

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



March 28, 2016

Scott J. Steffen, PE
BOHANNAN-HUSTON, INC.
7500 Jefferson Street NE Courtyard I
Albuquerque, NM 87109

Richard J. Berry, Mayor

RE: Valle Vista at the Trails, Unit 2 (File: C09D009)
Grading and Drainage Plan, Engineer's Stamp Date 6-23-2014
Revised Grading Plan, (verbally approved) Engineer's Stamp Date 1-20-15
Engineer's Certification Date: 3-18-16

Dear Mr. Steffen:

Based upon the information provided in your submittal received 3-21-16, the above referenced plan is accepted for Release of Financial Guarantee for grading and drainage.

PO Box 1293

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

Albuquerque

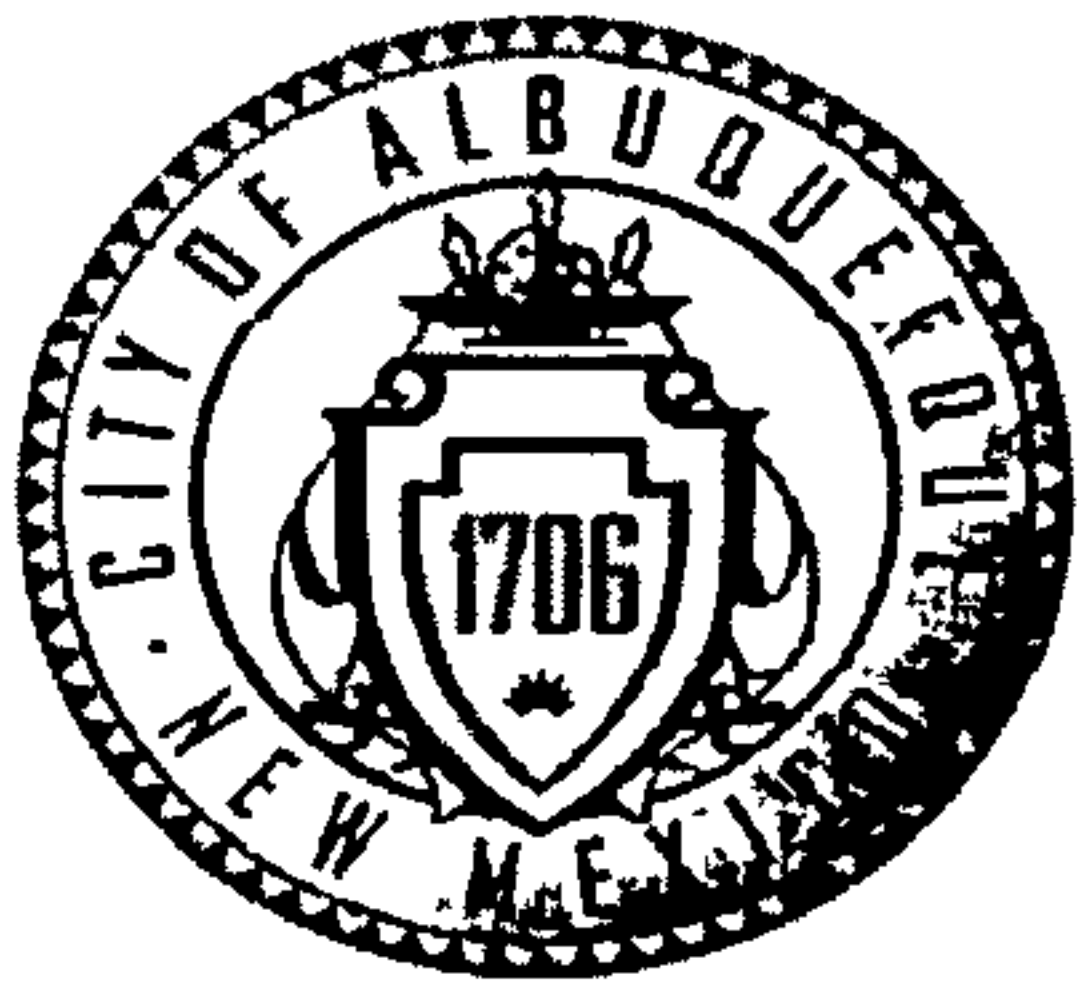
Sincerely,

New Mexico 87103

Rita Harmon, P.E.
Senior Engineer, Planning Dept.
Development Review Services

www.cabq.gov

Orig: Drainage file
c.pdf: via Email. Recipient; Charlotte LaBadie



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: VALLE VISTA UNIT 2 Building Permit #: _____ City Drainage #: C09/D009
DRB#: 1004606 EPC#: _____ Work Order#: _____
Legal Description: Valle Vista Unit 2
City Address: _____

Engineering Firm: BOHANNAN HUSTON INC Contact: SCOTT STEFFEN
Address: 7500 JEFFERSON ST NE COURTYARD I ALBUQUERQUE NM 87109
Phone#: 823-1000 Fax#: _____ E-mail: SSTEFFEN@BHINC.COM

Owner: WOODMONT PASEO, LLC Contact: RICK BELTRAMO
Address: 6330 RIVERSIDE PLAZA LANE #160 ALBUQUERQUE NM 87120
Phone#: _____ Fax#: _____ E-mail: _____

Architect: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

Other Contact: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

- ☒ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION
☐ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

- ☒ ENGINEER/ ARCHITECT CERTIFICATION

☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ DRAINAGE MASTER PLAN
☐ DRAINAGE REPORT
☐ CLOMR/LOMR

☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)

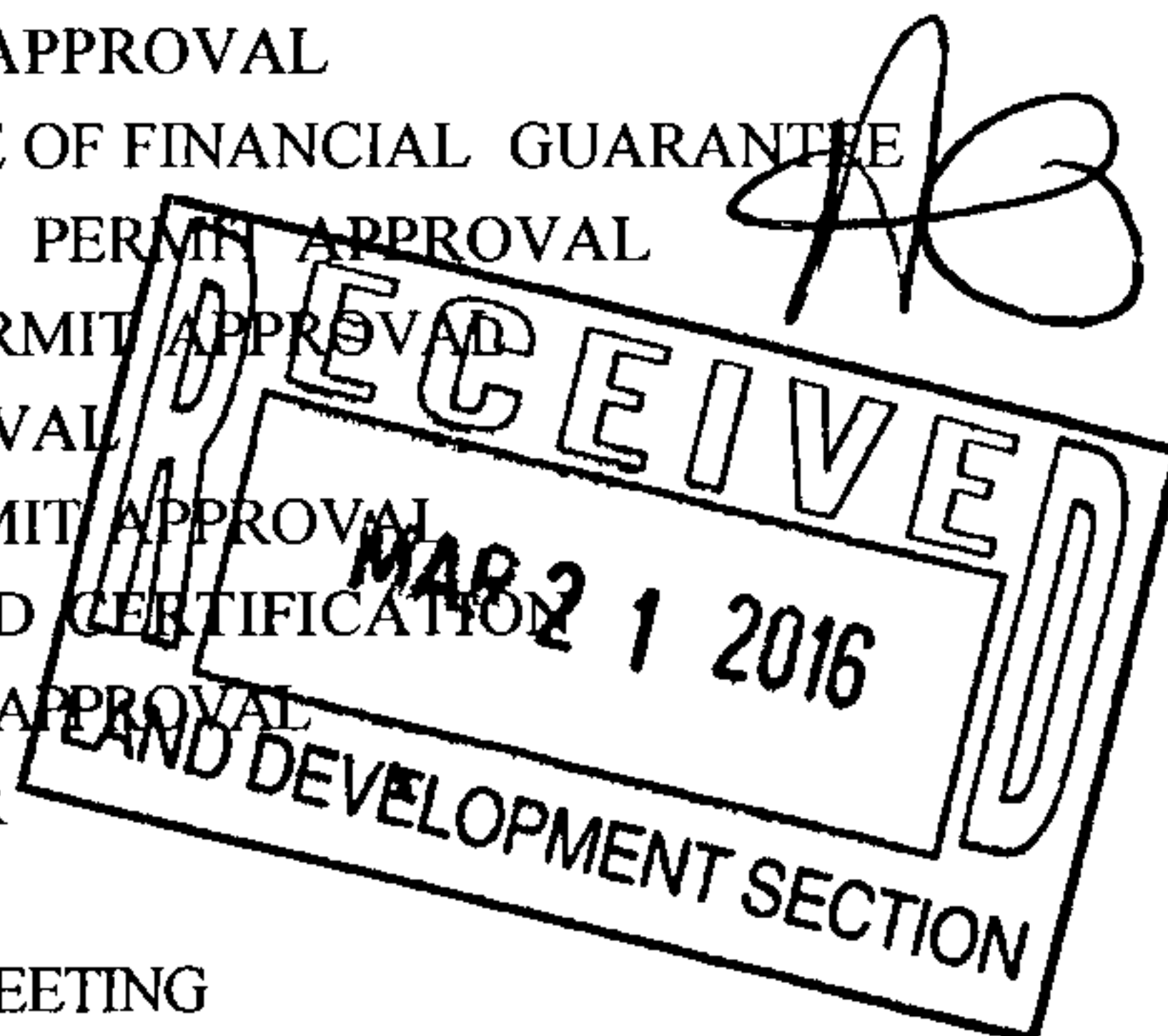
☐ OTHER (SPECIFY) _____

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☐ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY

☐ PRELIMINARY PLAT APPROVAL
☐ SITE PLAN FOR SUB'D APPROVAL
☐ SITE PLAN FOR BLDG. PERMIT APPROVAL
☐ FINAL PLAT APPROVAL
☒ SIA/ RELEASE OF FINANCIAL GUARANTEE
☐ FOUNDATION PERMIT APPROVAL
☐ GRADING PERMIT APPROVAL
☐ SO-19 APPROVAL
☐ PAVING PERMIT APPROVAL
☐ GRADING/ PAD CERTIFICATION
☐ WORK ORDER APPROVAL
☐ CLOMR/LOMR

☐ PRE-DESIGN MEETING
☐ OTHER (SPECIFY) _____



IS THIS A RESUBMITTAL? ☐ Yes ☒ No

DATE SUBMITTED: 3/18/16 By: SCOTT STEFFEN

COA STAFF. ELECTRONIC SUBMITTAL RECEIVED ☐

March 18, 2016

voice: 505.823.1000
facsimile: 505.798.7988
toll free: 800.877.5332

Ms. Rita Harmon
Hydrology Section
City of Albuquerque
600 2nd Street NW
Albuquerque, NM 87102

Re: Grading and Drainage Certification, Valle Vista Unit 2
DRB Case No. 1004606, (C09/D009)

Dear Rita:

Enclosed is the final grading and drainage certification for Valle Vista Unit 2. Enclosed for your review is the approved grading and drainage plan dated 6/23/14, with as-built elevations. Your comments, dated December 7, 2015, have been addressed as noted below. Also attached per your request is a hard copy of the Unit 2 and 3 grading plan revision dated 1/20/15. It was agreed with Curtis that these revisions could be as-built on the approved grading plan. The as-built grading plan and my previous Unit 2 certification submittal, dated 10/22/15 incorporate and/or address the grading plan revisions.

1. *This development discharges to Pond H, and as such the improvements to the Pond must be complete. The orifice plat is intended to allow for an opening of 1.14 SF and needs to resist over 3000 lbs of force without opening. Our field visit shows that the plates are already somewhat opened and need to be completely closed so that the opening does not exceed the 1.14 SF. The pin seems to be undersized. Show that the pin provided can maintain the plates remain completely closed under the 3000 lbs of force. Show that the pin will not shear with this amount of force. See attached picture. **It is my understanding that issues have been resolved and that at a subsequent field meeting with Rick Beltramo you stated that the Pond H improvements were acceptable.***
2. *The retaining wall at the rear of Lot 5 appears to have collapsed. **As previously discussed, the retaining wall has not collapsed, but actually turns an approximate 45 degree angle and steps down the slope.***
3. *Manhole is SD Tract east of Lot 5 needs to be adjusted to grade. **The manhole has been adjusted.***
4. *Lot 3 rear retaining wall is intended to be a garden wall retaining 2' to be built by the homebuilder. However, what mechanism is in place for the City to ensure that such a wall is built? If no such mechanism is in place, this wall should be constructed prior to Release of Financial Guarantee. Furthermore, should the garden wall not be built, the existing wall beyond is susceptible to overturning since the supporting soil is not in place. **The 2' garden wall has been built, see as-built elevations on the grading plan.***

Engineering ▲

Spatial Data ▲

Advanced Technologies ▲

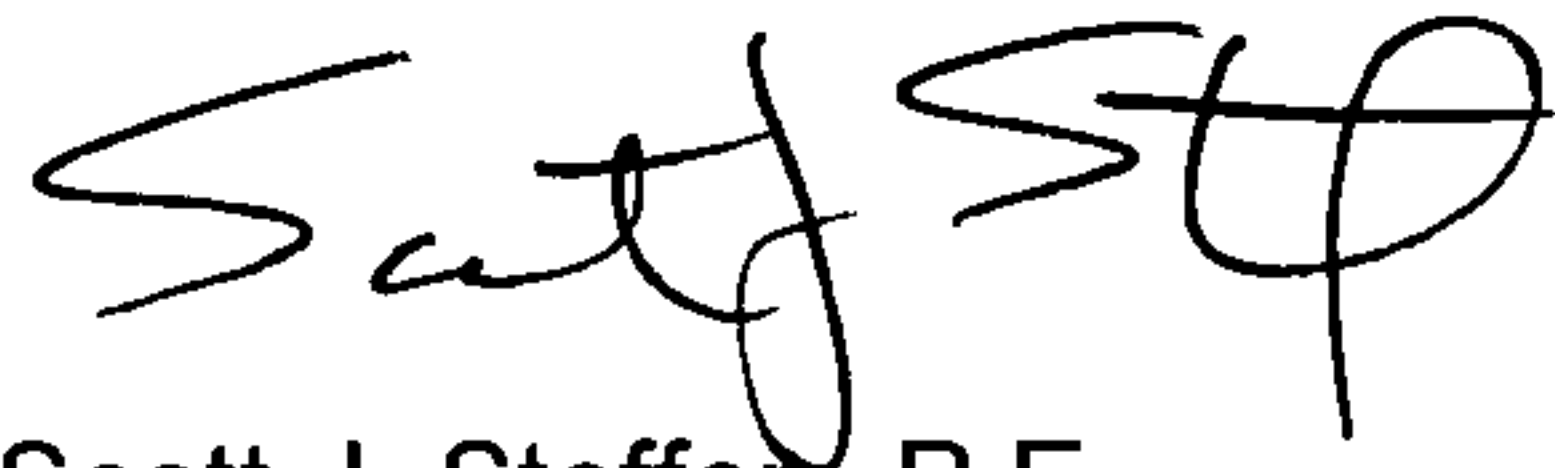
Rita Harmon, P.E.
Planning Department
March 18, 2016
Page 2

5. *The split between Lots 7 and 8 is over 2', and needs a retaining wall per the plan. **See the revised grading plan dated 1/20/15. The split is 2' or less, which will be built as part of the garden wall by the homebuilder.***
6. *The split between Lots 6 and 7 is over 4', and needs a retaining wall per the plan. **See the revised grading plan dated 1/20/15. The property line split is 2', with a slope in the rear yard. The 2' split will be incorporated in the garden wall, which will be built by the homebuilder.***
7. *Valley gutter at intersection of Valle Prado Lane and Valle Cantero Lane is chipped along an edge, and the asphalt is not flush. **The valley gutter is part of the Unit 1 infrastructure which has been accepted by the City. In addition, the streets in Valle Vista are private.***

After reviewing the as-built elevations and visiting the site on 3/17/16, it is my belief that Valle Vista Unit 2 has been graded in substantial compliance with the approved grading and drainage plan.

Your review and approval is requested for SIA/Financial Guarantee Release for Valle Vista Unit 2. If you have questions or require additional information, please contact me at 823-1000.

Sincerely,



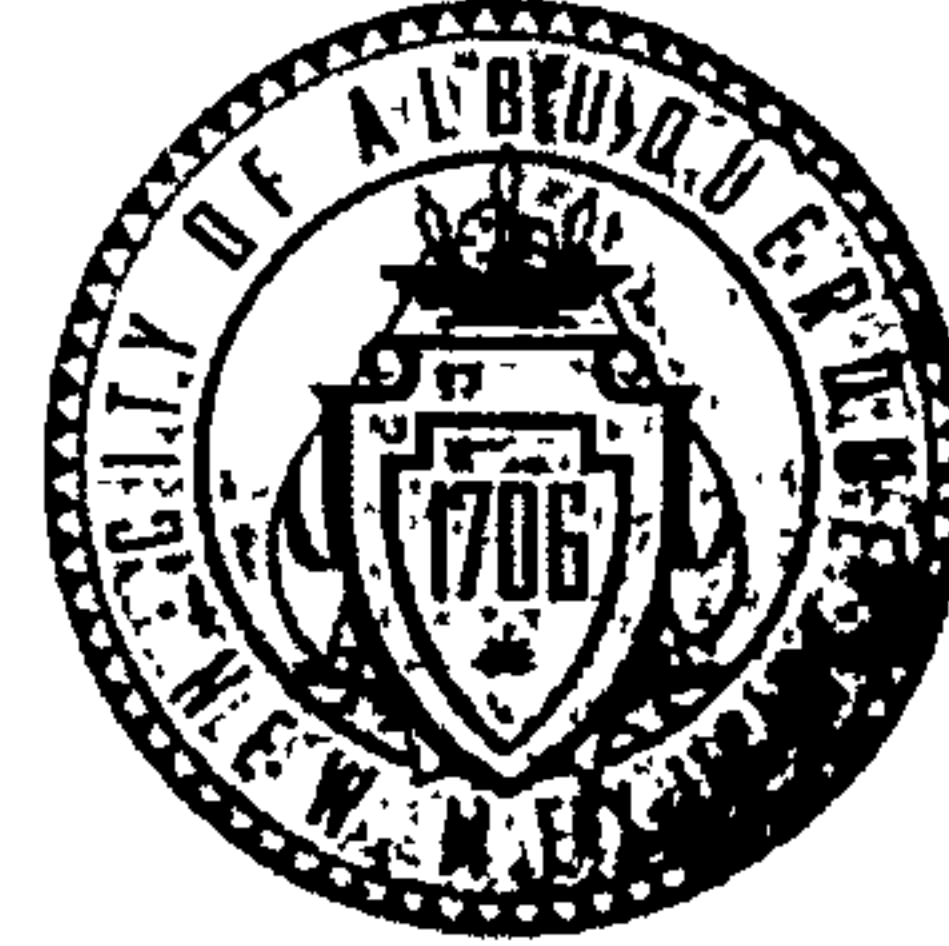
Scott J. Steffen, P.E.
Vice President
Community Development & Planning

Enclosure

cc: Rick Beltramo, Wexford Construction

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



December 7, 2015

Scott J. Steffen, PE
BOHANNAN-HUSTON, INC.
7500 Jefferson Street NE Courtyard I
Albuquerque, NM 87109

Richard J. Berry, Mayor

RE: **Valle Vista at the Trails, Unit 2 (File: C09D009)**
Grading and Drainage Plan,
Engineer's Stamp Date 6-23-2014
Engineer's Certification Date : 10-22-15

Dear Mr. Steffen:

Based upon the information provided in your submittal received 10-23-15, the above referenced plan cannot be accepted for Release of Financial Guarantee for grading and drainage until the following are addressed:

1. This development discharges to Pond H, and as such the improvements to the Pond must be complete. The orifice plate is intended to allow for an opening of 1.14 SF and needs to resist over 3000 lbs of force without opening. Our field visit shows that the plates are already somewhat opened and need to be completely closed so that the opening does not exceed the 1.14 SF. The pin seems to be undersized. Show that the pin provided can maintain the plates remain completely closed under the 3000 lbs of force. Show that the pin will not shear with this amount of force. See attached picture.
2. The retaining wall at the rear of Lot 5 appears to have collapsed.
3. Manhole in SD Tract east of Lot 5 needs to be adjusted to grade.
4. Lot 3 rear retaining wall is intended to be a garden wall retaining 2' to be built by the homebuilder. However, what mechanism is in place for the City to ensure that such a wall is built? If no such mechanism is in place, this wall should be constructed prior to Release of Financial Guarantee. Furthermore, should the garden wall not be built, the existing wall beyond is susceptible to overturning since the supporting soil is not in place.
5. The split between Lots 7 and 8 is over 2', and needs a retaining wall as per the plan.
6. The split between Lot 6 and 7 is over 4' and needs a retaining wall as per the plan.
7. Valley gutter at intersection of Valle Prado Lane and Valle Cantero Lane is chipped along an edge, and the asphalt is not flush.

PO Box 1293

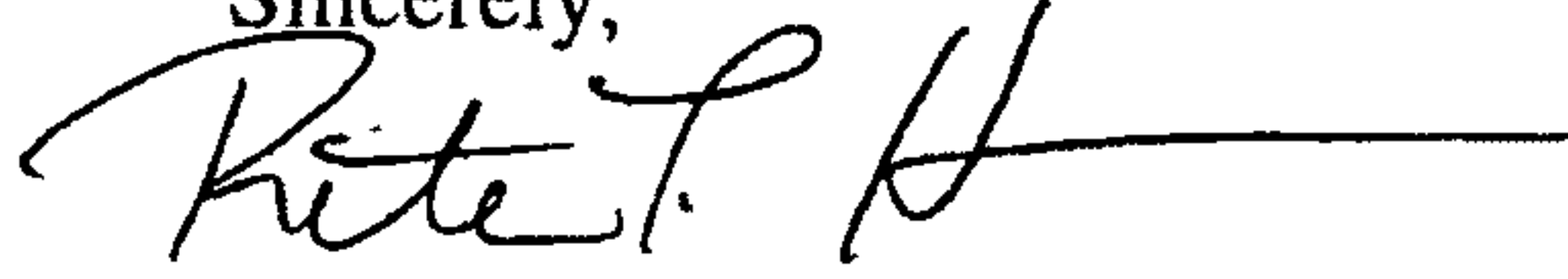
Albuquerque

New Mexico 87103

www.cabq.gov

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

Sincerely,

A handwritten signature in black ink, appearing to read "Rita L. Harmon", followed by a long horizontal line.

Rita Harmon, P.E.
Senior Engineer, Planning Dept.
Development Review Services

Orig: Drainage file
c.pdf. via Email: Recipient

Harmon Rita T.

10:00

From: Rick Beltramo <rbeltramo@gcinm.com>
Sent: Tuesday, January 19, 2016 5:58 PM
To: Harmon Rita T.
Cc: 'Scott Steffen'
Subject: Valle Vista Unit 2 Draft Comment Responses
Attachments: C09D009_ROFG_Cmmt (2).pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Rita,

Here are my responses to your comments relative to your letter dated December 7, 2015 (attached). We are currently addressing these comments. Some require additional work. Others, I believe do not require additional work. Below are my draft responses but I wanted to go over them with you first. Are you available for a phone call tomorrow?

Comment # Response

- 1 The original installation was not proper causing the gates to not hang incorrectly. The contractor has corrected the installation. I don't believe the problem was with the pin. Therefore I don't believe an analysis is necessary to show that the pin can provide the necessary shear resistance. However, I think that you and Curtis need to look at the work. There may be other items that are of concern. *easy*
- I request a field inspection so that we can show how the correction was made. *OK Field Insp. on 2/22*
- 2 Retaining wall at Lot 5 has not collapsed. It is a partial wall in that the retaining wall portion is constructed per plan, but the garden wall is yet to be added. The garden wall will be added when the lot is sold and a building is constructed. *—*
- No action additional is necessary *OK*
- 3 Manhole has been adjusted. *OK, per Insp. on 2/22*
- I request a site inspection, on the same day as the pond outlet inspection. *OK*
- 4 I agree. I have decided to build the wall now. The wall will be completed this week.
- I defer to you on additional action. Possibly we amend the G&D Cert. to show the wall was constructed. *OR PIC*
- 5 The plan shows a maximum split between lots 7 and 8 of equal to or less than 2'. The grades have been revised accordingly. *OK*
- 6 The lots split between lots 6 and 7, as shown on the revised grading plan are 2.0' maximum. The slope from the bottom of the wall on lot 6 to the backyard swale of lot 6 is intended to be a 3:1 slope maximum. The slope was constructed at a steeper slope. Lot 6 is being re-graded this week to meet the requirement of the 3:1 maximum. *OK*

OK
Field Insp. on 2/22
attach the revised plan for ref

I defer to you on additional action. Possibly we amend the G&D Cert. to show the wall was constructed.

