City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

November 7, 2002

Ronald R. Bohannan, P.E.
Tierra West, LLC
8509 Jefferson NE
Albuquerque, New Mexico 87113

RE: WELLS FARGO BANK @ LA CUEVA TOWN CENTER (C-19/D11D6)
(8100 Wyoming Blvd NE Suite 2-A)
ENGINEERS CERTIFICATION FOR CERTIFICATE OF OCCUPANCY
ENGINEERS STAMP DATED 3/11/2002
ENGINEERS CERTIFICATION DATED 11/5/2002

Dear Mr. Bohannan:

Based upon the information provided in your Engineers Certification submittal dated 11/5/2002, the above referenced site is approved for Permanent Certificate of Occupancy.

Please Note: On future Engineer Certifications, please put the newly adopted Engineer Certification form on the actual grading and drainage plan instead of on a separate sheet of paper. This form will replace the existing format that you are currently using.

If I can be of further assistance, please contact me at 924-3981.

Sincerely,

Teresa A. Martin
Hydrology Plan Checker
Development & Bldg. Ser. Div.

BLB

C: Certificate of Occupancy Clerk, COA
approval file
drainage file

DRAINAGE CERT W/SURVEY WORK BY OTHERS
12/28/01

DRAINAGE CERTIFICATION

I, Ronald R. Bohannan, NMPE 7868, OF THE FIRM Tierra West LLC, HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 3/11/02. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY Preston Hall, NMPS 10042, OF THE FIRM Hall Surveying.
I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON 11/5/02 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 CERTIFICTION IS SUBMITTED IN SUPPORT OF A REQUEST FOR Final Certification of Drainage for Certificate of Occupancy (WELLS FARGO BANK).

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE 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.

RONALD RAY BOHANNAN NEW MEXICO 7868 REGISTERED PROFESSIONAL ENGINEER

Ronald R. Bohannan, PE — 7868 NMPE

11/05/02
DATE

RECEIVED
NOV 05 2002
HYDROLOGY SECTION

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 5, 2001

Ronald R. Bohannan, P.E.
Tierra West, LLC
8509 Jefferson NE
Albuquerque, NM 87113

Attn: David Soule, P.E.

RE: WELLS FARGO AT LA CUEVA TOWN CENTER (C19-D11D6). Revised GRADING AND DRAINAGE PLAN FOR SITE DEVELOPMENT PLAN FOR BUILDING PERMIT APPROVAL, AND FOR BUILDING AND GRADING PERMIT APPROVALS. ENGINEER'S STAMP DATED NOVEMBER 27, 2001 (Update of the November 12, 2001 stamped Revision).

Dear Mr.Bohannan:

Based on the information provided on your November 27, 2001 resubmittal, the above referenced project is approved for Site Development Plan for Building Permit, and for Building Permit and Grading Permit. Note that Building Permit covers Grading Permit. (G & D Plan modified to meet conditions of 11/21/01 DRB hearing.)

Please attach a copy of this approved plan *** Engineer's Stamp dated November 27, 2001 *** to the construction sets prior to sign-off by Hydrology.

Prior to Certificate of Occupancy approval, an Engineer's Certification per the DPM will be required.

If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,

John P. Murray, P.E.
Hydrology

c: Terri Martin
√File

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 14, 2002

Ronald Bohannan, PE
Tierra West, LLC
8509 Jefferson NE
Albuquerque, NM 87113

Re: Wells Fargo @ La Cueva Town Center Grading and Drainage Plan
Engineer's Stamp Dated 3-11-02, (C19/D11D6)

Dear Mr. Bohannan,

Based on the information contained in your submittal dated 3-12-02, the above referenced plan is approved for Site Development Plan for Building Permit Action by the DRB and Building Permit which is inclusive with a Grading Permit.

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

Prior to Certificate of Occupancy approval, an Engineer's Certification per the DPM will be required.

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

Sincerely,

Carlos A. Montoya, PE
City Floodplain Administrator, PWD
Development and Building Services

c: Terri Martin, Hydrology
File (2)

DRAINAGE REPORT

for

Wells Fargo Bank
At
La Cueva Town Center
Albuquerque, New Mexico

LOT 2A

Prepared by

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

Prepared for
Dekker-Perich-Sabatini
6801 Jefferson NE, Suite 100
Albuquerque, New Mexico 87109

December 2000

RONALD RAY BOHANNAN REGISTERED NEW MEXICO 7868 PROFESSIONAL ENGINEER
12-01

Ronald R. Bohannan P.E. No. 7868

PURPOSE

The purpose of this report is to prove the development of the subject 1.50-acre property, for the use as a Bank, is in accordance with the DPM, Chapter 22. This report will demonstrate that the proposed improvements do not adversely effect the surrounding properties nor the upstream or downstream facilities.

INTRODUCTION

The subject of this report, as shown on the Exhibit A vicinity map, is a 1.50-acre parcel of land located on the northeast corner of Wyoming and Paseo del Norte. The site is located on Zone Atlas page C-19. The site currently exists as a rough graded pad site within La Cueva Town Center. The legal description of the property is Lot 2A of La Cueva Town Center. As shown on FIRM map 35001C0141D, the site lies within flood zone X.

