CITY OF ALBUQUERQUE

February 3, 2009

David A. Aube, P.E.
The Design Group
202 Central Ave SE Suite 200
Albuquerque, NM 87106

Re: New Mexico Educators Federal Credit Union, Barstow and Paseo del Norte Overall Grading Plan

Engineer's Stamp dated 12-23-08 (D19/D027)

Dear Mr. Aube,

Based upon the information provided in your submittal received 12-23-08 and 2-3-09, 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 checklist will be required.

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

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

CITY OF ALBUQUERQUE

August 5, 2009

David A. Aube, P.E.
The Design Group
202 Central Ave SE Suite 200
Albuquerque, NM 87106

Re: New Mexico Educators Federal Credit Union, Barstow and Paseo del Norte Overall Grading Plan

Engineer's Stamp date 8-5-09 (D19/D027)

Dear Mr. Aube,

Based upon the information provided in your submittal received 8-5-09, 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.

This is the plan to certify for release of Certificate of Occupancy.

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

PO Box 1293
Albuquerque
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DRAINAGE REPORT

for

New Mexico Educator's Federal Credit Union

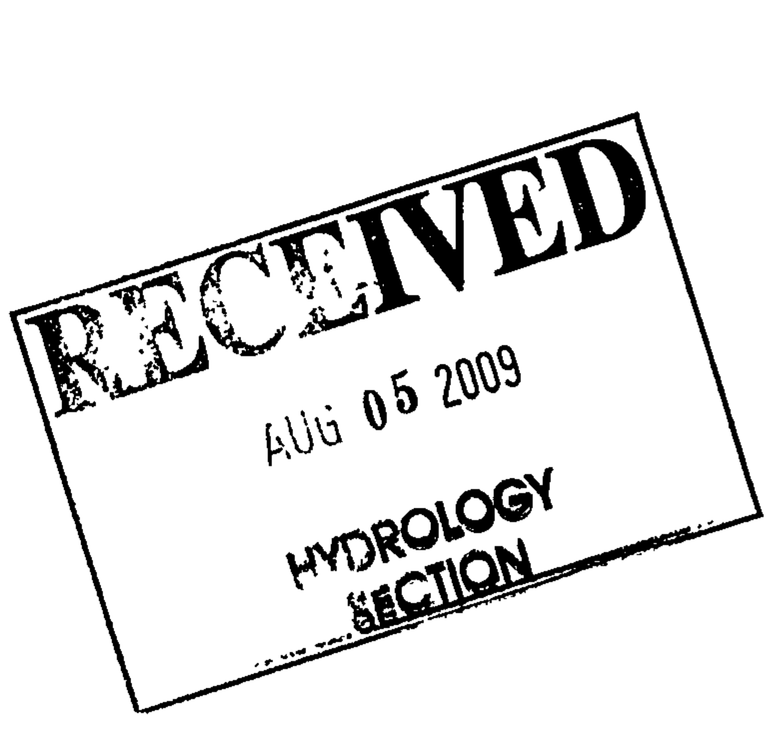
Lots 17 and 18, Block 21, Tract A, Unit A Lands of North Albuquerque Acres
Albuquerque, New Mexico

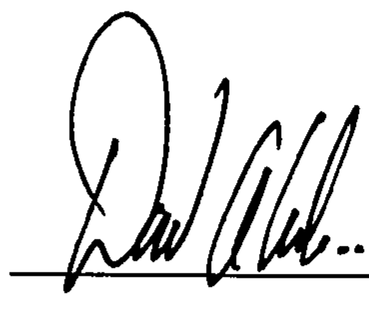
August 2009

Prepared by:
The Design Group
202 Central Avenue SE, Suite 200
Albuquerque, New Mexico 87102

Prepared for:
George Rainhart, Architect and Associates P.C.
2325 San Pedro NE, Suite 2-B
Albuquerque, NM 87110

I certify that this report was prepared under my supervision, and I am a registered professional engineer in the State of New Mexico in good standing.





David A. Aube
PE NO. 14221

TABLE OF CONTENTS

LOCATION

The proposed development is located on Lot 18-A, Block 21, Tract A, Unit A, North Albuquerque Acres. The 1.97-acre site is bordered on the north by Paseo del Norte, on the south by Palomas Avenue, on the east by Barstow Street, and on the west by Lot 19 which is currently under construction. The purpose of this report is to provide the drainage analysis and management plan for the SU-2 / C-1 zoned site to include the proposed New Mexico Educator's Federal Credit Union (4,069.55 SF) and two lease spaces (3,983 SF and 1,500 SF).

ZONE ATLAS PAGE

The site is located on the City of Albuquerque Zone Atlas Map D-19 and is shown on the attached sheet.