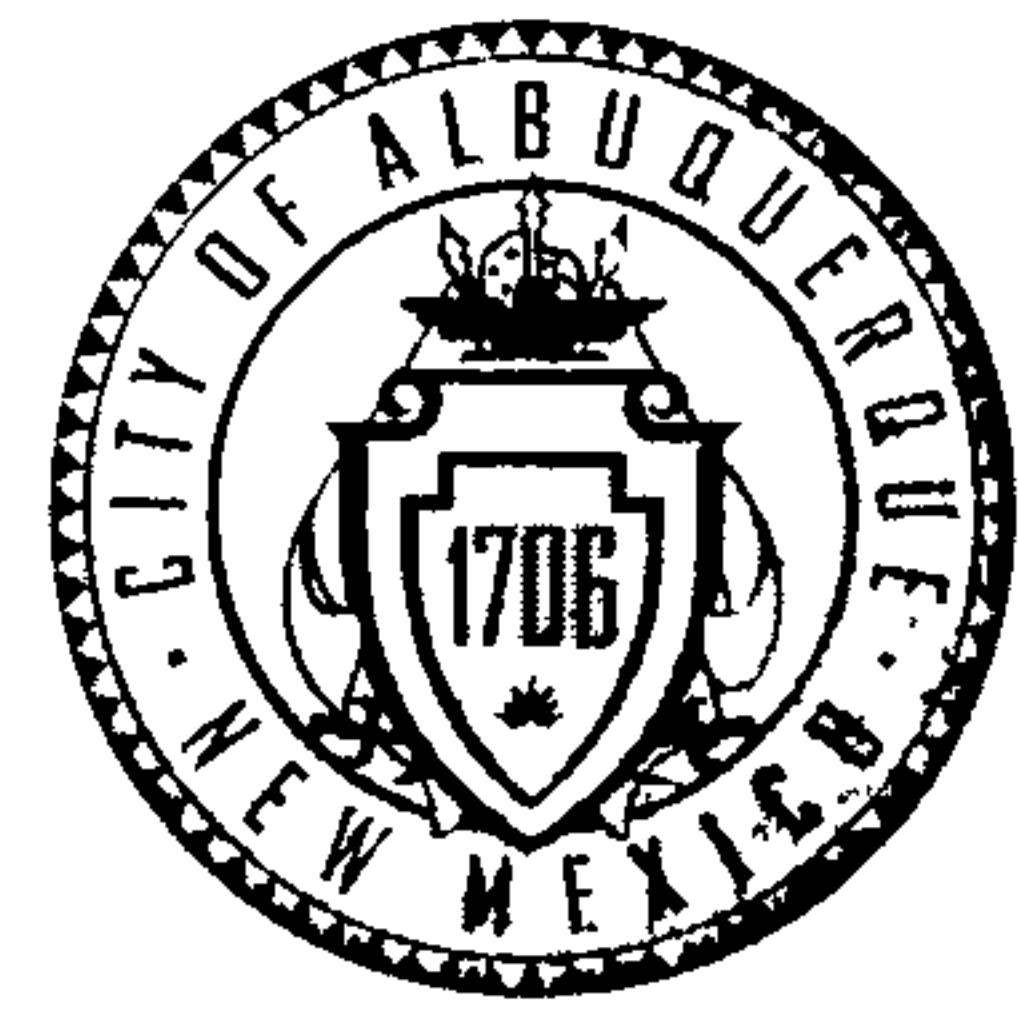
7 Although the VG is chipped it is very minor and is stable. However, improvement is part of Valle Prado Unit 1 and that project was turned over some time ago. Possibly the damage occurred after the project was accepted. I cant know for sure. For reasons other than cosmetics I don't believe that reconstruction is justifies the inconvenience to the new residents and builders caused by the construction. Also, the streets in Valle Vista are private streets, maintained by us, The Trails. If future repair is needed we would be the ones doing it at our cost. I respectfully request that this be left as is. The Trails accepts any future liability if any that may incur. OK

No further action.

Rick Beltramo
Director of Engineering
Galway Construction, Inc.
Cell (505) 620-5322

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



December 7, 2015

Scott J. Steffen, PE
BOHANNAN-HUSTON, INC.
7500 Jefferson Street NE Courtyard I
Albuquerque, NM 87109

Richard J. Berry, Mayor

RE: **Valle Vista at the Trails, Unit 2 (File: C09D009)**
Grading and Drainage Plan,
Engineer's Stamp Date 6-23-2014
Engineer's Certification Date : 10-22-15

Dear Mr. Steffen:

Based upon the information provided in your submittal received 10-23-15, the above referenced plan cannot be accepted for Release of Financial Guarantee for grading and drainage until the following are addressed:

- 1. This development discharges to Pond H, and as such the improvements to the Pond must be complete. The orifice plate is intended to allow for an opening of 1.14 SF and needs to resist over 3000 lbs of force without opening. Our field visit shows that the plates are already somewhat opened and need to be completely closed so that the opening does not exceed the 1.14 SF. The pin seems to be undersized. Show that the pin provided can maintain the plates remain completely closed under the 3000 lbs of force. Show that the pin will not shear with this amount of force. See attached picture.
2. The retaining wall at the rear of Lot 5 appears to have collapsed. *Scott says no*
3. Manhole in SD Tract east of Lot 5 needs to be adjusted to grade. *- agreed*
4. Lot 3 rear retaining wall is intended to be a garden wall retaining 2' to be built by the homebuilder. However, what mechanism is in place for the City to ensure that such a wall is built? If no such mechanism is in place, this wall should be constructed prior to Release of Financial Guarantee. Furthermore, should the garden wall not be built, the existing wall beyond is susceptible to overturning since the supporting soil is not in place.
5. The split between Lots 7 and 8 is over 2', and needs a retaining wall as per the plan.
6. The split between Lot 6 and 7 is over 4' and needs a retaining wall as per the plan.
7. Valley gutter at intersection of Valle Prado Lane and Valle Cantero Lane is chipped along an edge, and the asphalt is not flush. *- private road.*

- Swale in. per revised plan

to be slope graded per revised plan

*See C09D009-ROFG-Unit 3.
for revised plan.*

*CPN
740581*
PO Box 1293

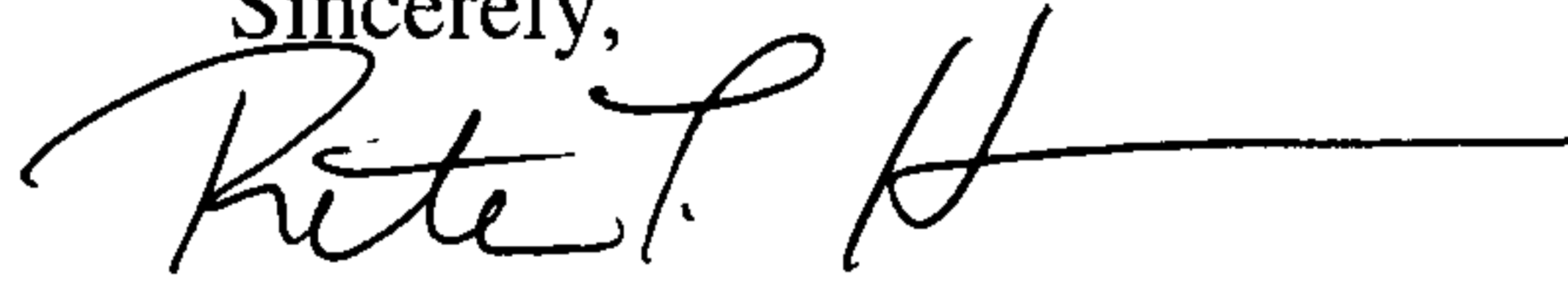
Albuquerque

New Mexico 87103

www.cabq.gov

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

Sincerely,

A handwritten signature in black ink, appearing to read "Rita L. Harmon", followed by a long horizontal line.

Rita Harmon, P.E.
Senior Engineer, Planning Dept.
Development Review Services

Orig Drainage file
c.pdf. via Email. Recipient

October 22, 2015

Ms. Rita Harmon
Hydrology Section
City of Albuquerque
600 2nd Street NW
Albuquerque, NM 87102

Re: Grading and Drainage Certification, Valle Vista Unit 2
DRB Case No. 1004606, (C09/D009)

Dear Rita:

Enclosed is the final grading and drainage certification for Valle Vista Unit 2. Enclosed for your review is the approved grading and drainage plan dated 6/23/14, with as-built elevations. Several minor field modifications were made during construction based on field conditions and homebuilder requirements. These are shown on the as-built grading plan and described below.

Unit 2

- ✍ Lot 1 – Pad depth increased from 65' to 75'.
- ✍ Lot 3 – Lower rear yard retaining wall is no longer required as the existing wall along the rear property line is able to accept a greater split than originally thought. The retaining wall is replaced by a garden wall to be built by the homebuilder.
- ✍ Lot 4 – Pad was built as a split pad to reduce the height of the lower rear yard retaining wall and reduce the driveway slope.
- ✍ Lot 6 – Pad was shifted back approximately 14' to comply with front yard setback requirements.
- ✍ Lot 7 – Pad was lowered by 1' to reduce the driveway slope as the driveway needs to be on the low side of the lot.
- ✍ Lot 8 – Pad was built as a split pad to eliminate the side yard and rear yard retaining wall. Pad was reduced from 70' to 60' to remove the pad from the 10' Public Utility Easement.
- ✍ Lot 13 – Pad was reduced from 70' to 65' to remove the pad from the 10' Public Utility Easement.
- ✍ Lot 18 – Pad was built as a split pad to reduce the driveway slope as the driveway needs to be on the low side of the lot. The upper pad matches the original pad elevation.

After reviewing these as-built elevations and visiting the site on 10/22/15, it is my belief that Valle Vista Unit 2 has been graded in substantial compliance with the approved grading and drainage plan.

Engineering ▲

Spatial Data ▲

Advanced Technologies ▲

Office
plate
Looke CPN set
740581

Rita Harmon, P.E.
Planning Department
October 22, 2015
Page 2

Your review and approval is requested for Building Permit Approval and for SIA/Financial Guarantee Release for Valle Vista Unit 2. If you have questions or require additional information, please contact me at 823-1000.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott J. Steffen". The signature is stylized with a large "S" and "J" and a circular flourish at the end.

Scott J. Steffen, P.E.
Vice President
Community Development & Planning

Enclosure

cc: Rick Beltramo, Wexford Construction

GRADING AND DRAINAGE CERTIFICATION

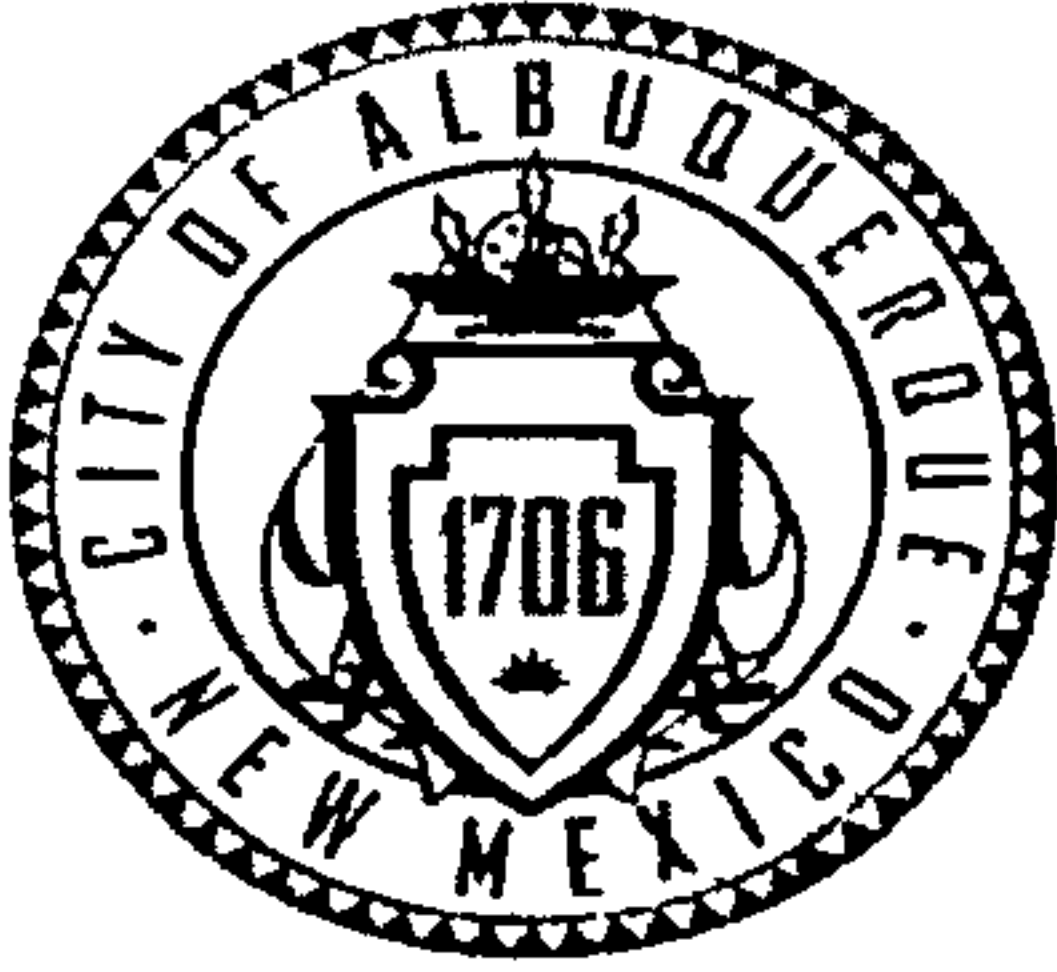
I, SCOTT J. STEFFEN, NMPE 14664, OF THE FIRM BOHANNAN HUSTON, HEREBY CERTIFY THAT VALLE VISTA UNIT 2 HAS BEEN GRADED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED GRADING AND DRAINAGE PLAN DATED 6/23/14. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN PROVIDED BY RUSS HUGG, NMPS 9750, OF SURVTEK INC. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON 10/07/14, 02/25/15 AND 10/22/15 AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE DATA PROVIDED IS REPRESENTATIVE OF ACUTAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

THIS CERTIFICATION ALSO COVERS THE PREVIOUSLY APPROVED CERTIFICATION DATED 10/08/14 FOR LOTS 1-8, VALLE VISTA UNIT 1 AND DATED 02/28/15 FOR LOTS 1-23, VALLE VISTA UNIT 3.

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

Scott Steffen 10/22/15
SCOTT J. STEFFEN, NMPE 14664 DATE





City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: DMP FOR VALLE VISTA AT THE TRAILS Building Permit #: _____ City Drainage #: C09/D009
DRB#: 1004606 EPC#: _____ Work Order#: _____
Legal Description: VALLE VISTA UNIT 2
City Address: _____

Engineering Firm: BOHANNAN HUSTON INC Contact: SCOTT STEFFEN
Address: 7500 JEFFERSON ST NE COURTYARD 1 ALBUQUERQUE NM 87109
Phone#: 823-1000 Fax#: _____ E-mail: SSTEFFENN@BHINC.COM

Owner: WOODMONT PASEO, LLC Contact: RICK BELTRAMO
Address: 6330 RIVERSIDE PLAZA LANE #160 ALBUQUERQUE NM 87120
Phone#: 505-761-9911 Fax#: _____ E-mail: _____

Architect: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

Surveyor: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

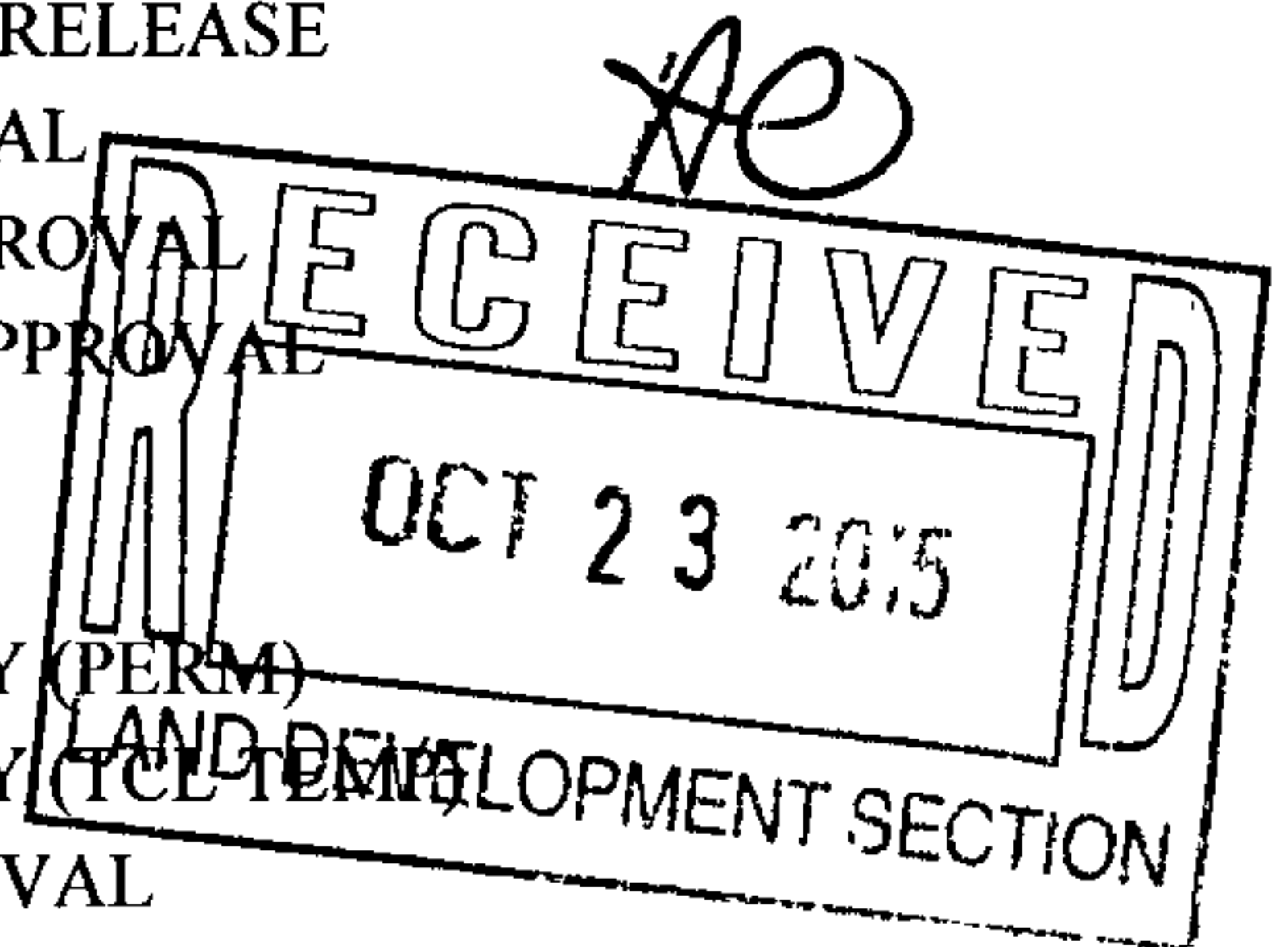
Contractor: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
- ☐ DRAINAGE PLAN 1st SUBMITTAL
- ☐ DRAINAGE PLAN RESUBMITTAL
- ☐ CONCEPTUAL G & D PLAN
- ☐ GRADING PLAN
- ☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
- ☒ ENGINEER'S CERT (HYDROLOGY)
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ ENGINEER'S CERT (TCL)
- ☐ ENGINEER'S CERT (DRB SITE PLAN)
- ☐ ENGINEER'S CERT (ESC)
- ☐ SO-19
- ☐ OTHER (SPECIFY) _____

CHECK TYPE OF APPROVAL/ACCEPTANCE 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
- ☐ CERTIFICATE OF OCCUPANCY (PERM)
- ☐ CERTIFICATE OF OCCUPANCY (TCL TEMP)
- ☐ FOUNDATION PERMIT APPROVAL
- ☒ BUILDING PERMIT APPROVAL
- ☐ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ WORK ORDER APPROVAL
- ☐ GRADING CERTIFICATION
- ☐ SO-19 APPROVAL
- ☐ ESC PERMIT APPROVAL
- ☐ ESC CERT. ACCEPTANCE
- ☐ OTHER (SPECIFY) _____



WAS A PRE-DESIGN CONFERENCE ATTENDED: _____ Yes _____ No _____ Copy Provided

DATE SUBMITTED: 10/22/15 By: Scott Steffen

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 defines 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
- 4 **Erosion and Sediment Control Plan** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

Scott Steffen

From: Scott Steffen
Sent: Thursday, October 22, 2015 3:57 PM
To: Harmon Rita T. (rharmon@cabq.gov); PLNDRS@cabq.gov
Cc: 'Rick Beltramo'
Subject: Valle Vista Unit 2 C09 D009 G&D cert
Attachments: Valle Vista Unit 2 C09D009 G&D Cert Submittal.pdf

Rita,

Attached is the Valle Vista Unit 2 final grading and drainage certification.

You should receive a hard copy tomorrow morning.

Let me know if you have any questions or comments.

