HYDROLOGY

F18/D20
ONE PLAN

HYDROLOGY F18/D20 ONE PLAN

F 18- D 20

1 PLAN

DRAINAGE REPORT CHECKLIST

DATE June 16, 1981 ZONE ATLAS PAGE NO. F-18-D20

PROJECT TITLE (ADDRESS) Raquetball Courts for Ross Aragon, Dated March, 1981

SUBDIVISION Land of Associated Investors LOT 1-4 BLOCK Tract 52

ENGINEER M.S.M. CONTACT Jim Leymon

ADDRESS 2601 Wyoming Blvd N.E PHONE 292-1936

OWNER Ross Aragon CONTACT

ADDRESS PHONE

ARCHITECT/SURVEYOR Channell Graham CONTACT

ADDRESS PHONE

GENERAL:

YES	NO	NA	
	✓		Professional Engineer's stamp signature and dated.
✓			North arrow and standard engineering scales used.
	✓		Planning and zoning action history.

OFF-SITE FLOWS:

YES	NO	NA	
	* *		Delineation of off-site contributing watersheds on SCS Bernalillo County Soil Survey Maps.
	* ✓		Delineation of off-site contributing watersheds on City of Albuquerque Ortho-Topo Area Maps (Scale 1"=500' or 1"=200').
	* *		Quantification of off-site rates of flow caused by contributing watersheds for the 10 and 100 year storm frequency.
	* *		Off-site flow velocities and depths determined and locations indicated.
	✓		Discussion of any other local conditions that affect site drainage.
	✓		Delineation of site and contributing off-site watersheds on pertinent Flood Hazard Boundary Map.
	* *		Adequate treatment of offsite flows.

ON-SITE FLOWS:

YES	NO	NA	
	✓		Calculations showing on-site developed and undeveloped flow volumes and rates.
	✓		On-site flow velocities and depths determined and locations indicated.
	✓		Pond volume calculations.
✓			Positive discharge of ponds with required rate and outlet calculations.
✓			Pond emergency spillway calculations.
	✓		Pond safety protection (fencing for pond depths greater than 18".)
		✓	Pond landscaping provisions and commitments.
	✓		Pond maintenance provisions and commitments.
	✓		Soils investigation report for ponding within 15' of any structure.

PLAN DRAWINGS:

YES	NO	NA	
	✓		Adequate grading plan provided (See Grading Plan Checklist).
	✓		Vicinity map with Zone Atlas designation.
	✓		Indication of all easements and right-of-ways on, or adjacent to, the site with dimensions and purpose shown.

GRADING PLAN CHECKLIST

DATE June 16, 1981 ZONE ATLAS PAGE NO. F-18-D20

PROJECT TITLE (ADDRESS) 5555 McCloud N.E

SUBDIVISION _____ LOT _____ BLOCK _____

ENGINEER MSM CONTACT Jim Leymon

ADDRESS _____ PHONE _____

ARCHITECT/SURVEYOR Channel Graham CONTACT _____

ADDRESS _____ PHONE _____

YES	NO	NA	ITEM
	✓		Vicinity map with zone atlas page and legal description (or plat).
	✓		Reference bench mark description. T.BM.
✓			Drawn to standard engineering scale (1"=10' for sites less than one acre; 1" = 20 for sites less than five acres: 1" = 50' for sites greater than 5 acres).
✓			Ground elevation on the site based on mean sea level datum as established by the U.S. Coast and Geodetic Survey (North American Datum 1929).
	✓		Existing contours extending a minimum of 10 feet beyond the property line.
	✓		Proposed contours at one foot intervals and proposed spot elevations at key points. Contours do not reflect change in grade at the sidewalk, see grading plan.
✓			Finish building floor elevation(s) with mean sea level designation.
✓			Notes defining property line, asphalt sidewalks, planting areas, ponding areas, and all other areas whose definition would increase clarity.
	✓		Slopes (cut or fill) with height of less than 18"; 2:1 minimum. Slopes with height greater than 18", 3:1 minimum.
✓			Elevation of property line at least 0.33 ft. above top of curb.
	✓		Retaining wall required when a vertical grade change greater than 18" is anticipated.
		✓	Proposed street and alley grades if property abuts a dedicated unpaved street or alley. These grades are available, at no charge, from the City Engineer's Office. An advance request will expedite your project. (Note: At present there is a 3 month wait to have the City Engineer supply grades. However, to expedite the plans, the City Engineer may accept grades provided by an engineer).

COMMENTS _____

BY Fred J Caquin 6-16-81

YES	NO	N/A	
		✓	Internal contributory drainage areas, including roof areas, outlined on the plan.
	✓		Direction and location of roof drainage including canales, gutters, and downspouts.
		✓	Flow lines defined by arrows and spot elevations.
	✓		Details of ponds, swales, rundowns, curb cuts, water blocks, and all other significant drainage structures with contours, cross-sections and spot elevations when appropriate. ALL CROSS-SECTIONS MUST BE DRAWN TO STANDARD ENGINEERING SCALE. (Note: All proposed construction within the public way must be approved by the Assistant City Engineer/Design).
	✓		Standard City drivepad with elevation shown.
✓			Standard City curb cut. INDICATE S/D DETAIL #

COMMENTS (1) * ADDRESS IN MORE DETAIL REASONS WHY THIS SITE IS NOT INTERCEPTING OFF-SITE FLOWS.

(2) ** DEPENDENT ON ITEM (1)

(3) ALSO, SEE COMMENTS IN RED ON THE GRADING PLAN.

BY: Fred J Cugini 6-16-81

APPROVED BY: _____ DATE _____

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

June 17, 1981

Mr. Jim Leymon
M.S.M. Consultants, Inc.
2601 Wyoming N.E.
Albuquerque, N.M. 87112

RE: RACQUETBALL COURTS FOR ROSS ARAGON DRAINAGE REPORT, MARCH 1981 F-18-D20

Dear Mr. Leymon:

The referenced drainage report has been reviewed and rejected for the reasons listed on the attached checklist and grading plan.

If you have any questions concerning these rejects, please feel free to call me.

