

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(Rev. 12/05)

Q-16/DA 6

PROJECT TITLE: Mesa del Sol Drainage Area 6 (DA6) ZONE MAP/DRG. FILE # Q-16, R-16
 DRB#: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: A portion of Tract 8 MdS Innovation Park and A portion of Tract 1 Mesa del Sol 1-15
 CITY ADDRESS: _____

ENGINEERING FIRM: Bohannon Huston, Inc.
 ADDRESS: 7500 Jefferson NE
 CITY, STATE: Albuquerque, NM

CONTACT: Mike Balaskovits
 PHONE: (505)-823-1000
 ZIP CODE: 87109

OWNER: Forest City Covington, N.M., LLC
 ADDRESS: 801 University Blvd. SE, Suite 200
 CITY, STATE: Albuquerque, NM

CONTACT: Manny Barrera
 PHONE: 505-400-3021
 ZIP CODE: 87106

ARCHITECT: _____
 ADDRESS: _____
 CITY, STATE: _____

CONTACT: _____
 PHONE: _____
 ZIP CODE: _____

SURVEYOR: _____
 ADDRESS: _____
 CITY, STATE: _____

CONTACT: _____
 PHONE: _____
 ZIP CODE: _____

CONTRACTOR: _____
 ADDRESS: _____
 CITY, STATE: _____

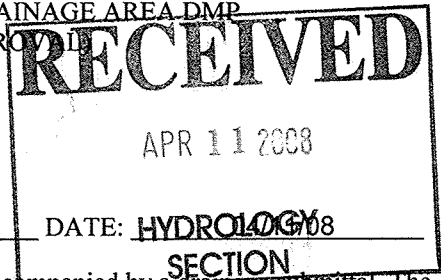
CONTACT: _____
 PHONE: _____
 ZIP CODE: _____

TYPE OF SUBMITTAL:
☐ DRAINAGE REPORT
☐ DRAINAGE PLAN 1st SUBMITTAL
☐ DRAINAGE PLAN RESUBMITTAL
☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERT (HYDROLOGY)
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT
☐ ENGINEER/ARCHITECT CERT (TCL)
☐ ENGINEER/ARCHITECT CERT (DRB S.P.)
☐ ENGINEER/ARCHITECT CERT (AA)
☒ OTHER (DRAINAGE AREA - DRAINAGE MANAGEMENT PLAN)

CHECK TYPE OF APPROVAL SOUGHT:
☐ SIA/FINANCIAL GUARANTEE RELEASE
☐ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D APPROVAL
☐ S. DEV. FOR BLDG. PERMIT APPROVAL
☐ 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 (DRAINAGE AREA DMP APPROVAL)

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

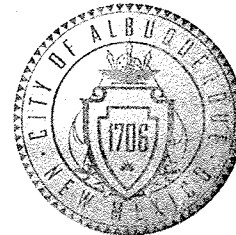
SUBMITTED BY: Mike Balaksovits



Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope to the proposed development define 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 (5) acres and Sector Plans.
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres.
3. **Drainage Report:** Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more.

CITY OF ALBUQUERQUE



April 28, 2008

Michael Balaskovits, P.E.
Bohannon Huston, Inc.
7500 Jefferson NE
Albuquerque, NM 87109

Re: Mesa del Sol Drainage Area Six Drainage Management Plan
Engineer's Stamp dated 4-11-08 (Q16/DA6)

Dear Mr. Balaskovits,

Based upon the information provided in your submittal received 4-11-08, the above referenced plan is approved as the Drainage Area Management Plan.

If you have any questions, you can contact me at 924-3695.

