CITY OF ALBUQUERQUE

November 16, 2012

Fred C. Arfman, P.E.
Isaacson & Arfman, P.A.
128 Monroe St. NE
Albuquerque, NM 87108

Re: Lot 10 Vista Faisan Subdivision
Grading and Drainage Plan
Engineer's Stamp date 10-12-12 (F14-D057)

Dear Mr. Arfman,

Based upon the information provided in your submittal received 11-14-12, the above referenced plan is approved for Building Permit.

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology. Prior to Certificate of Occupancy release, Engineer Certification per the DPM will be required.

If you have any questions, you can contact me at 924-3695 or Rudy Rael at 924-3977.

Sincerely,

Shahab Biazar, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

RR/SB
C: emailed

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

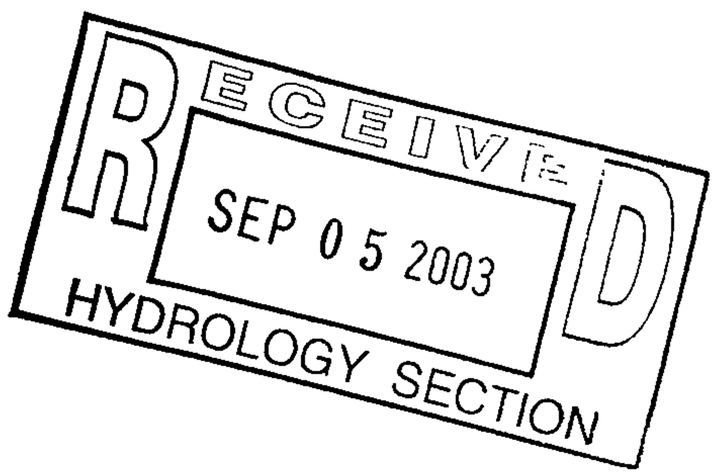
DRAINAGE REPORT

FOR

VISTA FAISÁN SUBDIVISION

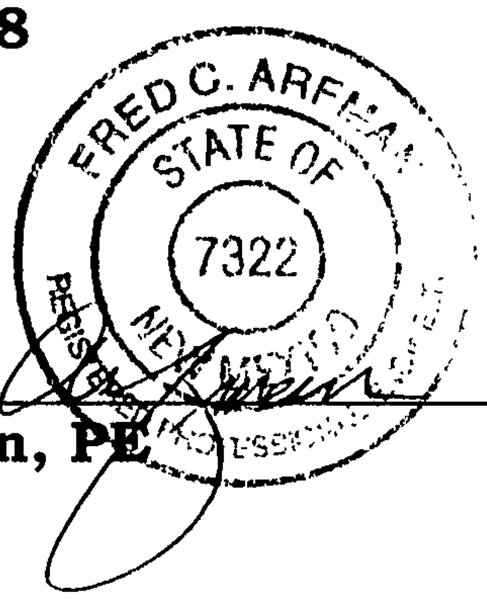
15-LOT SINGLE FAMILY RESIDENTIAL SUBDIVISIONS

ALBUQUERQUE, NEW MEXICO
SEPTEMBER 2003



Prepared by:

ISAACSON & ARFMAN, P.A.
128 Monroe Street NE
Albuquerque, NM 87108
(505) 268-8828



07-05-03

Fred C. Arfman, PE **Date**

I. PROJECT INFORMATION

LEGAL DESCRIPTION: LOTS 1&2, TRACTS A-1&171a1ba, LANDS OF JACK CULLY
(REC. BK. C-10, FOLIO 154, BK. C-11, FOLIO 99 AND BK. 93C, FOLIO

AREA: 5.1020 Ac (222,243 SF)

ENGINEER: ISAACSON & ARFMAN, P.A.
ALBUQUERQUE, NM 87108
(505) 268-8828
ATTN: FRED C. ARFMAN, P.E.

SURVEYOR: CLINT SHERRILL & ASSOC.
730 SAN MATEO BLVD. SE.
ALBUQUERQUE, NM 87108
(505) 256-7364
ATTN: CLINT SHERRILL

BENCHMARK: ALBUQUERQUE CITY SURVEY BRASS CAP
MONUMENT "15-F13"
ELEVATION= 4974.72 (SLD 1929)

ZONING: RA-2

EXISTING NUMBER OF TRACTS: 4

PROPOSED NUMBER OF LOTS: 15 LOTS AT 0.5 Ac. MIN.