This site was analyzed within the drainage report and grading plan for the La Cueva Town Center (C19-D11D) previously submitted by Tierra West, LLC, with the stamp date of 3/29/99. This grading plan is located in map pocket A. The City of Albuquerque Hydrology Section approved the Drainage Management Plan on 5/11/99. Based upon the approved Drainage Management Plan, this site is located within Basins A and E of the La Cueva Town Center. The approved Master Plan indicates this parcel is allowed free discharge if the land treatments are equal or less than 85% D, and 15% B. Since our improvements are consistent with developed condition assumptions within the La Cueva Town Center Drainage Plan, the site should be allowed free discharge.

EXISTING CONDITIONS

The site slopes from east to west, with general grades between 3-4%. The site drains to an existing 18" RCP and desiltation pond located near the center of the site. The site was rough graded with the construction of the La Cueva Town Center. As discussed within the La Cueva Town Center drainage report, this site is located in both Basins A and E. The portion of the site located in Basin E is the existing drive for the entire center and is completely improved. Due to the proposed development of the Chili's site to the south no offsite flows will enter the site. A copy of this grading plan is located in Map Pocket B. The existing desiltation pond and pipe is being used temporarily to drain the entire Basin A of the La Cueva Town Center. These flows sheet flow across the centers parking lot until a single curb opening channelizes them and conveys the flows to this temporary desiltation basin located on Lot 2A. The flows are then captured by an 18" RCP and conveyed to an existing storm drain system within Wyoming.

PROPOSED CONDITIONS

The proposed improvements consist of the construction of a Wells Fargo Bank and the associated parking lot. As shown in Exhibit B, the undeveloped portion of the site lies within Basin A as described within the Cueva Town Center drainage plan. As shown in Appendix A, the proposed land treatments are consistent with the developed condition assumptions for this site within the La Cueva Town Centers' Drainage Management Plan.

The entire onsite flows, generated from the roof and pavement areas and combined with the offsite flows, are conveyed via surface flows from east to west. The predicted 100-year peak runoff generated from this site will be 7.03 CFS. As shown in the La Cueva Town Center Master Drainage study, the entire Basin A flows through the site in the interim condition. Due to the proposed improvements of adjoining site to the south these offsite flows no longer will enter the

site.

Due to a conflict with the proposed building location the existing 18" storm drain will be rerouted. The existing line has a slope of 4.4 % with a capacity of 22.09 CFS. The proposed rerouted line will have a slope of 1.8% and a capacity of 14.13 CFS. As shown in Appendix A the rerouted line will have adequate capacity.

A new single grated type A inlet will be constructed along the west curb line. This Inlet will be in a sump condition. As shown in Appendix A, the inlet has the capacity to capture the entire onsite and offsite peak flow. This inlet will be connected to the existing storm drain line running through the site. The hydraulic analysis of this system is also shown in Appendix A. If this inlet clogs or if the flow exceeds the predicted 100-year peak rate, the flow will overtop the curb and enter into the Wyoming Boulevard right of way.

SUMMARY AND RECOMMENDATIONS

This site is an existing pad within the La Cueva Town Center, which is an existing commercial shopping center. The City of Albuquerque Hydrology Section approved the drainage management plan for the entire center. This La Cueva Town Center Master Drainage Plan assumed fully developed conditions for our site. The proposed improvements are consistent with the land treatment types used for the developed condition for this site within the La Cueva Town Centers' drainage plan. The development of this site is consistent with the DPM, Chapter 22, Hydrology section. Since this site encompasses less than 5 acres, an NPDES permit is not required prior to any construction activity. No improvements are to occur within City right of way, therefore an infrastructure list is not required. It is recommended this development be approved for rough grading, and Site Plan for Building Permit.

RUNOFF RATE COMPARISON

Use Equation A-10: $Q_P = Q_{PA} A_A + Q_{PB} A_B + Q_{PC} A_C + Q_{PD} A_D$
Values of Q_{pi} are from Table A-9, and are in CFS/acre. Area values are in acres.

DEVELOPED RATE OF RUNOFF (CFS)

BASIN	Q_{PA}	A_A	Q_{PB}	A_B	Q_{PC}	A_C	Q_{PD}	A_D	Total CFS
site as proposed in this report	1.87	0.00	2.60	0.21	3.45	0.00	5.02	1.29	7.03
Site as proposed in La Cueva TownCenter master plan*	1.87	0.00	2.60	0.21	3.45	0.00	5.02	1.29	7.03

* based upon treatment percentages used for basin A

exactly the same as Master Plan?
Amazing

Pipe Capacity

Manning's Equation:

Q = 1.49/n * A * R^(2/3) * S^(1/2)

A = Area
R = D/4
S = Slope
n = 0.013

STORM SEWER WELLS FARGO

Pipe	D	Slope	Area	R	Q Provided	Q Required	Velocity
	(in)	(%)	(ft^2)		(cfs)	(cfs)	(ft/s)
EXISTING PIPE	18	4.4	1.77	0.375	22.09	7.03	3.98
PROPOSED PIP	18	1.8	1.77	0.375	14.13	7.03	3.98

DROP INLET CALCULATIONS

STREET	TYPE OF INLET	AREA (SF)	Q* (CFS)	H (FT)	H ALLOW (FT)
WEST CURBLINE	SINGLE 'A'	11.24	7.03	0.0169	0.5

ORIFICE EQUATION

Q = CA sqrt(2gH)

C = 0.6

g = 32.2