Very truly yours,

Fred J. Aguirre

Fred J. Aguirre, P.E.
Civil Engineer

FJA/tsl

Attachments

MSM CONSULTANTS, INC. Engineering • Planning • Surveying/Energy Management

2601 WYOMING BLVD., N.E., SUITE F • ALBUQUERQUE, NEW MEXICO 87112 • (505) 292-1936

August 5, 1981

RECEIVED
AUG 05 1981
CITY ENGINEER

Building And Inspection Division
Drainage Department

ATTENTION: FRED AGUIRRE

RE: DRAINAGE REPORT - RAQUETBALL COURTS FOR ROSS ARAGON

Dear Fred:

Pursuant to our meeting on June 23, 1981, regarding your June 16, 1981 review comments on the above mentioned drainage report(submitted to your office March 23, 1981), the following information is supplied:

1. A date has been added to the grading and drainage plan.

2. No planning or zoning case history relating to drainage treatment exists.

3. See attached flood hazard map for delineation of site. As we discussed, no offsite contributing flows exist.

4. Pond Safety - the free storage of the pond has been reduced to 1.5 feet. 0.75' of gravel has been called out to be placed in the bottom of the pond. See the grading and drainage plan for the actual pond volume calculations and gravel specs.

5. Pond proximity to structures, as discussed, this is not a problem on site. However, as you pointed out, within the C-3 zone, a 5 foot side yard set back is allowed. Currently, the existing structure on the adjacent property, to the west, is set back some 20 feet from the property line.

6. Roof drainage has been indicated on the plan.

7. Reference is made to City Standard Drawing P-11-1 for drive pad construction. Flows line elevations and elevations at property line have been added to the plan at the center of drive pads.

8. A vicinity map has been added to the plan.

9. The T.B.M. shown on the plan is per city datum. It was run in from 5-G18 as noted.

MSM CONSULTANTS, INC.

Fred Aguirre
Page Two
August 5, 1981

10. East property line slope has been modified by the addition of a railroad retaining wall. Maximum slopes are now 2:1.

11. Modify your copies of the drainage reports as follows: on page 1 of the calculations, under the heading of Required Pond Volume, scratch out the calculations for actual pond volume and add "see plan for pond volume calculations".

Your checklist is enclosed for reference. The red checks in the left hand margin indicate points which required additional clarification and which are addressed in this letter. I hope this additional information will allow you to approve this report. If there are any questions, please feel free to contact me at 292-1930.

Sincerely,

MSM Consultants, Inc.

Jim Leymon

Jim Leymon
Project Engineer

JL:jsc

Enc.

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

MAYOR
David Rusk

F18-D20

August 18, 1981

Mr. Jim Leymon
M.S.M. Consultants, Inc.
2601 Wyoming Boulevard N.E., Suite F
Albuquerque, New Mexico 87112

RE: RACQUETBALL COURTS FOR ROSS ARAGON
DRAINAGE REPORT DATED AUGUST 5, 1981

Dear Jim:

The revised drainage report submitted August 5, 1981 satisfies all but two of my comments mailed to you on June 16, 1981. They are:

1. Soil investigation report for ponding within 15' of any structure or closer than 15' from the property line minus the required setback on adjacent property.

2. Cross-sections along a portion of the north property line to evaluate the proposed grading with respect to retaining wall requirements. This item was indicated in red on the grading and drainage plan mailed to you on June 16, 1981.

Therefore, before final approval can be granted for this report the remaining two items must be complied with.

If you have any questions concerning my comments, please feel free to call me.

Sincerely,

Fred Aguirre

Fred Aguirre, P.E.
Civil Engineer/Hydrology

FA:gc
7824A
cc Drainage Files
f/Reading

LETTER OF TRANSMITTAL

MEURER, SERAFINI AND MEURER, INC.

2601 Wyoming Blvd., N.E. Suite F
Albuquerque, N.M. 87112/505-292-1936

Date 9.30.81

To CITY DRAINAGE DEPT

Attn. FRED AGUIRRE

Re: RAQUETBALL COURTS

Comments: PER OUR CONVERSATION ON 9.25.81 WE HAVE REVISED THE PLAN TO INCLUDE THOSE ITEMS REQUESTED. PLEASE INCLUDE THE ATTACHED PRINTS ~~[illegible]~~ TO THE DRAINAGE REPORT. PLANS HAVE BEEN SUBMITTED TO THE DESIGN SECTION PER SPECIAL ORDER #A. SIGNED DRAINAGE COVENANT FORTHCOMING.

Enclosures:

Quantity	Type of Enclosure and Description
2	DRAINAGE & GRADING PLAN
2	LANDSCAPE PLAN.

Signed: Jim Lyman

Copy to: FILE #0690114

If enclosures are not as noted, kindly notify us at once.

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

September 30, 1981

Mr. Jim Leymon
M.S.M. Consultants, Inc.
2601 Wyoming Boulevard N.E., Suite F
Albuquerque, New Mexico 87112

RE: RACQUETBALL COURTS FOR ROSS ARAGON
DRAINAGE REPORT DATED SEPTEMBER, 1981
(F-18-D20)

Dear Jim:

The referenced drainage report is approved with the understanding that the following items will be included with the construction plans.

1. A spot elevation at the north inlet to the pond.
2. A completed Covenant Agreement.
3. A completed Special Order 19.
4. The specifications for the construction of the berm.
5. The drivepad elevations at the south east corner per City standards.
6. A detail of the pond outlet (recommend header curb at the pond outlet).

If you have any questions concerning the above, please feel free to call me at 766-7644.

Sincerely,

Fred Aguirre

Fred Aguirre, P.E.
Civil Engineer/Hydrology

FA/el

cc: Drainage Files
F/Reading

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

December 21, 1982

Mr. Ross Aragon
2524 Georgene NE
Albuquerque, New Mexico 87112

Re: Racquetball Courts for Ross Aragon, Dated 9/81
(File No. F18-D20)

Dear Mr. Aragon:

The drainage plan for the referenced site has been reviewed for compliance with the present drainage requirements and has been found to be in substantial agreement with said requirements.

However, before the building permit can be released copies of Special Order 19 (previously required in my letter to your engineer) must be attached to the construction plans.

If you have any questions regarding the above, please feel free to call me at 766-7644.

