

## **Cherne, Curtis**

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**From:** Cherne, Curtis  
**Sent:** Monday, November 25, 2013 3:46 PM  
**To:** Wolfe, Bryan K.  
**Subject:** Don Hoech- pond at Mendocino

Bryan,

I dug deeper into this and therefore did not have to contact Ron Bohannon.

A storm drain is required that runs north into the La Cueva Arroyo before the pond can be reclaimed. It is still a temporary pond.

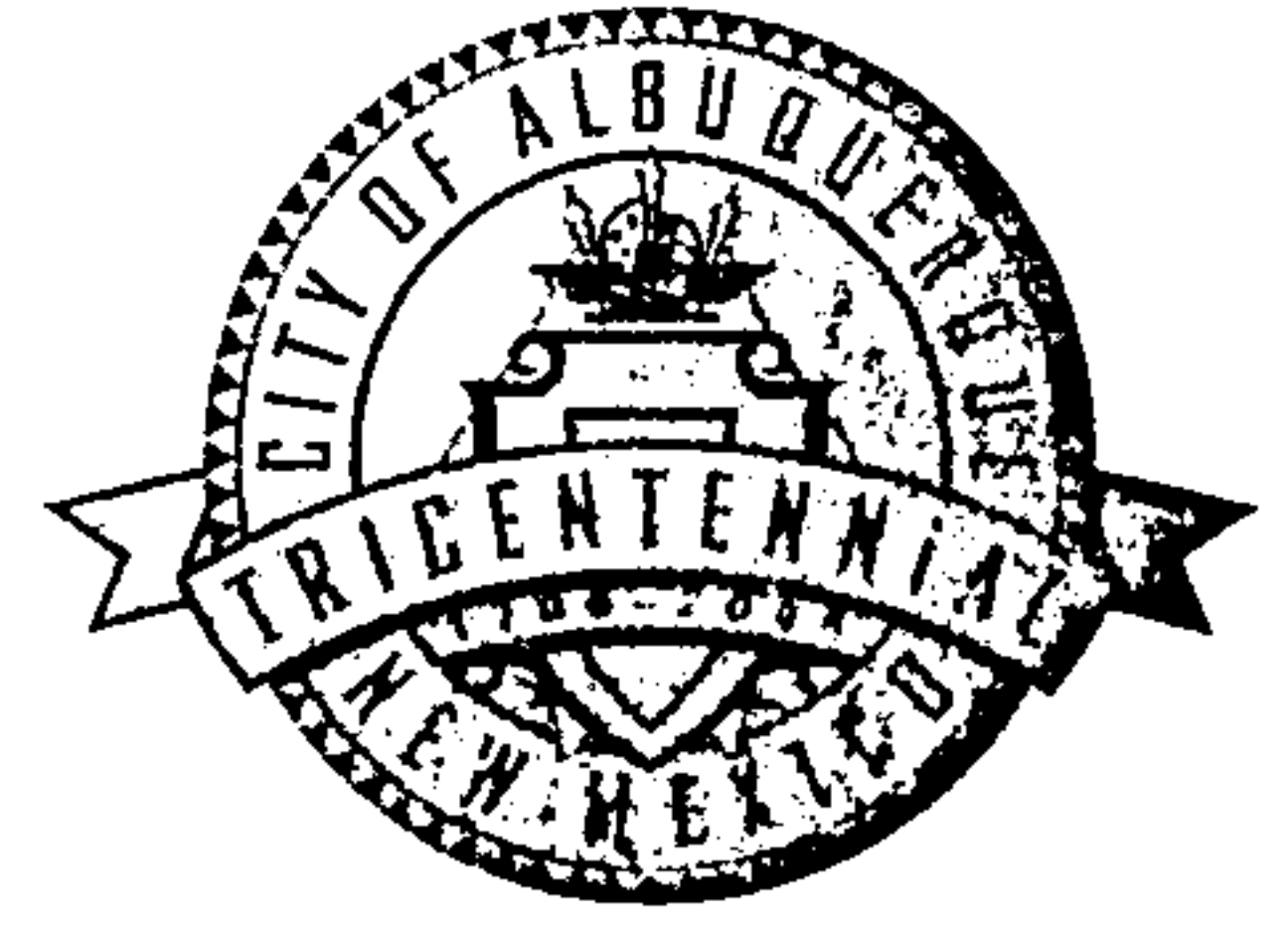
Addressing the memo from Mr. Hoech:

1. I do not know where he got the idea that as soon as a determination or vacation of Signal Ave... the permanent solution for managing developed flows would be constructed. We are waiting on a site to develop north of Signal Ave to build the permanent solution, which is usual for this neck of the woods.
2. Per the drainage ordinance, the developer is to maintain temporary facilities. There really isn't anything to rectify. If Mr. Hoech wishes to make a deal with storm drain maintenance, he should contact Wilfred Gallegos. Wilfred will most likely not wish to maintain the pond.

I will put the agreement on your desk with a map showing the approximate location of the proposed storm drain that is required to reclaim the pond.

Curtis

# CITY OF ALBUQUERQUE



August 29, 2006

Mr. Ron Bohannon, PE  
**TIERRA WEST, LLC**  
8509 Jefferson St. NE  
Albuquerque, NM 87113

**RE: DESERT VISTA SUBDIVISION, (C-20/D026)**  
**Engineers Certification for Release of Financial Guaranty**  
**Engineers Stamp dated 10/21/2004**  
**Engineers Certification dated 08/26/2006**

Dear Ron:

Based upon the information provided in your Engineer's Certification Submittal dated 08/28/2006, the above referenced plan is adequate to satisfy the Grading and Drainage Certification for Release of Financial Guaranty.

P.O. Box 1293

If you have any questions, you can contact me at 924-3982

Albuquerque

New Mexico 87103

[www.cabq.gov](http://www.cabq.gov)

Sincerely,

Arlene V. Portillo  
Plan Checker, Planning Dept.- Hydrology  
Development and Building Services

