# CITY OF ALBUQUERQUE



March 17, 2006

Diane Hoelzer, PE Mark Goodwin & Associates P.O. Box 90606, Albuquerque, NM 87199

Re: Stonebrooke Estates Pond Reclamation and Grading Plan Engineer's Stamp dated 2-9-06, (C19/D3)

Dear Ms. Hoelzer,

P.O. Box 1293

Based upon the information provided in your submittal dated 2-9-06, the above referenced plan is approved for Preliminary Plat action by the DRB. It is also approved for an SO#19 Permit.

Albuquerque

Prior to Final Plat signoff by the City Engineer, the following comments must be addressed.

New Mexico 87103

Please submit the Engineer's Certification of your new grading plan.

• Written acceptance of the storm drain work by the Storm Drain Maintenance section. Contact Ed Elwell at 235-0844.

www.cabq.gov

If you have any questions, please contact me at 924-3986.

Sincerely,

Budley d. Binglan
Bradley L. Bingham, PE

Principal Engineer, Planning Dept.

Development and Building Services

C: Ed Elwell, DMD file



### City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

May 8, 2001

Diane Holzer, P.E. Mark Goodwin & Associates P.O. Box 90606 Albuquerque, New Mexico 87199

RE: Grading and Drainage Certification

StoneBrook Estates (C-19/D3)

Submitted for Release of Financial Guaranty

Engineers Stamp dated 2/8/2000

Engineer's Certification dated 5/7/2001

Dear Ms. Holzer:

Based upon the information provided in your submittal dated May 7, 2001, the above referenced plan is adequate to satisfy the Grading and Drainage Certification requirements for Release of Financial Guaranty.

If you have any questions, please call me at 924-3981.

Sincerely,

Teresa A. Martin

Hydrology Plan Checker

Public Works Department

C: Arlene Portillo, PWD – #627281
Tile



# City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

February 9, 2000

Diane Hoelzer, P.E.
Mark Goodwin & Associates
P.O. Box 90606
Albuquerque, New Mexico 87199

RE: Revised Grading and Drainage Plan for StoneBrooke Estates (C19/D3) Engineer's Stamp Dated 2/8/00.

Dear Ms. Hoelzer:

Based on the information provided, the above referenced revised Grading and Drainage plan for StoneBrooke Estates Subdivision, dated February 8, 2000 is approved.

Please provide this plan to the DRB for their approval so that this may be the official grading plan to be used for certification purposes.

If you have any questions, or if I may be of further assistance to you, please call me at 924-3982.

Sincerely,

Susan M. Calongne, P.E.