Sincerely,

Curtis A. Cherne, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

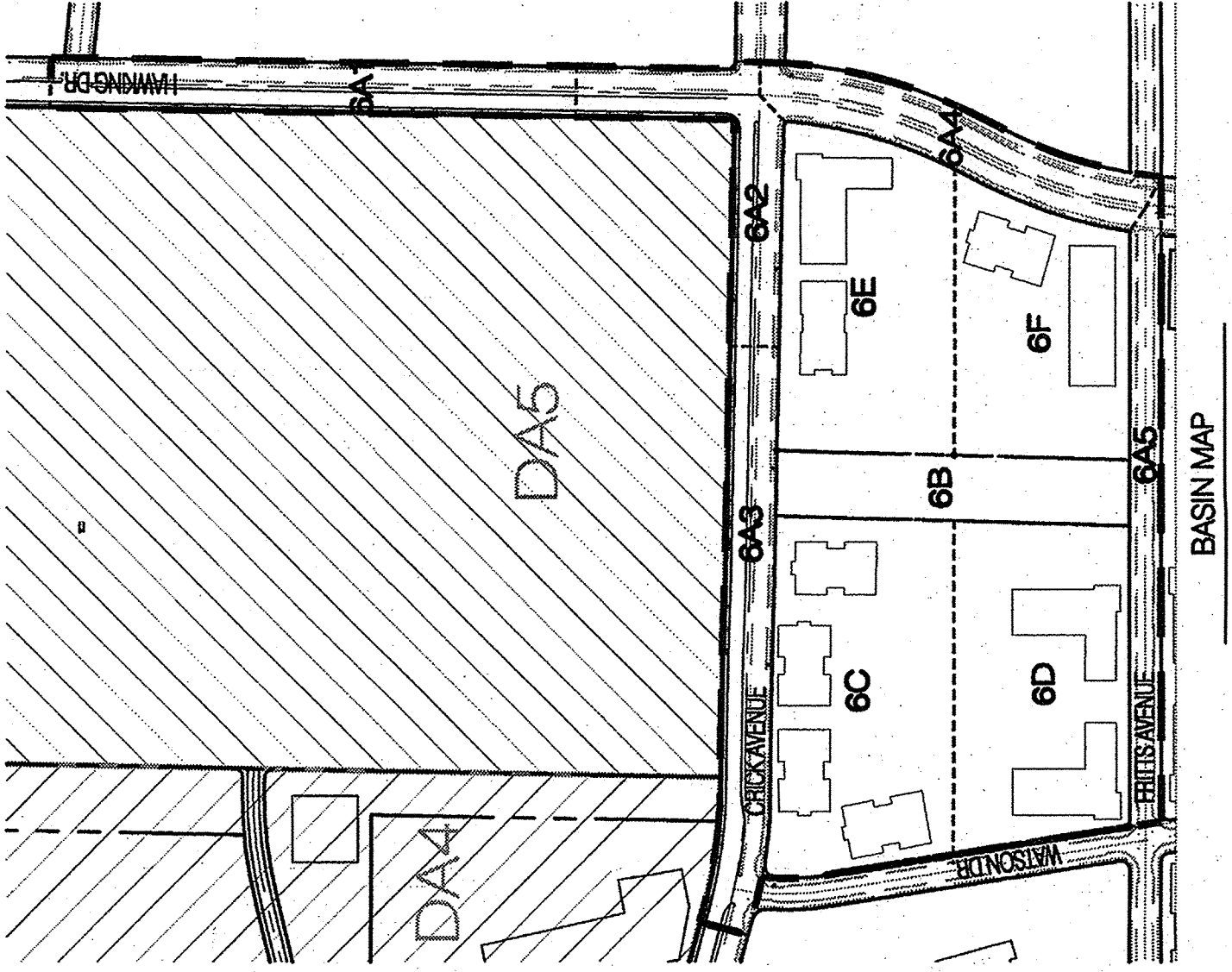
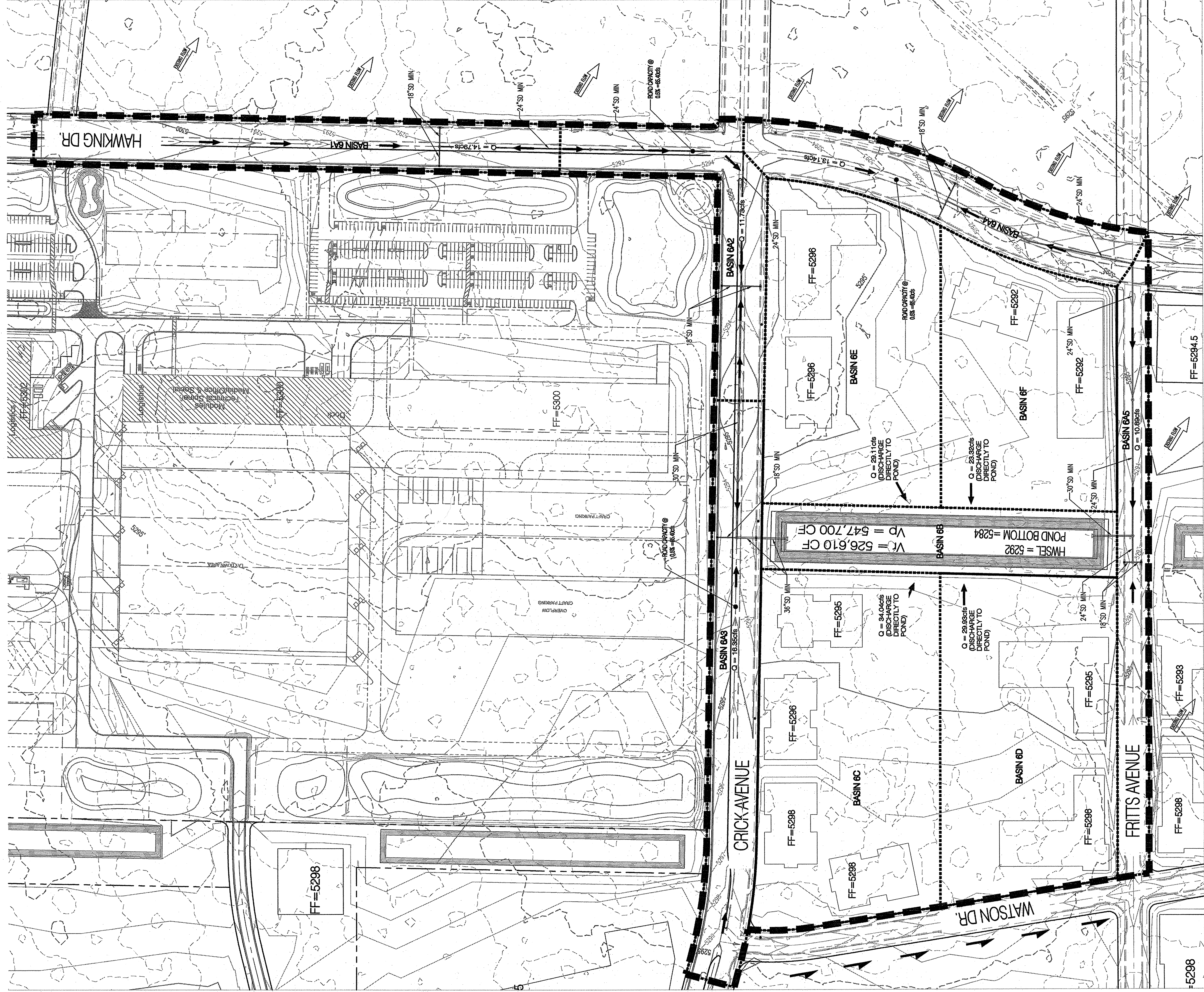
PO Box 1293