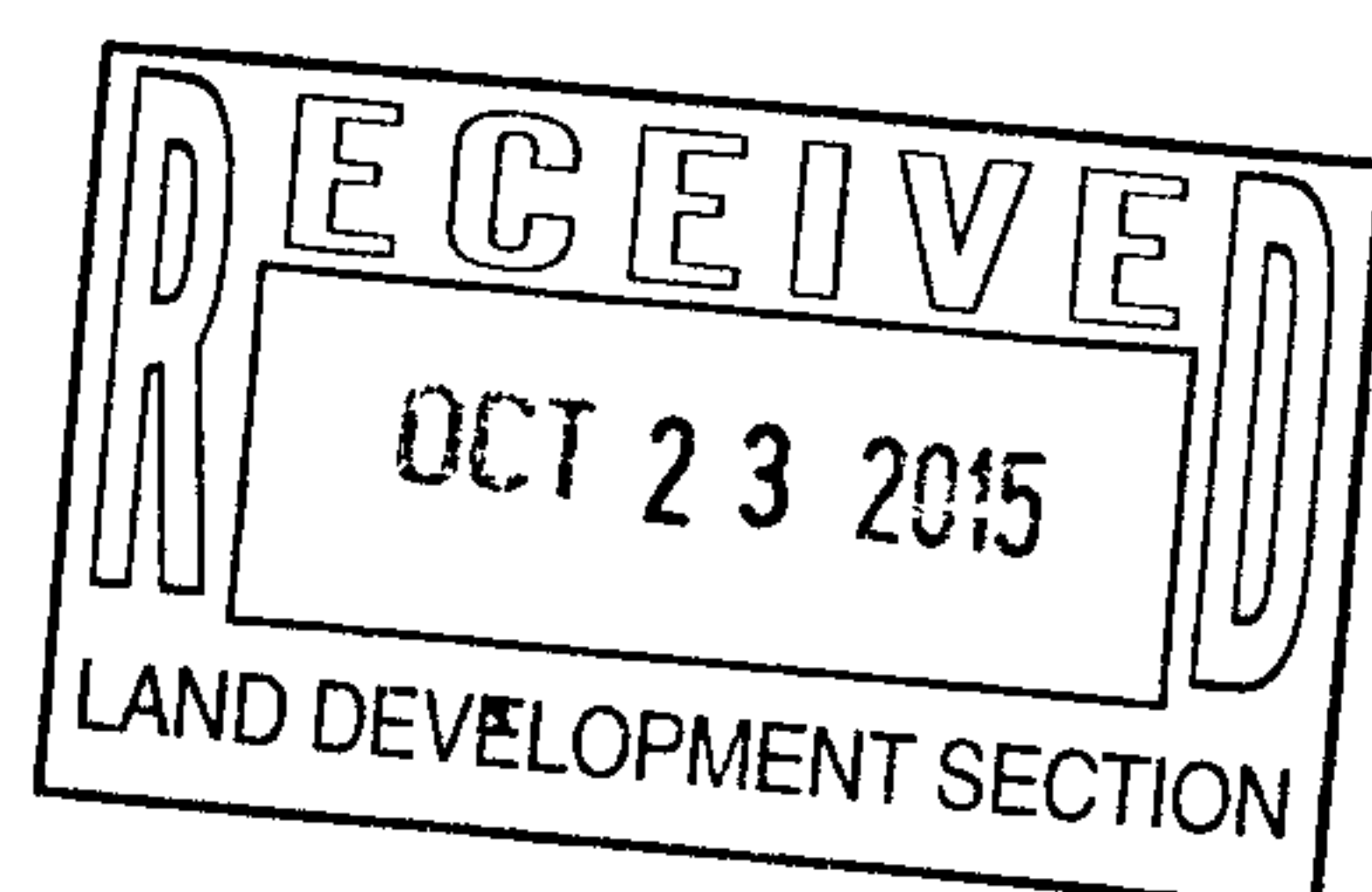
Thanks,

Scott J. Steffen
Vice President
Community Development and Planning

Bohannon Huston

Courtyard I
7500 Jefferson St. NE
Albuquerque, NM 87109-4335
www.bhinc.com

voice: 505.823.1000 facsimile: 505.798.7988 toll free: 800.877.5332



CITY OF ALBUQUERQUE



June 30, 2014

Scott Steffen, P.E.
Bohannon Huston Inc.
7500 Jefferson St NE, Ctyd 1
Albuquerque, NM 87109

**Re: Valle Vista at the Trails Units 1, 2 and 3 Grading Plan
Engineer's Stamp Date 6-23-14 (C09D009)**

Dear Mr. Steffen,

Based upon the information provided in your submittal received 6-24-14, the above referenced plan is approved for Preliminary Plat action by the DRB. Since the DRB approved the Preliminary Plat on 6-25-14, the plan is approved for Grading Permit once the ESC plan is approved, if one is required.

If you have any questions, you can contact me at 924-3986.

PO Box 1293

Albuquerque

New Mexico 87103

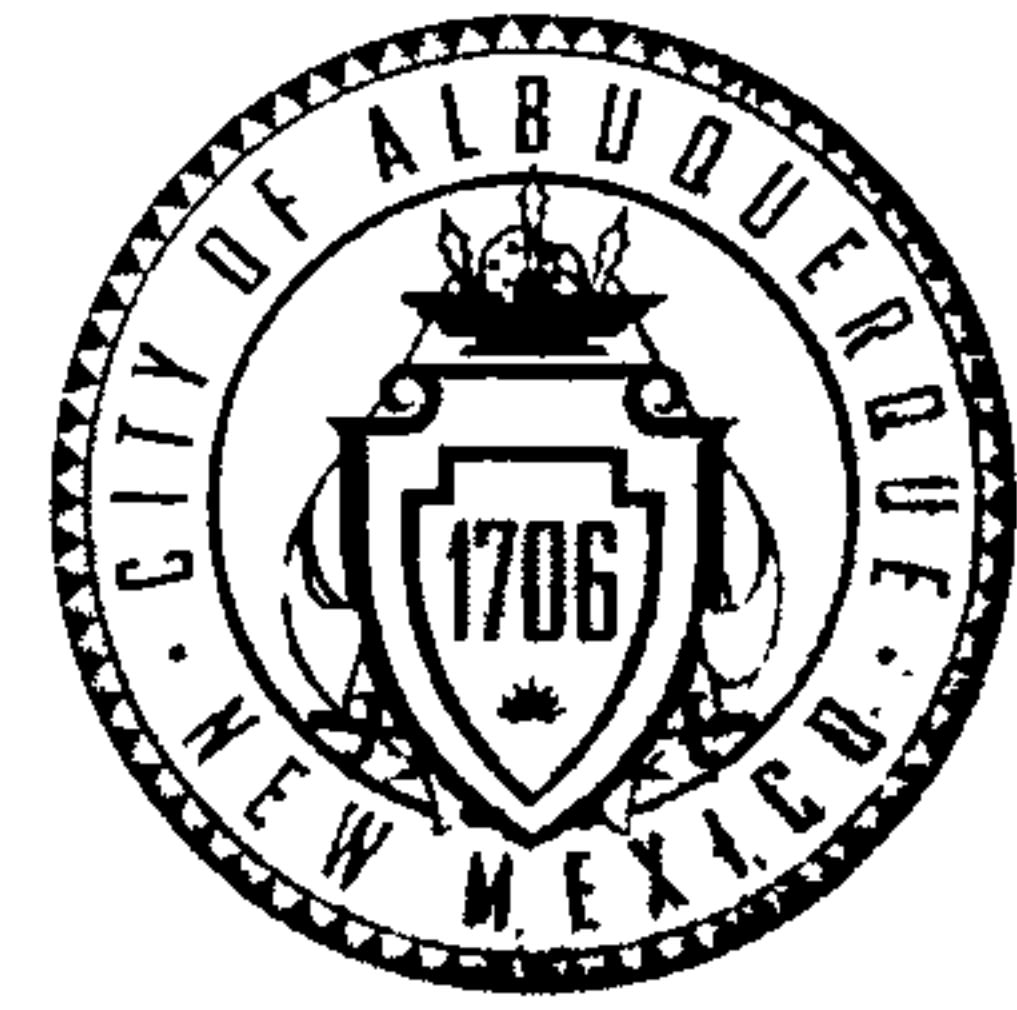
Sincerely,

Curtis Cherne, P.E.
Principal Engineer, Hydrology
Planning Dept.

www.cabq.gov

C: e-mail

CITY OF ALBUQUERQUE



June 10, 2015

Scott Steffen, P.E.
Bohannon Huston Inc.
7500 Jefferson St NE, Ctyd 1
Albuquerque, NM 87109

Re: Valle Vista at the Trails Unit 3 (ROFG)
Grading and Drainage Plan, Engineer's Stamp Date 6-23-14 (C09D009)
Engineer's Certification dated 2-28-15, Supplemental Information 3-9-15

Dear Mr. Steffen,

Based upon the information provided in your submittal received 3-2-15, and supplemental information received 3-9-15, the above referenced plan is accepted for Release of Financial Guarantee for grading and drainage for Unit 3 only.

Please note that for Unit 2, a new submittal is required which includes lots 6-9 as part of the Certification.

PO Box 1293

If you have any questions, you can contact me at 924-3986.

Albuquerque

New Mexico 87103

www.cabq.gov

Sincerely,

Rita Harmon, P.E.
Senior Engineer, Hydrology
Planning Dept.

C: e-mail
Christiana Montoya

NOTE: Electronic file has revised grading Plan

CITY OF ALBUQUERQUE



March 9, 2015

Scott Steffen, P.E.
Bohannon Huston Inc.
7500 Jefferson St NE, Ctyd 1
Albuquerque, NM 87109

**Re: Valle Vista at the Trails Unit 2 Lots 1-5 and 10-19 and Unit 3 all Lots Pad
Certification,
Engineer's Stamp Date 6-23-14 (C09D009)
Certification dated 2-28-15, Supplemental Information 3-9-15**

Dear Mr. Steffen,

Based upon the information provided in your submittal received 3-2-15 and supplemental information received 3-9-15, the above referenced plan and information is accepted for Building Permit approval on above mentioned lots.

If you have any questions, you can contact me at 924-3986.

PO Box 1293

Albuquerque

New Mexico 87103

Sincerely,

Curtis Cherne, P.E.
Principal Engineer, Hydrology
Planning Dept.

www.cabq.gov

C: e-mail

Cherne, Curtis

From: Scott Steffen <ssteffen@bhinc.com>
Sent: Monday, March 09, 2015 3:46 PM
To: Cherne, Curtis
Cc: 'Rick Beltramo'
Subject: RE: valle vista cert Units 2 and 3
Attachments: Valle Vista grading plan Rev_2_20150120.pdf

Curtis,

Attached is the revised grading plan that the lot revisions noted in the Unit 2/3 certification letter are based upon.

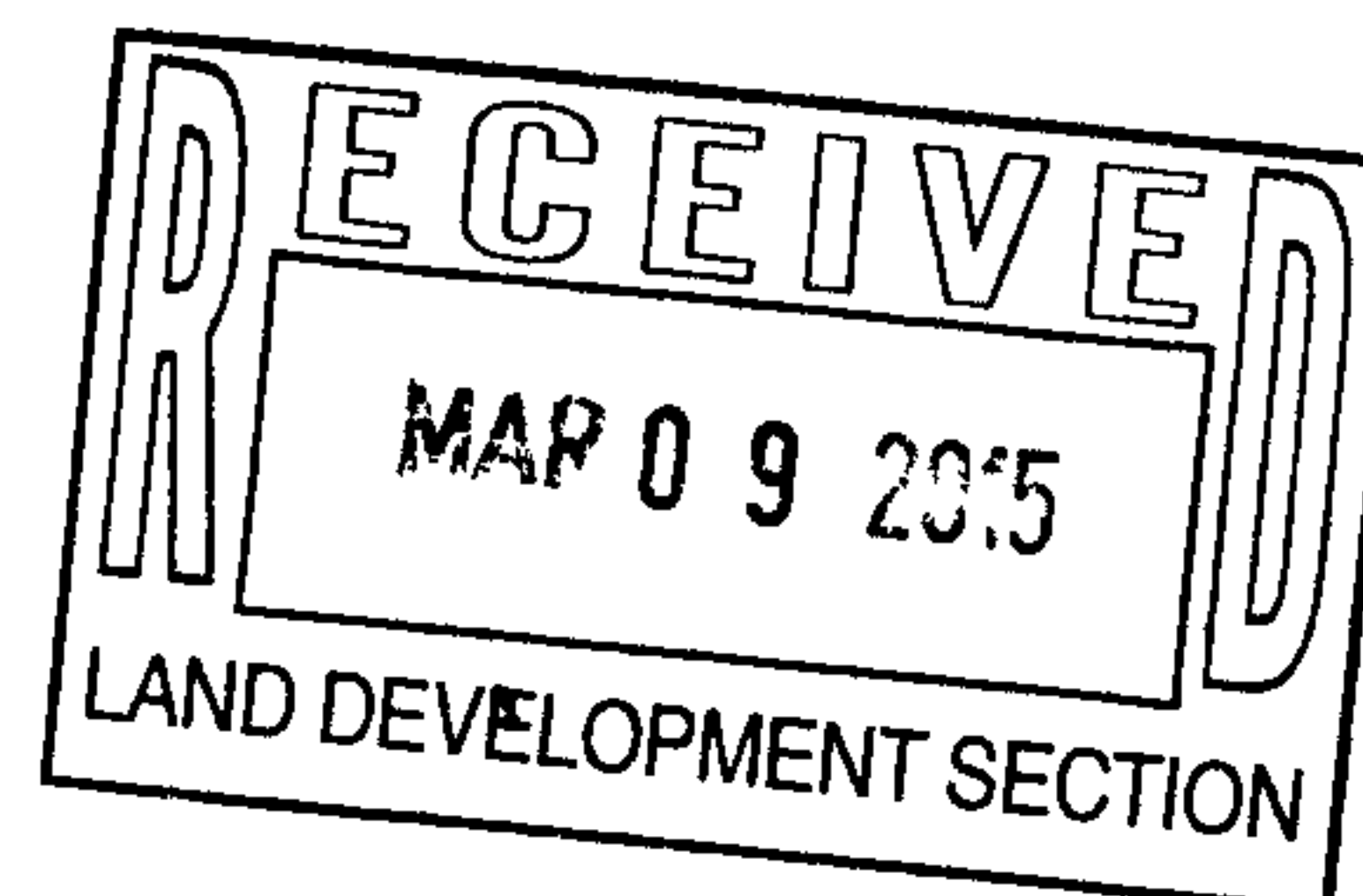
For the Lot 3, Unit 2 rear wall, there is some excess dirt that has not been removed, but will be required to be removed in order for the homebuilder to construct the lower garden wall per this plan. The existing dirt slope will be excavated/removed for the lower wall construction and backfilled upon wall completion, and slope constructed from the upper wall along Woodmont and the lower garden wall.

For the Lot 5, Unit 3 side wall adjacent to the Lots 6-8 back wall, a slope will need to be constructed in order to build the wall per the attached plan. This slope will be destroyed and rebuilt with the wall construction to be completed by the homebuilder.

I think seeing the revised plan will help you w/understanding the intent of the design. I will call to discuss.

Thanks,

Scott J. Steffen
Vice President
Community Development and Planning
Bohannon Huston
Courtyard I
7500 Jefferson St. NE
Albuquerque, NM 87109-4335
www.bhinc.com
voice: 505.823.1000 facsimile: 505.798.7988 toll free: 800.877.5332



From: Cherne, Curtis [<mailto:CCherne@cabq.gov>]
Sent: Monday, March 09, 2015 9:49 AM
To: Scott Steffen
Cc: 'Rick Beltramo'
Subject: valle vista cert Units 2 and 3

Scott,

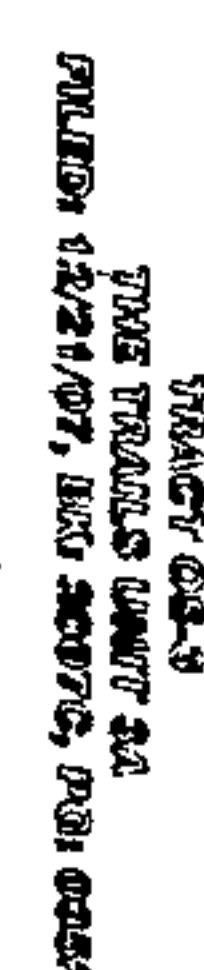
As discussed on the phone this morning, I have reviewed the above mentioned certification and provide the following comments:

1. Add a note to the certification that the homebuilder is to construct the side yard wall drain on Lot 17. Would you recommend a turn-block?
2. It appears the rear-yard retaining wall is still required on Lot 3 Unit 2. The TW is about 52 and the BW is about 48.
3. It appears the side-yard retaining wall is required between lots 5 and 6/7 maybe 8. TW is high than 40 and the BW is 37 and some change.

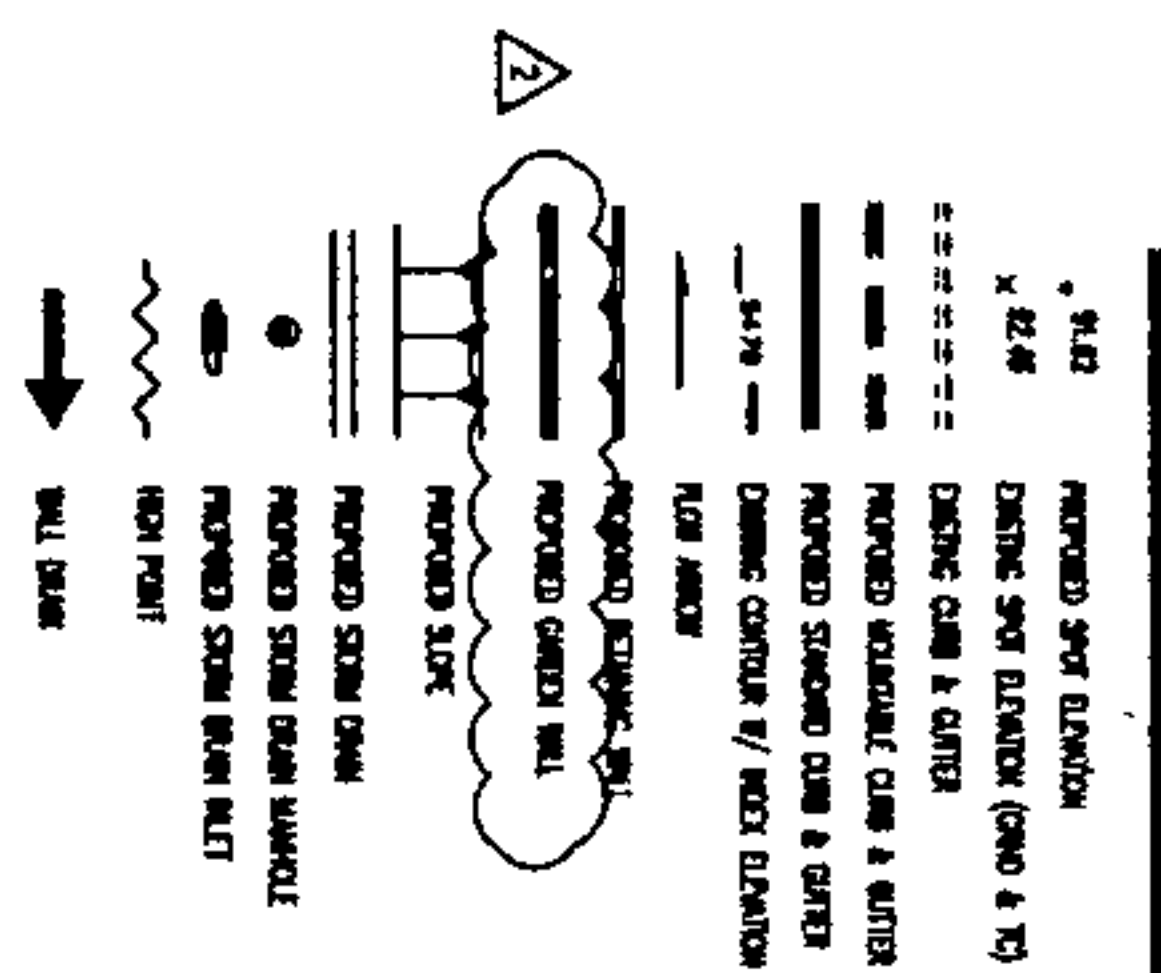
As an informational comment. In general Hydrology only requires 4 points for a pad cert: back two corners, top of curb and the pad. However, when there is a side yard retaining wall changes in the pad grade causes changes in the side-yard grade, which may impact whether a retaining wall is required or not. Without the side-yard grades being as-built makes it difficult for Hydrology to review.

Curtis

THE WARDENS UNIT 2A
FLEET STREET LONDON E4, 8007
PLAY BOOK 2007C, PG. 005




1. CONTRACTOR SHALL OBTAIN A SPECIAL INSURANCE POLICY FROM THE CONTRACTOR'S INSURANCE AGENT FOR CONSTRUCTION.
2. THE CONTRACTOR IS TO ENTER TO FATHOMER SPECIFICATION AS NOTED IN THIS SPEC.
3. THE CONTRACTOR SHALL COMPLY TO ALL CITY, COUNTY, STATE AND FEDERAL AND CONTROL AGENCIES A REQUIREMENTS AND WILL BE RESPONSIBLE FOR PAYING AND SECURING ALL NECESSARY APPLICATIONS AND APPROVALS.
4. THE CONTRACTOR SHALL BEAR THE RISK OF LOSS FROM THE LOSS OF AND DAMAGE TO ANY OF THE CASES, INJURIES TO THE CONSTRUCTION, DAMAGE TO THE PROPERTY, LOSS OF LIFE, AND LOSSES TO THE RISK OF LOSS FROM DAMAGE.
5. ALL SPOIL EXCAVATION ARE TO BE PLACED IN A PLACE, OTHERWISE NOTED.
6. MATERIALS SHALL BE PLACED IN PLACES EXCEPTED OTHERWISE NOTED.
7. MATERIALS SHALL BE STOCKPILED AND PROTECTED OF AT THE ORDERING OF THE OWNER.
7. ALL WILLS SHALL BE TO BE PLACED ALONG PROPERTY LINE. WILLS ARE SHOWN OFFSET FOR WILLS, PAVING, DRAIN.



Bohannon & Huston
www.bhinc.com 800.877.5332

 **CITY OF ALBUQUERQUE**
PUBLIC WORKS DEPARTMENT
VALLE VISTA UNITS 1, 2 & 3
GRADING AND DRAINAGE PLAN

Design Review Committee	City Engineer Approval 	Last Design Update 	By: / Date:	By: / Date:
City Project No. XXXXXX	Zone Map No. C-09-Z	Sheet 1	Of 2	

ENGINEER'S SEAL	SURVEY INFORMATION			BENCH MARKS		AS-BUILT INFORMATION	
	FIELD NOTES			CONTRACTOR		DATE	
	NO.	BY	DATE	DESIGNED BY		DATE	
				CHECKED BY		DATE	
				FIELDWORK BY		DATE	
				DRAWN BY		DATE	
			GROUND-TO-CMID FACTOR = 0.999664360		MICROFILM INFORMATION		
			Δi = -00°16'58.96"		RECORDED BY		DATE
			NAVD 1988 ELEVATION = 5524.950		NO.		

Cherne, Curtis

From: Cherne, Curtis
Sent: Monday, March 09, 2015 9:49 AM
To: steffen, scott
Cc: 'Rick Beltramo'
Subject: valle vista cert Units 2 and 3

Scott,

As discussed on the phone this morning, I have reviewed the above mentioned certification and provide the following comments:

1. Add a note to the certification that the homebuilder is to construct the side yard wall drain on Lot 17. Would you recommend a turn-block?
2. It appears the rear-yard retaining wall is still required on Lot 3 Unit 2. The TW is about 52 and the BW is about 48.
3. It appears the side-yard retaining wall is required between lots 5 and 6/7 maybe 8. TW is high than 40 and the BW is 37 and some change.

As an informational comment. In general Hydrology only requires 4 points for a pad cert: back two corners, top of curb and the pad. However, when there is a side yard retaining wall changes in the pad grade causes changes in the side-yard grade, which may impact whether a retaining wall is required or not. Without the side-yard grades being as-built makes it difficult for Hydrology to review.

Curtis

February 28, 2015

Mr. Curtis Cherne
Hydrology Section
City of Albuquerque
600 2nd Street NW
Albuquerque, NM 87102

1 - City?
2 - S/L Hwy
3 - wall down

Re: Grading and Drainage Certification, Valle Vista Units 2 and 3
DRB Case No. 1004606, (C09/D009)

Dear Curtis:

We are submitting grading and drainage certifications for Valle Vista Units 2 and 3. The certifications include a partial certification of Valle Vista Unit 2 (Lots 1-5 and 10-19) and a final certification for Valle Vista Unit 3. Enclosed for your review is the approved grading and drainage plan dated 6/23/14, with as-built elevations for the above lots in Unit 2 and all lots in Unit 3. Several minor field modifications were made during construction based on field conditions and homebuilder requirements. These are shown on the as-built grading plan and described below.

Unit 2

- Lot 1 – Pad depth increased from 65' to 75'.
- Lot 3 – Lower rear yard retaining wall is no longer required as the existing wall along the rear property line is able to accept a greater split than originally thought. The retaining wall is replaced by a garden wall to be built by the homebuilder.
- Lot 4 – Pad was built as a split pad to reduce the height of the lower rear yard retaining wall and reduce the driveway slope.
- Lot 13 – Pad was reduced from 70' to 65' to remove the pad from the 10' Public Utility Easement.
- Lot 18 – Pad was built as a split pad to reduce the driveway slope as the driveway needs to be on the low side of the lot. The upper pad matches the original pad elevation.

