CITY OF ALBUQUERQUE

August 3, 2009

Ronald R Bohannan, P.E.
Tierra West, LLC
5571 Midway Park Pl NE
Albuquerque, NM 87109

Re: APS Food Services Building Grading and Drainage Plan
Engineer's Stamp date 7-28-09 (L21/D070)

Dear Mr. Bohannan,

Based upon the information provided in your submittal received 7-28-09, the above referenced plan is approved for Building Permit and SO-19 Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

A separate permit (SO 19) is required for construction within City ROW. A copy of this approval letter must be on hand when applying for the excavation/barricading permit.

To obtain a temporary or permanent CO, Engineer Certification of the Grading Plan per the DPM is required and the storm drain work in the City ROW must be inspected and accepted. Please contact Duane Schmitz, 235-8016, to schedule an inspection.

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

C: file
Antoinette Baldonado, Excavation and Barricading
Duane Schmitz, Street/Storm Drain Maintenance

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

DRAINAGE AND TRANSPORTATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: APS Food Services Building
ZONE MAP/DRG. FILE #: L-21/D070
DRB #: _____ EPC #: _____
WORK ORDER #: _____

LEGAL DESCRIPTION: Tract A, Manzano Mesa
CITY ADDRESS: 1000 Innovation Parkway SE

ENGINEERING FIRM: Tierra West, LLC
CONTACT: Vincent Carrica, PE
ADDRESS: 5571 Midway Park Place
PHONE: (505) 858-3100 X 205
CITY, STATE: Albuquerque, NM
ZIP CODE: 87109

OWNER: Albuquerque Public Schools
CONTACT: Tyler Mason
ADDRESS: 6300 Jefferson NE
PHONE:
CITY, STATE: Albuquerque,NM
ZIP CODE: 87109

ARCHITECT: Claudio Vigil Architects
CONTACT: Claudio Vigil
ADDRESS: 1801 Rio Grande Blvd NW, Suite 2
PHONE: 505-842-1113
CITY, STATE: Albuquerque, NM
ZIP CODE: 87104

SURVEYOR: N/A
CONTACT:
ADDRESS:
PHONE:
CITY, STATE:
ZIP CODE:

CONTRACTOR: N/A
CONTACT:
ADDRESS:
PHONE:
CITY, STATE:
ZIP CODE:

CHECK TYPE OF SUBMITTAL:

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

CHECK TYPE OF APPROVAL SOUGHT:

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

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ____ YES
- x NO
- ____ COPY PROVIDED

RECEIVED
JUL 28 2009
HYDROLOGY SECTION

RECEIVED
JUL 27 2009
HYDROLOGY SECTION

DATE SUBMITTED: 7/28/2009
BY: Vincent Carrica, PE

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 sumbittal may be required based on the following:

1. **Conceptual Grading and Drainage Plans**: 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 subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

CITY OF ALBUQUERQUE

June 3, 2009

Ronald R. Bohannan, P.E.
Tierra West, LLC
5571 Midway Park Pl NE
Albuquerque, NM 87109

Re: APS Food Services Building, Manzano Mesa Grading and Drainage Plan
Engineer's Stamp date 4-29-09 (L21/D070)

Dear Mr. Bohannan,

Based upon the information provided in your submittal received 5-4-09, the above referenced plan cannot be approved for Building Permit until the following comments are addressed:

- Show the existing storm drain in Stephen Moody St. and the required new storm drain in Innovation Parkway Rd.
- Propose a solution to minimize the drainage over the sidewalk.
- The sidewalk culvert on Stephen Moody St. is required (STD DWG 2236) to extend to the face of curb.
- Show the extent of the roof drain drainage swales on Plan View.

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

C: file

Rec'd 6/25/09 (No Info sheet)

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

CITY OF ALBUQUERQUE

June 3, 2009

Ronald R. Bohannan, P.E.
Tierra West, LLC
5571 Midway Park Pl NE
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Curtis A. Cherne