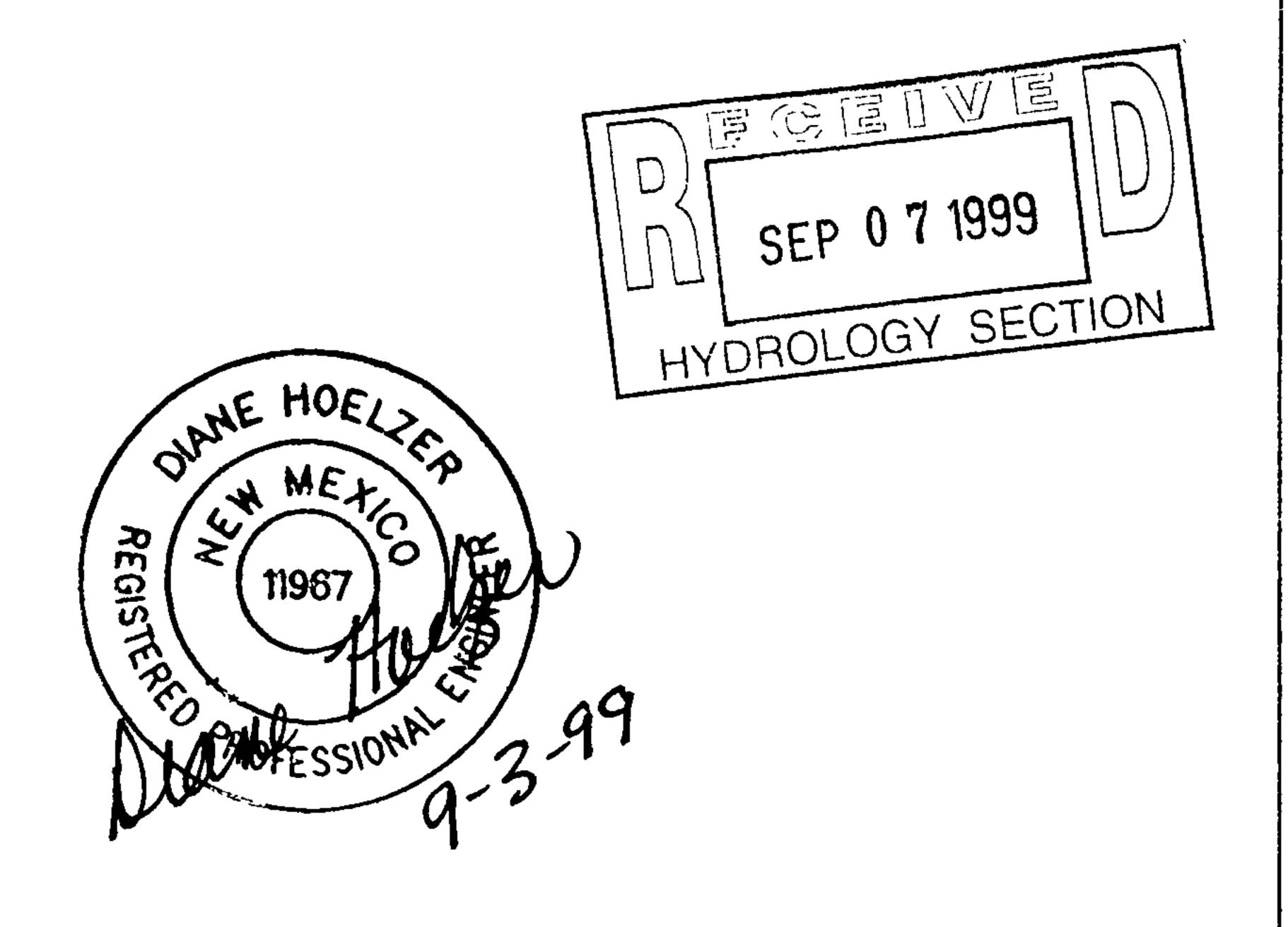
City/County Floodplain Administrator

c: Randy Schmille, Schmille Construction Co.

DRB #99-143

File

# DRAINAGE REPORT for STONEBROOKE ESTATES (LOUISIANA AND EAGLE ROCK AVENUE)



#### MARK GOODWIN & ASSOCIATES, PA DLH

SEPTEMBER 1999

#### I. LOCATION AND DESCRIPTION

The project site is located immediately east of the recently developed Eagle Rock Estates Unit 2 subdivision and is north of Quail Springs subdivision. The site is comprised of approximately 8 acres and is bounded by vacant land to the east and Eagle Rock avenue and Oakland avenue to the north and south, respectively.

#### II. DRAINAGE DESIGN CRITERIA AND PREVIOUS REPORTS

The design criteria used in this report was in accordance with Section 22.2 Hydrology of the Development Process Manual, Volume 2, Design Criteria, January 1993 edition. The 100 year - 6 hour storm event was analyzed to determine street capacities and sizing the internal storm drain system using P(1hr) = 2.15" and P(6 hr) = 2.50". The land treatment values were Treatment D = 57, Treatment C = 21.5 and Treatment D = 21.5.

The site is affected by three previously approved drainage reports: Eagle Rock Estates Unit 1 and Unit 2, Quail Springs Subdivision and the North Albuquerque Acres Master Drainage Plan (RTI, Inc.).

#### III. EXISTING DRAINAGE CONDITIONS

Under existing drainage conditions, runoff from the project site flows in a general westward direction toward Eagle Rock Estates Unit 2. Ultimately existing flows are diverted to either Oakland Avenue to the south or Eagle Rock Avenue to the north. The "existing conditions" peak discharge was determined to be 14.4 cfs.