Albuquerque

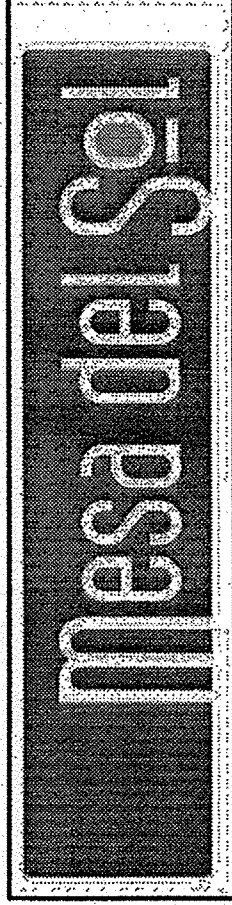
NM 87103

www.cabq.gov

C: file



LOCATION MAP
ZONE ATLAS INDEX MAP R-16



Drainage Management Plan

Introduction/Purpose
This submittal describes the drainage scheme for Drainage Area Six (DA6) within the Mesa del Sol Innovation Park. This drainage management plan will serve as guidelines for ultimate pond sizing and drainage calculations for the block. This plan will provide a framework diagram for future hydrology submittals including but not limited to sites specific grading plans and work order approvals.

Existing Conditions
The drainage area at the northeast end of the Innovation Park (referred to here after as DA6) within Mesa del Sol is currently undeveloped and slopes 0.5% to 1.0% generally from the northwest to southeast. The final outfall for this current drainage is a series of plays that extend down the middle of the proposed Innovation Park to the south of DA6. The block being analyzed will be bound by Watson Drive to the west, Crick Crossing to the north along with a portion of Hawking Drive, Hawking Drive to the east, and Fritts Crossing to the south.