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

C: file

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

L21-D070

DRAINAGE REPORT

For

APS FOOD SERVICES BUILDING
TRACT A MANZANO MESA
ALBUQUERQUE, NEW MEXICO

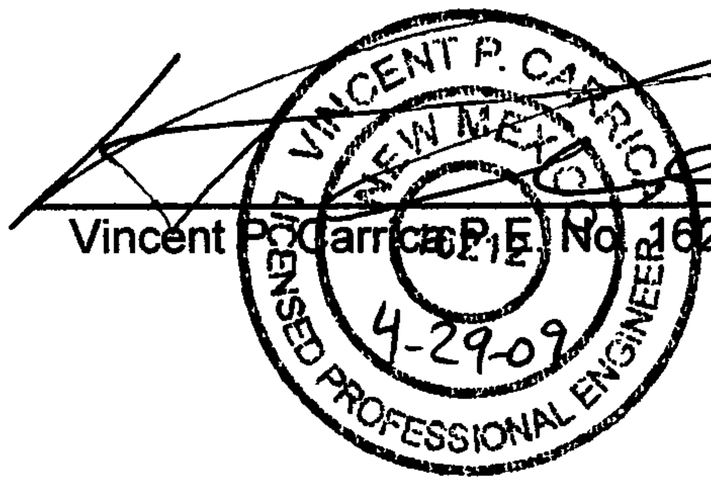
Prepared by

Tierra West, LLC
5571 Midway Park Place, NE
Albuquerque, New Mexico 87109

Prepared for

Albuquerque Public Schools
6300 Jefferson NE
Albuquerque, New Mexico 87109

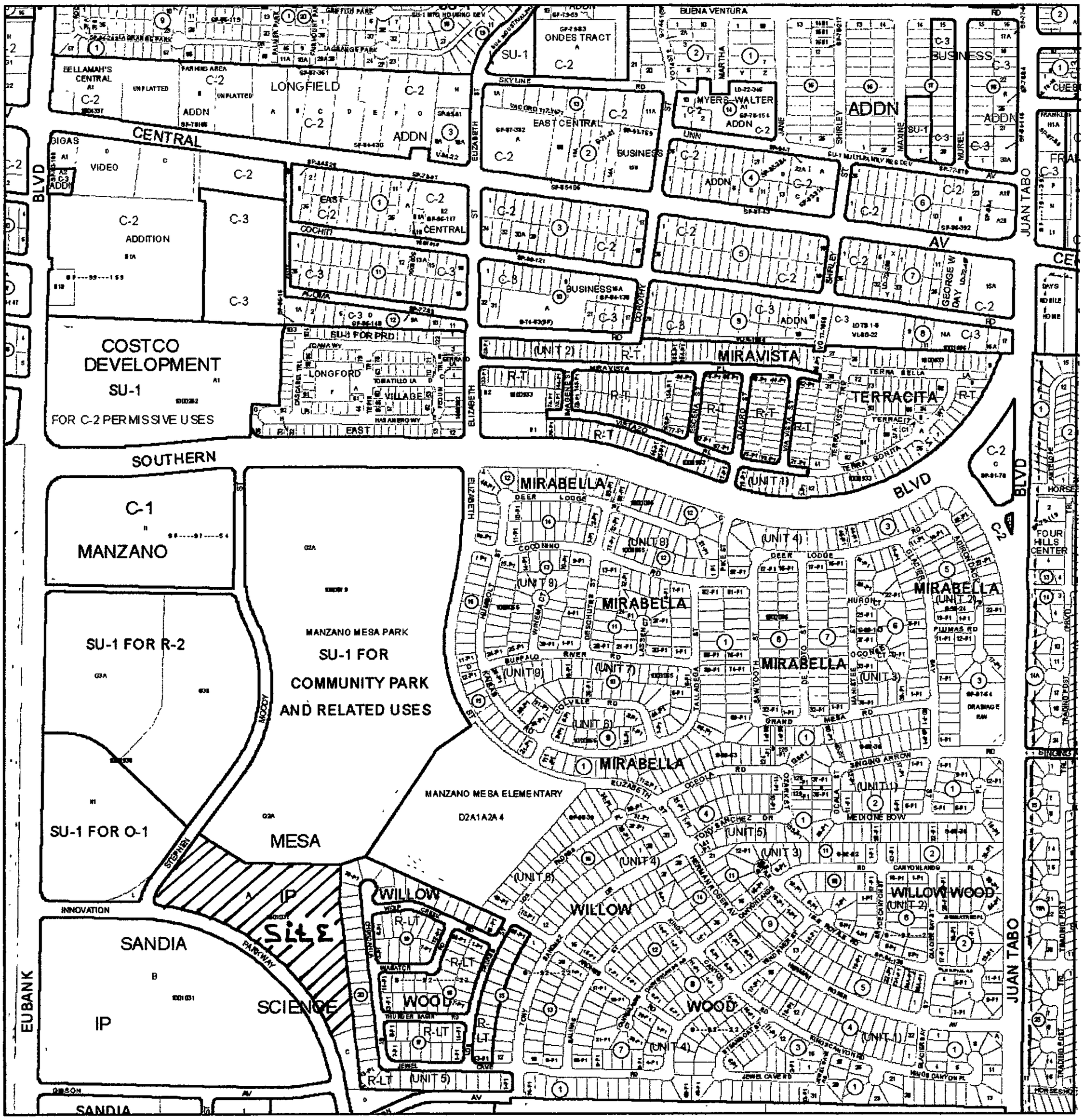
April 14, 2009



Vincent P. Carrica, P.E. No. 16212

City Project

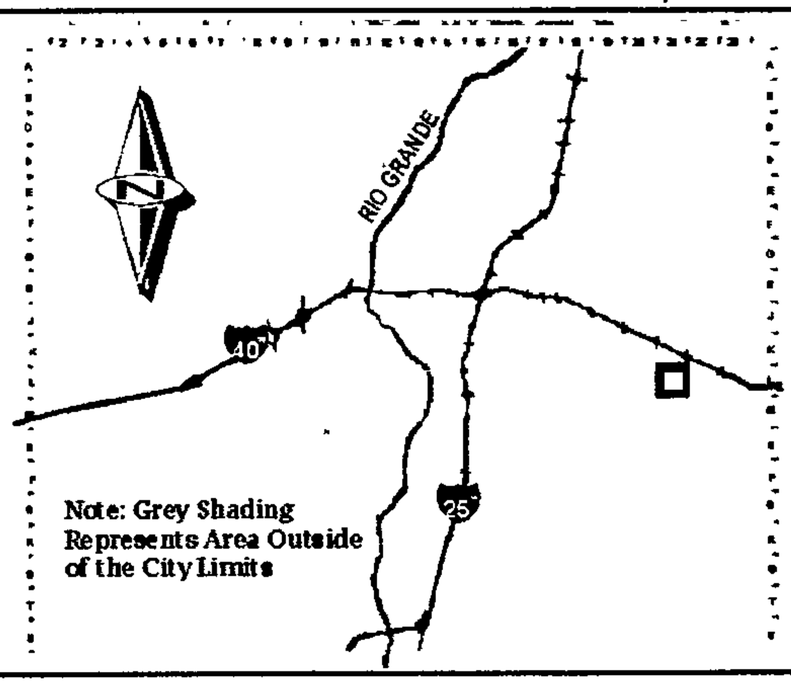
7585.82



For more current information and more details visit: http://www.cabq.gov/gis

AGIS
Albuquerque Geographic Information System

Map amended through: 5/1/2006



Zone Atlas Page:

L-21-Z

Selected Symbols

- SECTOR PLANS
- Design Overlay Zones
- City Historic Zones
- H-1 Buffer Zone
- Petroglyph Mon.
- Escarpment
- 2 Mile Airport Zone
- Airport Noise Contours
- Wall Overlay Zone

0 750 1,500 Feet

TABLE OF CONTENTS

LOCATION

The proposed industrial development, APS Food Services Building, is comprised of 11 acres zoned IP and is located in Manzano Mesa in southeast Albuquerque, in Bernalillo County. The site is bordered by Stephen Moody Drive to the west, Innovation Parkway to the south, Willow Wood Subdivision to the east and City of Albuquerque drainage pond to the north. The property is currently undeveloped.

This report represents an overall drainage management and conceptual grading plan for approval by the City of Albuquerque, for Building Permit.

DRAINAGE BASIN DESIGNATION

The drainage basins for existing and proposed conditions are as indicated on the BASIN MAP located in the map pocket of this report

EXISTING DRAINGE CONDITIONS

The majority of the site historically drains from north to south. Runoff under undeveloped conditions surface flows off the site, to Innovation Parkway. There are no offsite flows that enter this site.

A City of Albuquerque drainage pond exists north of the proposed Food Services Site. It is drained by a large diameter storm drain in Stephen Moody that conveys the flows to the Eubank Storm Drain, which outfalls to the Tijeras Arroyo.