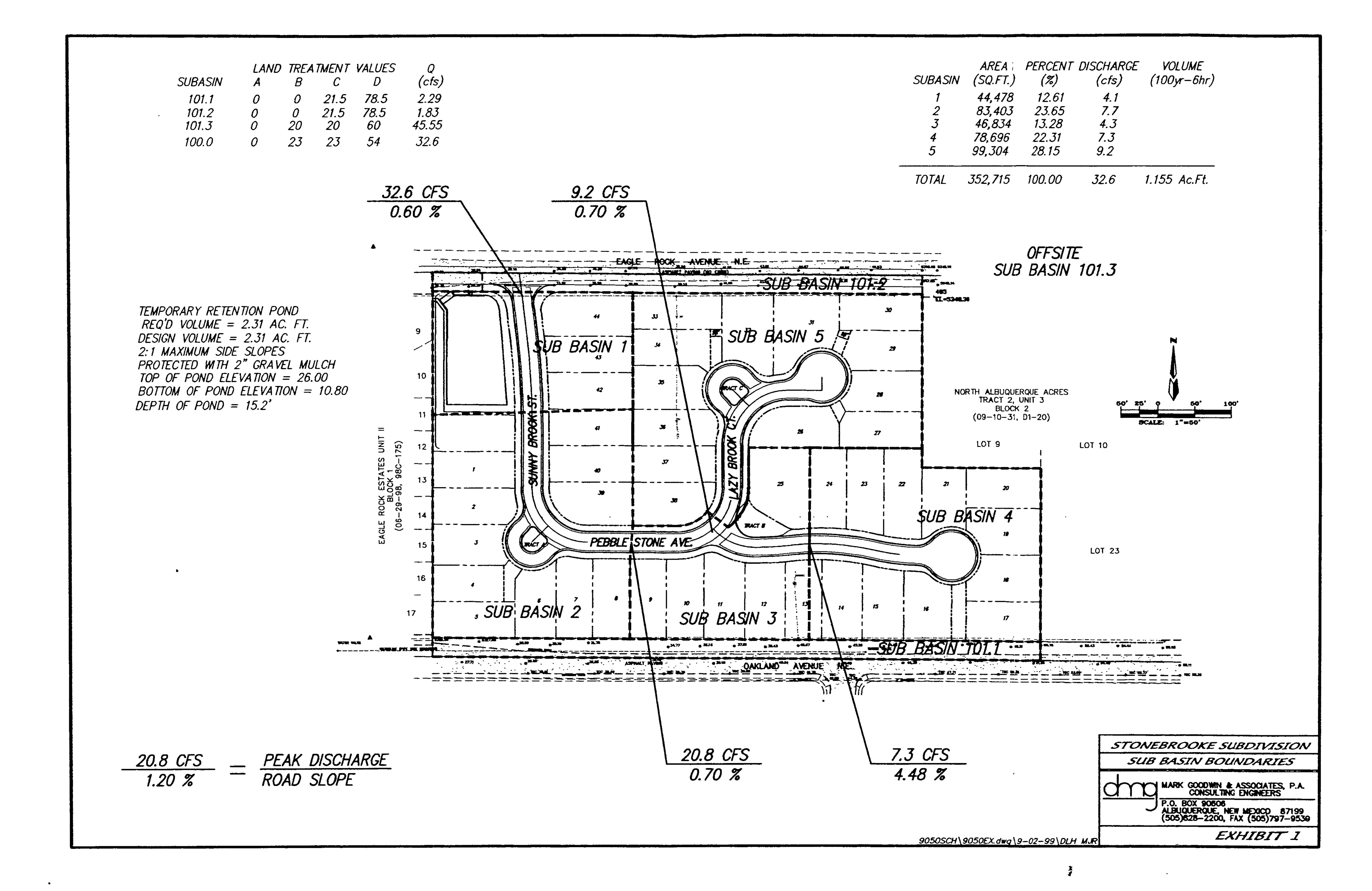
The Quail Springs drainage report calculated future flows for all the upstream lots adjacent to Oakland and designed these flows to be intercepted by their storm drain in Oakland Avenue (refer to Exhibit 2). However, it appears that the storm drain was undersized to intercept all these flows and some of the inlets shown on the approved construction plans were not constructed. In addition, the inlet interception calculations used the energy grade line elevation to determine the amount of runoff intercepted which tends to overestimate the amount of runoff actually intercepted. As a consequence, it does not appear that the developed flows from Stonebrooke Estates can be intercepted by the Oakland Storm Drain as master planned. The developed flow will have to be intercepted by the Eagle Rock Storm Drain to the north.