Unit 3

- Lot 4 – Pad elevation decreased by 1.5' as it was determined that the depth to basalt rock was deeper than originally thought. This lower elevation also reduces the driveway slope.
- Lot 5 – Pad elevation decreased by 1.0' as it was determined that the depth to basalt rock was deeper than originally thought. This lower elevation also reduces the driveway slope.
- The lowering of the Lot 4 and 5 pad elevations reduced the Lot 4/5 side yard split to less than 2.0', therefore eliminating the side yard retaining wall.

Engineering ▲

Spatial Data ▲

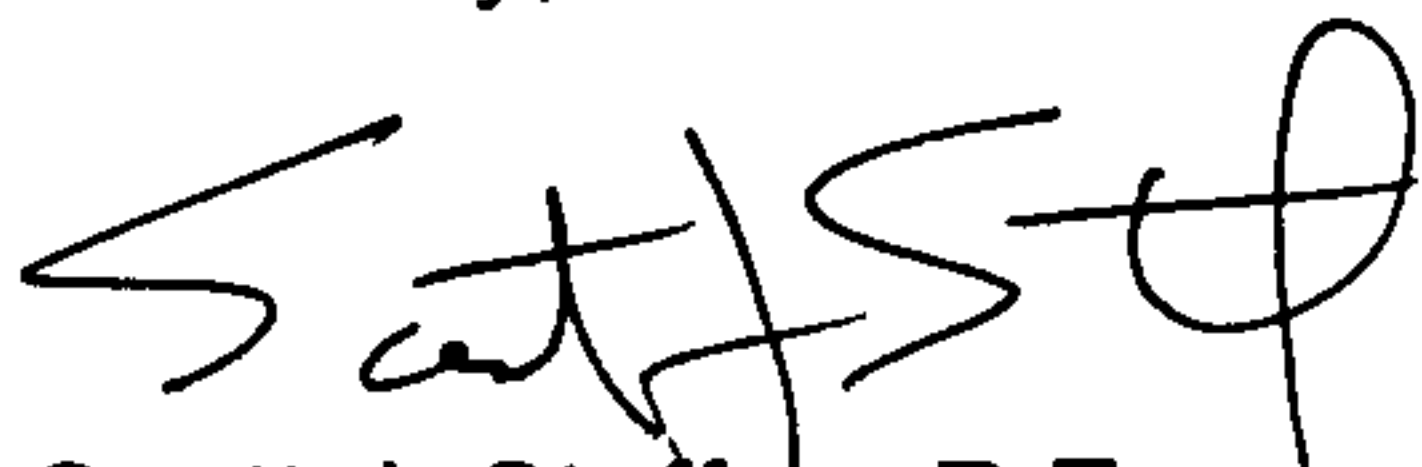
Advanced Technologies ▲

- Minimum wall
wall drain?
what
replaster?*
- The lowering of the Lot 5 pad elevation reduced the Lot 5 side yard and Lots 6-8 rear yard splits to less than 2.0', therefore eliminating the side/rear yard retaining wall. *5m canal*
 - Lot 17 – Reposition the pad to increase the pad depth from 57' to 60' to meet the homebuilder minimum pad depth requirement. The entire back yard now drains to the low point wall drain as shown on the original grading plan. This allowed the pad elevation to be lowered by 1.4', reducing the side yard split next to Valle Jardin Lane and the Lot 16 side yard and Lot 17 rear yard split to less than 2.0', eliminating the retaining walls in these locations. *5m canal as per 4, 5*
 - Lot 18 - Pad depth increased from 57' to 65'. Reconfiguration of the Lot 17/18 common lot line, such that Lots 16-19 now share a common rear corner, eliminated the need for the Lot 19 side yard retaining wall.
 - Lot 22 – Pad depth increased from 65' to 75'. *replaster*

After reviewing these as-built elevations and visiting the site on 02/25/15, it is my belief that the above lots have been graded in substantial compliance with the approved grading and drainage plan and that street and drainage improvements allow runoff to be managed in the interim condition.

Your review and approval is requested for Building Permit Approval for Lots 1-5 and 10-19, Valle Vista Unit 2 and for SIA/Financial Guarantee Release for Valle Vista Unit 3. I appreciate your time and consideration. If you have questions or require additional information, please contact me at 823-1000.

Sincerely,



Scott J. Steffen, P.E.
Vice President
Community Development & Planning

Enclosure

cc: Rick Beltramo, Wexford Construction

Scott Steffen

From: Scott Steffen
Sent: Saturday, February 28, 2015 11:40 AM
To: 'Cherne, Curtis'
Cc: Ortiz, Monica; 'Rick Beltramo'
Subject: Valle Vista Units 2 and 3
Attachments: Valle Vista Units 2_3 C09D009 G&D Cert Submittal.pdf

Curtis,

Attached is the Valle Vista Unit 2 partial certification and Valle Vista Unit 3 final certification.

You should receive a hard copy on Monday morning.

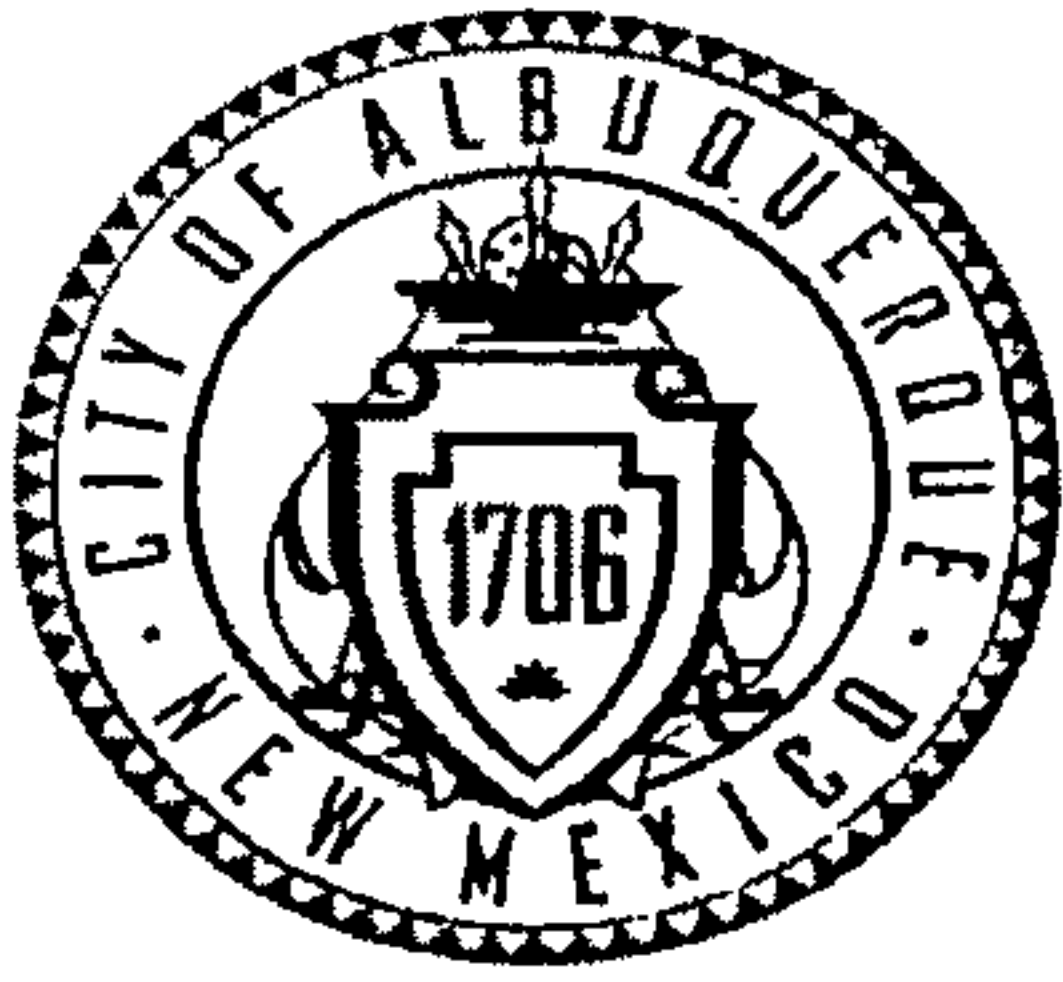
Thanks,

Scott J. Steffen
Vice President
Community Development and Planning

Bohannon Huston

Courtyard I
7500 Jefferson St. NE
Albuquerque, NM 87109-4335
www.bhinc.com

voice: 505.823.1000 facsimile: 505.798.7988 toll free: 800.877.5332



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: DMP FOR VALLE VISTA AT THE TRAILS Building Permit #: _____ City Drainage #: C09/D009
DRB#: 1004606 EPC#: _____ Work Order#: _____
Legal Description: VALLE VISTA UNITS 2 AND 3
City Address: _____

Engineering Firm: BOHANNAN HUSTON INC Contact: SCOTT STEFFEN
Address: 7500 JEFFERSON ST NE COURTYARD 1 ALBUQUERQUE NM 87109
Phone#: 823-1000 Fax#: _____ E-mail: SSTEFFENN@BHINC.COM

Owner: WOODMONT PASEO, LLC Contact: RICK BELTRAMO
Address: 6330 RIVERSIDE PLAZA LANE #160 ALBUQUERQUE NM 87120
Phone#: 505-761-9911 Fax#: _____ E-mail: _____

Architect: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

Surveyor: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

Contractor: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
☐ DRAINAGE PLAN 1st SUBMITTAL
☐ DRAINAGE PLAN RESUBMITTAL
☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
☒ ENGINEER'S CERT (HYDROLOGY)
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ ENGINEER'S CERT (TCL)
☐ ENGINEER'S CERT (DRB SITE PLAN)
☐ ENGINEER'S CERT (ESC)
☐ SO-19
☐ OTHER (SPECIFY) _____

CHECK TYPE OF APPROVAL/ACCEPTANCE 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
☐ CERTIFICATE OF OCCUPANCY (PERM)
☐ CERTIFICATE OF OCCUPANCY (TCL TEMP)
☐ FOUNDATION PERMIT APPROVAL
☒ BUILDING PERMIT APPROVAL
☐ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ WORK ORDER APPROVAL
☐ GRADING CERTIFICATION
☐ SO-19 APPROVAL
☐ ESC PERMIT APPROVAL
☐ ESC CERT. ACCEPTANCE
☐ OTHER (SPECIFY) _____

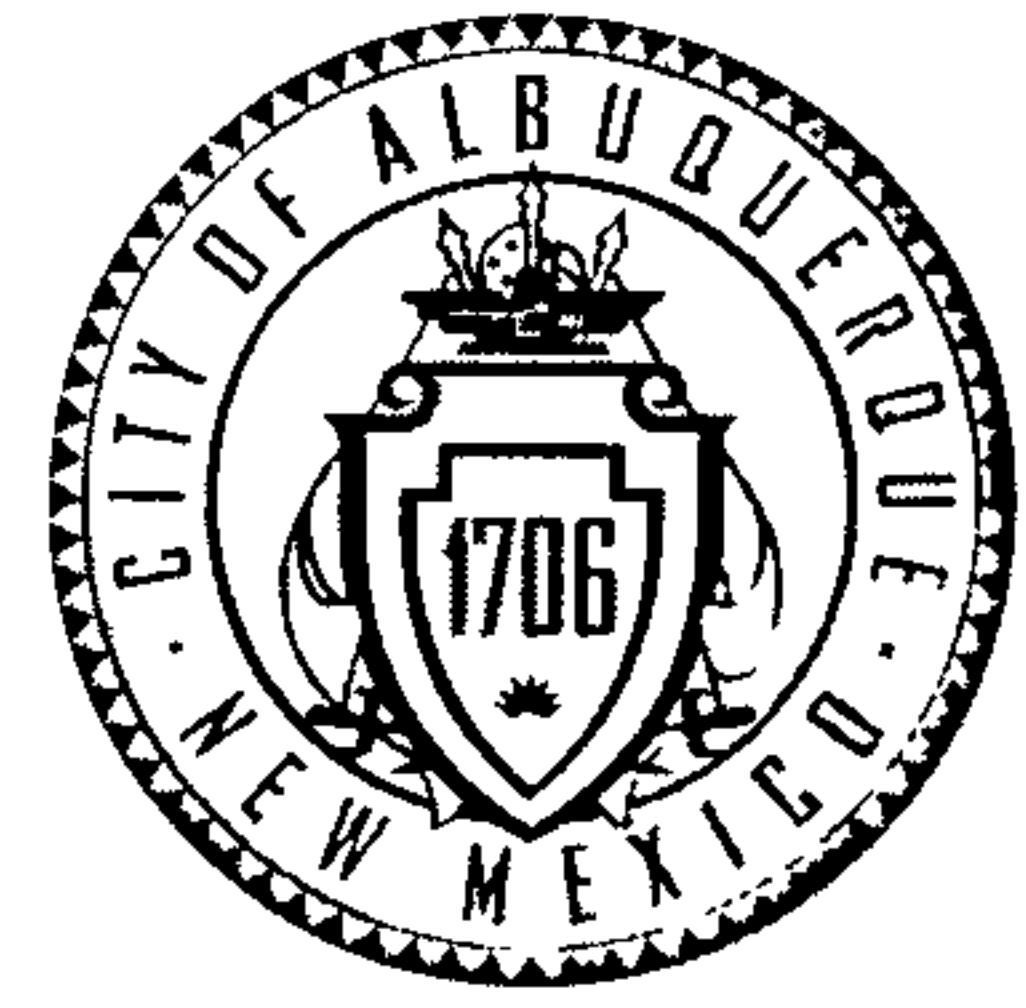
WAS A PRE-DESIGN CONFERENCE ATTENDED: _____ Yes _____ No _____ Copy Provided

DATE SUBMITTED: 3/2/15 By: Scott Steffen

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 defines 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
- 4 **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

CITY OF ALBUQUERQUE



February 27, 2015

Scott Steffen, P.E.
Bohannon Huston Inc.
7500 Jefferson St NE, Ctyd 1
Albuquerque, NM 87109

Re: Valle Vista at the Trails Units 1 — RCFG
Grading and Drainage Plan
Engineer's Stamp Date 6-23-14 (C09D009)
Certification dated 10-8-14

Dear Mr. Steffen,

Based upon the information provided in your submittal received 10-16-14, the above referenced plan is accepted for Release of Financial Guarantee for grading and drainage.

- If you have any questions, you can contact me at 924-3986.

PO Box 1293

Albuquerque

New Mexico 87103

Sincerely,

Curtis Cherne, P.E.
Principal Engineer, Hydrology
Planning Dept.

www.cabq.gov

C: e-mail
Christiana Montoya

CITY OF ALBUQUERQUE



October 17, 2014

Scott Steffen, P.E.
Bohannon Huston Inc.
7500 Jefferson St NE, Ctyd 1
Albuquerque, NM 87109

**Re: Valle Vista at the Trails Units 1 Pad Certification, Lots 1-8
Engineer's Stamp Date 6-23-14 (C09D009)
Certification dated 10-8-14**

Dear Mr. Steffen,

Based upon the information provided in your submittal received 10-16-14, the above referenced plan is accepted for Building Permit for Lots 1-8.

If you have any questions, you can contact me at 924-3986.

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

Sincerely,

Curtis Cherne, P.E.
Principal Engineer, Hydrology
Planning Dept.

C: e-mail

Courtyard I
7500 Jefferson St. NE
Albuquerque, NM
87109-4335
www.bhinc.com
voice: 505.823.1000
facsimile: 505.798.7988
toll free: 800.877.5332

CLIENT/COURIER TRANSMITTAL

To: Curtis Cherne
Hydrology Section
City of Albuquerque
600 2nd St NW

Requested by: Scott Steffen

Date: October 16, 2014

Time Due: ☐ This A.M.
☒ This P.M.
☐ Rush _____
☐ By Tomorrow _____

Phone: 924-3986
Job No.: 20140164.005.01.cdp

Job Name: Valle Vista Unit 1

DELIVERY VIA

☒ Courier ☐ Federal Express

☐ Mail ☐ UPS

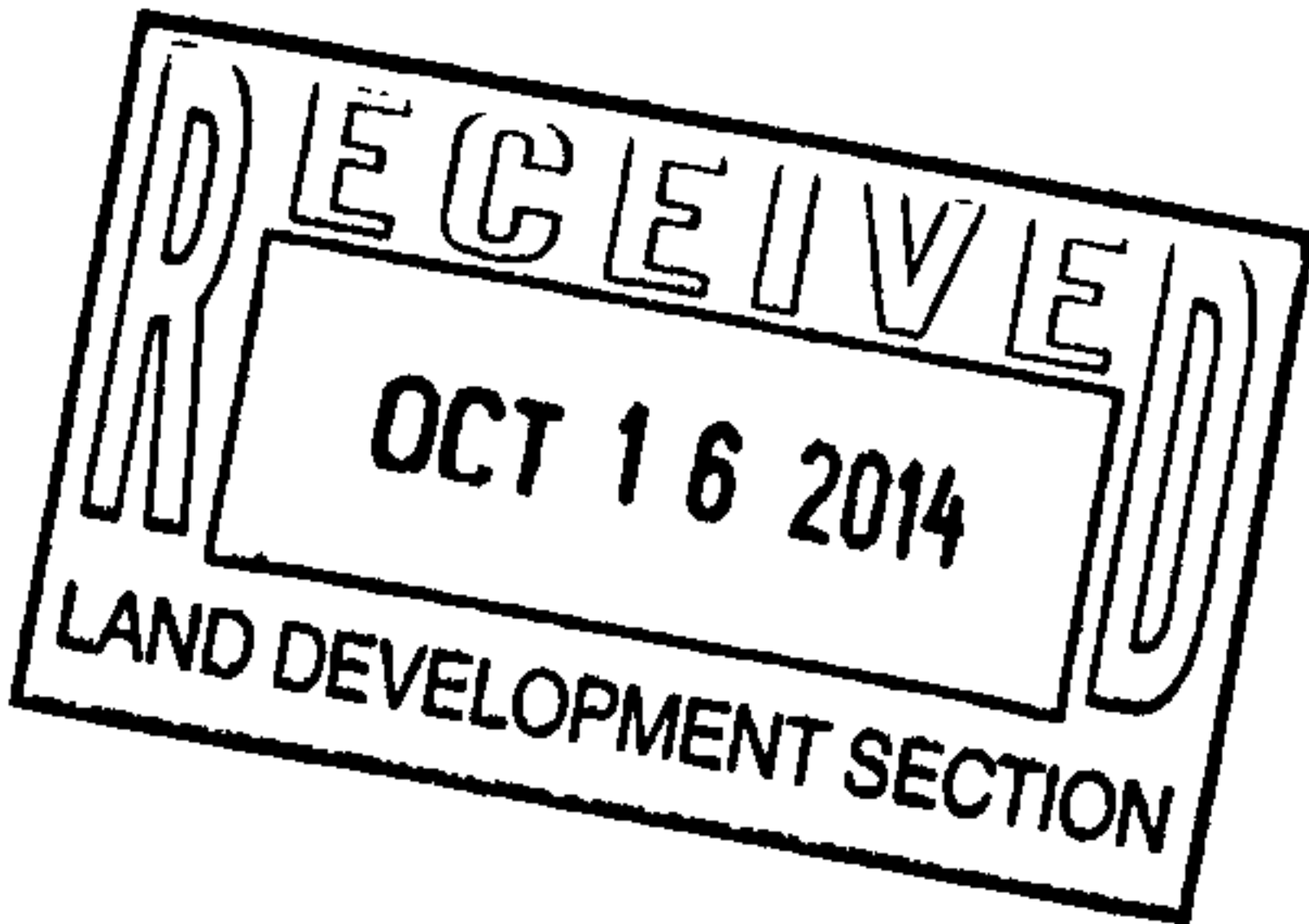
☐ Other

PICK UP

Item: _____

<u>ITEM NO.</u>	<u>QUANTITY</u>	<u>DESCRIPTION</u>
1	1	Grading and Drainage Certification submittal

COMMENTS / INSTRUCTIONS



REC'D BY: _____ DATE: _____ TIME: _____

Scott Steffen

From: Scott Steffen
Sent: Thursday, October 16, 2014 12:25 PM
To: Cherne, Curtis
Cc: Ortiz, Monica
Subject: Valle Vista Unit 1 G&D cert
Attachments: Valle Vista Unit 1 C09D009 G&D Cert Submittal.pdf

Curtis,

Attached is the Valle Vista Unit 1 G&D cert showing the retaining wall between lots 3 and 4 as no longer required.

A hard copy should be delivered this afternoon.

Let me know if you need anything else.