Sincerely,

Fred J. Aguirre, PE
Civil Engineer/Hydrology

FJA/el

cc: Drainage File
Reading File

0416

DRAINAGE REPORT

FOR

[illegible] CODES
FOR [illegible] TRACT
ALBUQUERQUE, NEW MEXICO

REVISED SEPTEMBER, [illegible]

MEURER, GERAFINI AND MEURER, INC.
Systems Planning Corporation

2601 Wyoming Boulevard, N.E.
Albuquerque, New Mexico 87112
(505) 292-1936

DRAINAGE REPORT

FOR

RAQUETBALL COURTS
FOR ROSS ARAGON
ALBUQUERQUE, NEW MEXICO

REVISED SEPTEMBER, 1981

PREPARED BY:

MSM CONSULTANTS, INC.
2601 WYOMING NE
ALBUQUERQUE, NEW MEXICO
TELEPHONE 505-292-1936

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Introduction	1
The Site	1
Undeveloped Site Characteristics	1
Developed Site Drainage	2
Design Criteria	2
Conclusions and Recommendations	4
Calculations	
Exhibits	

EXHIBITS

Exhibit "A" - Site Location Map

Exhibit "B" - Ortho Topo

Exhibit "C" - Intensity Duration Frequency Curves

Exhibit "D" - Drainage and Grading Plan (Pocket)

Exhibit "E" - Pond Storage Curve

Exhibit "F" - FHBM Flood Hazard Boundary Map

INTRODUCTION

The objective of this report is to present the data, analysis, supportive calculations and exhibits which lead to recommendations for the design and implementation of a drainage management plan. The proposed plan outlined herein does comply with City and A.M.A.F.C.A. requirements.

THE SITE

The site is located in the Northeast Heights of Albuquerque on McLeod N.E., approximately 700' east of San Mateo. The site is bordered on the east by a day care center, on the north by a drive-in movie theater and on the west by an auto repair shop. The site contains 1.63 acres. (See Exhibit "A" site location map).

The proposed development is a raquetball club. The proposed site improvements are to include the building and its associcated paved parking area, as well as areas designated for landscaping and/or ponding.

UNDEVELOPED SITE CHARACTERISTICS

The site, in its natural state, slopes at approximately 5% to the west. Natural flows consist of sheet flows. There are no offsite flows intercepted by the site. (See Exhibit "B", ortho topo Note: ortho topo does not show existing adjacent developments).

The natural runoff exits the site in a somewhat concentrated state near the northwest corner. The runoff continues west along the rear of the block, before discharging into San Mateo Blvd.

The surface soils are comprised mainly of Tijeras gravelly fine sandy loam, hydrologic soil Group B.

DEVELOPED SITE DRAINAGE

As development occurs, the impervious area increases and thereby the amount of runoff also increases. To offset this increase in runoff, onsite restrictions of flow must be incorporated into the development. While this can take different forms, the most practical solution for this type of development is to utilize onsite ponding.

A single pond located along the entire length of the west property line is proposed. All runoff from the site is captured and detained in the pond before leaving the site. For ultimate drainage of the pond, it is proposed to provide outlet pipes from the pond to the adjacent gutter flowline. An emergency overspill is recommended to accommodate any pond overspill.

Pond outlet pipes shall discharge into McLeod at the gutter flowline. Pond overspill shall discharge to the south before entering McLeod. Once onto McLeod, the flows are carried west to the intersection with San Mateo where they enter a storm drainage system.

DESIGN CRITERIA

In analyzing the storm runoff, the rational formula, Q=CIA is used.

WHERE:

Q = Runoff Quantity in Cubic Fee/second.

A = Contributing Area in Acres.

I = Intensity in Inches/Hour for a Duration Equal to the Time of concentration measured in minutes and obtained from Exhibit "C". intensity duration frequency curves, Albuquerque.

C = Runoff Coefficient (No Unit). This coefficient represents the integrated effects of infiltration, detention storage, evaporation, retention, flow routing and interception which all affect the time distribution and peak rate of runoff (C=0.4 pervious and 0.9 impervious)

In calculating the pond volumes and discharge rates, the Interim Drainage Guidelines, dated November 13, 1979 is used.

WHERE:

Required pond volume = Developed 100 year volume - undeveloped 100 year volume.

Positive discharge = Q_5 undeveloped.

Emergency overspill = Q_{100} developed.

In sizing of the pond outlets pipes and overspill weir, the following equations are used:

Oriffice Equation, $Q = CdA\sqrt{2gh}$

WHERE:

Q = Flow quantity in cu. ft/sec.

Cd = Inlet friction coefficient = 0.63 (flush entrance) unit less.

A = Area of pipe in Ft^2.

g = Gravitational constant = 32.2 Ft/Sec^2.

h = Head, measured from top of pond to pipe flowline at discharge in Ft.

Rectangular weir equation, $q = Cw\ 2/3\ \sqrt{2g}\ H^{3/2}$

WHERE:

q = Flow quantity per foot of weir in cubic feet per second.

Cw = Weir coefficient = $0.605 + 0.08\ \frac{H}{P} + \frac{1}{305\ H}$

WHERE:

H = Head-flow depth, in feet.

P = Height of weir, in feet.

g = Gravitational constant = 32.2 feet/sec.^{2}

H = Head in feet.

CONCLUSIONS AND RECOMMENDATIONS

In conclusion it is recommended that the concepts as outlined in this report be approved as they adhere strictly to the guidelines as set forth by the City of Albuquerque. The following is also recommended:

1. The site grading and drainage improvements be performed per attached plan.

2. The approved site landscaping plan include measures for the control of erosion of the slope along the west and north property lines.

PREPARED BY:

Jim Leymon
Project Engineer

APPROVED FOR MSM CONSULTANTS, INC., BY:

Carl A. Tebbens, P.E.
Vice President

CARL A. TEBBENS
NO. 6309
NEW MEXICO
REGISTERED PROFESSIONAL ENGINEER

CALCULATIONS

MEURER - SERAFINI - MEURER, INC. ALBUQUERQUE, N.M.

By [illegible] Date 7-3-81 PROJECT RACQUETBALL COURTS sheet No. 1 of 3

Checked By ____ Date ____ CALCULATIONS Job No. 0640114

REQUIRED PONDING

NATURAL SITE

GROSS AREA = 200' x 355' = 71,000 S.F. = 1.63 AC.

$C_{NAT.} = 0.40$ ∴ RUNOFF VOL. (100 YR.) = 5680 CU. FT.

DEVELOPED SITE

AREA @ C = 0.40 (LANDSCAPED) = 15,378 S.F.

AREA @ C = 0.85 (PAVING & ROOF) = 55,622 S.F.

$$\text{COMPOSITE } C = \frac{0.85(55,622) + 0.40(15,378)}{71,000}$$

$$= 0.75$$

RUNOFF VOL. (100 YR.) = 0.75(0.20') 71,000

= 10,650 CU. FT.

∴ REQUIRED POND VOL. = 10,650 - 5680 = 4970 CU. FT.

ACTUAL POND VOLUME

BOTTOM SURFACE AREA (ELEV. 25.0) = 3065 S.F.