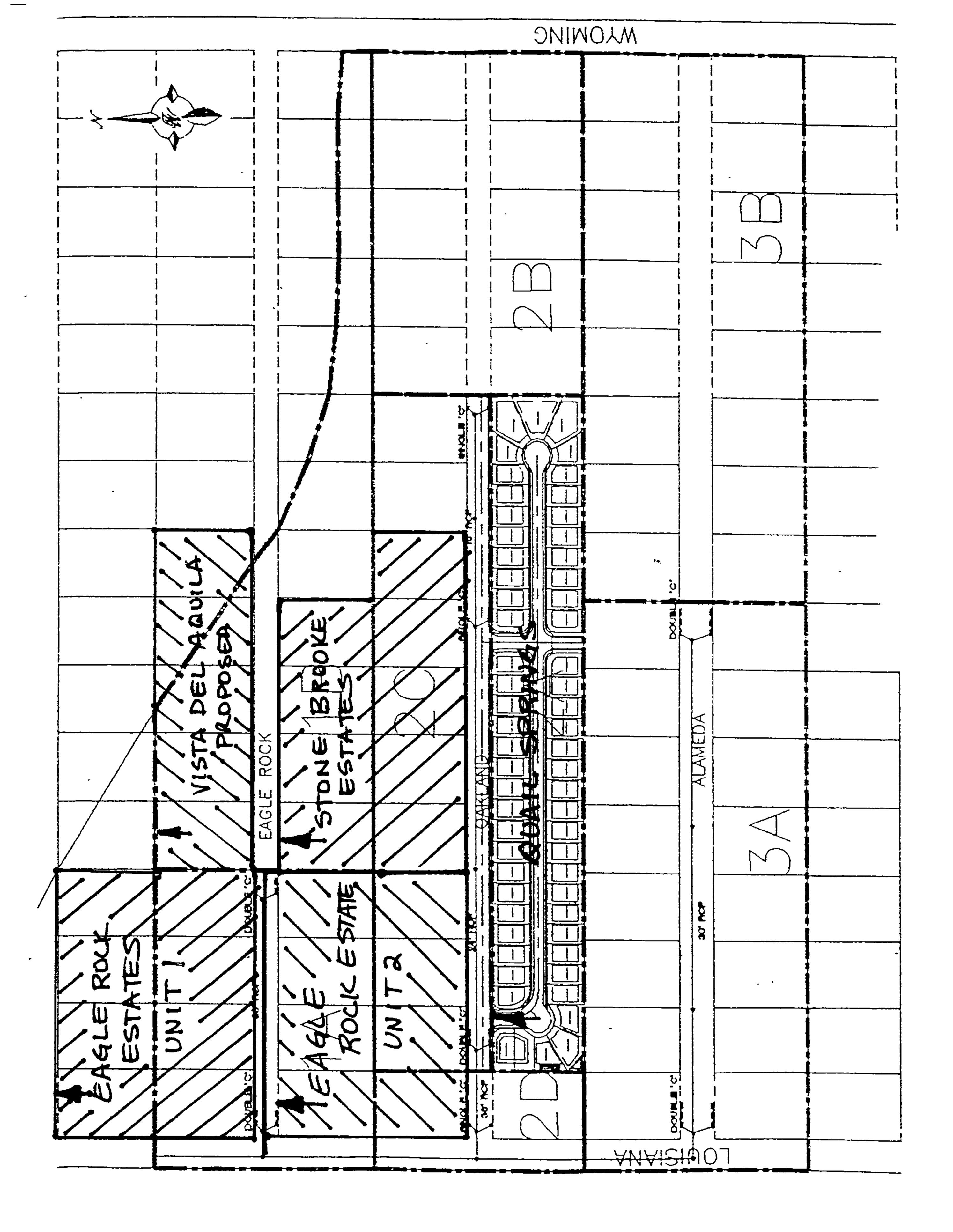
The Eagle Rock Estates drainage report calculated future flows for all the upstream lots adjacent to Eagle Rock Avenue and sized the storm drain to handle these flows using the NAA Master Drainage Plan as a guide. As presently designed the Eagle Rock Storm Drain does not have capacity for the additional drainage from

the 5 lots adjacent to Oakland Avenue that was supposed to be a part of the Oakland Avenue storm drain system. However, the proposed drainage for the Villa Del Aguila subdivision which comprises 5 lots to the north of Eagle Rock Avenue proposes to drain their site to the north to a temporary retention pond located within an AMAFCA drainage easement. The details of the agreement are in the process of being finalized. Their drainage plan will free up enough capacity in the Eagle Rock Storm Drain to handle the additional runoff from the 5 lots in Stonebrooke subdivision adjacent to Oakland Avenue.