Thanks,

Scott J. Steffen
Vice President
Community Development and Planning

Bohannon Huston

Courtyard I
7500 Jefferson St. NE
Albuquerque, NM 87109-4335
www.bhinc.com

voice: 505.823.1000 facsimile: 505.798.7988 toll free: 800.877.5332





City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: DMP FOR VALLE VISTA AT THE TRAILS Building Permit #: _____ City Drainage #: C09/D009
DRB#: 1004606 EPC#: _____ Work Order#: _____
Legal Description: VALLE VISTA UNIT 1
City Address: _____

Engineering Firm: BOHANNAN HUSTON INC Contact: SCOTT STEFFEN
Address: 7500 JEFFERSON ST NE COURTYARD 1 ALBUQUERQUE NM 87109
Phone#: 823-1000 Fax#: _____ E-mail: SSTEFFENN@BHINC.COM

Owner: WOODMONT PASEO, LLC Contact: RICK BELTRAMO
Address: 6330 RIVERSIDE PLAZA LANE #160 ALBUQUERQUE NM 87120
Phone#: 505-761-9911 Fax#: _____ E-mail: _____

Architect: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

Surveyor: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

Contractor: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
☐ DRAINAGE PLAN 1st SUBMITTAL
☐ DRAINAGE PLAN RESUBMITTAL
☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
☒ ENGINEER'S CERT (HYDROLOGY)
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ ENGINEER'S CERT (TCL)
☐ ENGINEER'S CERT (DRB SITE PLAN)
☐ ENGINEER'S CERT (ESC)
☐ SO-19
☐ OTHER (SPECIFY) _____

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

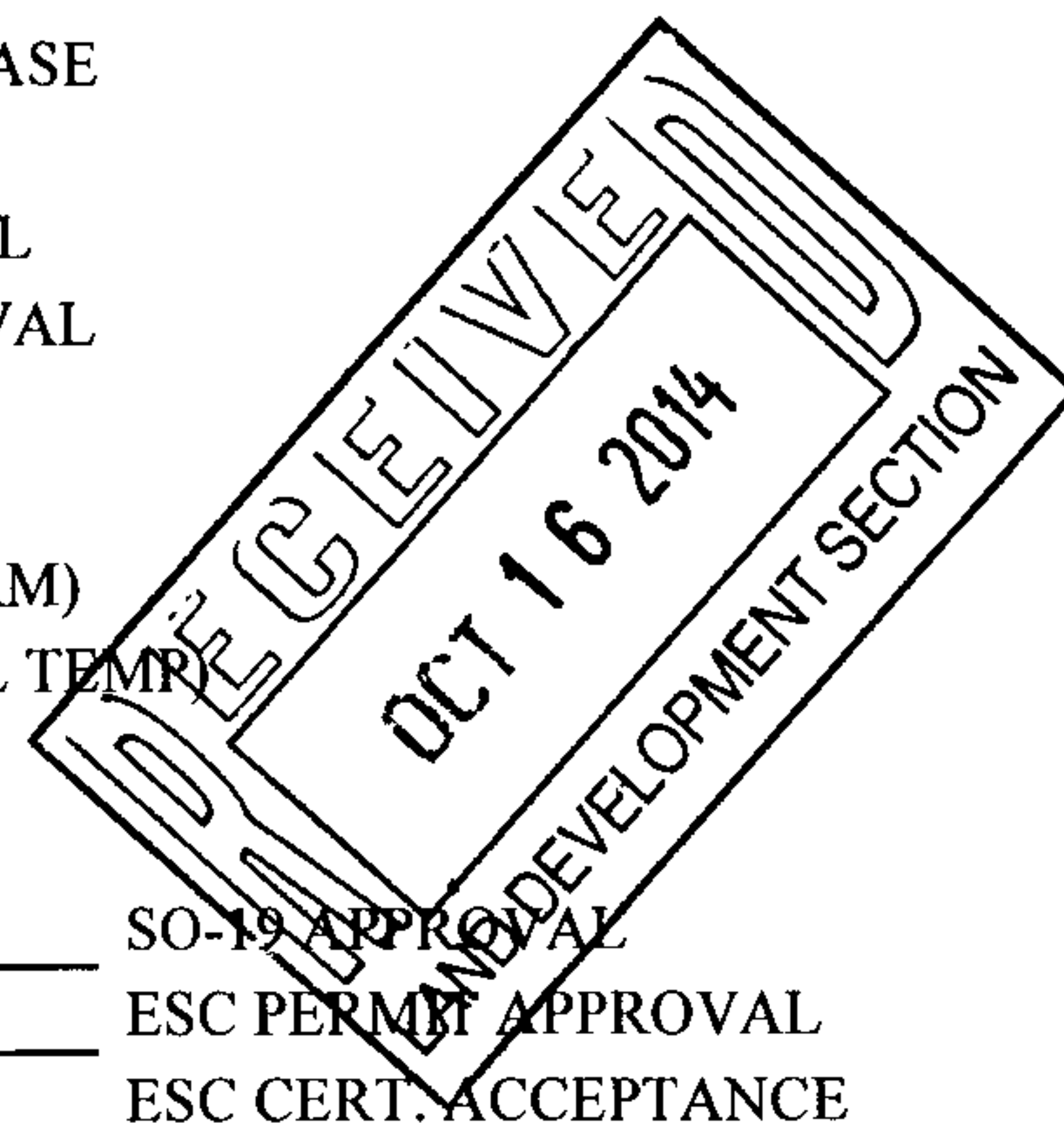
- ☒ SIA/FINANCIAL GUARANTEE RELEASE
☐ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D APPROVAL
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☐ SECTOR PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☐ CERTIFICATE OF OCCUPANCY (PERM)
☐ CERTIFICATE OF OCCUPANCY (TCL TEMP)
☐ FOUNDATION PERMIT APPROVAL
☐ BUILDING PERMIT APPROVAL
☐ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ WORK ORDER APPROVAL
☐ GRADING CERTIFICATION
☐ SO-19 APPROVAL
☐ ESC PERMIT APPROVAL
☐ ESC CERT. ACCEPTANCE
☐ OTHER (SPECIFY) _____

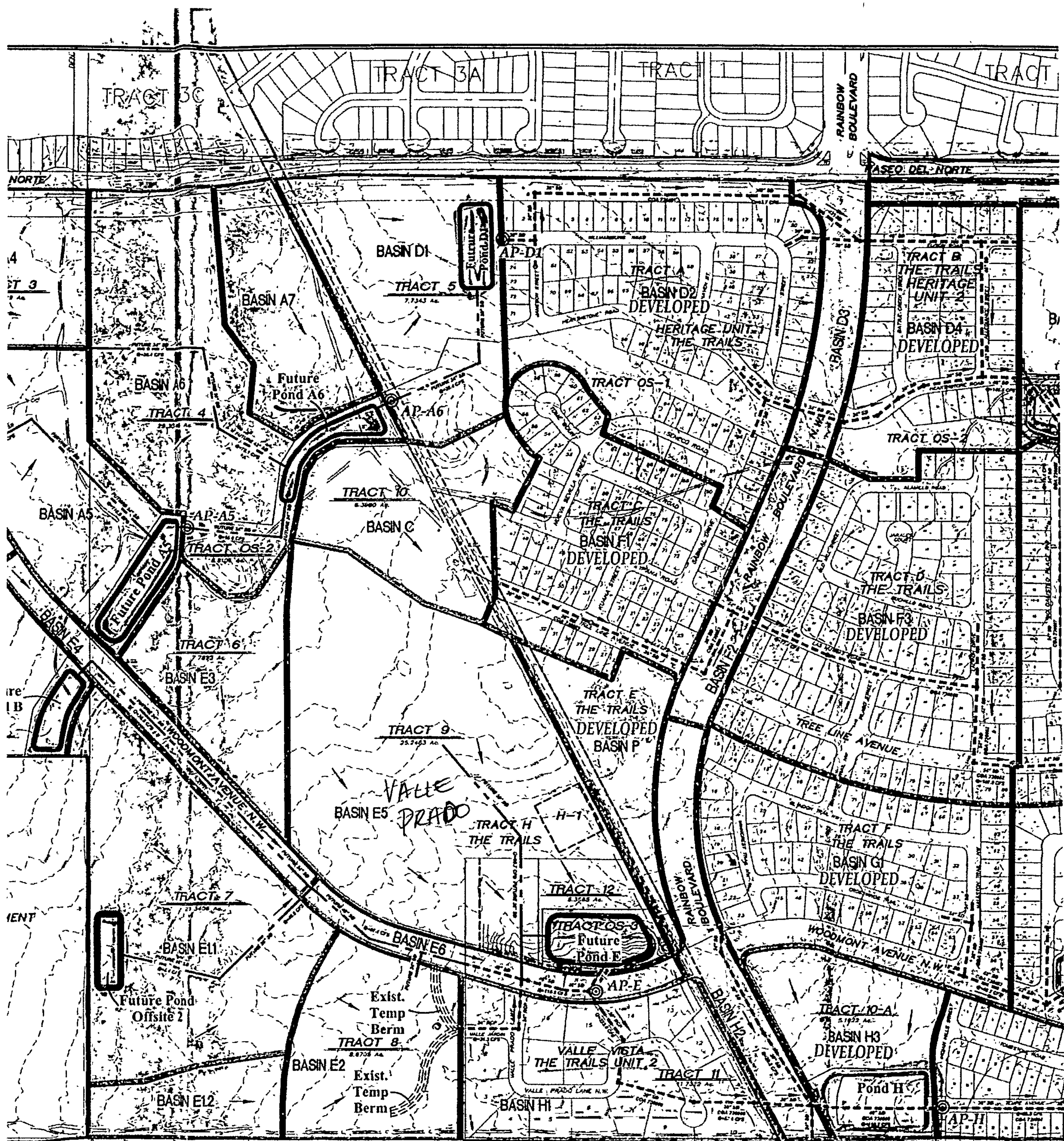
WAS A PRE-DESIGN CONFERENCE ATTENDED: _____ Yes _____ No _____ Copy Provided

DATE SUBMITTED: 10/16/14 By: Scott Steffen

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 defines 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
4. **Erosion and Sediment Control Plan** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

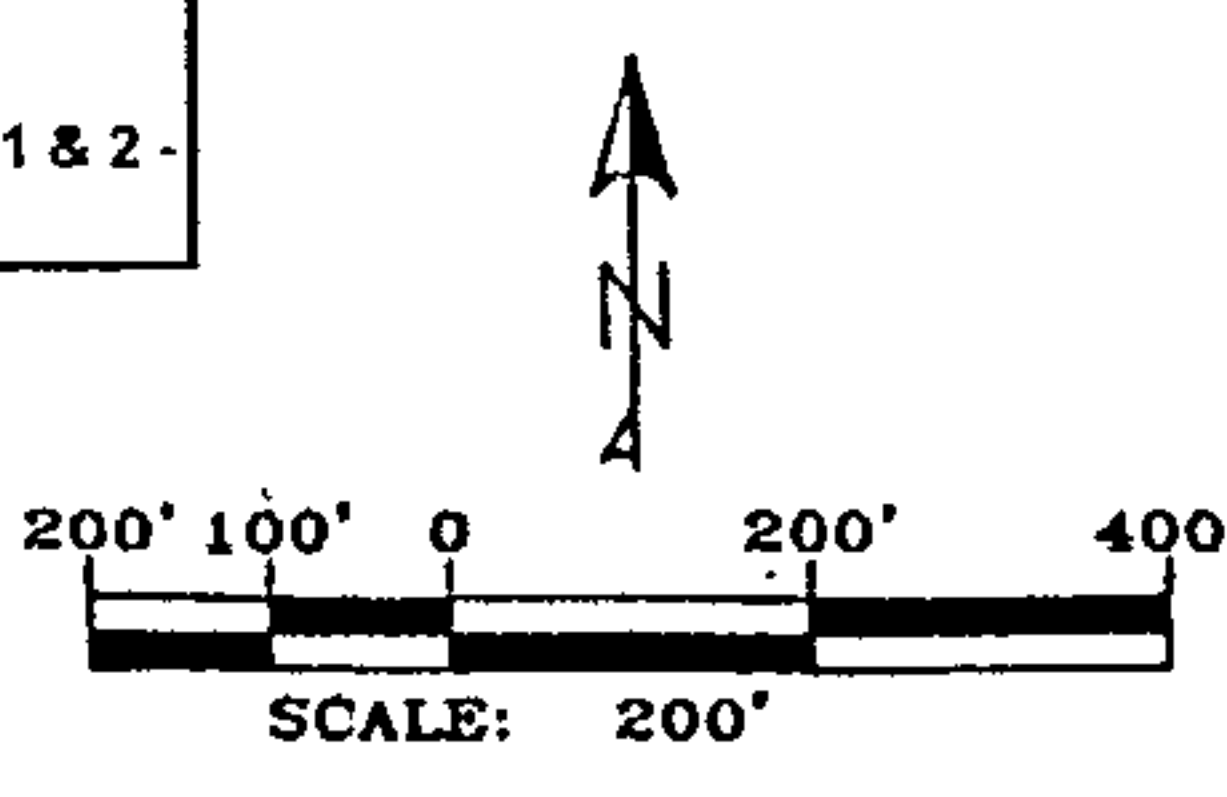




LEGEND

- ANALYSIS POINT
- - - EXISTING STORM DRAIN
- FLOW DIRECTION
- - - FUTURE DEVELOPED STORM DRAIN

C09-D001
THE TRAILS Units 1-3
Amended D M P
Drainage Management Plan
April 2014
- Composite of Plates 1 & 2 -



VALLE VISTA

DATUM NAVD 1929

Thompson
Engineering
Consultants, Inc.

P.O. BOX 65760
ALBUQUERQUE, NM 87193

PHONE: (505) 271-2199
FAX: (505) 630-9246

- NOTES:
1. STORM DRAIN SIZES BASED ON 100 YEAR FUTURE PROJECTS MAY BE REQUIRED SIZE BASED ON 100-YR. 6-HR STORM
 2. THE INTENDED FUTURE CONTRIBUTION TO THE MAXIMUM DOWNSTREAM

C09 D009

Cherne, Curtis

From: Cherne, Curtis
Sent: Friday, February 27, 2015 12:34 PM
To: Rael, Jane E.
Cc: David Hibler (dhibler@bhinc.com); Rodriguez, Jason T.; Harmon Rita T.
Subject: Valle Vista Units 2 and 3 close-out comments
Attachments: manhole-erosion.jpg

I have three items to be addressed:

1. Verify pipe diameter of storm drain entering the "D" inlet in Valle Huerto. It's supposed to be a 30", looks like a 24".
2. In the downstream end of the "D" inlet in Valle Jardin, the vertical walls appear to extend down to only leave an opening of 16" or so.

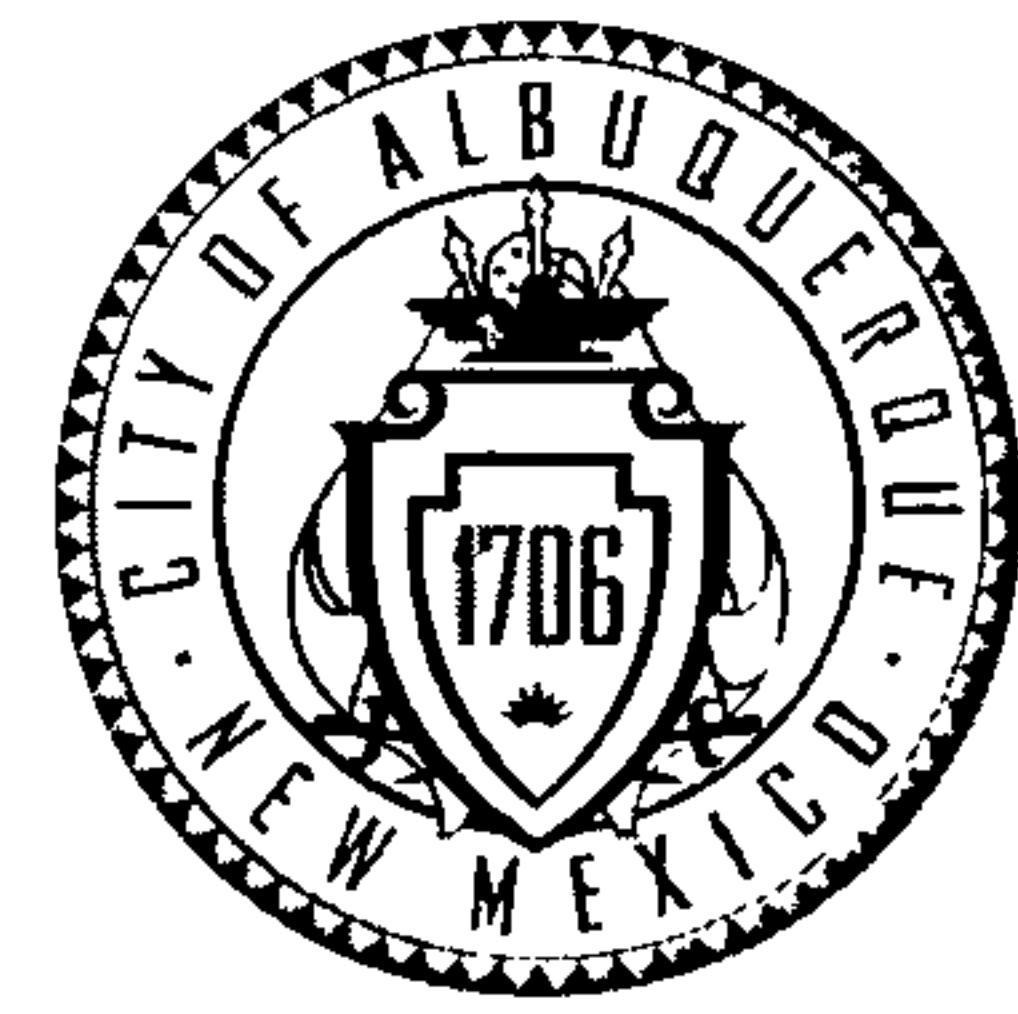
A photo of the pipe with a tape measure in front of it should be submitted for review.

3. There is erosion occurring at the southwest corner of the manhole collar just north of the intersection of Valle Jardin and Valle Huerto. The slope too steep coming down to Valle Jardin. The Rim elevation should probably be adjusted down to obtain a flatter slope from the manhole collar to the top of curb. Another solution may also be viable.

Curtis

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



June 17, 2014

Scott J. Steffen, PE
BOHANNAN-HUSTON, INC.
7500 Jefferson Street NE Courtyard I
Albuquerque, NM 87109

Richard J. Berry, Mayor

**RE: Valle Vista at the Trails
Drainage Report for Valle Vista at the Trails Subdivision
Engineer's Stamp Date 6-12-2014 (File: C09D009)**

Dear Mr. Steffen:

Based upon the information provided in your submittal received 6-13-14, the above referenced plan is approved for Preliminary Plat and Grading Permit.

This project requires a National Pollutant Discharge Elimination System (NPDES) permit for storm water discharge for disturbing one acre or more and a Topsoil Disturbance Permit for disturbing $\frac{3}{4}$ of an acre or more. 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.

PO Box 1293

Albuquerque

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

New Mexico 87103

www.cabq.gov

Sincerely,

Rita Harmon, P.E.
Senior Engineer, Planning Dept.
Development Review Services

Orig: Drainage file
c.pdf: via Email: Recipient, Tim Sims, Monica Ortiz

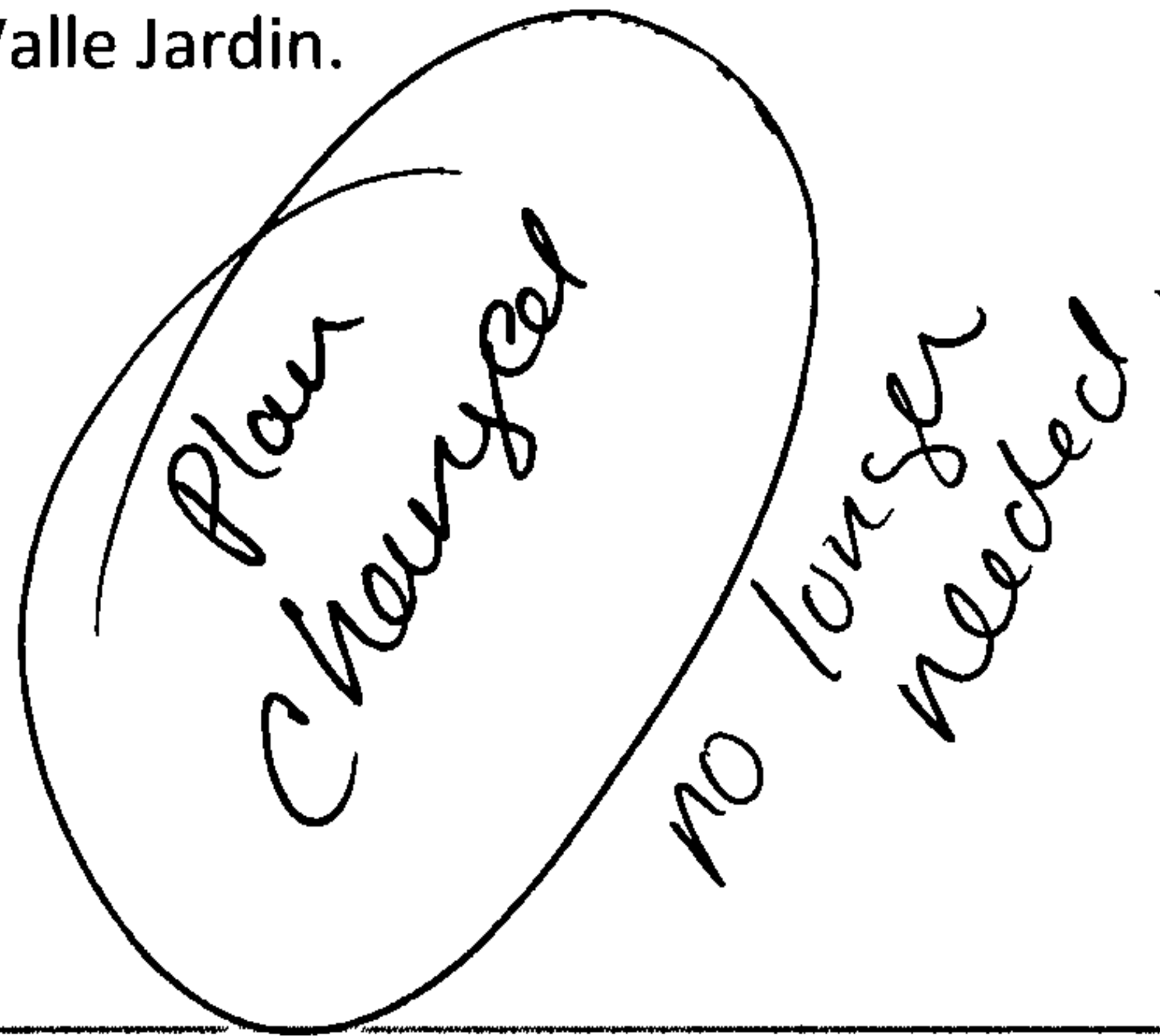
Harmon Rita T.

From: Harmon Rita T.
Sent: Tuesday, June 17, 2014 1:53 PM
To: Scott J. Steffen (ssteffen@bhinc.com)
Subject: FW: Valle Vista DMP (C09D009)
Attachments: C09D009_PP_GP_Appr.pdf

Scott,

It was just brought to my attention that a retaining wall needs to be added to the plan in Unit 1. Grade difference is 2.4' between Lot 4 and Valle Jardin.

Rita Harmon, P.E.
Planning Department
505-924-3695



Plan changed
no longer needed.

From: Harmon Rita T.
Sent: Tuesday, June 17, 2014 11:37 AM
To: 'Scott Steffen'
Cc: Sims, Timothy E.; Ortiz, Monica
Subject: Valle Vista DMP (C09D009)

Scott,

Please find attached a copy of the Hydrology Approval letter for Preliminary Plat and Grading Permit for the above referenced project.

Sincerely,

Rita Harmon, P.E.
Senior Engineer
Planning Department
Development Review Services Division
600 2nd St. NW, Suite 400
Albuquerque, NM 87102
t 505-924-3695
f 505-924-3440

June 12, 2014

Rita Harmon, P. E.
Planning Department
Hydrology Review Section
City of Albuquerque
P. O. Box 1293
Albuquerque, NM 87103

Re: Valle Vista at the Trails, Grading and Drainage Plan (C09/D009)

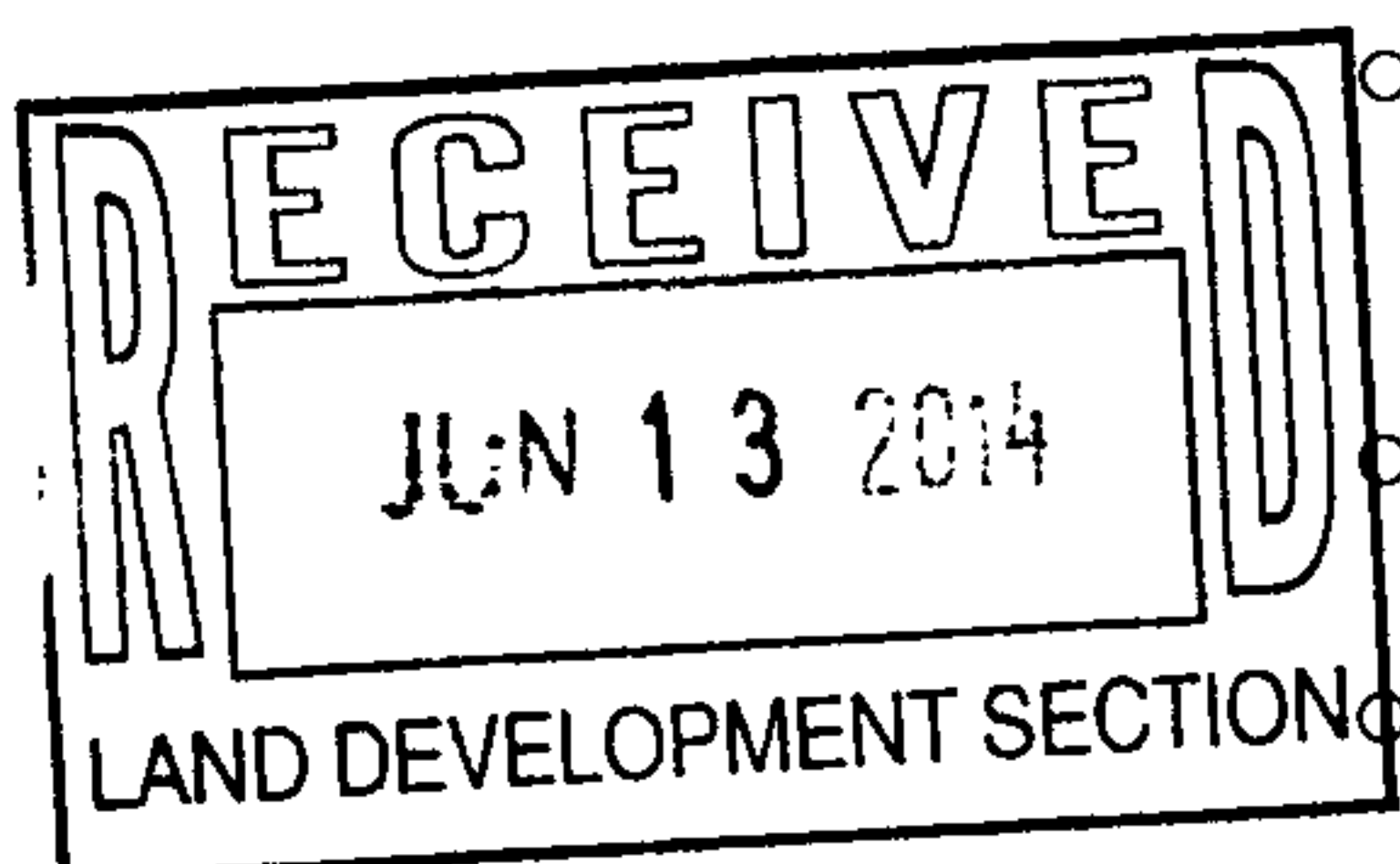
Dear Rita:

This letter provides a written response to your comments dated June 9, 2014:

Pertaining to the drainage concept presented in the Report and its congruency with the DMP:

1. *Since the proposed development is to be built in phases, the Report should indicate what infrastructure will be included on the infrastructure list for each phase. Text has been revised/added in Section IV.B "Onsite Flows" describing what storm drain infrastructure is required for each Unit (i.e., Unit 1, 2 or 3) of the development. These items have been added to the corresponding infrastructure list, which is included for your review.* ✓
2. *The DMP, Table 4 (page 6) lists **Tract 8, Unit 2** as the tract responsible for improvements of Pond H. However, it is anticipated that **Tract 8, Unit 2** will not be able to develop for at least another year, after major water infrastructure is in place, and it is also possible that development of this tract is aborted altogether. Since this drainage plan utilized Pond H as part of its drainage scheme, it is incumbent upon the developers of this tract to either make the improvements or to show that Pond H in its present condition can accommodate the flows both from this tract and upstream.*

The following language has been added to Section IV.A "Offsite Flows" of the Drainage report.