TOP SURFACE AREA (ELEV. 26.3) = 4842 S.F.

$$\text{VOL.} = \frac{3065 + 4842}{2} \times 1.3' = 5139.5 \text{ CU. FT.}$$

(SEE EXHIBIT "E" - POND STORAGE CURVE)

POND OUTLET

RATE = Qs UNDEV. = ACI

A = 1.63 AC
C = 0.40
I = 0.47/(10×60) = 2.82 IN./HR.

NOTE: FOR A 5 YR. STORM WITH A DURATION EQUAL TO THE TIME OF CONCENTRATION - FROM WEATHER BUREAU DATA - 10 MIN. RAINFALL = 0.47 IN. TOTAL RAINFALL.

Qs UNDEVEL. = 1.63(0.40) 2.82 = 1.84 CFS

POSITIVE POND OUTLET RATE SHOULD NOT GREATLY EXCEED 1.84 CFS.

PIPES

$Q = A C_d \sqrt{2gH}$ ∴ $A = Q / C_d \sqrt{2gH}$

Q = 1.84 CFS
C_d = 0.63
H = 26.30 - 23.31 = 2.99'

$A = 1.84 / 0.63 \sqrt{2(32.2)2.99} = 0.21$ S.F.

4" DIAMETER PIPE HAS AN AREA = 0.086 S.F.

USE 3-4" PIPES

$Q = 3(0.086)\, 0.63 \sqrt{2(32.2)2.99} = 2.26$ CFS

Q @ AVERAGE POND DEPTH = 2.0 CFS (H=2.34)

APPROXIMATE TIME TO DRAIN POND = 42.8 MIN.

MEURER - SERAFINI - MEURER, INC. ALBUQUERQUE, N.M.

By J.L. Date 2-26-81 PROJECT RACQUETBALL CLUB sheet No. 3 of 3

Checked By ____ Date ____ DRAINAGE CALCULATIONS Job No. 0640114

REVISED 9.3.81

EMERGENCY OVERSPILL

RATE = $Q_{100\,DEV.} = ACI$

$A = 1.63$ AC

$C = 0.85$ (ASSUMED)

$I = 6.0$ IN/HR (FOR $T_C = 10$ MIN, SEE EXHIBIT "C")

$Q_{100\,DEV.} = 1.63(0.85)\,6.0 = 8.31$ CFS

RECTANGULAR WEIR

$q = C_W \frac{2}{3}\sqrt{2g}\,H^{3/2}$

$C_W = 0.605 + 0.08\frac{H}{P} + \frac{1}{305H}$

TRY $H = 0.20'$ ∴ $P = 1.50'$, $C_W = 0.634$

$q = 0.634(2/3)\sqrt{2 \times 32.2}\,(0.20)^{3/2} = 1.15$ CFS/FT

$L = Q_{100\,DEV}/q = 8.31/1.15 = 7.2$ FT.

USE $L = \underline{\underline{10'}}$

(SEE DETAIL DRAINAGE AND GRADING PLAN)