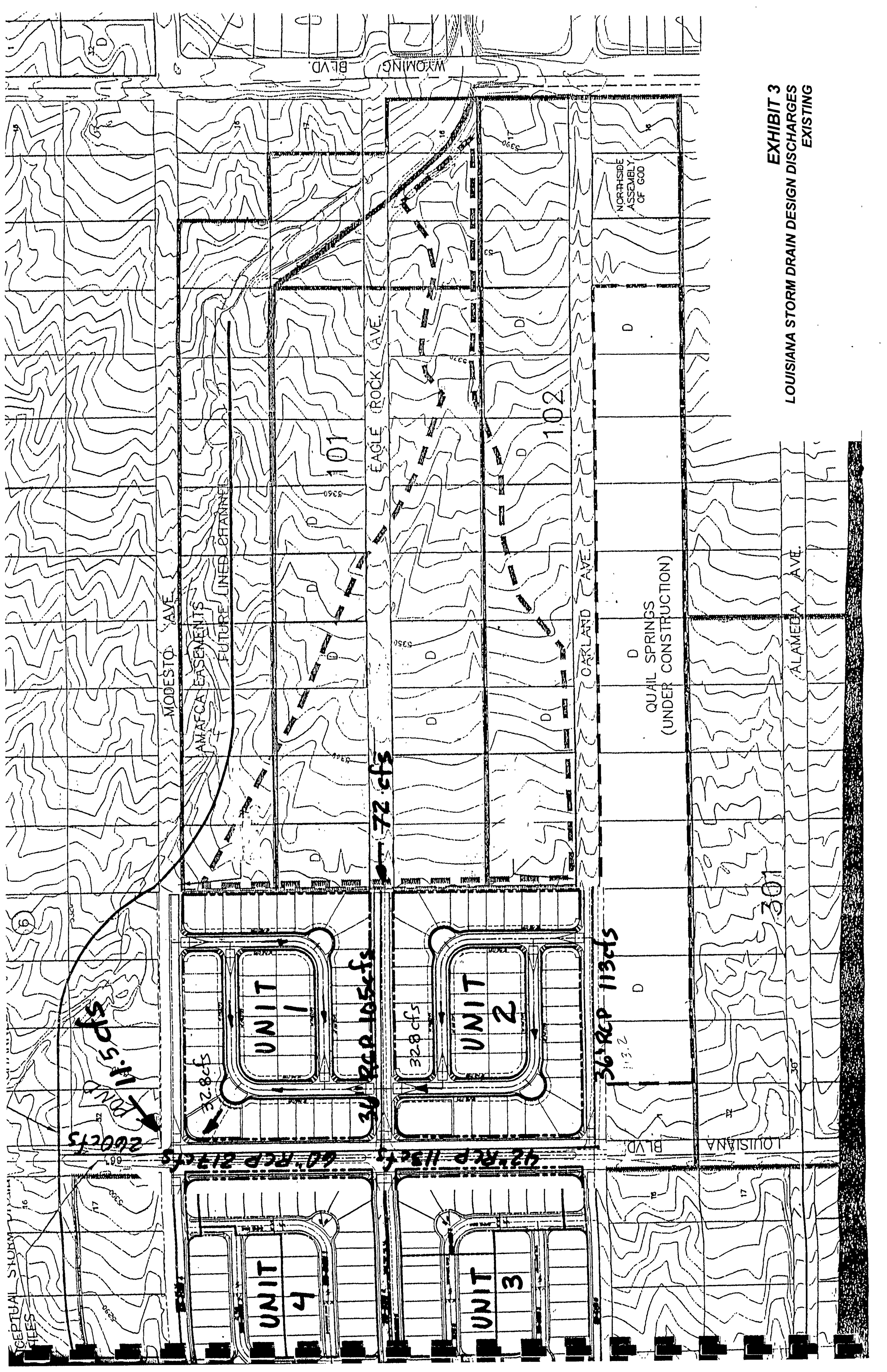
#### IV. DEVELOPED DRAINAGE CONDITIONS

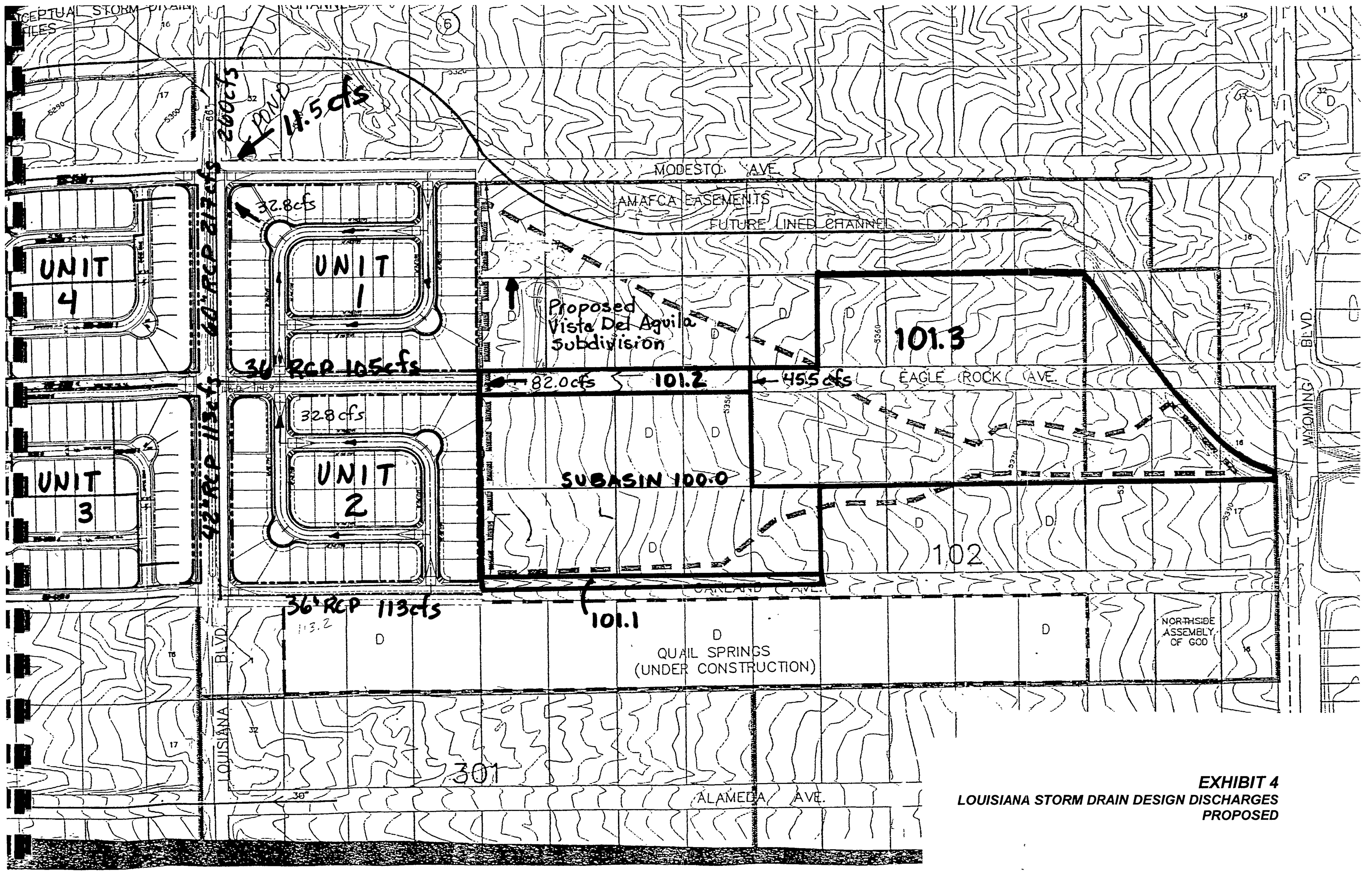
The 100 year "developed conditions" peak discharge from the site was determined to be 32.6 cfs. These flows will be conveyed through street flow to a series of inlets located on Sunny Brook Street at Eagle Rock Avenue. Until the downstream Louisiana storm drain is connected to the proposed La Cueva channel, all onsite flows will be temporary diverted to a retention pond located at the entrance to the subdivision. The Louisiana Storm Drain has been re-analyzed to make sure the increased flows in the Eagle Rock Avenue can be accommodated (Appendix C). Exhibit 3 shows the discharges used from the Eagle Rock Estates Drainage analysis. Exhibit 4 shows the revised discharges used based on the revised drainage basin boundaries and design discharges. The retention pond has been sized to retain the 100 year 10 day runoff volume determined for onsite flows and developed flows on half the street sectino in Eagle Rock and Oakland Avenues, adjacent to the project site.