C: Marilyn Maldonado, COA# 750381  
File

# DRAINAGE REPORT

For

## Desert Vista Subdivision

Prepared by

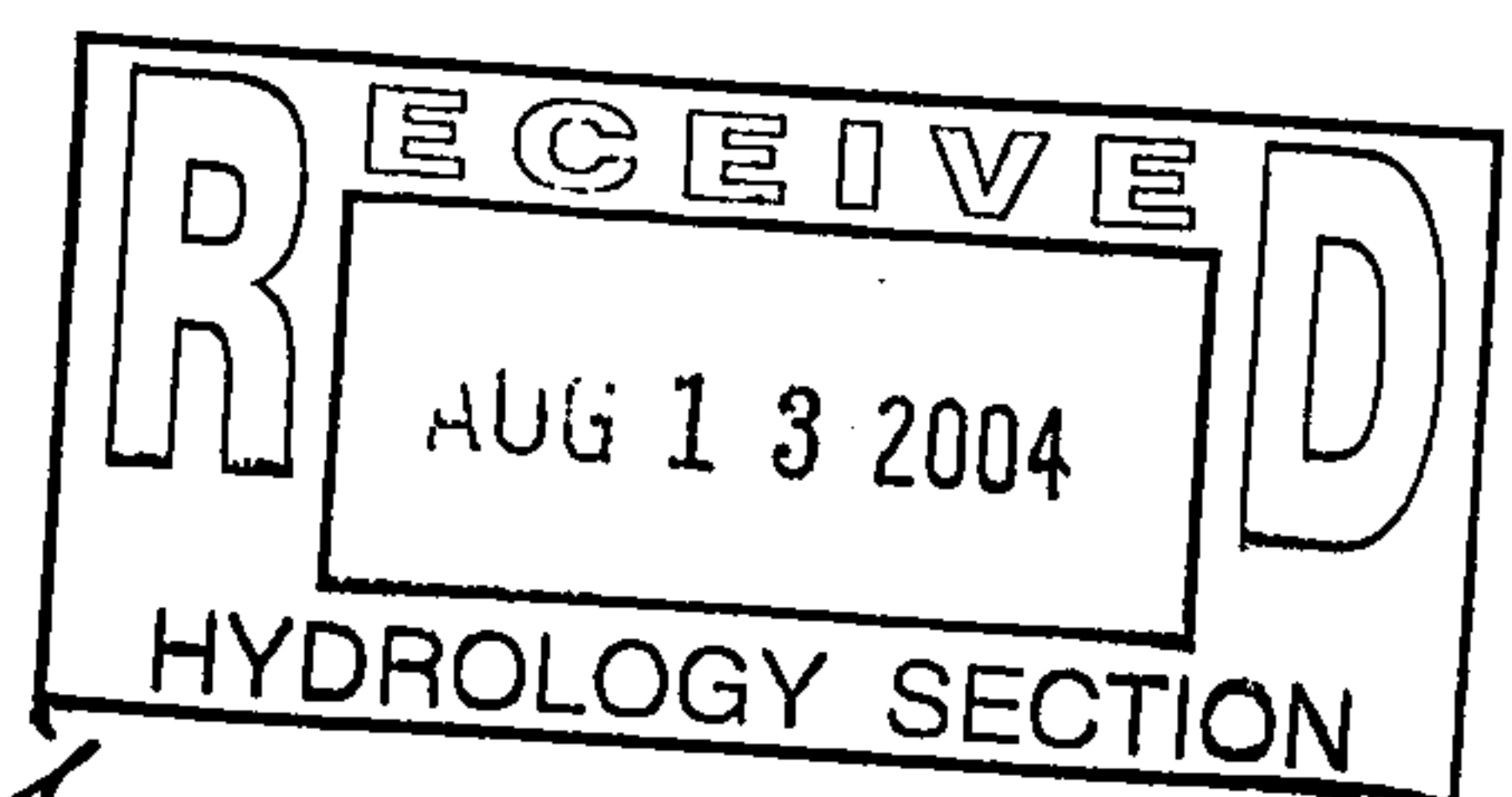
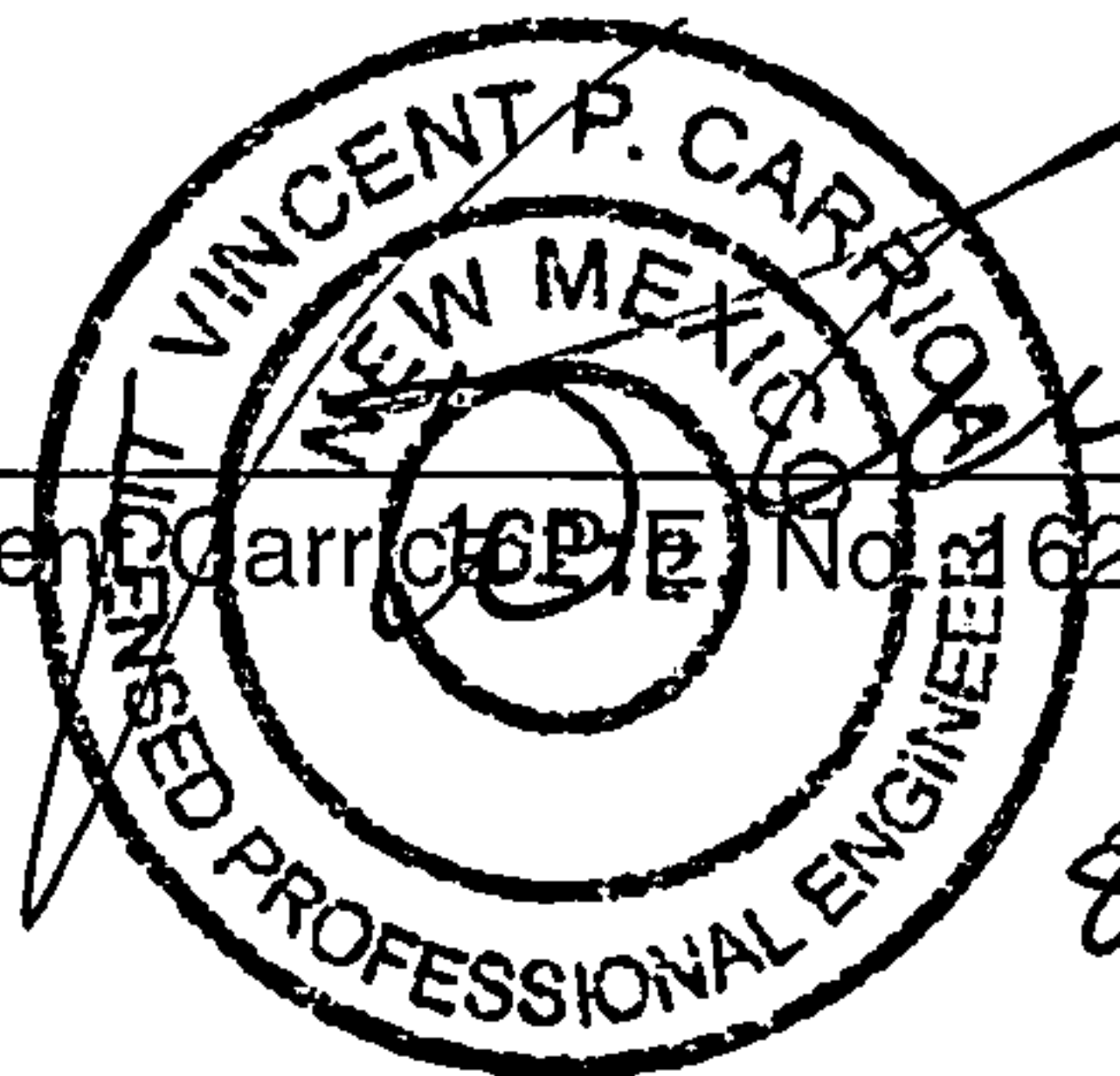
Tierra West, LLC  
8509 Jefferson NE  
Albuquerque, New Mexico 87113