Provide outlet control (orifice) to limit the pond bypass flow plus routed discharge through the pond to a maximum of 26.8 cfs, when the pond water surface is at Vol(100) pond elevation
Provided outlet bypass capacity around the orifice at the Max. WSE to accommodate the 26.8 cfs if the orifice gets clogged.
Provide pond inflow capacity to match the DMP inflow (Bypass plus Surge) of 111 cfs. ✓

Engineering ▲

Spatial Data ▲

Advanced Technologies ▲

This matches the language that Greg Olson required for the Tierra Vista Unit 3 (Trails Tract 8 Unit 2 report, C09/D001E). Pond H requirements have also been added to the Valle Vista Unit 2 infrastructure list, which matches the Tierra Vista Unit 3 infrastructure language.

3. *There is a 48" Storm Drain Pipe that supposed to connect Pond K to the nearest manhole south, but was not built. Without this piece of pipe, the drainage concept in the DMP, and thus in this report, will not operate (or surge) as intended. It is therefore incumbent upon the developers of this tract to install the missing storm drain or show that the system in its present condition can accommodate the flows both from this tract and upstream. **This section of storm drain has been added to all three infrastructure lists per Curtis' request. The construction plans for this section of storm drain have been submitted to DRC.*** ✓
4. *Indicate that flows from Basin E6 of the DMP (Woodmont Ave) are accounted for in the Drainage Report for Valle Prado. **Section IV.A "Offsite Flows" has been added to the report. Language regarding Basin E6 has been added to this section of the report.***
5. *Indicate that offsite flows from the lot to the west drain into existing an Storm Drain that passes through this subdivision, and reference the Drainage Report that has the calculations for those pipes. **Section IV.A "Offsite Flows" has been added to the report. Language regarding the storm drain from Tract 8 at the Trails Unit 3A to the west of Valle Vista has been added to this section of the report. The language includes the allowable flow rate through the pipe per the DMP.***
6. *Indicate that offsite flows from the property to the north and northwest are accounted for in the Drainage Report for Valle Prado. **Section IV.A "Offsite Flows" has been added to the report. Language regarding Tracts 6 and 9 at the Trails Unit 3A north of Woodmont Avenue (DMP Basins E3 and E5) has been added to this section of the report.***
7. *Indicate that the "first flush" requirements per the new drainage ordinance will be waived for this subdivision, but will be required for the Valle Prado subdivision in lieu of this subdivision. **Section IV.C "First Flush Requirements" has been added to the report with this language.***
8. *Inlets need to be sized using the 6 hour storm. **Noted. The peak runoff is the same for the 6-hour and 24-hour storms. The AHYMO 6-hour summary file has been added to Appendix A for reference.*** ✓

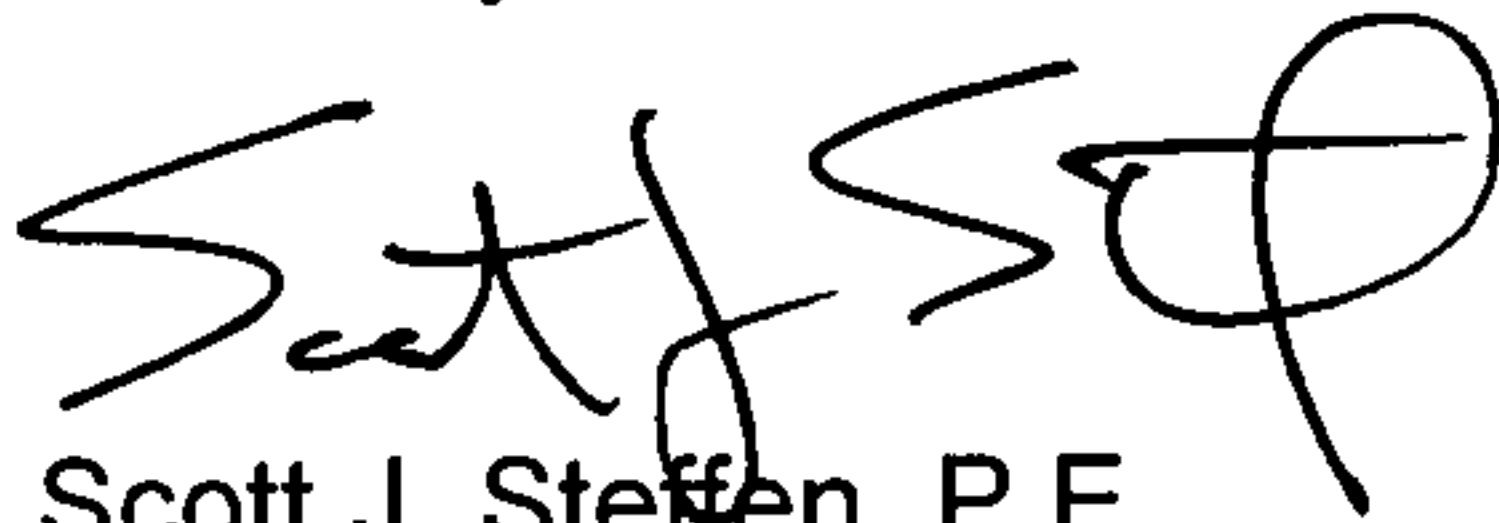
Rita Harmon, P.E.
Planning Department
June 12, 2014
Page 3

Pertaining to the Grading Plan:

- ✓ 9. *Show existing contours on the south side of the subdivision. The existing contours south and west of Valle Vista have been added to the Grading Plan.*
- ✓ 10. *Show sizes of all existing storm drain and manholes, and any new manholes. Show pipe flows. Keyed notes for inlets and manholes have been added to the Grading Plan. A storm drain pipe table has been added to the Grading Plan.*
- ✓ 11. *Show inlet locations, sizes, and T.O. Grate elevations. Keyed notes for inlets and manholes have been added to the Grading Plan. Grate elevations have been added next to the proposed inlet keyed notes.*
- ✓ 12. *Are there new Manholes where new/relocated inlets tie into existing storm drains? Per keyed note B, existing Type A inlets will either be converted to Type D inlets or replaced by manholes. This will be determined when the construction plans are prepared for review by DRC.*

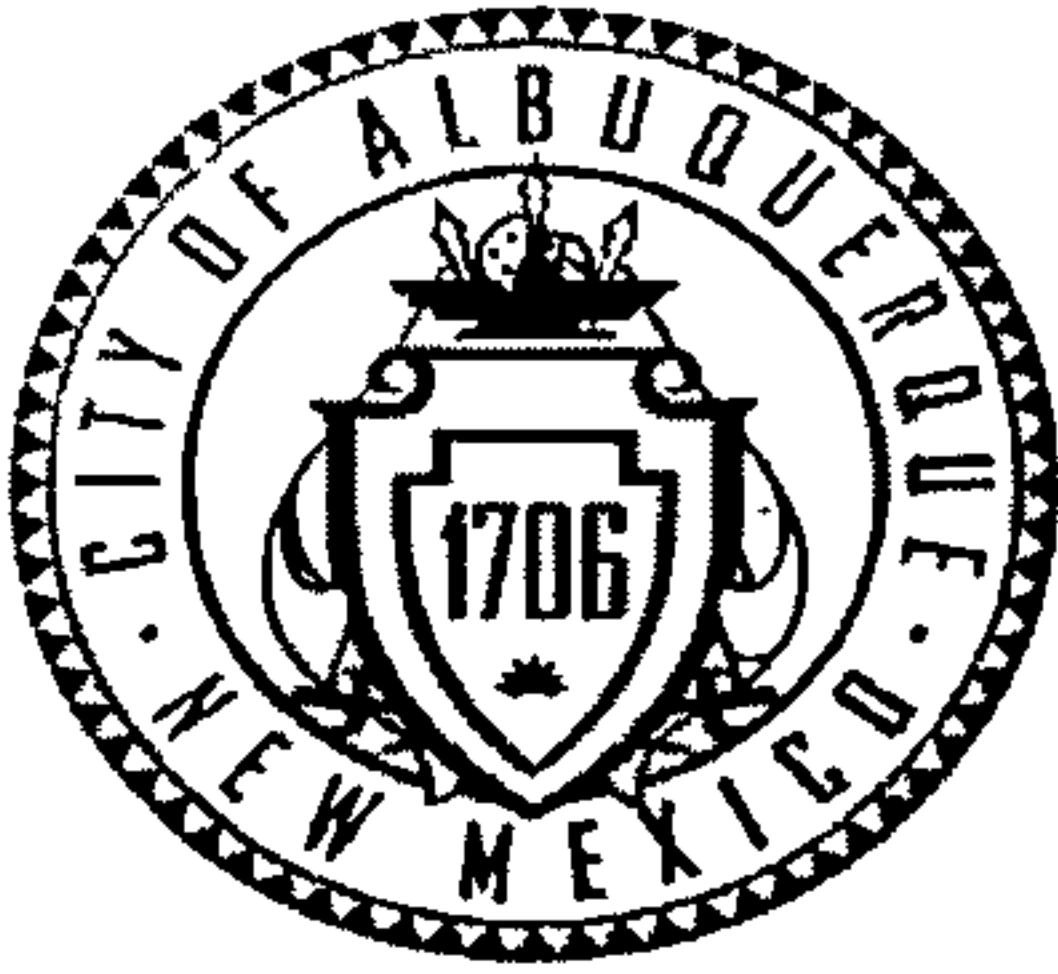
If you have any questions or require further information in order to approve the Grading and Drainage Plan, please feel free to contact me at 823-1000.

Sincerely,



Scott J. Steffen, P.E.
Vice President
Community Development and Planning Group

Enclosures



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: DMP FOR VALLE VISTA AT THE TRAILS Building Permit #: _____ City Drainage #: C09D009
DRB#: 1004606 EPC#: _____ Work Order#: _____
Legal Description: LOTS 1-18, VALLE VISTA AT THE TRAILS UNIT 2
City Address: _____

Engineering Firm: BOHANNAN HUSTON INC Contact: BRIAN PATTERSON
Address: 7500 JEFFERSON ST NE COURTYARD 1 ALBUQUERQUE NM 87109
Phone#: 823-1000 Fax#: _____ E-mail: BPATTERSON@BHINC.COM

Owner: WOODMONT PASEO, LLC Contact: RICK BELTRAMO
Address: 6330 RIVERSIDE PLAZA LANE #160 ALBUQUERQUE NM 87120
Phone#: 505-761-9911 Fax#: _____ E-mail: _____

Architect: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

Surveyor: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

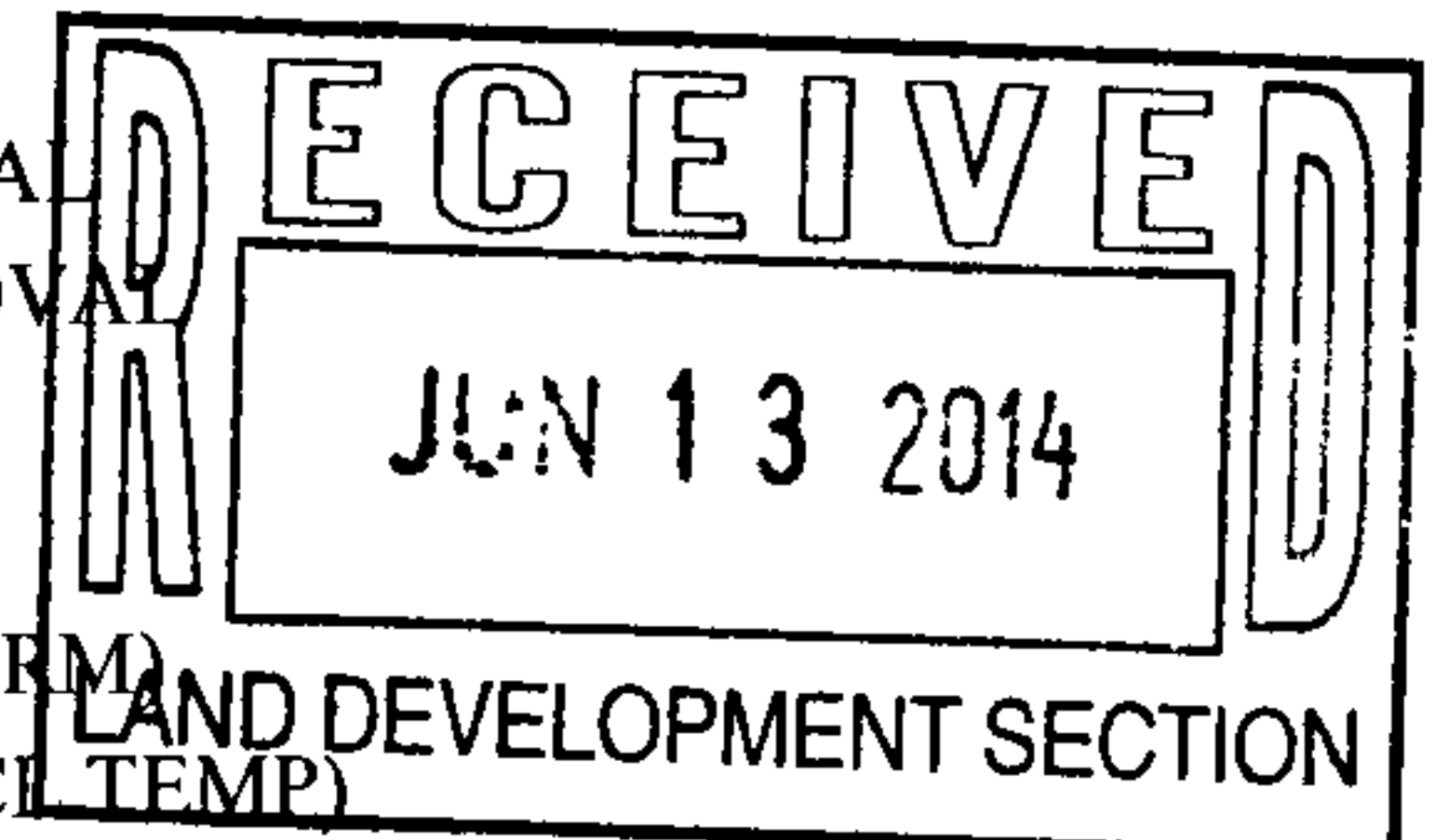
Contractor: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

- ☒ DRAINAGE REPORT
☐ DRAINAGE PLAN 1st SUBMITTAL
☒ DRAINAGE PLAN RESUBMITTAL
☐ CONCEPTUAL G & D PLAN
☒ GRADING PLAN
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
☐ ENGINEER'S CERT (HYDROLOGY)
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ ENGINEER'S CERT (TCL)
☐ ENGINEER'S CERT (DRB SITE PLAN)
☐ ENGINEER'S CERT (ESC)
☐ SO-19
☐ OTHER (SPECIFY) _____

CHECK TYPE OF APPROVAL/ACCEPTANCE 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
☐ CERTIFICATE OF OCCUPANCY (PERM)
☐ CERTIFICATE OF OCCUPANCY (TCL TEMP)
☐ FOUNDATION PERMIT APPROVAL
☐ BUILDING PERMIT APPROVAL
☒ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ WORK ORDER APPROVAL
☐ GRADING CERTIFICATION
☐ SO-19 APPROVAL
☐ ESC PERMIT APPROVAL
☐ ESC CERT. ACCEPTANCE
☐ OTHER (SPECIFY) _____



WAS A PRE-DESIGN CONFERENCE ATTENDED: _____ Yes _____ No _____ Copy Provided

DATE SUBMITTED: 6/13/14 By: Scott Steffen

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 defines 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
- 4 **Erosion and Sediment Control Plan** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

Courtyard I
7500 Jefferson St. NE
Albuquerque, NM
87109-4335

www.bhinc.com

voice: 505.823.1000
facsimile: 505.798.7988
toll free: 800.877.5332

CLIENT/COURIER TRANSMITTAL

To: Rita Harmon
Hydrology Section
City of Albuquerque
600 2nd St NW

Requested by: Scott Steffen

Date: June 13, 2014

Time Due: ☒ This A.M.
☐ This P.M.
☐ Rush _____
☐ By Tomorrow

Phone: 924-3988

Job No.: 20140164.005.01.cdp

Job Name: Valle Vista

DELIVERY VIA

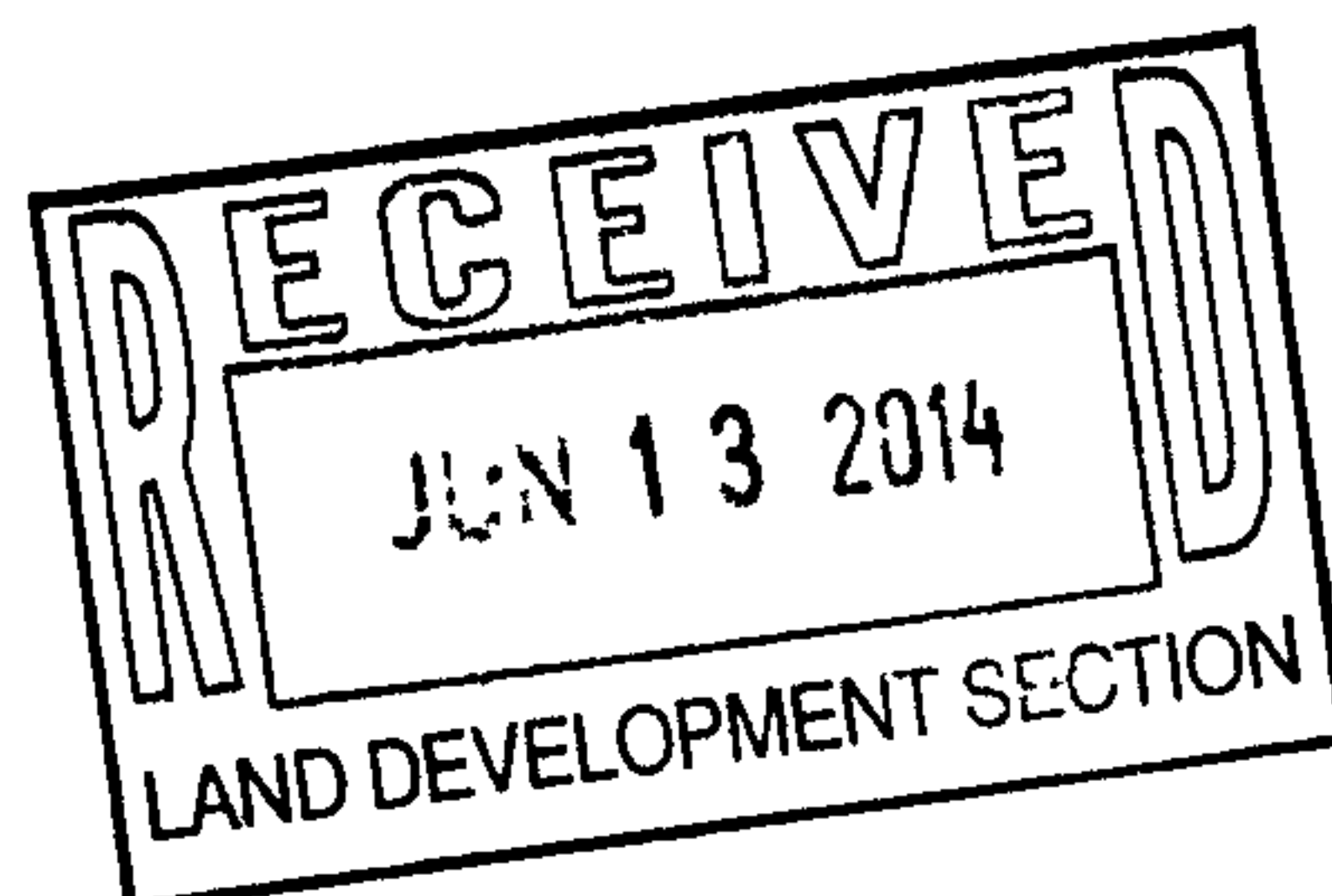
☒ Courier ☐ Federal Express
☐ Mail ☐ UPS
☐ Other

PICK UP

Item: _____

<u>ITEM NO.</u>	<u>QUANTITY</u>	<u>DESCRIPTION</u>
1	1	Grading and Drainage plan resubmittal