DRAINAGE BASIN DESIGNATIONS

For the purpose of this report, the existing and developed drainage basins were designated and shown on the Existing Drainage Map and Proposed Drainage Map in Map Pocket 1.

Existing Undeveloped Basins: #E1, #E2, #E3

Basin #E1 includes the northern portion of the site, Basin #E2 includes a small portion of the interior of the site, and Basin #E3 includes the southern portion of the site, approximately 11,833 SF, 10,801 SF and 46,797 SF, respectively. The 3 existing

basins are 100% Land Treatment C. The Basin #E1, #E2, and #E3 100-year flows are 0.94 cfs, 0.86 cfs, and 3.71cfs, respectively.

Developed Condition Basins: #1, #2

Basin #1 includes the northern portion of the site and Basin # 2 includes the southern portion of the site, approximately 25,731 SF and 44,370 SF, respectively. Proposed basin #1 is 20% Land Treatment C and 80% Land Treatment D. Proposed basin #2 is 18% Land Treatment C and 82% Land Treatment D. The Basin #1 and #2 100-year flows are 2.78cfs and 4.76cfs, respectively.

EXISTING DRAINAGE CONDITIONS

The existing site is currently undeveloped and generally slopes from east to west. Barstow Street to the east has a normal crown with COA standard curb and gutter that directs offsite drainage to the south and toward the South Domingo Baca Arroyo. Offsite flows from what is assumed to be excess COA right-of-way along Barstow Street drains west into the site. The total 100-year flow is 5.51 cfs and drains to the adjacent streets and/or is infiltrated into the ground.

FLOOD PLAIN MAP

The site is located on FIRM Map 35001C0141F. The attached map that was obtained from AGIS shows that the site does not lie within a flood zone.

ON-SITE DRAINAGE MANAGEMENT PLAN

The proposed Drainage Management Plan is to keep with "*Drainage Report For Lot 28-A, Block A, Tract A, Unit A, North Albuquerque Acres, Albuquerque, NM, July 2006*" by Tierra West, LLC (D19/D26) and the 1991 approved "*Master Drainage Plan, North and South Domingo Baca Arroyos and Paseo del Norte Corridor Drainage Management Plan*" and drain the developed site total 100-year flow 7.54 cfs, through the two entrances onto Palomas Avenue. The flow from Basin #1, 2.78 cfs, will be conveyed through a valley gutter located along the north side of the building, through a curb cut located at the NW corner of the parking lot and through a water harvesting area within the landscaping along the west side of the property, back out to the western driveway, and finally to the Palomas right-of-way. The flow from Basin #2, 4.76 cfs will be conveyed through a concrete valley gutter located along the east side of the building and through a small concrete rundown located at the SW corner of the parking adjacent to Palomas, and through both entrances. Once the flow reaches Palomas, it will be conveyed along the curb and gutter to the storm drain located at Wyoming Boulevard and Palomas Avenue.

CALCULATIONS

The Weighted E method from the "City of Albuquerque Development Process Manual Volume II – Design Criteria, 1997 Revision" was used to calculate the runoff and volume for the site. These calculations are included in Appendix A.

SUMMARY

In keeping with the "*Drainage Report For Lot 28-A, Block A, Tract A, Unit A, North Albuquerque Acres, Albuquerque, NM, July 2006"* by Tierra West, LLC (D19/D26) and the 1991 approved "*Master Drainage Plan, North and South Domingo Baca Arroyos and Paseo del Norte Corridor Drainage Management Plan*" The developed site total 100-year flow, 7.54 cfs, will be conveyed through the entrances onto Palomas Avenue. The flow will go to the storm drain at Wyoming and Palomas.

Drainage Summary

Project:	NMEFCU Barstow Palomas
Project Numbe:	2340
Date:	08/05/09
By:	Dave A

Site Location

Precipitaion Zone 3 Per Table A-1 COA DPM Section 22.2

Existing summary

Basin Name	#E1	#E2	#E3
Area (sf)	11833	10801	46797
Area (acres)	0.27	0.25	1.07
%A Land treatment			
%B Land treatment	0	0	0
%C Land treatment	100	100	100
%D Land treatment	0	0	0
Soil Treatment (acres)			
Area "A"	0.00	0.00	0.00
Area "B"	0.00	0.00	0.00
Area "C"	0.27	0.25	1.07
Area "D"	0.00	0.00	0.00
Excess Runoff (acre-feet)			
100yr. 6hr.	0.0292	0.0267	0.1155
10yr. 6hr.	0.0140	0.0128	0.0555
2yr. 6hr.	0.0045	0.0041	0.0179
100yr. 24hr.	0.0292	0.0267	0.1155
Peak Discharge (cfs)			
100 yr.	0.94	0.86	3.71
10yr.	0.54	0.50	2.15
2yr.	0.21	0.19	0.84