Prepared for

DR Horton  
4400 Alameda NE, Suite B  
Albuquerque, New Mexico 87113

August 12, 2004

Vincent Garrido, P.E. No. 16212



8-12-04

## **LOCATION:**

Desert Vista is a proposed sixtyseven (67) lot, single-family subdivision. The 14.5-acre site is located in northeast Albuquerque immediately east of Ventura Boulevard, between Signal Avenue and Corona Avenue. It encompasses lots 9 through 20 of block 5 and lots 15 through 18 of block 6, all within Tract 3, Unit 3 of the North Albuquerque Acres. The area is currently zoned R-D and is proposed to be limited to 5 DU's per acre under the proposed La Cueva Sector Plan. Previously, a portion of Wilshire Avenue was vacated under Vacation No.V-93-1. The remaining portion between the Vineyard Estates Unit IIIA and Ventura Boulevard will be vacated as a part of this project. The purpose of this report is to provide the drainage analysis and management plan for the subdivision.

## **EXISTING DRAINAGE CONDITIONS:**

The site is currently undeveloped and features small natural arroyos which carry runoff generated on site in a generally east to west direction. Runoff from an off-site basin, designated on the attached basin map as OS-1, enters the subject site from the east via an existing battery of four 24" corrugated metal culverts. This off-site runoff is channeled through the site in a number of small natural arroyos. As the properties to the east of the site have been developed, the area of the basin contributing to the volume of off-site runoff has been decreased to approximately 9.19 acres. The peak flow rate of runoff generated within basin OS-1 was calculated to be 26.3 cfs in a 100 year, 6-hour storm event, under existing conditions. The off-site flows cross Ventura Boulevard and join on site flows generated by the portion of the site bounded by Ventura to the east, Signal to the north and Wilshire to the south. The combined flow is conveyed to a temporary detention pond constructed as part of the Vineyard Estates Unit III A (drainage file C20-D3). The detention pond was designed and constructed with an outfall, which controls the outflow, to a peak rate of 10.5 cfs.

Runoff generated by the portion of the site bounded by Ventura to the east, Wilshire to the north and Corona to the south, currently drains to Corona. The flows are then carried west in Corona to Mendocino Drive. At this point the runoff enters the storm drain inlets and rundowns constructed to convey flows to the storm drain system in place within Vineyard Estates Unit I.