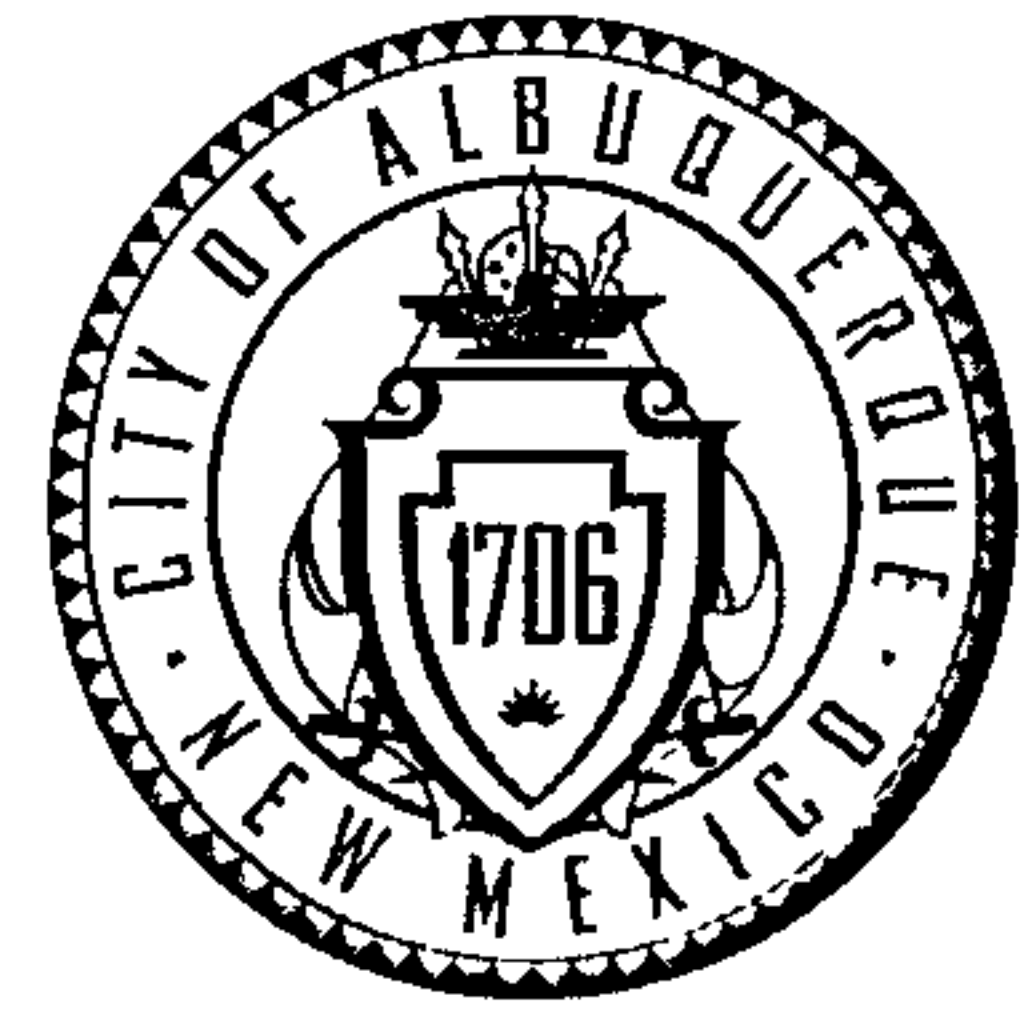
COMMENTS / INSTRUCTIONS



REC'D BY: _____ DATE: _____ TIME: _____

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services

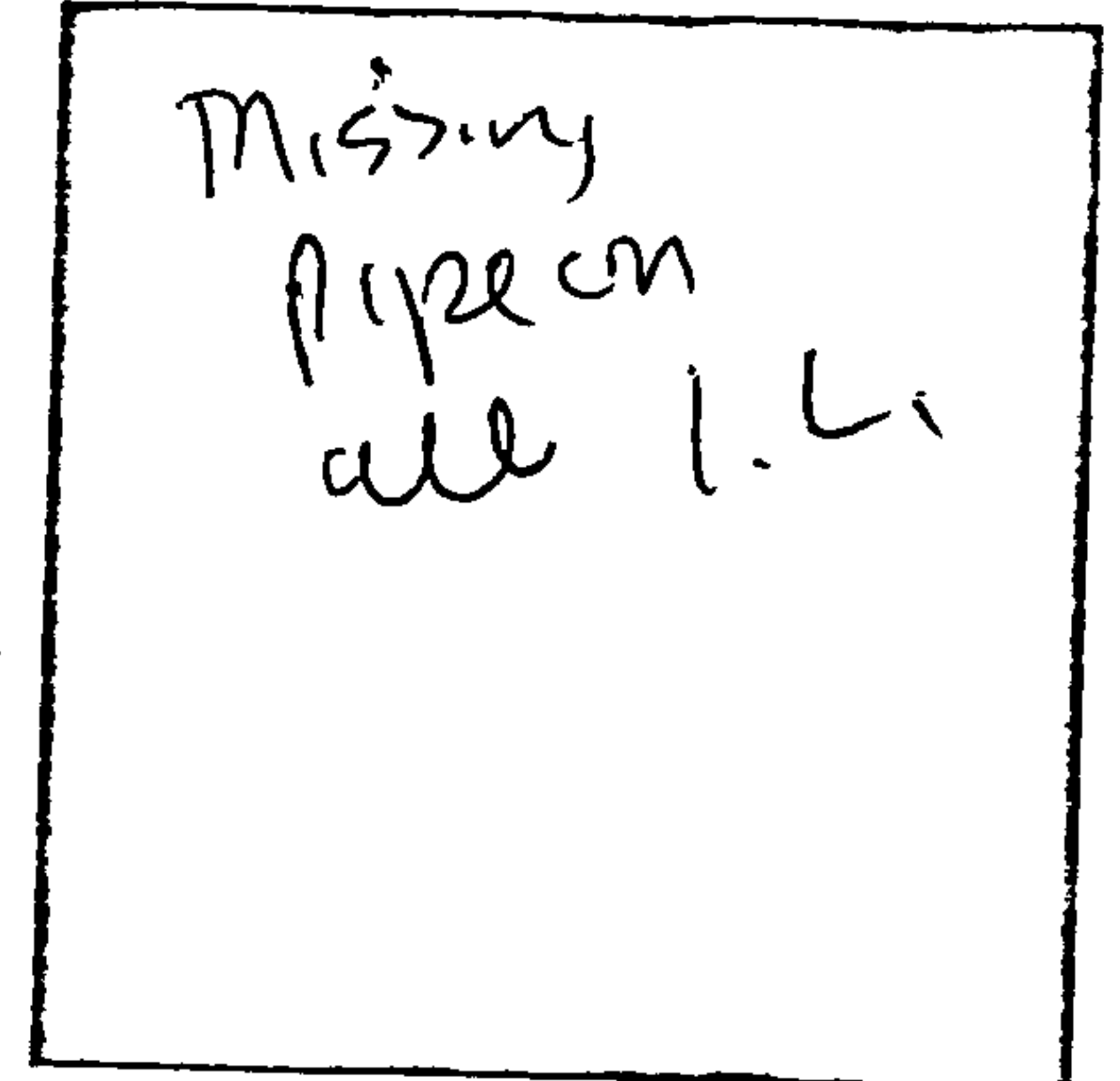


June 9, 2014

Brian Patterson, PE
BOHANNAN-HUSTON, INC.
7500 Jefferson Street NE Courtyard I
Albuquerque, NM 87109

Richard J. Berry, Mayor

RE: **Valle Vista at the Trails**
Drainage Report for Valle Vista at the Trails Subdivision
Engineer's Stamp Date 5-16-2014 (File: C09D009)



Dear Mr. Patterson:

Based upon the information provided in your submittal received 5-16-14, the above referenced plan cannot be approved for Preliminary Plat Approval, or Grading Permit until the following comments are addressed. The **Drainage Report for Valle Vista at the Trails Subdivision** is herein referred to as "the Report," and the **Amendment to The Drainage Master Plan for the Trails Units 1,2, and 3(April 2014)** is herein referred to as "the DMP."

PO Box 1293

Pertaining to the drainage concept presented in the Report and its congruency with the DMP:

Albuquerque

New Mexico 87103

www.cabq.gov

1. Since the proposed development is to be built in phases, the Report should indicate what infrastructure will be included on the infrastructure list for each phase.
2. The DMP, Table 4 (page 6) lists **Tract 8, Unit 2** as the tract responsible for improvements of Pond H. However, it is anticipated that **Tract 8, Unit 2** will not be able to develop for at least another year, after major water infrastructure is in place, and it is also possible that development of this tract is aborted altogether. Since this drainage plan utilized Pond H as part of its drainage scheme, it is incumbent upon the developers of this tract to either make the improvements or to show that Pond H in its present condition can accommodate the flows both from this tract and upstream.
3. There is a 48" Storm Drain Pipe that supposed to connect Pond K to the nearest manhole south, but was not built. Without this piece of pipe, the drainage concept in the DMP, and thus in this report, will not operate (or surge) as intended. It is therefore incumbent upon the developers of this tract to install the missing storm drain or show that the system in its present condition can accommodate the flows both from this tract and upstream.
4. Indicate that flows from Basin E6 of the DMP (Woodmont Ave) are accounted for in the Drainage Report for Valle Prado.
5. Indicate that offsite flows from the lot to the west drain into existing an Storm Drain that passes through this subdivision, and reference the Drainage Report that has the calculations for those pipes.
6. Indicate that offsite flows from the property to the north and northwest are accounted for in the Drainage Report for Valle Prado.

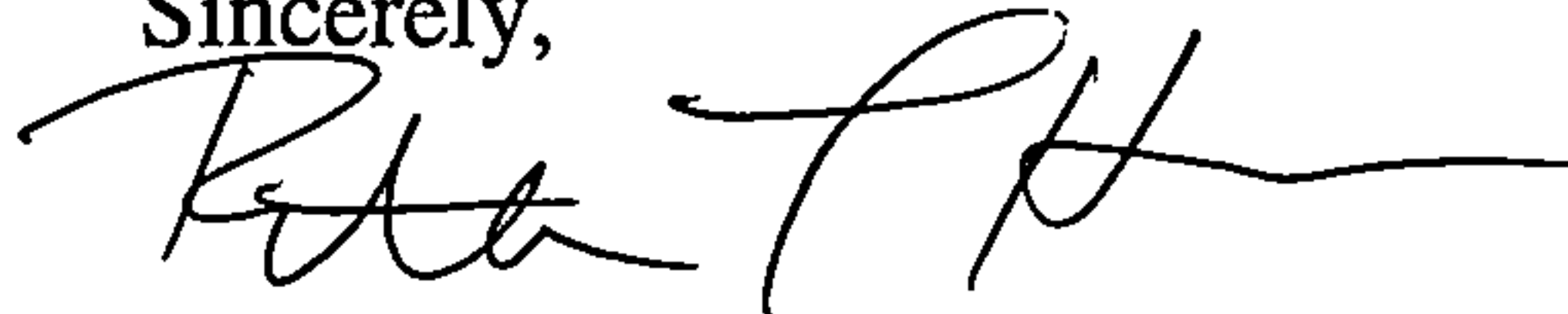
7. Indicate that the "first flush" requirements per the new drainage ordinance will be waived for this subdivision, but will be required for the Valle Prado subdivision in lieu of this subdivision.
8. Inlets need to be sized using the 6 hour storm.

Pertaining to Grading Plan:

9. Show existing contours on the south side of the subdivision.
10. Show sizes of all existing storm drain and manholes, and any new manholes. Show pipe flows.
11. Show inlet locations, sizes, and T.O. Grate elevations.
12. Are there new Manholes where new/relocated inlets tie into existing stormdrains?

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

Sincerely,



Rita Harmon, P.E.
Senior Engineer, Planning Dept.
Development Review Services

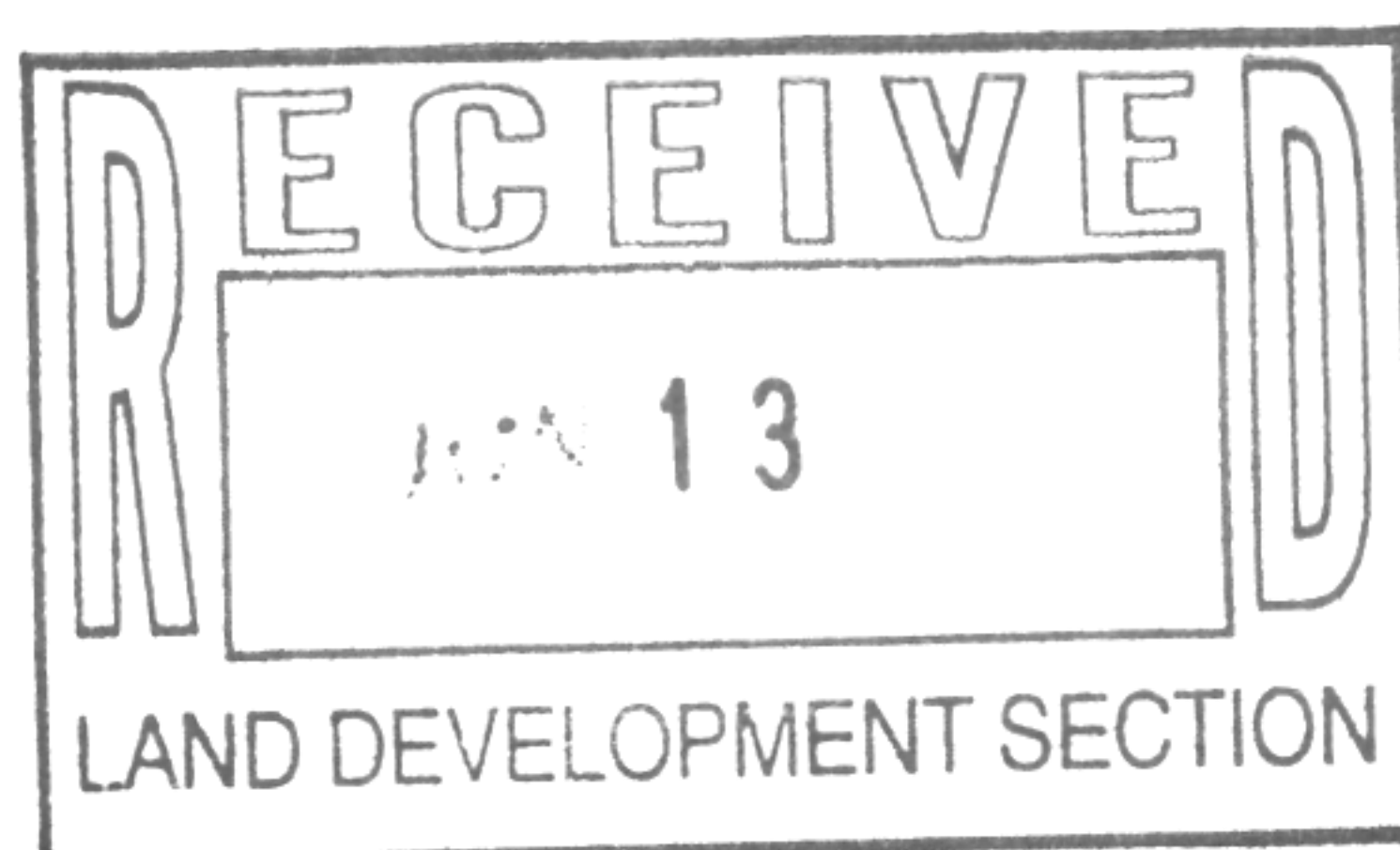
Orig: Drainage file
c.pdf Addressee via Email

Language fr
pg 2
C09D001E
DMP for
Pond H. to
be put
in this report

Pond H
improvements
to be
put on
Unit 2 & 3
IL.

DRAINAGE REPORT FOR VALLE VISTA AT THE TRAILS SUBDIVISION

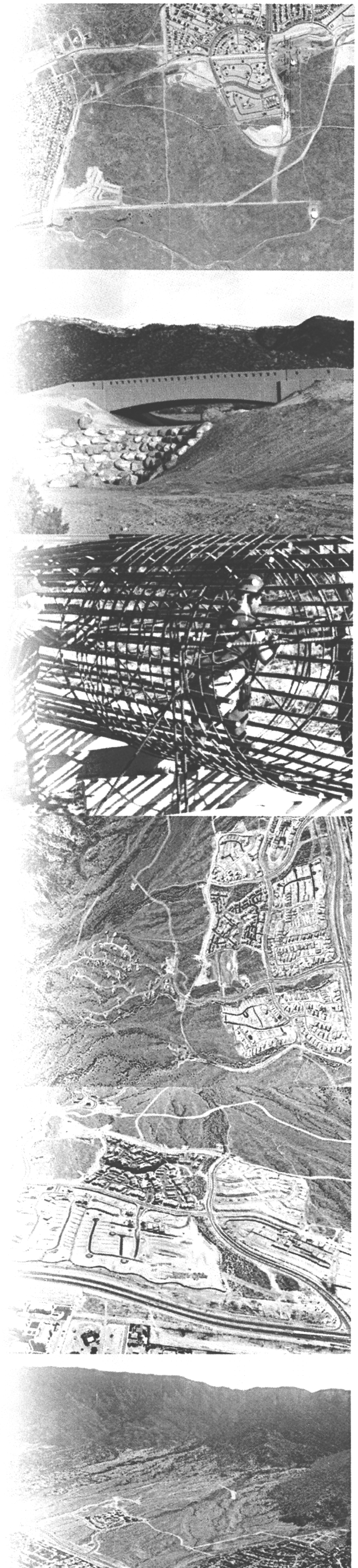
JUNE 2014



Prepared for:
Woodmont Paseo, LLC
6300 Riverside Plaza Lane, Suite 160
Albuquerque, NM 87120

Bohannon  **Huston**

Engineering
Spatial Data
Advanced Technologies



**DRAINAGE REPORT
FOR
VALLE VISTA AT THE TRAILS
SUBDIVISION**

JUNE 12, 2014

Prepared for:
**WOODMONT PASEO, LLC
6300 RIVERSIDE PLAZA LANE, SUITE 160
ALBUQUERQUE, NM 87120**

Prepared by:
**BOHANNAN HUSTON, INC.
COURTYARD I
7500 JEFFERSON STREET NE
ALBUQUERQUE, NM 87109**

Prepared By:

 6/12/14
Scott J. Steffen, P.E. Date
Project Engineer



Bohannon  Huston

TABLE OF CONTENTS

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APPENDICES

APPENDIX A – DEVELOPED CONDITIONS AHYMO SUMMARY, OUTPUT, AND INPUT FILES

APPENDIX B – STREET HYDRAULICS AND STORM DRAIN INLET ANALYSIS

EXHIBITS

EXHIBIT 1 – PRELIMINARY PLATS

EXHIBIT 2 – FULLY DEVELOPED BASIN MAP

EXHIBIT 3 – GRADING PLAN

EXHIBIT 4 – SUPPLEMENTAL EXHIBITS

I. PURPOSE

This report establishes a drainage management plan for Valle Vista at the Trails Subdivision. The proposed development consists of 51 single family detached residential lots on approximately 11 acres. This project is located within the Volcano Trails Sector Plan area, in northwest Albuquerque, east of Rainbow Blvd and south of Woodmont Avenue. Valle Vista was originally developed to be an 18 lot subdivision and is currently graded as such with street improvements constructed, which is discussed in greater detail below. Valle Vista is in the Trails Units 1-3 Drainage Master Plan (DMP) area and discharges developed flows to an existing storm drain system that is in the Valle Vista Subdivision. The Trails drainage outfall is to the Boca Negra Dam through a storm drain in Universe Boulevard. Discharge to the Boca Negra Dam is limited by the Trails Universe storm drain capacity. Flows in excess of the storm drain capacity surge to detention ponds east of Universe Boulevard. This report is submitted in support of grading approval and preliminary plat approval by the DRB.

II. CONCEPTS AND METHODOLOGIES

Drainage conditions were analyzed utilizing the 100-year, 24-hour storm event ($P_{60}=1.84$ in, $P_{360}=2.20$ in, $P_{1440}=2.66$ in), in accordance with the City of Albuquerque DPM. The use of the 24-hour storm event is consistent with the Trails Units 1-3 DMP. The Arid-lands Hydrologic Model (AHYMO) was utilized to determine peak flow rates for design of the storm drainage improvements within the project. The results are included in **Appendix A**. Street capacity and storm drain inlet calculations supporting this study are located in **Appendix B**.

The following document was referenced in the preparation of this report:

- *Amendment to the Drainage Master Plan for the Trails Units 1, 2, and 3*, prepared by Thompson Engineering Consultants, dated April 2014.

This amendment to the Drainage Management Plan (DMP) for the Trails "is to update the land use of the undeveloped parcels to match the density identified in the recently approved Volcano Trails Sector Development Plan (VTSDP) and to update the Developed Conditions Drainage Master Plan to adhere to the peak flow discharge from the previously approved Trails DMP". This DMP allows a discharge of 37.78 cfs from Valle Vista.

Inlets to be sized
for 6-hr storm
but no difference
between
6 hr & 24 hr
storm.
See
SHT #1

- *Drainage Report for Tract 11 of the Trail Unit II (Valle Vista at the Trails Unit II)*, prepared by Wilson and Company, dated December 2005.

This report provided the drainage analysis of the previous layout for Valle Vista which was originally 18 lots. Existing infrastructure that was design and constructed from this report will be utilized with this revised layout. This Drainage report allows a discharge of 33.32 cfs from Valle Vista.

III. SITE LOCATION AND CHARACTERISTICS

The land comprising Valle Vista was graded several years ago and the roadway improvements associated with the previous design have been constructed. The site generally slopes from west to east. It is bounded by Woodmont Avenue to the north, Rainbow Avenue to the east and undeveloped property to the west and Tierra Antiqua Elementary School to the south. Access to Valle Vista will be from Woodmont Avenue. Runoff generated by the project site in its present state drains towards existing drop inlets located in the existing roadway.

IV. DEVELOPED HYDRAULIC AND HYDROLOGIC CONDITIONS

Valle Vista is a proposed single-family residential development with 51 lots on 11 acres and will be subdivided into 3 units. Unit 1 consists of 9 lots, Unit 2 consists of 19 lots and Unit 3 consists of 23 lots. Proposed street and lot configurations are shown on the *Preliminary Plats, Exhibit 1*. Valle Vista is encompassed by Tract 11 at the Trails Unit 3A and labeled as Basin H1 with a $Q=37.78$ cfs in the DMP. The DMP allows for full discharge of developed flows from Valle Vista to enter the existing storm drain system that is in the Valle Vista Subdivision.

The percent impervious land treatment for the proposed conditions is determined from Table A-5 of the DPM, Section 22.2. The percent impervious land treatment value used in the Trails DMP AHYMO analysis assumed an impervious land treatment value of 68%. The Valle Vista percent impervious land treatment calculated in this report had a cumulative impervious land treatment value of 47%.

A. OFFSITE FLOWS

No offsite surface flows reach Valle Vista. Woodmont Avenue is an existing street north of Valle Vista. There is a water block in Valle Prado Lane just south of Woodmont Avenue that prevents flows from Woodmont Avenue from entering the site. Flows in

Woodmont Avenue correspond to Basin E6 of the DMP and are accounted for in the Valle Prado Units 1 and 2 Drainage Report. Tracts 6 and 9 of the Trails Unit 3A are north of Woodmont Avenue. Flows from Tracts 6 and 9 correspond to Basins E3 and E5 of the DMP and are accounted for in the Valle Prado Units 1 and 2 Drainage Report. No flows reach the site from the east or south as Valle Vista is higher in elevation than Rainbow Boulevard to the east and Tierra Antigua Elementary School to the south. There is an existing temporary detention pond on Tract 8 at the Trails Unit 3A to the west of Valle Vista that intercepts undeveloped flows from the west. The pond drains through an existing standpipe into a 24-inch storm drain pipe that is routed through Valle Vista, connecting to the existing 54-inch storm drain in Woodmont Avenue. No flow from Valle Vista is added to this 24-inch storm drain. This storm drain is designed to carry 31.3 cfs per the DMP when Tracts 7 and 8 at the Trails Unit 3A are developed.

B. ONSITE FLOWS

Developed flows from Valle Vista will be directed to the existing storm drain network in the Valle Vista Subdivision. There are no storm drain improvements required for Valle Vista Unit 1. Runoff from Unit 1 is conveyed in Valle Prado Lane to an existing Type 'A' single grate storm drain inlet at an intermediate low point in Valle ^{Huerto} Prado Lane near the location of proposed Inlet #1. A Type 'A' Double Grate, Double Wing inlet (Inlet #1) will be located at the low point in Valle Huerto Lane and is required for the development of Units 2 and 3. The existing inlet will be converted to a Type D inlet or replaced with a manhole. Flows from Basin 1 (15.1 cfs) and Basin 2 (8.2 cfs) are captured by Inlet #1. There is an emergency spill way present (Tract C) for Inlet #1, therefore the inlet has not been sized to capture two times the 100-year storm event. A 15% clogging factor analysis has been completed for Inlet #1 and is shown in **Appendix B**.