Proposed summary

Basin Name	#1	#2
Area (sf)	25731	43780
Area (acres)	0.59	1.01
%A Land treatment		
%B Land treatment	0	0
%C Land treatment	20	18
%D Land treatment	80	82
Soil Treatment (acres)		
Area "A"	0.00	0.00
Area "B"	0.00	0.00
Area "C"	0.12	0.18
Area "D"	0.47	0.82
Excess Runoff (acre-feet)		
100yr. 6hr.	0.1056	0.1816
10yr. 6hr.	0.0652	0.1124
2yr. 6hr.	0.0370	0.0642
100yr. 24hr.	0.1253	0.2159
Peak Discharge (cfs)		
100 yr.	2.78	4.76

Design Group

Architects, Planners, Interior Design and Civil Engineers

PROJECT NMEFCU Barstow Palomas
PROJECT NO. 2340.00
DATE 08/05/09
BY Dave A

DPM Section 22.2 - Hydrology

Part A-Watersheds less than 40 acres.
January, 1993

INSTRUCTIONS

* Spread sheet requires three input areas (dark cells):
  - Location
  - >A.1 Precipitation Zone
  - >A.3 Land Treaments
* Values from the tables are automatically placed using "if" statements.
* Table values should be checked for correctness for each use.

SUMMARY

Location	**0**		
Precipitation Zone		**3**	
Land Area		**0.27**	acres
Excess Precipitation Volume			
>>> 100-year 6-hour (design)		**0.03**	**acre-ft.**
10-year 6-hour		**0.01**	acre-ft.
2-year 6-hour		**0.00**	acre-ft.
100-year 24-hour		**0.03**	acre-ft.
Peak Discharge Rates (DPM)			
>>> Q100 (design)		**0.94**	**cfs**
Q10		**0.54**	cfs
Q2		**0.21**	cfs
Peak Discharge Rates (DPM-Rational Method)			
>>> Q100 (design)		**0.94**	**cfs**
Q10		**0.55**	cfs
Q2		**0.21**	cfs

CALCULATIONS FOLLOW

INPUT AND CALCULATIONS

	LOCATION	0	
>A.1	PRECIPITATION ZONE (from Table A-1)	3	
>A.2	DEPTHS		
	(from Table A-2)		
	100-YEAR STORM (P60)	2.14	inches
	100-YEAR STORM (P360)	2.60	inches
	100-YEAR STORM (P1440)	3.10	inches
	10-YEAR (P360) (Calculated: P360*RPF10)	1.73	inches
	2-YEAR (P360) (Calculated: P360*RPF2)	1.13	inches
>A.3	**LAND TREATMENTS (Ai)**		
	Treatment A	0.00	acres
	Treatment B	0.00	acres
	Treatment C	0.27	acres
	Treatment D	0.00	acres
	Total Area	0.27	acres
>A.4	**ABSTRACTIONS**	**See A.5**	

CALCULATIONS FOLLOW

INPUT AND CALCULATIONS (CON'T)

>A.5 EXCESS PRECIPITATION 6 HOUR AND 24 HOUR (Ei) from Table A-8		
100-year 6-hour		
Treatment A	0.66	inches
Treatment B	0.92	inches
Treatment C	1.29	inches
Treatment D	2.36	inches
WEIGHTED E (Sum Ei*Ai/A)	1.20	inches
VOLUME V100:6h (E*A)	0.03	acre-ft.
	1,272.06	ft^3
10-year 6-hour		
Treatment A	0.19	inches
Treatment B	0.36	inches
Treatment C	0.62	inches
Treatment D	1.50	inches
WEIGHTED E (Sum Ei*Ai/A)	0.62	inches
VOLUME V10:6h (E*A)	0.01	acre-ft.
	611.37	ft^3
2-year 6-hour		
Treatment A	0.00	inches
Treatment B	0.06	inches
Treatment C	0.20	inches
Treatment D	0.89	inches
WEIGHTED E (Sum Ei*Ai/A)	0.20	inches
VOLUME V2:6h (E*A)	0.00	acre-ft.
	197.22	ft^3
100-year 24-hour		
VOLUME V100:24h (V100-6h+Ad*P1440-P360)/12)	0.03	acre-ft.
	1,272.06	ft^3

CALCULATIONS FOLLOW

INPUT AND CALCULATIONS (CON'T)

>A.6 PEAK DISCHARGE RATE FOR SMALL WATERSHEDS (Qi)

from Table A-9

100-year			
Treatment A		1.87	cfs/acre
Treatment B		2.60	cfs/acre
Treatment C		3.45	cfs/acre
Treatment D		5.02	cfs/acre