EXHIBITS

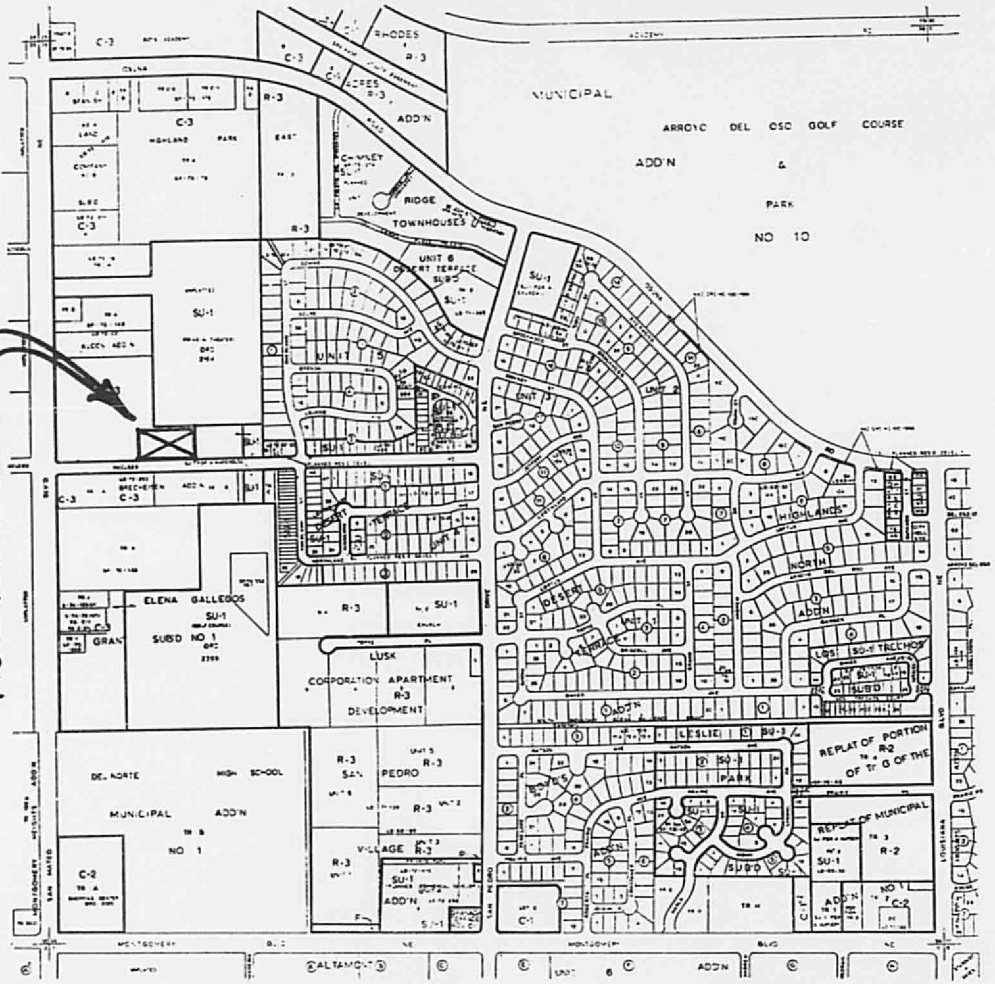
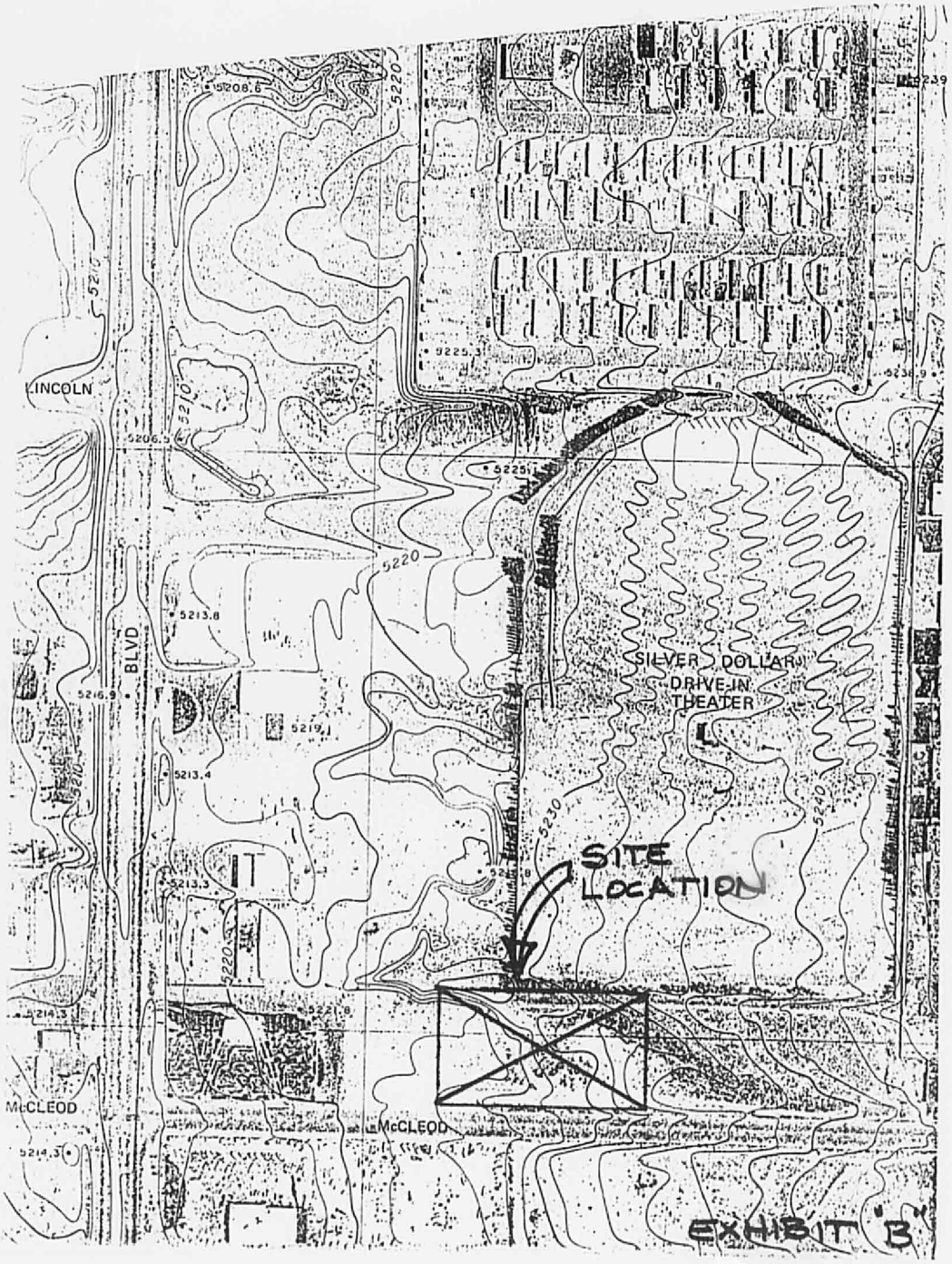
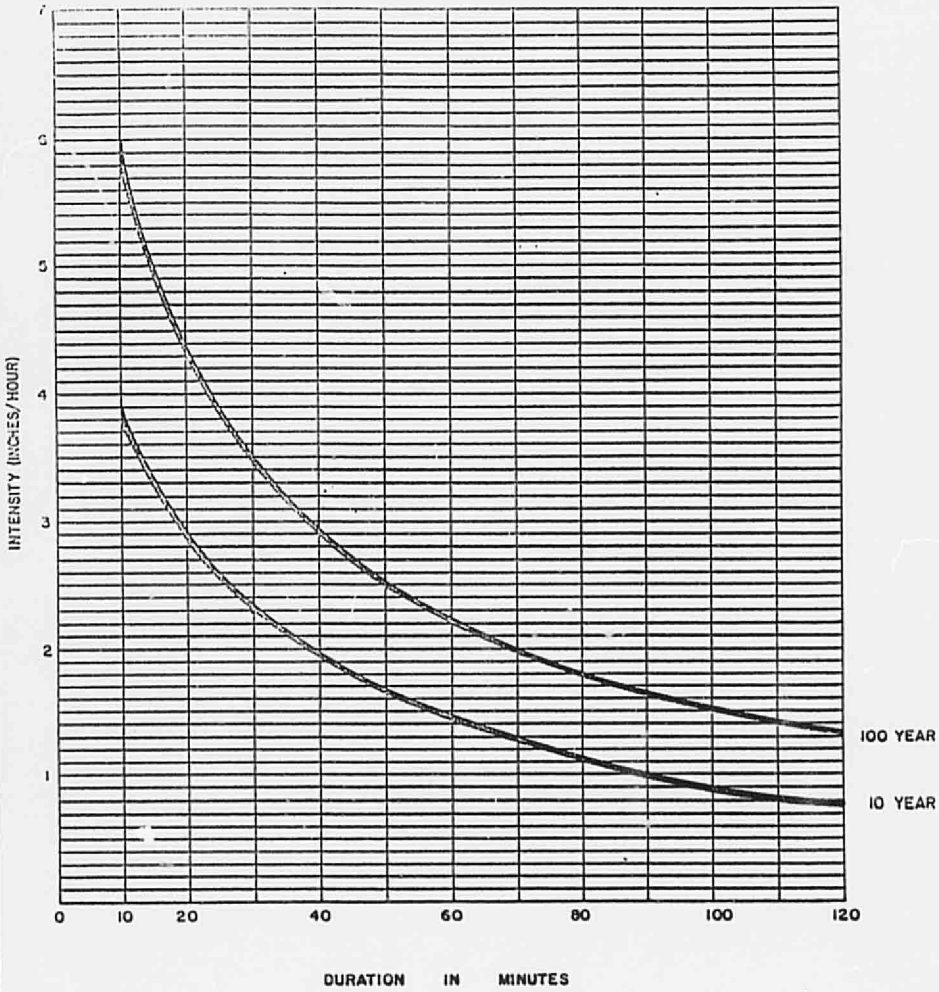