FLOOD HAZARD:
A PORTION OF TRACT a1ba IS ENCUMBERED BY A ZONE AH (EL. 4973) AS INDICATED ON THE PANEL 119 OF 825, FIRM FLOOD INSURANCE RATE MAP, EFFECTIVE DATE, SEPTEMBER 20, 1996.

II. INTRODUCTION

Vista Faisán is a proposed 15-lot single family subdivision on 5.103 acres of land in the north valley. Because this is a flat land area, this subdivision will have onsite retention ponds for the 100-year, 10 day storm, and the back half of 12 of the lots will drain to backyard ponds.

III. EXISTING CONDITIONS

The proposed site is built on four existing lots. Lot 15 (existing lot 2, Lands of Cully) has an existing 3500 sf house on the property. This house will remain in place. The southern boundary of the subdivision is adjacent to Adobe Rd, the Hackman Irrigation Lateral runs along the western boundary, a small ditch runs along the major portion of the south boundary, and the entire subdivision is surrounded by residential/agricultural lots. The existing area generates 0.2442 Acre-feet of storm water volume that is contained onsite. Because all property lines have either old berms or irrigation ditches, offsite flows do not enter the site. (See Appendix A for Runoff and Volume Calculations)

IV. PROPOSED CONDITIONS

There are 15 proposed lots with one existing home that will remain existing. Vista Faisán Place will carry 8.6 cfs (0.3772 Ac-ft) of front yard flows from Lots 2 through 15 to the pond on Tract O/S. The backyards for Lots 7 and 8 will also drain to this pond. Lot 1 and portions of the road will direct 2.4 cfs (0.1057 Ac-ft) to the pond on Lot 1. (See Appendix B for Runoff and Volume Calculations)

Lot 2 – 6 and Lots 9 - 15 will each retain 988 cu. ft. in the backyard. (See Appendix B for the Typical Lot Drainage Exhibit.)

Lot 1 ~~has a Zone AH floodplain~~ with a water surface elevation of 4973 on the property. The pad grade will ensure that the finished floor will be more than one foot above the floodplain.

To prevent ponded water from exiting the site, a block perimeter wall with 1.5' minimum flood protection will surround the subdivision.

V. SUMMARY & CONCLUSIONS

Based on information in previous sections, it is recommended that the following items be constructed with each of the noted developments:

1. Curb opening at the Tract O/S and Lot 1 Ponds.
2. Backyard ponds retaining 988 cu. ft. on lots 2-6 and 9-15.
3. Perimeter wall with 1.5' min flood protection.
4. A 0.3772 Ac-ft pond on Tract O/S to retain the 100-year, 10-day storm.
5. A 0.1057 Ac-ft pond on Lot 1 to retain the 100-year, 10-day storm.

RUNOFF CALCULATIONS FOR EXISTING CONDITIONS (Q_{100})

100-YEAR, 6-HOUR STORM

Per the City of Albuquerque D.P.M. Section 22.2

PROJECT NAME: **VISTA FAISAN**

JOB NUMBER: 1282

PRECIP ZONE	Q_{100} RUNOFF RATES (cfs/Ac)			
	A	B	C	D
1	1.29	2.03	2.87	4.37
2	1.56	2.28	3.14	4.70
3	1.87	2.60	3.45	5.02
4	2.20	2.92	3.73	5.25

% LAND TREATMENTS				
	TREAT TYPE 1	TREAT TYPE 2	TREAT TYPE 3	TREAT TYPE 4
A	93			
B	5			
C	0			
D	2			
Σ% =	100	0	0	0

PRECIPITATION ZONE: 2

TREATMENT TYPE 1							
BASIN #	LAND TREATMENT AREAS (Ac)					Q_{100} (cfs)	REMARKS
	A_{TOTAL}	A_A	A_B	A_C	A_D		
100	5.103	4.75	0.26	0	0.10	**8.5**	

VOLUME CALCULATIONS FOR EXISTING CONDITIONS (V_{100})

100-YEAR, 6-HOUR STORM

Per the City of Albuquerque D.P.M. Section 22.2

PROJECT NAME: **VISTA FAISAN**

JOB NUMBER: 1282

PRECIP ZONE	E_{360} EXCESS PRECIPITATION (in.)			
	A	B	C	D
1	0.44	0.67	0.99	1.97
2	0.53	0.78	1.13	2.12
3	0.66	0.92	1.29	2.36
4	0.80	1.08	1.46	2.64