### **FIRM MAP AND SOIL CONDITIONS:**

The site is located on FIRM Map 350001 as shown on the attached excerpt. The map shows that the site does not lie within any 100-year flood plains. It does, however, lie adjacent to Flood Hazard Zone AO, which is shown on the attached applicable section of panel 141 of 825 of the National Flood Insurance Rate Maps, Bernalillo County, New Mexico and incorporated areas, dated September 20, 1996. The map indicates a flood hazard depth of 1 foot for Zone AO. Signal Avenue separates the proposed subdivision from Zone AO. Signal Avenue was elevated to act as a training dike. The Signal Avenue dike was constructed through this area to prevent the La Cueva Arroyo from avulsing to the North Domingo Baca Arroyo. This dike was constructed by and is maintained by the Albuquerque Metropolitan Area Flood Control Authority (AMAFCA).

The site contains one soil type as designated by the Soil Conservation Service Soil Survey of Bernalillo County. The soil is an Embudo – Tijeras complex and is a mixture of an Embudo gravelly fine loam and a Tijeras gravelly fine sandy loam. The soil has a medium runoff and the hazard of water erosion is moderate.

### **ONSITE DRAINAGE MANAGEMENT PLAN:**

The peak runoff from the single off-site basin (OS-1) east of the site is calculated to be 26 cfs for a 100 year, 6 hour storm event under developed conditions. A storm drain constructed within Ventura Boulevard currently terminates approximately half way between Corona and Wilshire. This 36" diameter storm drain will be extended north to intercept runoff generated within basin OS1 as well as runoff generated within the ultimate construction of the full Ventura Boulevard roadway section between Signal and Corona. This storm drain will also provide a stub to the east in Wilshire to provide conveyance for a future storm drain in Wilshire that will intercept flows from an upland basin that currently drains to a detention pond in Vineyard Estates I. The upland basin is located in the County and is programmed to develop at a maximum of 1 DU per acre. The full development of this

basin can only occur upon construction of the master plan storm drain in Holbrook to intercept flows from the east.

The Ventura storm drain will direct run off from the upland basins south to the North Domingo Baca Arroyo. This is consistent with the drainage measures outlined in the North Albuquerque Acres Master Drainage plan prepared by Resource Technology, Inc (October 1998) and adopted by both the City of Albuquerque and AMAFCA. The plan labels this storm drain as SD-29. Interim ponds constructed downstream of SD-29 were used to control the developed area runoff until future downstream improvements to the North Domingo Baca Arroyo. These improvements have been constructed and the interim pond adjacent to Ventura, down stream of this site has been reclaimed. The offsite basin OS-C1 (church property) located west of the site between Wilshire and Corona will continue to follow existing drainage patterns and will drain to Corona.

The site has been divided into 5 on-site basins labeled A through E and P1. Basin P1 is an existing temporary detention pond. Discharge from Basin B will be conveyed to Vallejo Place located immediately down stream in Vineyard Estates Unit III A. The rate of discharge from this basin will be 14 cfs. The outfall will carry the runoff to a rundown located in Mendocino Road. This rundown carries flows to the intersection of Sonoma Valley road and Napa Valley Road. The Vineyard Estates Subdivision Master Drainage Plan (C20-D3) designates the design street flow for Napa Valley Road to be 77.5 cfs. The proposed discharge of 14 cfs from Desert Vista Subdivision will result in a peak design flow of 76.5 cfs. The design flows in Napa Valley will not exceed this downstream constraint. From Napa Valley the runoff is carried in the street to a series of existing drop inlets where a portion of the developed flows are carried in a storm drain with the balance remaining in Napa Valley Road. The flows are conveyed to interim detention ponds and ultimately in to the Domingo Baca Arroyo. The existing interim pond constructed as part of Vineyard Estates Unit III will be reclaimed. A drainage easement and utility easement will be retained for use by this development. The drainage easement includes allowing 14 cfs programmed to enter the down stream storm drain system.