Offsite Drainage
Any and all drainage from the west of the block will be mitigated and rerouted around the block to the south toward the current play system. Flow generated to the east of DA6 will continue along the historic path to a series of aforementioned plays to the south. The drainage to the north will be retained on site and will be explained in a separate Drainage Area submittal. All drainage generated onsite will be retained under the 100yr 10day storm event and not effect surrounding areas.

Proposed Site Grading
The slope of the DA6 basin under proposed conditions is similar to existing conditions. The DA6 will have one centrally located permanent retention pond within the open space/drainage tract. This pond has been designed to retain the 100 year, 10 day storm generated by the Drainage Area.

Drainage generated by the roads within the DA6 basin will be conveyed to the regional retention pond via surface flow to storm drain systems within the block. Each site will be analyzed on a site by site basis for future submittals. The drainage for each site will be discharged directly to the pond by either direct storm drain or surface flow. The flow generated by each sub-basin is shown within the table labeled MESA DEL SOL - DEVELOPED HYDRAULIC CALCULATIONS. In addition the capacity of each road based on Manning's equation is shown on the overall drainage map.

The regional retention pond will be subject to future site planning considerations which will incorporate water quality facilities, along with aesthetically pleasing features such as a trail system, pedestrian amenities, and sedimentation basin facilities. In addition, infiltration basins will be installed in the retention pond to manage nuisance flows and provide a positive discharge of ponded water over time; however, the infiltration does not reduce the 100 year, 10 day stored ponding volume requirements.

The pond is sized in accordance with the methodology outlined in the DPM section 22.2. Developed land treatments for the majority of this drainage area were assumed to be 90% treatment D and 10% treatment B (See MESA DEL SOL - DEVELOPED HYDRAULIC CALCULATIONS for basin calculations and land treatments). For DA6, the volume of retention required (Vr) is 526,610 CF and the volume of retention provided (Vp) is 547,700 CF.

Floodplain.

In accordance with FEMA Community Map Panel #350103535 E, the site is not located within a floodplain.

Conclusions.

This drainage submittal has been prepared in accordance with City of Albuquerque requirements. This plan demonstrates the proposed grading and drainage concepts. The implementation of these concepts would result in the safe retention on the 100 yr, 10 day storm event. Individual sites will be subject to separate hydrology approval in compliance with the grading and drainage requirements of the City of Albuquerque. The drainage management plan is submitted in support of future development within the block, including building sites and roads.

MESA DEL SOL - DEVELOPED HYDRAULIC CALCULATIONS
Ultimate Development Conditions Basin Data Table

BASIN ID	Area (SQ. FT.)	Area (AC.)	This table is based on the DPM Section 22.2, Zone 12				Q(100) (cfs/ac.)	Q(100) (cfs)	WT E (inches)	V(100)sub (CF)	V(100)Total (CF)
			A	B	C	D					
DRAINAGE AREA 6											
Basin 6A (Surrounding Roads)	620000	14.23	0.0%	0.0%	0.0%	100.0%	4.70	66.90	2.12	109533	192200
Basin 6A1	137082	3.15	0.0%	0.0%	0.0%	100.0%	4.70	14.79			
Basin 6A2	108726	2.50	0.0%	0.0%	0.0%	100.0%	4.70	11.73			
Basin 6A3	151505	3.48	0.0%	0.0%	0.0%	100.0%	4.70	16.35			
Basin 6A4	121783	2.80	0.0%	0.0%	0.0%	100.0%	4.70	13.14			
Basin 6A5	100905	2.32	0.0%	0.0%	0.0%	100.0%	4.70	10.89			
Total								66.90			
Basin 6B (Open Space /Regional Retention Pond)	121778	2.80	0.0%	50.0%	50.0%	0.0%	2.71	7.58	0.96	9692	9692
Basin 6C	332648	7.64	0.0%	10.0%	90.0%	0.0%	4.46	34.04	1.99	55053	54971
Basin 6D	293485	6.73	0.0%	10.0%	90.0%	0.0%	4.46	29.93	1.99	48407	53496
Basin 6E	227841	5.23	0.0%	10.0%	90.0%	0.0%	4.46	23.32	1.99	37708	55049
Basin 6F											
Total	1879140.50	43.14					190.87			307458	526608