% LAND TREATMENTS				
	TREAT TYPE 1	TREAT TYPE 2	TREAT TYPE 3	TREAT TYPE 4
A	93	0	0	0
B	5	0	0	0
C	0	0	0	0
D	2	0	0	0
∑% =	100	0	0	0

PRECIPITATION ZONE: 2

TREATMENT TYPE 1								
BASIN #	LAND TREATMENT AREAS (Ac)					**V_{100} (Ac-ft)**	**V_{100} (cu.ft.)**	REMARKS
	A_{TOTAL}	A_A	A_B	A_C	A_D			
100	5.103	4.75	0.26	0	0.10	**0.2442**	**10638.3**	

LAND TREATMENT CALCULTIONS

(Per the City of Albuquerque DPM Section 22.2, Table A-5)

PROJECT NAME: **VISTA FAISAN**

JOB NUMBER: 1282

Total Area	5.103	Acres
# of Lots	15	lots

N = 2.94 D.U./Ac.

Percentage of Impervious Land (Type D)

$\%D = 7(N^2+5N)^{1/2}$

%D= 33.82 %

A+D= 33.82 %

B+C= 66.18 %

LAND TREATMENTS	
Type A=	**0 %**
Type B=	**33.09 %**
Type C=	**33.09 %**
Type D=	**33.82 %**
Σ=	100 %

RUNOFF CALCULATIONS FOR DEVELOPED CONDITIONS (Q_{100})

100-YEAR, 6-HOUR STORM

Per the City of Albuquerque D.P.M. Section 22.2

PROJECT NAME: **VISTA FAISAN**

JOB NUMBER: 1282

PRECIP ZONE	Q_{100} RUNOFF RATES (cfs/Ac)			
	A	B	C	D
1	1.29	2.03	2.87	4.37
2	1.56	2.28	3.14	4.70
3	1.87	2.60	3.45	5.02
4	2.20	2.92	3.73	5.25

% LAND TREATMENTS				
	TREAT TYPE 1	TREAT TYPE 2	TREAT TYPE 3	TREAT TYPE 4
A	0			
B	33.1			
C	33.1			
D	33.8			
Σ% =	100	0	0	0

PRECIPITATION ZONE: 2

TREATMENT TYPE 1							
BASIN #	LAND TREATMENT AREAS (Ac)					Q_{100} (cfs)	REMARKS
	A_{TOTAL}	A_A	A_B	A_C	A_D		
101	2.549	0	0.84	0.84	0.86	**8.6**	Drain to pond on Tract O/S
102	1.839	0	0.61	0.61	0.62	**6.2**	Backyard ponds
103	0.715	0	0.24	0.24	0.24	**2.4**	Lot 1 & Entry

VOLUME CALCULATIONS FOR DEVELOPED CONDITIONS (V_{100})

100-YEAR, 6-HOUR STORM

Per the City of Albuquerque D.P.M. Section 22.2

PROJECT NAME: **VISTA FAISAN**

JOB NUMBER: 1282

PRECIP ZONE	E_{360} EXCESS PRECIPITATION (in.)			
	A	B	C	D
1	0.44	0.67	0.99	1.97
2	0.53	0.78	1.13	2.12
3	0.66	0.92	1.29	2.36
4	0.80	1.08	1.46	2.64

% LAND TREATMENTS				
	TREAT TYPE 1	TREAT TYPE 2	TREAT TYPE 3	TREAT TYPE 4
A	0	0	0	0
B	33.1	0	0	0
C	33.1	0	0	0
D	33.8	0	0	0
Σ% =	100	0	0	0

PRECIPITATION ZONE: 2

TREATMENT TYPE 1								
BASIN #	LAND TREATMENT AREAS (Ac)					V_{100} (Ac-ft)	V_{100} (cu.ft.)	REMARKS
	A_{TOTAL}	A_A	A_B	A_C	A_D			
101	2.549	0	0.84	0.84	0.86	**0.2865**	**12480.0**	Drain to pond on Tract O/S
102	1.839	0	0.61	0.61	0.62	**0.2067**	**9003.8**	Backyard ponds
103	0.715	0	0.24	0.24	0.24	**0.0804**	**3500.7**	Lot 1 & Entry