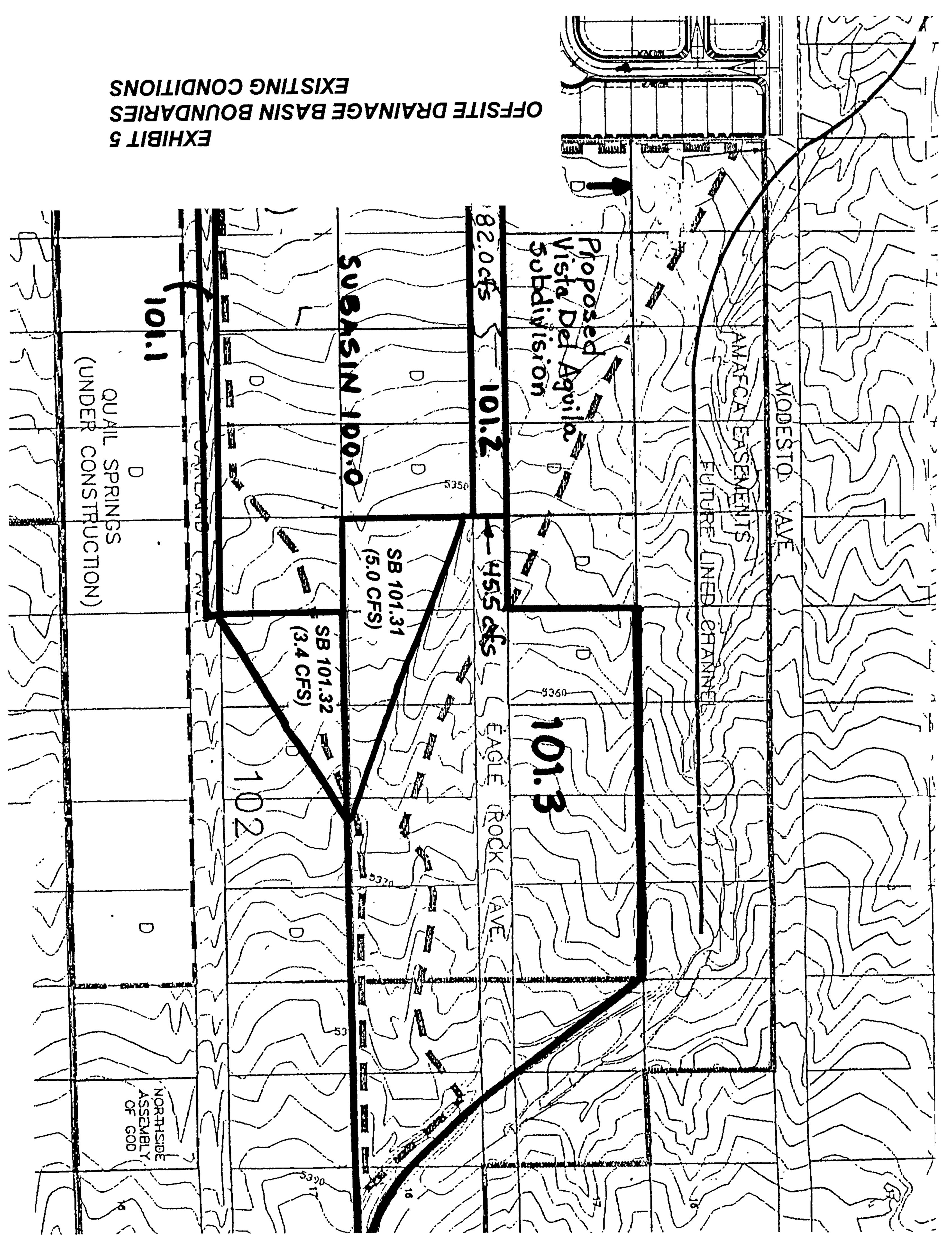




REVISED SUB BASIN BOUNDARIES FOR N. A. A. MASTER DRAINAGE PLAN EXHIBIT 2







#### STONE BROOK ESTATES

TABLE 1 SUMMARY OF STREET CAPACITY AND INLET CALCULATIONS

LOCATION	CURB	WIDTH ft.	SLOPE %	Q cfs	DEPTH ft	EG ft	Q INLE T cfs	#/TYPE of INLETS	REMAIN Q (cfs)
Pebble Stone Place	МТВ	26' FF	4.48	11.1	.23	.51	<b>=</b> •	_	-
Lazy Brook Court	MTB	26' FF	0.7	9.2	.29	.37	-	_	_
Pebble Stone Place	STD	28' FF	0.7	20.8	.48	.60			
Sunny Brook Street	STD	28' FF	0.6	32.6	.57	.74	8.0	2DBL A	16.6
Sunny Brook Street	STD	28' FF	0.6	16.6	.45	.55	4.0	2SGL C	8.6
Sunny Brook Street	STD	28' FF	0.6	8.6	.38	.43	2.7	2SGL C	3.2
Eagle Rock Avenue	STD	36'FF	3.23	49.43	.49	1.03	8.6	1SNGA	32.23
Eagle Rock Avenue	STD	36'FF	3.23	32.23	.44	.82	8.8	2DBLC	14.63
Eagle Rock Avenue	STD	36'FF	3.23	14.63	.35	.61	5.3	2DBLC	4.03

MTB = Mountable Curb STD = Standard Curb

ASTONBRK\STRCAP.STO 8-31-99 AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994 INPUT FILE = stoneb.dat