SITE LOCATION
MUNICIPAL
ARROYO DEL OSO GOLF COURSE
ADD'N
&
PARK
NO 10
RHODES
ADD'N
RIDGE
TOWNHOUSES
UNIT 6
DESERT TERRACE
SUBD
ELENA GALLEGOS
SUBD NO 1
LUSK
CORPORATION APARTMENT
DEVELOPMENT
DE ANDRE
HIGH SCHOOL
MUNICIPAL
ADD'N
NO 1
SAN PEDRO
VILLAGE
HIGHLANDS
NORTH
ADD'N
LESLIE
PARK
REPLAT OF PORTION
OF TR G OF THE
REPLAT OF MUNICIPAL
ALTAMONT
MONTGOMERY BLVD NE
LOUISIANA
F-18-Z

EXHIBIT "A"


LINCOLN
BLVD
McCLEOD
McCLEOD
SILVER DOLLAR
DRIVE-IN
THEATER
SITE
LOCATION
5220
5210
5206.5
5225.1
5213.8
5216.9
5219
5213.4
5213.3
5230
5240
5214.3
EXHIBIT "B"



NOTE:
CURVE IS BASED ON DATA CONTAINED IN NOAA ATLAS 2, DATED 1973.

EXHIBIT "C"

INTENSITY/ DURATION FREQUENCY CURVE
ALBUQUERQUE, N.M.

MEURER - SERAFINI - MEURER, INC. ALBUQUERQUE, N.M.

By J.L. Date 9-1-81 PROJECT BASKETBALL COURTS sheet No. 1 of 1

Checked By ___ Date ___ POND VOLUME VS DEPTH Job No. ___

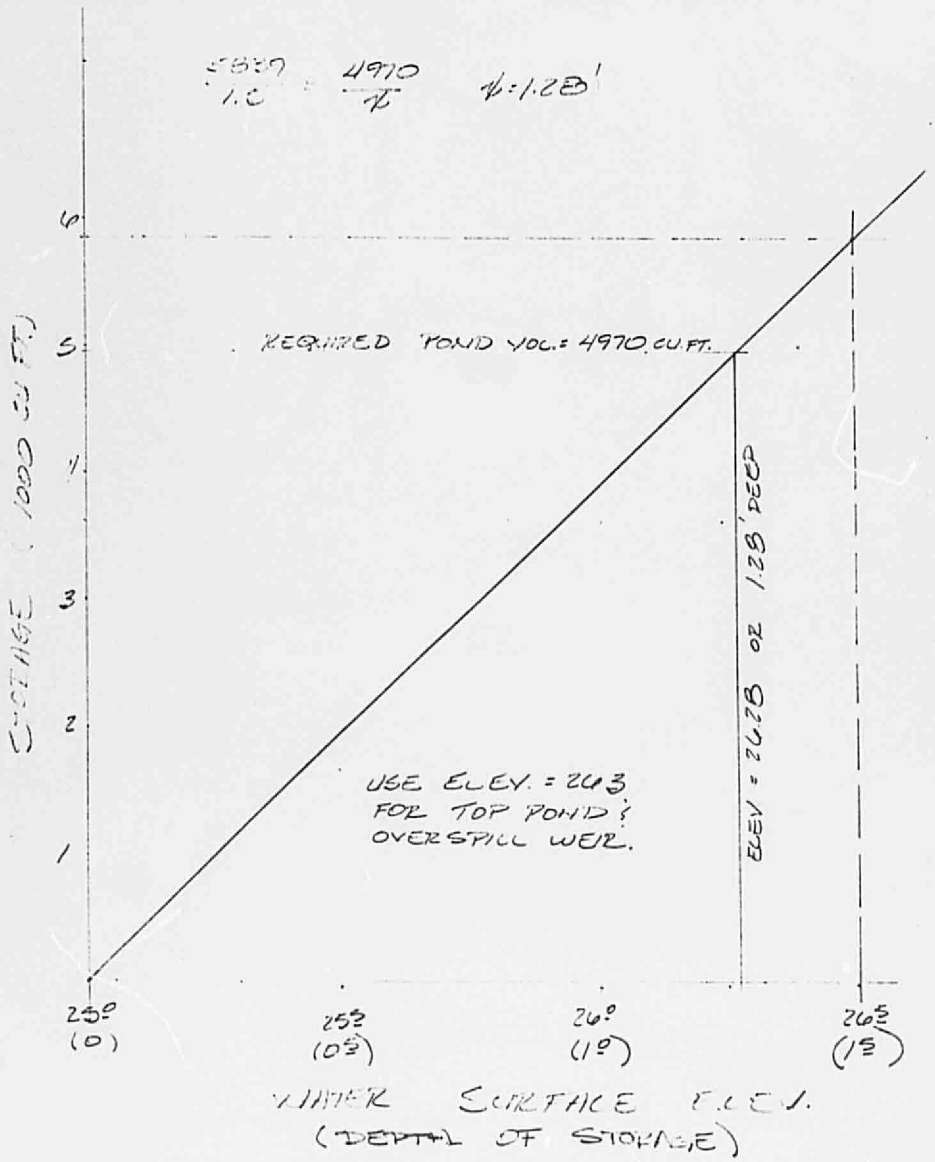
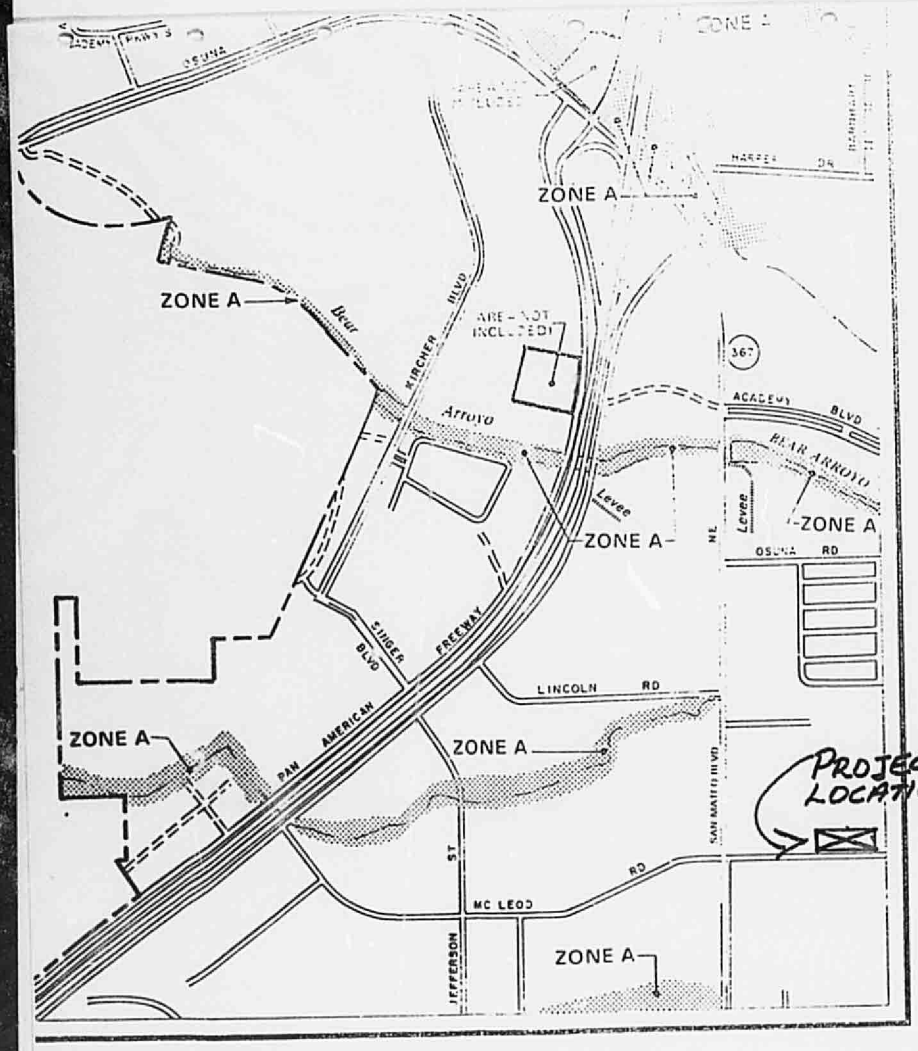