RETENTION POND VOLUMES

FOR 100-YEAR, 10-DAY STORM

PROJECT NAME: VISTA FAISAN

JOB NUMBER: 1282

POND O/S:

P_{360} = 2.2 in (from Fig. C-2, COA DPM)

P_{1440} = 2.6 in (from Fig. C-3, COA DPM)

V_{360} = 0.2865 Ac-ft (from Volume calcs)

A_D = 0.86 Ac

$P_{10day} = 10 - [24.9/(P_{1440})^{1.4}]$

P_{10day} = 3.465134 in

$V_{10day} = V_{360} + A_D(P_{10day} - P_{360})/12$

V_{10day} = 0.3772 Ac-ft => 16429 cu. ft.

POND LOT 1:

P_{360} = 2.2 in (from Fig. C-2, COA DPM)

P_{1440} = 2.6 in (from Fig. C-3, COA DPM)

V_{360} = 0.0804 Ac-ft (from Volume calcs)

A_D = 0.24 Ac

$P_{10day} = 10 - [24.9/(P_{1440})^{1.4}]$

P_{10day} = 3.465134 in

$V_{10day} = V_{360} + A_D(P_{10day} - P_{360})/12$

V_{10day} = 0.1057 Ac-ft => 4604 cu. ft.

BACKYARD PONDS:

P_{360} = 2.2 in (from Fig. C-2, COA DPM)

P_{1440} = 2.6 in (from Fig. C-3, COA DPM)

V_{360} = 0.2067 Ac-ft (from Volume calcs)

9003 sf

A_D = 0.62 Ac

$P_{10day} = 10 - [24.9/(P_{1440})^{1.4}]$

P_{10day} = 3.465134 in

$V_{10day} = V_{360} + A_D(P_{10day} - P_{360})/12$

TOTAL LOTS

V_{10day} = 0.2721 Ac-ft => 11851 cu. ft.

EACH LOT

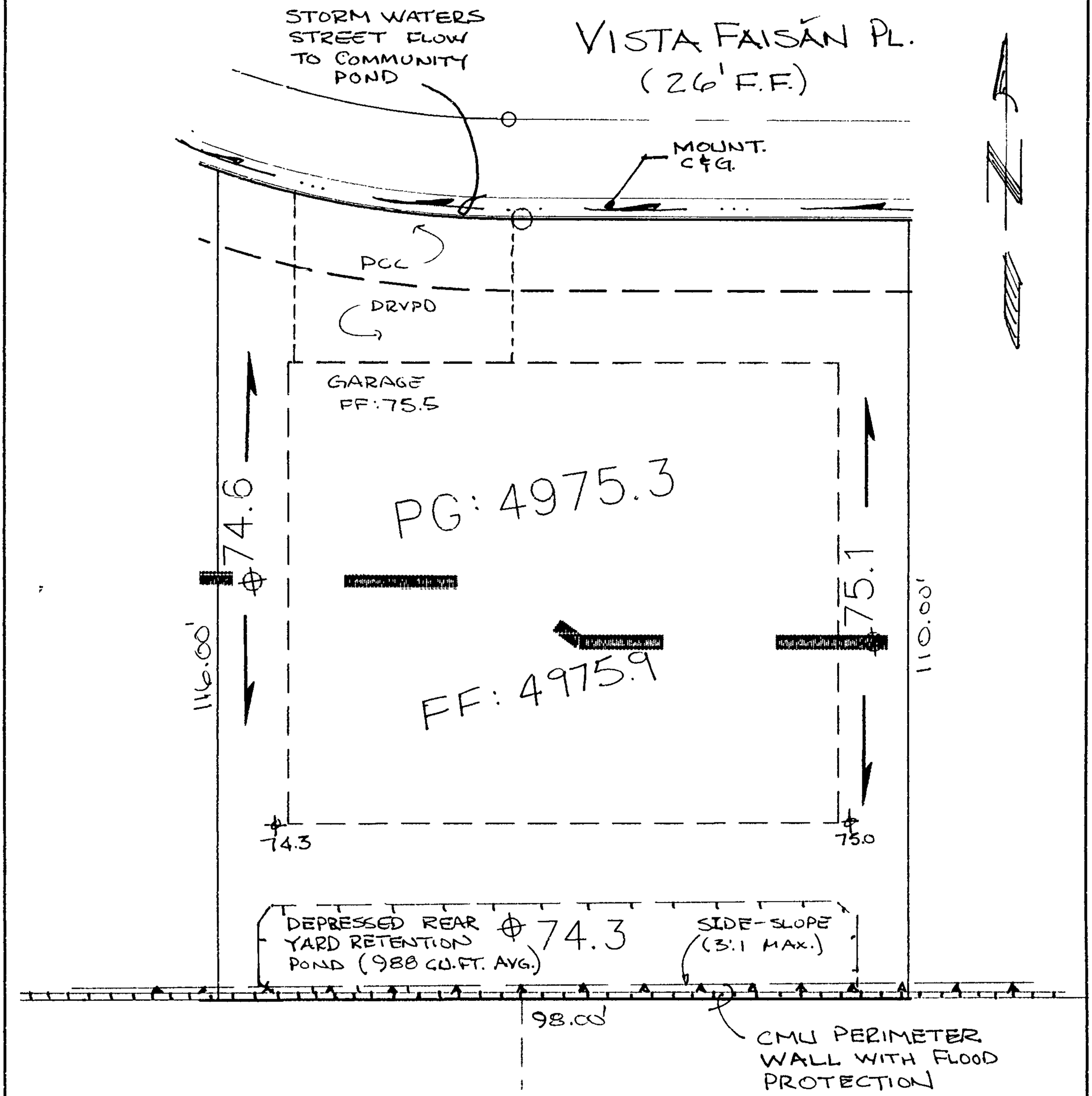
11,851 / 12 lots = 987.58 cu. ft.