RUN DATE (MON/DAY/YR) =09/03/1999 USER NO. = M\_GOODWN.I01

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE =	
START										TIME=	. 00
	YPE= 1					a const				RAIN6=	2.500
COMPUTE NM	HYD 100.20	_	1	. 01265	14.35	. 421	. 62419	1.500	1.772	PER IMP=	.00
COMPUTE NM	HYD 100.00	_	1	.01265	32.56 de	71.155	1.71239	1.500	4.021	PER IMP=	54.00
COMPUTE NM	HYD 100.10	-	1	.01265	33.20 N	AA: 1.192	1.76687	1.500	4.100	PER IMP=	60.00
COMPUTE NM	HYD 100.11	_	1	.00028 ,	. 64-ba	ch, .020	1.33190	1.500	3.568	PER IMP=	7.00
COMPUTE NM	HYD 101.10	-	1	.00077 定人	1a/2-2.29	.084	2.05115	1.500	4.642	PER IMP=	78.50
COMPUTE NM	HYD 101.11	-	1	.01811	54.880as	セフ 2.059	2.13162	1.500	4.735	PER IMP=	86.50
COMPUTE NM	HYD 101.20		1	.00062	1.83	.067	2.05115	1.500	4.653	PER IMP=	78.50
COMPUTE NM	HYD 101.30	_	1	.01719	45.55	1.636	1.78478	1.500	4.141	PER IMP=	60.00
COMPUTE NM	HYD 101.31		1	.00445	5.05	. 148	. 62419	1.500	1.774	PER IMP=	.00
COMPUTE NM I FINISH	HYD 101.32	-	1	.00302	3.43	. 101	. <i>62419</i>	1.500	1.775	PER IMP=	.00

# <u>M</u>

# D. Mark Goodwin & Associates, P.A. Consulting Engineers

P.O. BOX 90606, ALBUQUERQUE, NM 87199 (505) 828-2200 FAX 797-9539 e-mail: dmg@swcp.com

PROJECT_	Stonebrook
SUBJECT_	Retention Pord
BY	DLH DATE 8-31 99
CHECKED_	DATE
	SHEET OF

Pond Volume Calculations

Reg'd Retention Volume = 10 day storm

VIODAY = V360 + 40 (PRODAY - P360)

P360 = 2.5"

P10 = 419"

AD = .54(8.1 ac.) + .785(.39 ac) + .785(.49 ac)

(Onsite) (Eagle Rock) (Oakland)

AD = 5.064

VIODAY = 1.155+ .084+ .067+ 5.064 (4.9-2.5) = 2.31AcF+

1	
<u> </u>	

# D. Mark Goodwin & Associates, P.A. Consulting Engineers

P.O. BOX 90606, ALBUQUERQUE, NM 87199 (505) 828-2200 FAX 797-9539 e-mail: dmg@swcp.com

PROJECT	Stonebrook
SUBJECT	Oakland Ave
BY	DLH DATE 9-2-99
	DATE
	SHEETOF

Oakland Ave - curb cut calculations

Subbasin 102 (portion and Ocklend Road)

10 lots (234×165) = 386,100

Oakland Ave.

12(165)(60) = 118,800 TOTAL AREA COAKLAND)

Impervious Area

14(165)4 = 9240 (SDWK)

5 (165) 36 = 29700 (PAV-Sluts)

7(165) 25 = 28,875 (PAV-710ts)

67,815 Tr. D

386100+(118,800-67815) = 437,085 SF

TOTAL AREA = 386100+118800 = 504,900 SF = .01811 sq.mi

Tr. A = 437,085 - 86.5%  $\frac{504,400}{504,400}$ 

 $Tr. D = \frac{67815}{504900} = 13.5\%$ 

Q100 = 54.88 cfs

36' FF w1 2.0% crown D= 0.51'

Assume Broadcrosted Weir (Divert 229cfs developed flows)  $Q = CH^{1/S} \quad Z.29cfs = 3.02(.51)^{1.5}L$  L = Z.0 ft.

#### D. Mark Goodwin & Associates, P.A. Consulting Engineers

P.O. BOX 90606, ALBUQUERQUE, NM 87199 FAX 797-9539 (505) 828-2200

e-mail: dmg@swcp.com

PROJECT	Stonebrooke
SUBJECT	Hydrology Calcs DCH DATE 5-17-99
BY	DCH DATE 5-17-99
CHECKED	DATE
	SHEET OF

$$n = \frac{444}{8.1} = 5.5$$

Lanci Treatment 
$$D = 7/(5.5)^2 + 5(5.5) = 53.2 \cong 54$$
  
 $C = 23.0$ 

B = 23.0

9 acres = ,01265259.mi

PROJECT Stonebrooke Estate
SUBJECT Storm Drain Schamatic D. Mark Goodwin & Associates, P.A. Consulting Engineers DATE 7-23-99 BY\_ P.O. BOX 90606, ALBUQUERQUE, NM 87199 DATE CHECKED\_ FAX 797-9539 (505) 828-2200 SHEET\_\_\_\_ e-mail: dmg@swcp.com "Zh ,,09 "99 "01 ローフ 547081 547542 547882 547942 17.28 C.F. 'H.72'59/7 17552 (pownssu) ANAISIUOJ