	Q100 (Sum Qi*Ai)	8.94	cfs
		==========	
10-year			
Treatment A		0.58	cfs/acre
Treatment B		1.19	cfs/acre
Treatment C		2.00	cfs/acre
Treatment D		3.39	cfs/acre

	Q10 (Sum Qi*Ai)	5.54	cfs
		==========	
2-year			
Treatment A		0.00	cfs/acre
Treatment B		0.21	cfs/acre
Treatment C		0.78	cfs/acre
Treatment D		2.04	cfs/acre

	Q2 (Sum Qi*Ai)	0.21	cfs
		==========	

CALCULATIONS FOLLOW

RATIONAL METHOD

PEAK INTENSITY (in/hr at tc=0.2 hour)
from Table A-10

Peak Intensity (I) 100-year	5.38
Peak Intensity (I) 10-year	3.65
Peak Intensity (I) 2-year	2.21

RATIONAL METHOD COEFFICIENT, C
from Table A-11

100-year

Treatment A	0.35	cfs/acre
Treatment B	0.48	cfs/acre
Treatment C	0.64	cfs/acre
Treatment D	0.93	cfs/acre
Q100 (Sum Qi*I*Ai)	0.04	cfs

10-year

Treatment A	0.16	cfs/acre
Treatment B	0.33	cfs/acre
Treatment C	0.55	cfs/acre
Treatment D	0.93	cfs/acre
Q10 (Sum Qi*I*Ai)	0.55	cfs

2-year

Treatment A	0.00	cfs/acre
Treatment B	0.10	cfs/acre
Treatment C	0.35	cfs/acre
Treatment D	0.92	cfs/acre
Q2 (Sum Qi*I*Ai)	0.21	cfs

CITY OF ALBUQUERQUE

November 19, 2009

Stephen A. Dunbar, Registered Architect
Modulus Architects
2325 San Pedro NE, Ste. 2b
Albuquerque, NM 87110

Re: New Mexico Educators Federal Credit Union,
8321 Palomas Ave. NE
Certificate of Occupancy – Transportation Development
Engineer's/Architect's Stamp dated 11-01-09 (D-19/D027)

Dear Mr. Dunbar,

Based upon the information provided in your submittal received 11-18-09, Transportation Development has no objection to the issuance of a Permanent Certificate of Occupancy. This letter serves as a "green tag" from Transportation Development for a Permanent Certificate of Occupancy to be issued by the Building and Safety Division.

If you have any questions, you can contact me at 924-3630.

Sincerely,

Nilo E. Salgado-Fernandez, P.E.
Senior Traffic Engineer, Planning Dept.
Development and Building Services

C: CO Clerk
File

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

CITY OF ALBUQUERQUE

November 19, 2009

David A. Aube, P.E.
Design Group
202 Central Ave SE Suite 200
Albuquerque, NM 87106

Re: NMEFCU at Barstow and Palomas, 8321 Palomas Ave NE
Permanent Certificate of Occupancy - Approved
Engineer's Stamp dated 8-5-09 (D19/D027)
Certification dated 11-18-09

Based upon the information provided in the Certification received 11-18-09, the above referenced Certification is approved for a release of Permanent Certificate of Occupancy by Hydrology.

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

Sincerely,

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

C: CO Clerk
File

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

TRAFFIC CERTIFICATION

I, Stephen A. Dunbar , NMRA -004218 , of the firm Modulus Architects Inc. Hereby Certify that this project is in substantial design compliance with and in accordance with the design intent of the approved plan stamp dated 8/6/09. The record information edited onto the original design document has been obtained by Stephen A. Dunbar of the firm Modulus Architects Inc. I further certify that I have personally visited the project site on 11/1/09 and have determined by visual inspection that the survey data provided is representative of actual site conditions and is true and correct to the best of my knowledge and belief. This certification is submitted in support of a request for permanent certificate of occupancy.

The record information presented hereon is not necessarily complete and intended only to verify substantial compliance of the traffic aspects of this project. Those relying on the record document are advised to obtain independent verification of its accuracy before using it for any other purpose.

Stephen A Dunbar
Signature of Engineer or Architect

ARCHITECT'S STAMP

11/1/09
Date

STATE OF NEW MEXICO
STEPHEN A. DUNBAR
No. 4218
11/1/09
REGISTERED ARCHITECT

MODULUS ARCHITECTS
2325 San Pedro NE, Suite 2b
Albuquerque, New Mexico 87110
p 505.338.1499 f 505.338.1498
toll free: 1-866-224-2161

#106