EXHIBIT "E"



FHBM

FLOOD HAZARD BOUNDARY MAP

CITY OF
ALBUQUERQUE
NEW MEXICO
BERNALILLO COUNTY

PAGE 2 OF 9

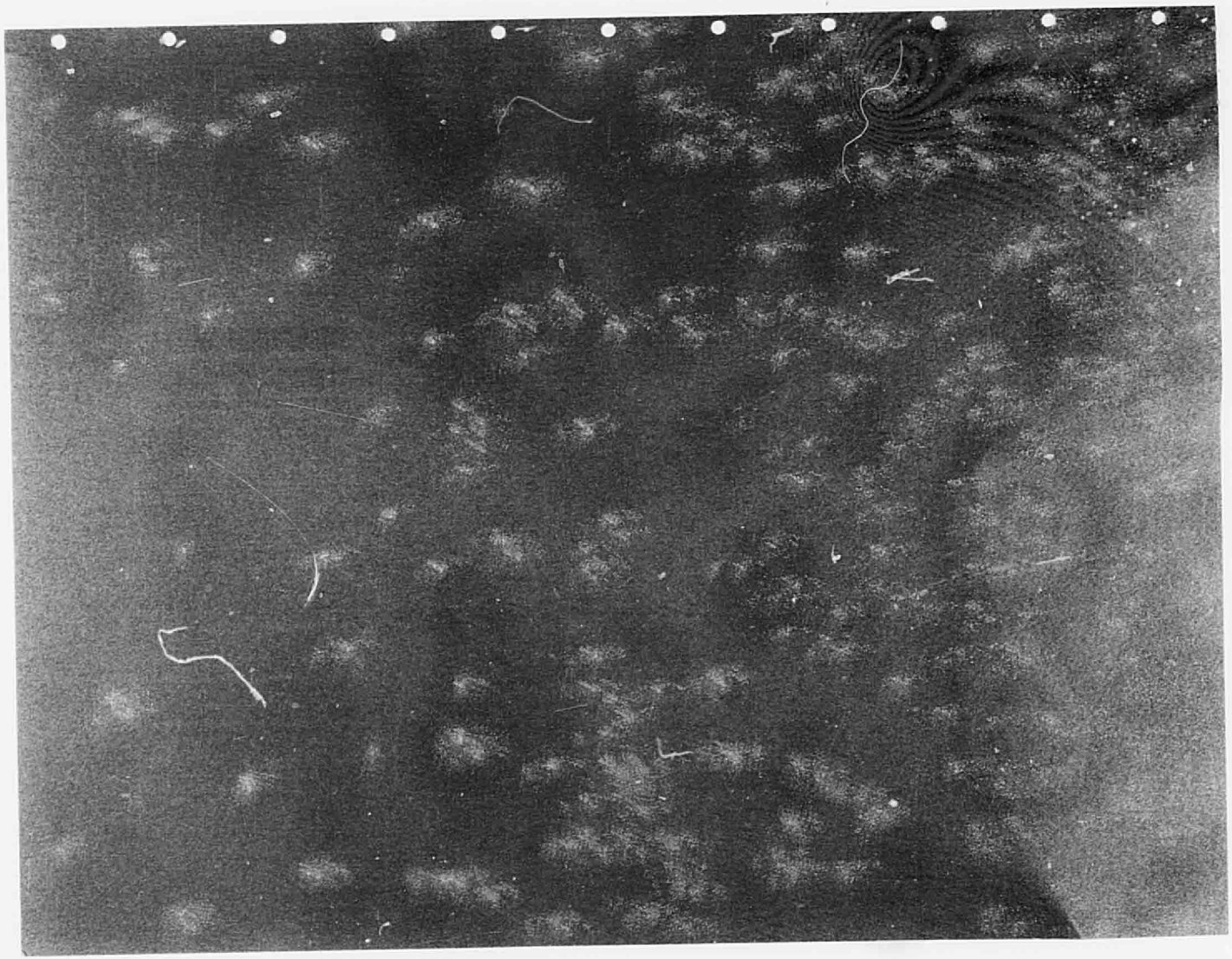
SEE MAP INDEX FOR PAGES NOT PRINTED

COMMUNITY-PANEL NUMBER
350002 0002 B

MAP REVISED:
DECEMBER 4, 1979

U.S. DEPARTMENT OF HOUSING
AND URBAN DEVELOPMENT
FEDERAL INSURANCE ADMINISTRATION

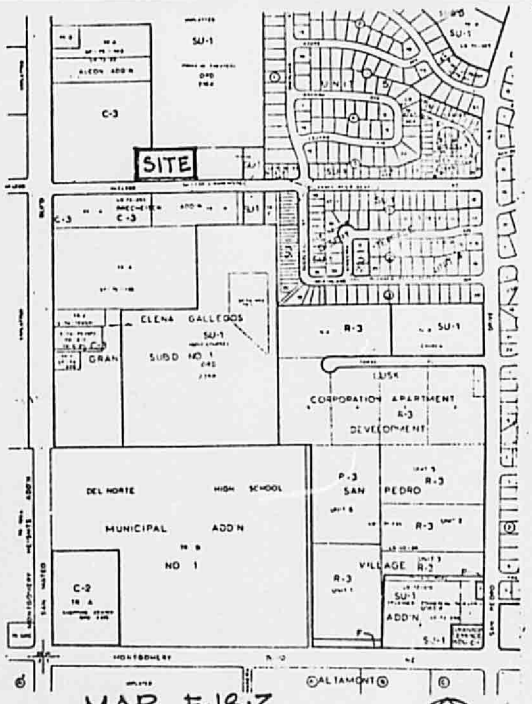
EXHIBIT "F"



Fred Baca

CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



LOT 3 OF TRACT 3-1 AS IS SHOWN ON PLAT 'LOTS 1 THRU 4 OF LAND OF ASSOCIATED INVESTORS' FILED 6/6/81

OWNER:
ROSS ARAGON
2524 GEORGINE NE
ALBUQUERQUE, NM 87112

PREPARED UNDER THE SUPERVISION OF

Carl A. Terbos
President N.M.P.E. No. 6309 — Date 8/5/81

DRAINAGE ONLY — EXCLUDES CONC. RETAINING WALL

STATE OF NEW MEXICO — REGISTERED PROFESSIONAL ENGINEER

MEURER, SERATINI AND MEURER, INC.
CONSULTING ENGINEERS • SURVEYORS • PLANNERS
2701 Wyoming Blvd., N.E. Albuquerque, New Mexico 87110
(505) 292-1938
A Gange Co.

F18-D20

NOTICE TO CONTRACTOR

1. An excavation/construction permit will be required before beginning any work within City right-of-way. An approved copy of these plans must be submitted at the time of application for this permit.