POND VOLUMES
TRACT O\S
VISTA FAISÁN
9/4/2003

ELEV	AREA (SF)	VOLUME (CF)	VOLUME (Ac-ft)	SUM VOL (Ac-ft)
4967	2433.32			
		2638.67	0.060575528	
4968	2844.02			0.060575528
		3065.09	0.070364784	
4969	3286.16			0.130940312
		3522.95	0.080875803	
4970	3759.74			0.211816116
		4012.25	0.092108586	
4971	4264.76			0.303924702
		4532.99	0.104063131	
4972	4801.22			0.407987833
		5102.56	0.117138659	
4973	5403.9			0.525126492

POND VOLUMES
LOT 1
VISTA FAISÁN
9/4/03

ELEV	AREA (SF)	VOLUME (CF)	VOLUME (Ac-ft)	SUM VOL (Ac-ft)
4967	376.84			
			0	
4968	580.29			0
		705.35	0.016192608	
4969	830.41			0.016192608
		977.965	0.022450987	
4970	1125.52			0.038643595
		1290.66	0.029629477	
4971	1455.8			0.068273072
		1636.865	0.03757725	
4972	1817.93			0.105850321
		2011.81	0.046184803	
4973	2205.69			0.152035124



TYPICAL LOT DRAINAGE PLAN

1"=20'

1282EXH2.DWGjts 09/04/03

EL 4976

BERNALILLO COUNTY UNINCORPORATED AREAS 350001

ZONE X

CITY OF ALBUQUERQUE 350002

FAIRWAY ROAD

CAMINO

BERNALILLO COUNTY UNINCORPORATED AREAS 350001

FAIRWAY ROAD

SOLAR

LANE

ROAD

BERNALILLO COUNTY UNINCORPORATED AREAS 350001

KENSINGTON DRIVE

FLORETTA ROAD

GRECIAN AVENUE

HARMONY

CAMINO FLORETTA

NUEVE

OCHO

CITY OF ALBUQUERQUE 350002

CALLE

CALLE

ZONE AH (EL 4975)

TRAIL

GUADALUPE

BERNALILLO COUNTY

CITY OF ALBUQUERQUE

SANDIA

CITY OF ALBUQUERQUE 350002

LOS POBLANOS RANCH LANE

ROAD

CORPORATE LIMITS

STREET

GOLIAD

SITE

ADOBE

ZONE AH (EL 4973)

ZONE X

GENE AVENUE

ROAD

GUADALUPE DEL PRADO

ZONE AH (EL 4975)

RIO

TIERRA

DLL

MONTANO ROAD

SANCHEZ ROAD

ZONE X

DOUGLAS

8TH COURT

MACARTHUR

7TH COURT

6TH COURT

ROAD

5TH

DELAMAR

CITY OF ALBUQUERQUE

May 11, 2006

Genevieve Donart, P.E.
Isaacson & Arfman, P.A.
128 Monroe St. NE
Albuquerque, NM 87108

Re: Vista Faisan Subdivision, SIA/Financial Guarantee Release
Engineer's Stamp dated 9-05-03 (F14-D57)
Certification dated 5-08-06

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

Dear Ms. Donart,

Based upon the information provided in your submittal received 5-08-06, the above referenced certification is approved for release of SIA and Financial Guarantee.