FIRM MAP

The proposed site is not located in a designated Flood Hazard Zone per FEMA – (Firm Map 35001C0367G – See Attached Map). Aside for minor use of unplatted and undeveloped dirt roads/trails there has not been any grading or changes to the site from its historic state

-106° 31' 52.5"

03' 45"

0 M

361 000M

ELIZABETH ST SE

OC

RI

City of Albuquerque
350002

ELIZABETH ST SE

ZONE X

SITE

CHIRICAHUA

WOLF CREEK

WASATCH

THUNDER BASIN

JEWEL CAVE

LOS PADRES

LOS PADRES PL SE

TONY SANCHEZ DR SE

28

SALINAS ST SE

ARCHES RD SE

CANYONLANDS CT SE

JEWEL CAVE RD SE

OPPORTUNITY AVE SE

OST AVE SE

BST

CST

DST

EST

GST

IST

JST

MST

FST

LXST

DEVELOPMENT RD SE

BRITT ST SE

RESEARCH RD SE

City of Albuquerque
350002

M

MAP SCALE 1" = 500'

250 0 500 1000 FEET

0 150 300 METE

PANEL 0367F

FIRM

FLOOD INSURANCE RATE MAP

BERNALILLO COUNTY, NEW MEXICO
AND INCORPORATED AREAS

PANEL 367 OF 825

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ALBUQUERQUE, CITY OF	350002	0367	F
BERNALILLO COUNTY	350001	0367	F

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
35001C0367F
MAP REVISED
NOVEMBER 19, 2003

Federal Emergency Management Agency

DESIGN-CRITERIA

The drainage plan presented in this report was prepared in accordance with the City of Albuquerque Drainage Ordinances and Chapter 22 of the Development Process Manual DPM. The hydrological analysis is based on the 100-year frequency, 6-hour duration storm, as Represented in Section 22, Part A, Hydrology, of the Development Process Manual.

Rainfall intensities per this report are as follows:

FREQ	ZONE	P60	P360	P1440
100YR	3	2.14	2.60	3.10

Land Treatments:

Proposed development land treatment values vary by basin. See attached basin map and Weighted E Method calculation spreadsheet for applicable land treatment values.

DEVELOPED-DRAINAGE CONDITIONS

The APS Food Services site will comply with the drainage master plan prepared by Espey, Houston and Associates for the Manzano Mesa in 1990 (L21/D37) encompassing 480 acres. The master plan allows for free discharge from the proposed site listed as Drainage Basin No. 08, Tract E based on a 100 year developed condition. The proposed runoff from the Food Services development is approximately 45 cfs. This is right at the amount allowed by the master drainage plan, which allowed for 4.1 cfs per acre for this drainage basin.

In the developed condition, no upland flows will impact the proposed site. All will be intercepted by the upland storm drain and detention pond or by the adjacent roadways.

SUMMARY

The proposed APS Foods and Nutrition Services site is an 11-acre industrial project in the Manzano Mesa area. The proposed drainage for developed conditions comply with the master drainage plan with the proposed run off equaling the flows anticipated in the master plan. The site will free discharge via surface and storm drain flows to adjacent streets and storm drains.

APS FOOD & NUTRITION BUILDING

Weighted E Method

Zone #3

Developed Basins

											100-Year		
Basin	Area (sf)	Area (acres)	Area (sq miles)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
				%	(acres)	%	(acres)	%	(acres)	%	(acres)			
1	19365.00	0.445	0.00069	0%	0	0%	0.000	25%	0.11114	75%	0.333	2.093	0.078	2.06
2	26040.00	0.598	0.00093	0%	0	0%	0.000	5%	0.02989	95%	0.568	2.307	0.115	2.95
3	81820.00	1.878	0.00293	0%	0	0%	0.000	32%	0.601065	68%	1.277	2.018	0.316	8.49
4	32320.00	0.742	0.00116	0%	0	0%	0.000	10%	0.074197	90%	0.668	2.253	0.139	3.61
5	39880.00	0.916	0.00143	0%	0	0%	0.000	15%	0.137328	85%	0.778	2.200	0.168	4.38
6	91001.00	2.089	0.00326	0%	0	0%	0.000	45%	0.940093	55%	1.149	1.879	0.327	9.01
7	188607.00	4.330	0.00677	0%	0	56%	2.425	15%	0.649473	29%	1.256	1.393	0.503	14.85
Total	479033.00	10.997	0.01718										1.645	45.34

Equations:

Weighted E = Ea*Aa + Eb*Ab + Ec*Ac + Ed*Ad / (Total Area)

Volume = Weighted D * Total Area

Flow = Qa * Aa + Qb * Ab + Qc * Ac + Qd * Ad

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