2. All work detailed on these plans to be performed, except as otherwise stated or provided hereon, shall be constructed in accordance with "~~Contract Documents for City-Wide Utilities and Cash Paving No. 31~~" Public Works Contract No. 84-1

3. Two working days prior to any excavation, contractor must contact Line Locating Service, 765-1234, for location of existing utilities.

4. Prior to construction, the contractor shall excavate and verify the horizontal and vertical locations of all obstructions. Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay.

5. Backfill compaction shall be according to ARTERIAL street use.

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APPROVALS	NAME	DATE
A.C.E./DESIGN	[illegible]	29 Dec 83
INSPECTOR	[illegible]	2-15-84
[illegible]	[illegible]	2-15-84

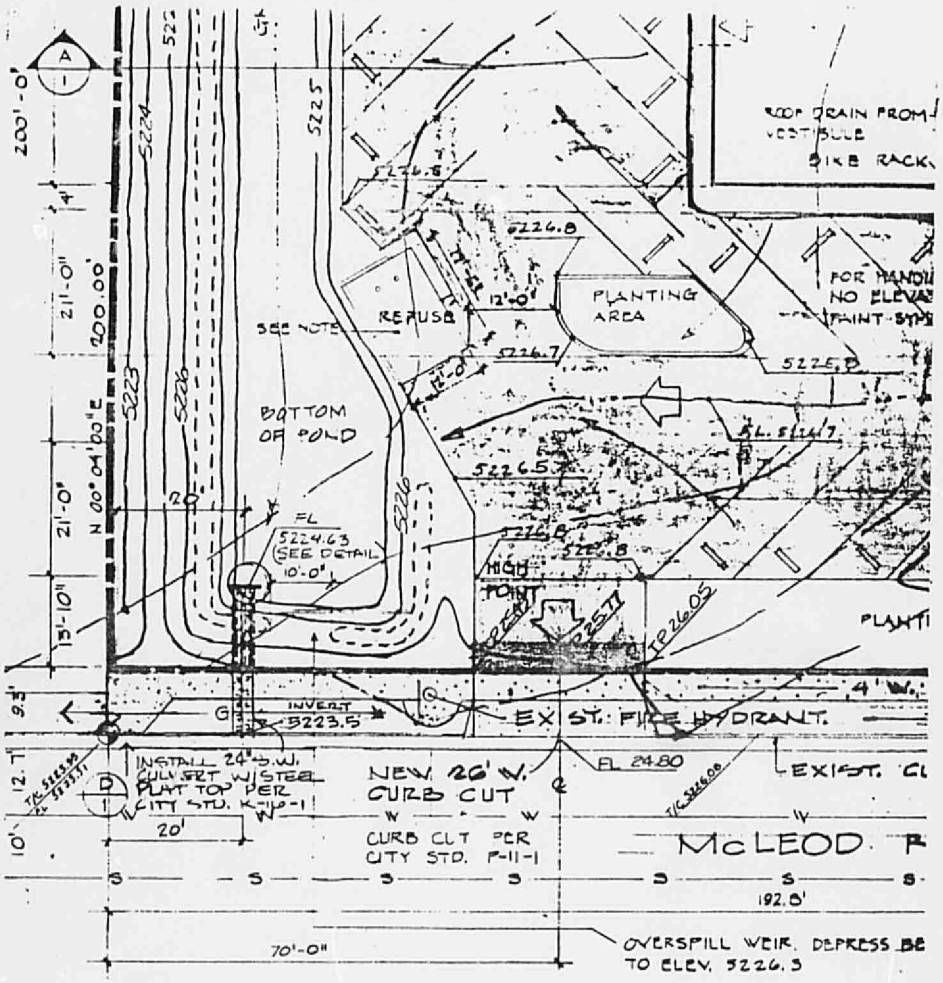
TITLE: RAQUETBALL COURTS FOR ROSS ARAGON · 5555 McLEOD NE

PERMIT NO. SHEET 1 OF 5

MAP F-18 NO.

CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



SITE PLAN / DRAINAGE PLAN

1" = 20'

B-72

APPROVALS	NAME	DATE	TITLE: RAQUETBALL COURTS for ROSS ARAGON - 5555 McLEOD NE
A.C.E./DESIGN	[illegible]	29 Dec 82	
INSPECTOR			PERMIT NO.
A.C.E./FIELD			SHEET 2 OF 2 — MAP F-18

0437