If you have any questions, you can contact me at 924-3981.

Sincerely,

Kristal D. Metro, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: Marilyn Maldonado, COA# 747181
File

F-14/D57

DRAINAGE AND TRANSPORTATION INFORMATION SHEET
(REV. 1/28/2003rd)

PROJECT TITLE: Vista Faisan subdivision
ZONE MAP / DRG. FILE #: F14 / D57
DRB #: 1002984 EPC #: 03EPC-01736
WORK ORDER #: 747181

LEGAL DESCRIPTION: [redacted], Vista Faisan Subdivision
CITY ADDRESS:

ENGINEERING FIRM: Isaacson & Arfman, P.A. CONTACT: Genny Donart
ADDRESS: 128 Monroe St. NE PHONE: 268-8828
CITY, STATE: Albuquerque, NM ZIP CODE: 87108

OWNER: MS DEV ONE, LLC CONTACT: Mike Silbert
ADDRESS: 6707 Academy NE, Ste B PHONE:
CITY, STATE: Albuquerque, NM ZIP CODE: 87109

ARCHITECT: CONTACT:
ADDRESS: PHONE:
CITY, STATE: Albuquerque, New Mexico ZIP CODE:

SURVEYOR: Aldrich Land Surveying CONTACT: Tim Aldrich
ADDRESS: PHONE: 884-1990
CITY, STATE: Albuquerque, New Mexico ZIP CODE:

CONTRACTOR: Salls Bros Constr. CONTACT: Charlie Alcorta
ADDRESS: PHONE: 873-8780
CITY, STATE: ZIP CODE:

CPN 747181

CHECK TYPE OF SUBMITTAL:
- ____ DRAINAGE REPORT
- ____ DRAINAGE PLAN 1ST *REQUIRES TCL or equal*
- ____ DRAINAGE PLAN RESUBMITTAL
- ____ CONCEPTUAL GRADING & DRAINAGE PLAN
- ____ GRADING PLAN
- ____ EROSION CONTROL PLAN
- X ENGINEER'S CERTIFICATION (HYDROLOGY)
- ____ CLOMR / LOMR
- ____ TRAFFIC CIRCULATION LAYOUT (TCL)
- ____ ENGINEER'S CERTIFICATION (TCL)
- ____ ENGINEER'S CERTIFICATION (DRB APPR, SITE PLAN)
- ____ OTHER

CHECK TYPE OF APPROVAL SOUGHT:
- X SIA / FINANCIAL GUARANTEE RELEASE
- ____ PRELIMINARY PLAT APPROVAL
- ____ S. DEV. PLAN FOR SUB'D APPROVAL
- ____ S. DEV. PLAN FOR BLDG. PERMIT APPR.
- ____ SECTOR PLAN APPROVAL
- ____ FINAL PLAT APPROVAL
- ____ FOUNDATION PERMIT APPROVAL
- ____ BUILDING PERMIT APPROVAL
- ____ CERTIFICATE OF OCCUPANCY (PERM)
- ____ CERTIFICATE OF OCCUPANCY (TEMP)
- ____ GRADING PERMIT APPROVAL
- ____ PAVING PERMIT APPROVAL
- ____ WORK ORDER APPROVAL
- ____ OTHER

WAS A PRE-DESIGN CONFERENCE ATTENDED:
- ____ YES
- X NO
- ____ COPY PROVIDED

RECEIVED
MAY 08 2006
HYDROLOGY SECTION

DATE SUBMITTED: Monday, May 08, 2006 BY:
Isaacson & Arfman, P.A.

Requests for approvals of Site Development Plans and / or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. Conceptual Grading and Drainage Plan: Required for approval of Site Development Plans greater than five acres and Sector Plans
2. Drainage Plans: Required for building permits, grading permits, paving permits and site plans less than five acres
3. Drainage Report: Required for subdivisions containing more than ten (10) lots or constituting five acres or more.