGINEER'S CERTIFICATION:

I, Jackie S. McDowell, hereby certify that I personally inpsected the site shown on this plan on April 22, 1994, and as of that date it appeared that no filling, grading, or excavation had occurred thereon since completion of the topographic survey used to prepare this plan.

BERNALILLO COUNTY NEW MEXICO

NORTH ALBUQUERQUE ACRES
LOT 29, BLOCK 6, TRACT 2, UNIT 1

HOPKINS NAA LOT - GRADING AND DRAINAGE PLAN

McDowell Engineering, Inc.

Designed	Drawn	Checked	Sheet of
JSM	STAFF	JSM	1 1
File HOP0194L	Date MAY,1994		

GRADING
05-12-94
1=20
HOP0194L