Basin C will drain to Corona Avenue where the runoff will be conveyed in the roadway to a low point in Mendocino Drive and will joint flows mentioned above in route to the Domingo Baca Arroyo at

Barstow. Flows from Basin A will be divided to allow a maximum discharge of 10 cfs to continue down Hampton Avenue in the adjacent Carrington Subdivision. This equals the allowable flow rate designated in the Carrington Subdivision drainage report for flows from the east. The remaining flows in Basin A will be conveyed to an existing storm drain detention pond at Mendocino Drive. This pond currently is programmed to discharge a maximum flow rate of 2 cfs to an outfall in Ashton Drive, also located in the Carrington Subdivision. The maximum flow rate from this pond, under developed conditions for the contributing basins will be maintained to not exceed the 2 cfs maximum flow rate.

#### **FUTURE DEVELOPED CONDITIONS:**

The storm drain, that is to be extended north in Ventura, has capacity to handle the increased flows generated by the development of the off site basins to the east of this site. This area lies within the county of Bernalillo and is expected to continue to be developed at a density equal to one dwelling unit per acre. As the development of this basin progresses the storm drain in Ventura will be expanded to include drop inlet structures on the east half of the roadway as the proposed typical section is completed. In addition, the storm drain in Wilshire will be constructed and once the storm drain in Holbrook is constructed, the existing upstream detention pond can be reclaimed and the upland basin can be fully developed.

As the vacant lots northwest of the site are developed, a storm sewer will be constructed to channel flows generated from the new sites as well as this site, to the La Cueva Arroyo. The North Albuquerque Acres Master Drainage Plan indicates that a 48" outfall (SD-27) to the La Cueva Arroyo will be constructed just west of Modesto to divert runoff generated between Wilshire Avenue and Signal Avenue. Under this contract, a 24" storm drain will be used to convey the runoff from Basin A and D to Signal Avenue to eventually be extended under this scenario. The interim pond adjacent to Mendocino can then be reclaimed. The existing emergency overflow that is being used for the pond will be retained to provide for an emergency overflow in the ultimate drainage scheme.



## **CRITERIA:**

The site was analyzed using the procedures outlined in the Development Process Manual Volume 2, Chapter 22. The Weighted-E method was used in estimating volumes and flow rates of runoff from off-site basins. The AHYMO computer program was used to analyze on site basins and the pond. The existing and developed conditions for both on site and off-site basins were analyzed for a 100-year, 6-hour rainfall event.

## **SUMMARY:**

Desert Vista is a proposed 67-lot subdivision that is located near the intersection of Signal and Ventura on approximately 14.5 acres. The site lies within the North Albuquerque Acres Drainage Management Plan. Upland flow from Ventura (approximately 26.34 cfs) is proposed to be routed to the south in an extension of a 36-inch storm drain. This storm drain will divert all flows upland of the proposed site. The Signal Avenue training dike (north of the site) diverts the La Cueva Arroyo to the north and is maintained by AMAFCA. Modifications to that facility are not required under this plan. The onsite flows are handled under an interim and then future developed management plan.



DESERT VISTA @ Signal & Ventura

Weighted E Method

Zone #3

Developed Basins - On Site

Basin	Area (sf)	Area (acres)	Area (sq miles)	Treatment A		Treatment B		Treatment C		Treatment D		100-Year			10-Year			2-Year				
				%	(acres)	%	(acres)	%	(acres)	%	(acres)	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs		
A	303141.00	6.959	0.01087	0%	0	32%	2.227	20%	1.391832	48%	3.340	1.685	0.977	27.36	0.959	0.556	16.76	0.486	0.282	8.37		
B	155346.00	3.566	0.00557	0%	0	32%	1.141	20%	0.713251	48%	1.712	1.685	0.501	14.02	0.959	0.285	8.59	0.486	0.145	4.29		
C	154737.00	3.552	0.00555	0%	0	32%	1.137	20%	0.710455	48%	1.705	1.685	0.499	13.97	0.959	0.284	8.55	0.486	0.144	4.27		
D	66646.00	1.530	0.00239	0%	0	0%	0.000	40%	0.611993	60%	0.918	1.932	0.246	6.72	1.148	0.146	4.34	0.614	0.078	2.35		
E	64812.00	1.488	0.00232	0%	0	0%	0.000	20%	0.297576	80%	1.190	2.146	0.266	7.00	1.324	0.164	4.63	0.752	0.093	2.66		
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