Basin 3 drains to an existing Type 'A' Single Grate sump inlet in the terminal cul-de-sac of the Valle Vista Subdivision. The cul-de-sac will be relocated further east with the Unit 3 development. Two (2) –Type 'A' Single Grate inlets (Inlets #2 and 3), will be located at a new low point in Valle Jardin Lane and are required for development of Valle Vista Unit 3. Flow from Basin 3 (8.9 cfs) is captured by Inlets #2 and #3. Inlets #2 and 3 are in a sump condition and there is no emergency spill way present, therefore the inlets have been sized to capture two times the 100-year storm event as shown in **Appendix B**. The total runoff from Valle Vista is $Q=32.2$ cfs, which is less than the runoff of $Q=37.78$ cfs calculated in the DMP.

Please see **Exhibit 2** – Fully Developed Basin Map for basin locations and **Exhibit 3** – Grading Plan for existing storm drain and inlet locations.

C. FIRST FLUSH REQUIREMENTS

Valle Vista Units 1 through 3 are required to meet the first flush requirements of the new City Drainage Ordinance. However, due to the fact that Valle Vista is a previously developed residential subdivision with a storm drain system and roadways in place, and that Pond H downstream of Valle Vista was designed and constructed as a surge pond, it is not reasonable for Valle Vista to hold back the first flush as required by the Drainage Ordinance. Therefore the first flush requirement for Valle Vista will be waived. The Valle Vista first flush requirement will be transferred to the Valle Prado Units 1 and 2 developments north of Woodmont Avenue, which are not required to meet first flush requirements. The Valle Prado Units 1 and 2 developed area is approximately 14.2 acres. The Valle Vista developed area is approximately 11.0 acres. Holding the first flush from all of Valle Prado Units 1 and 2 will result in a greater first flush volume being held than if Valle Vista was able to hold its first flush volume. The Valle Prado first flush will be held in Pond E.

D. OFFSITE STORM DRAIN IMPROVEMENTS

Flows from the Valle Vista storm drain system join flows from Rainbow Boulevard (DMP Basin H2) storm drain system and pass through a storm drain under the Trails Pond H. The Amended Trails Units 1-3 DMP, April 2014, requires modification to the Pond H inlet and outlet structures to meet the revised inflow and outflow flow rates. The Pond H modifications will be constructed as part of the Valle Vista Unit 2 development to include the following:

- Provide outlet control (orifice) to limit the pond bypass flow plus routed discharge through the pond to a maximum of 26.8 cfs, when the pond water surface is at the 100-year pond volume elevation.
- Provide outlet bypass capacity around the orifice at the maximum pond water surface elevation to accommodate the 26.8 cfs if the orifice gets clogged.
- Provide pond inflow capacity to match the DMP inflow (bypass plus surge) of 111 cfs.

V. CONCLUSION

This report provides a detailed study of the developed runoff and street capacities for the proposed Valle Vista at the Trails Subdivision. Included is the preliminary plat, basin

map, grading plan, and all necessary hydrologic and hydraulic analyses. The proposed drainage plan for Valle Vista can be safely conveyed by the existing and proposed improvements in this drainage plan. This drainage plan maintains the overall drainage pattern of the area, is consistent with the Trails Units 1-3 DMP and allows for the safe management of storm runoff in the fully developed condition as well as interim conditions.

APPENDICES

**APPENDIX A: DEVELOPED CONDITIONS AHYMO
SUMMARY, OUTPUT, AND INPUT
FILES**

**APPENDIX B: STREET HYDRAULICS AND
STORM DRAIN INLET ANALYSIS**

APPENDIX A

DEVELOPED CONDITIONS AHYMO SUMMARY, OUTPUT, AND INPUT FILES

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 1	NOTATION
*S	VALLE VISTA @ THE TRAILS SUBDIVISION DRAINAGE BASIN (D) PROPOSED										
*S	<u>100 YEAR - 6 HOUR STORM</u>										
*S											
START											TIME= .00
LOCATION			DEFAULT								
RAINFALL	TYPE= 1										RAIN6= 2.200
*S											
*S											
*S											
*S											
*S											
*S											
*S	COMPUTE BASIN 1										
COMPUTE NM HYD	1.00	-	1	.00790	15.06	.583	1.38341	1.500	2.979	PER IMP=	50.00
*S	COMPUTE BASIN 2										
COMPUTE NM HYD	2.00	-	2	.00440	8.16	.308	1.31322	1.500	2.895	PER IMP=	44.00
*S	COMPUTE BASIN 3										
COMPUTE NM HYD	3.00	-	3	.00479	8.87	.335	1.31322	1.500	2.895	PER IMP=	44.00
FINISH											

compare to 24-hr storm output (next sheet)
+ no difference
in peak discharge
so OK to use 24 hr storm
to size inlets.

Rita Harman, PE
Plan Reviewer
6/17/2014

AHYMO PROGRAM SUMMARY TABLE (AHYMO_97) -
INPUT FILE = DEV_Cond.HYM

- VERSION: 1997.02c

RUN DATE (MON/DAY/YR) =06/11/2014
USER NO.= AHYMO-S-9702c1BohanHu-AH

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 1 NOTATION
*S	VALLE VISTA @ THE TRAILS									
*S	100 YEAR - 24 HOUR STORM									
*S										
START										TIME= .00
LOCATION			DEFAULT							
RAINFALL	TYPE= 2									RAIN24= 2.660
*S										
*S										
*S										
*S										
*S										
*S										
*S	COMPUTE BASIN 1									
COMPUTE NM HYD	1.00	-	1	.00790	15.06	.679	1.61331	1.500	2.979	PER IMP= 50.00
*S	COMPUTE BASIN 2									
COMPUTE NM HYD	2.00	-	2	.00440	8.16	.356	1.51554	1.500	2.895	PER IMP= 44.00
*S	COMPUTE BASIN 3									
COMPUTE NM HYD	3.00	-	3	.00479	8.87	.387	1.51554	1.500	2.895	PER IMP= 44.00
FINISH										

- Version: 1997.02c

*CONVERT TO NMHYMO

LOCATION NM
Soil infiltration values (LAND FACTORS) for this location are not available.
The following default values were used.

*

*

```
*100 YEAR - 24 HOUR  
RAINFALL          TYPE=2  RAIN QUARTER=0  
                   RAIN ONE=1.84 IN  RAIN SIX=2.20 IN  
                   RAIN DAY=2.66 IN  DT=0.10 HRS
```

COMPUTED 24-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
DT = .100000 HOURS END TIME = 24.000000 HOURS

.0000	.0060	.0124	.0193	.0266	.0347	.0435
.0532	.0640	.0764	.0908	.1071	.1906	.4476
.9796	1.3314	1.5028	1.6393	1.7527	1.8488	1.9308
1.9485	1.9639	1.9776	1.9899	2.0013	2.0117	2.0215
2.0306	2.0393	2.0475	2.0553	2.0627	2.0698	2.0766
2.0832	2.0895	2.0956	2.1015	2.1072	2.1128	2.1182
2.1234	2.1285	2.1335	2.1383	2.1431	2.1477	2.1522
2.1566	2.1610	2.1652	2.1694	2.1734	2.1774	2.1814
2.1852	2.1890	2.1927	2.1964	2.2000	2.2039	2.2078
2.2117	2.2155	2.2193	2.2231	2.2268	2.2305	2.2342
2.2379	2.2416	2.2452	2.2488	2.2524	2.2559	2.2595
2.2630	2.2665	2.2700	2.2734	2.2768	2.2802	2.2836
2.2870	2.2903	2.2937	2.2970	2.3002	2.3035	2.3068
2.3100	2.3132	2.3164	2.3196	2.3227	2.3259	2.3290
2.3321	2.3352	2.3383	2.3413	2.3444	2.3474	2.3504
2.3534	2.3563	2.3593	2.3622	2.3652	2.3681	2.3710
2.3739	2.3767	2.3796	2.3824	2.3853	2.3881	2.3909
2.3937	2.3965	2.3992	2.4020	2.4047	2.4074	2.4101
2.4128	2.4155	2.4182	2.4208	2.4235	2.4261	2.4287
2.4314	2.4340	2.4365	2.4391	2.4417	2.4442	2.4468
2.4493	2.4518	2.4543	2.4568	2.4593	2.4618	2.4643
2.4667	2.4692	2.4716	2.4740	2.4765	2.4789	2.4813
2.4837	2.4860	2.4884	2.4908	2.4931	2.4955	2.4978
2.5001	2.5024	2.5047	2.5070	2.5093	2.5116	2.5139
2.5161	2.5184	2.5206	2.5229	2.5251	2.5273	2.5295
2.5317	2.5339	2.5361	2.5383	2.5404	2.5426	2.5448
2.5469	2.5490	2.5512	2.5533	2.5554	2.5575	2.5596
2.5617	2.5638	2.5659	2.5680	2.5700	2.5721	2.5741
2.5762	2.5782	2.5803	2.5823	2.5843	2.5863	2.5883
2.5903	2.5923	2.5943	2.5963	2.5982	2.6002	2.6022
2.6041	2.6061	2.6080	2.6099	2.6119	2.6138	2.6157
2.6176	2.6195	2.6214	2.6233	2.6252	2.6271	2.6290
2.6308	2.6327	2.6346	2.6364	2.6383	2.6401	2.6419
2.6438	2.6456	2.6474	2.6492	2.6510	2.6528	2.6546
2.6564	2.6582	2.6600				

```
*S
*S                      *****
*S                      *COMPUTE ONSITE BASINS*
*s                      *****
*S
*S
*S
*S
*S COMPUTE BASIN 1 *****
*
COMPUTE NM HYD          ID=1 HYD=1   AREA=0.007897   PER A=0 PER B=25
```


PER C=25 PER D=50 TP=-0.133 RAINFALL=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 15.624 CFS UNIT VOLUME = 1.030 B = 526.28 P60 = 1.8400
AREA = .003949 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

K = .118257HR TP = .133000HR K/TP RATIO = .889153 SHAPE CONSTANT, N = 3.989065
UNIT PEAK = 10.523 CFS UNIT VOLUME = 1.006 B = 354.44 P60 = 1.8400
AREA = .003949 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD

ID=1 CODE=1

OUTFLOW HYDROGRAPH REACH 1.00

RUNOFF VOLUME = 1.61331 INCHES = .6795 ACRE-FEET
PEAK DISCHARGE RATE = 15.06 CFS AT 1.500 HOURS BASIN AREA = .0079 SQ. MI.

*

*S COMPUTE BASIN 2 *****

COMPUTE NM HYD ID=2 HYD=2 AREA=0.004404 PER A=0 PER B=28
PER C=28 PER D=44 TP=-0.133 RAINFALL=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 7.6676 CFS UNIT VOLUME = 1.029 B = 526.28 P60 = 1.8400
AREA = .001938 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

K = .118257HR TP = .133000HR K/TP RATIO = .889153 SHAPE CONSTANT, N = 3.989065
UNIT PEAK = 6.5724 CFS UNIT VOLUME = 1.006 B = 354.44 P60 = 1.8400
AREA = .002466 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD

ID=2 CODE=1

OUTFLOW HYDROGRAPH REACH 2.00

RUNOFF VOLUME = 1.51554 INCHES = .3560 ACRE-FEET
PEAK DISCHARGE RATE = 8.16 CFS AT 1.500 HOURS BASIN AREA = .0044 SQ. MI.

*

*S COMPUTE BASIN 3 *****

COMPUTE NM HYD ID=3 HYD=3 AREA=0.004788 PER A=0 PER B=28
PER C=28 PER D=44 TP=-0.133 RAINFALL=-1

K = .072485HR TP = .133000HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 8.3362 CFS UNIT VOLUME = 1.029 B = 526.28 P60 = 1.8400
AREA = .002107 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

K = .118257HR TP = .133000HR K/TP RATIO = .889153 SHAPE CONSTANT, N = 3.989065
UNIT PEAK = 7.1455 CFS UNIT VOLUME = 1.006 B = 354.44 P60 = 1.8400
AREA = .002681 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .100000

PRINT HYD

ID=3 CODE=1

OUTFLOW HYDROGRAPH REACH 3.00

RUNOFF VOLUME = 1.51554 INCHES = .3870 ACRE-FEET
PEAK DISCHARGE RATE = 8.87 CFS AT 1.500 HOURS BASIN AREA = .0048 SQ. MI.

*

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 08:16:23

```

*S  VALLE VISTA @ THE TRAILS SUBDIVISION DRAINAGE BASIN (D) PROPOSED
*S  100 YEAR - 24 HOUR STORM
*S
*  CREATED JUNE 11, 2014
*
*
*CONVERT TO NMHYMO
START          TIME=0.0 HR  PUNCH CODE=0
*****
LOCATION  NM
*
*****
*
*****
*100 YEAR - 24 HOUR
RAINFALL          TYPE=2  RAIN QUARTER=0
                  RAIN ONE=1.84 IN  RAIN SIX=2.20 IN
                  RAIN DAY=2.66 IN  DT=0.10 HRS

*S
*S          *****
*S          *COMPUTE ONSITE BASINS*
*S          *****
*S
*S
*S
*S COMPUTE BASIN 1 *****
*
COMPUTE NM HYD          ID=1 HYD=1  AREA=0.007897  PER A=0 PER B=25
PER C=25 PER D=50  TP=-0.133  RAINFALL=-1
PRINT HYD          ID=1  CODE=1
*
*S COMPUTE BASIN 2 *****
COMPUTE NM HYD          ID=2 HYD=2  AREA=0.004404  PER A=0 PER B=28
PER C=28 PER D=44  TP=-0.133  RAINFALL=-1
PRINT HYD          ID=2  CODE=1
*
*S COMPUTE BASIN 3 *****
COMPUTE NM HYD          ID=3 HYD=3  AREA=0.004788  PER A=0 PER B=28
PER C=28 PER D=44  TP=-0.133  RAINFALL=-1
PRINT HYD          ID=3  CODE=1
*

FINISH

```

APPENDIX B

STREET HYDRAULICS AND STORM DRAIN INLET ANALYSIS

2.93%.txt

MANNING'S N = 0.017 SLOPE = 0.029

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.0	0.5	4.0	10.5	0.1	7.0	37.5	0.0
2.0	7.9	0.3	5.0	23.5	0.4	8.0	39.1	0.3
3.0	9.5	0.0	6.0	36.5	0.1	9.0	47.0	0.5

mountable curb & gutter?

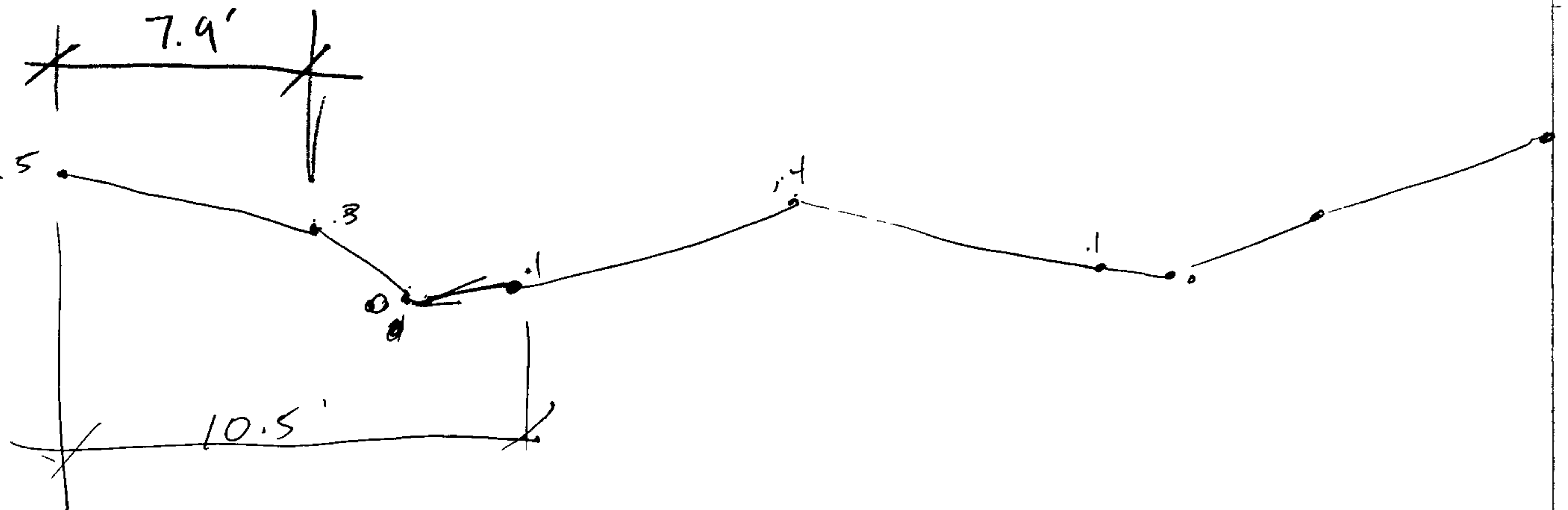
VALLE CANTERO

JUST WEST OF VALLE HUERTO LANE.

WSEL FT.	DEPTH INC	FLOW AREA SQ. FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOTAL ENERGY (FT)
0.050	0.050	0.032	0.040	1.280	1.268	1.263	0.075
0.100	0.100	0.126	0.254	2.559	2.013	2.526	0.163
0.150	0.150	0.301	0.647	5.529	2.150	5.482	0.222
0.200	0.200	0.713	1.716	11.034	2.408	10.976	0.290
0.250	0.250	1.399	4.032	16.539	2.883	16.470	0.379
0.300	0.300	2.360	7.959	22.044	3.373	21.964	0.477
0.350	0.350	3.613	13.387	29.315	3.705	29.228	0.564
0.400	0.400	5.317	21.354	38.236	4.016	38.146	0.651
0.450	0.450	7.347	33.770	43.156	4.596	43.065	0.779

85% BASIN 1 = 13 CFS

WSEL = 0.33 ✓ ok



1.64%.txt

MANNING'S N = 0.017 SLOPE = 0.016

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1.0	0.0	0.5	4.0	10.5	0.1	7.0	37.5	0.0
2.0	7.9	0.3	5.0	23.5	0.4	8.0	39.1	0.3
3.0	9.5	0.0	6.0	36.5	0.1	9.0	47.0	0.5

WSEL FT.	DEPTH INC	FLOW AREA SQ. FT.	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOPWID PLUS OBSTRUCTIONS	TOTAL ENERGY (FT)
0.050	0.050	0.032	0.030	1.280	0.949	1.263	0.064
0.100	0.100	0.126	0.190	2.559	1.506	2.526	0.135
0.150	0.150	0.301	0.484	5.529	1.608	5.482	0.190
0.200	0.200	0.713	1.284	11.034	1.802	10.976	0.250
0.250	0.250	1.399	3.017	16.539	2.157	16.470	0.322
0.300	0.300	2.360	5.955	22.044	2.524	21.964	0.399
0.350	0.350	3.613	10.015	29.315	2.772	29.228	0.470
0.400	0.400	5.317	15.976	38.236	3.005	38.146	0.540
0.450	0.450	7.347	25.265	43.156	3.439	43.065	0.634

VALLE HUERTO

JUST NORTH OF

INLET #1

DASIN 2 - 8.2 CFS

USEL

$$\frac{10.0 - 5.9}{0.35 - 0.30} = \frac{10 - 8.2}{0.35 - x} \Rightarrow \frac{4.1}{0.05} = \frac{1.8}{0.35 - x} \Rightarrow 0.095 = 1.435 - 4.1x$$

$$x = 0.32' < 0.33'$$

✓ OK

Double A inlet, in sump condition:

Open Area (for orifice calc in sq. ft.):

7.7977431

Length of Weir (feet):

7.9791667

Orifice Coefficient

0.6

Weir Coefficient

3

INLET #1
in Valle Huelmo

Head (ft)	Head (in)	1 Wing	Grate		Control Q	
		Weir Q (cfs)	Weir Q (cfs)	Orifice Q (cfs)	Sgl Wing (cfs)	Dbl Wing (cfs)
0.05	0.6	0.13	0.27	8.40	0.40	0.54
0.1	1.2	0.38	0.76	11.87	1.14	1.52
0.15	1.8	0.70	1.39	14.54	2.09	2.78
0.2	2.4	1.07	2.14	16.79	3.21	4.29
0.25	3	1.50	2.99	18.77	4.49	5.99
0.3	3.6	1.97	3.93	20.56	5.91	7.88
0.35	4.2	2.48	4.96	22.21	7.44	9.93
0.4	4.8	3.04	6.06	23.75	9.09	12.13
0.45	5.4	3.62	7.23	25.19	10.85	14.47
0.5	6	4.24	8.46	26.55	12.71	16.95
0.55	6.6	4.89	9.76	27.84	14.66	19.55
0.6	7.2	5.58	11.13	29.08	16.70	22.28
0.65	7.8	6.29	12.54	30.27	18.83	25.12
0.667	8.0	6.54	13.04	30.66	19.58	26.11
0.7	8.4	7.03	14.02	31.41	21.05	28.08
0.75	9	7.79	15.55	32.52	23.34	31.14
0.8	9.6	8.59	17.13	33.58	25.71	34.30
0.85	10.2	9.40	18.76	34.62	28.16	37.57
0.9	10.8	10.25	20.44	35.62	30.68	40.93
0.95	11.4	11.11	22.16	36.60	33.28	44.39
1	12	12.00	23.94	37.55	35.94	47.94
1.05	12.6	12.91	25.76	38.47	38.67	51.58
1.1	13.2	13.84	27.62	39.38	41.46	55.31
1.15	13.8	14.80	29.52	40.26	44.32	59.12
0.567	6.804	5.12	10.22	28.27	15.34	20.47

Calculation of open area:

Total Grate Area	2000	13.888889
Cross Bar Area	-732	-5.083333
Supports (ends)	-115.625	-0.802951
(middle)	-100	-0.694444
Areas Counted Twice	70.5	0.4895833
	1122.875	7.7977431

Calculation of Length of Weir:

Total Perimeter of Grate	130	10.833333
Short Cross Bars	-7	-0.583333
Bearing Bars	-13	-1.083333
End Supports	-9.25	-0.770833
- Middle Supports	-5	-0.416667
	110	7.9791667

BASIN 1 - 15.2 cfs

BASIN 2 - 8.2 cfs

23.2 cfs

h = 0.6' ✓ ok

x 15% CLOGGING FACTOR = 26.9 cfs

h = 0.68' ✓ ok

but OK since @ intersection

grate el = 5436.16
+ 0.68
5436.84 ✓ ok

roads higher than

INLETS #2 & #3

Single A inlet, in sump condition with curb openings on both sides:

Open Area (for orifice calc in sq. ft.): 3.9314236

Length of Weir (feet): 11.354167

Head (ft)	Head (in)	Weir Q	Orifice Q	Control Q
0.05	0.6	0.34	4.23	0.34
0.1	1.2	0.96	5.99	0.96
0.15	1.8	1.77	7.33	1.77
0.2	2.4	2.72	8.47	2.72
0.25	3	3.80	9.46	3.80
0.3	3.6	5.00	10.37	5.00
0.35	4.2	6.30	11.20	6.30
0.4	4.8	7.70	11.97	7.70
0.45	5.4	9.19	12.70	9.19
0.5	6	10.76	13.39	10.76
0.55	6.6	12.41	14.04	12.41
0.6	7.2	14.14	14.66	14.14
0.65	7.8	15.95	15.26	15.26
0.7	8.4	17.82	15.84	15.84
0.75	9	19.76	16.39	16.39
0.8	9.6	21.77	16.93	16.93
0.85	10.2	23.85	17.45	17.45
0.9	10.8	25.98	17.96	17.96
0.95	11.4	28.18	18.45	18.45
1	12	30.43	18.93	18.93

Calculation of open area:

	(in^2)	(ft^2)
Total Grate Area	1000	6.9444444
Cross Bar Area	-366	-2.541667
Supports (ends)	-115.625	-0.802951
Areas Counted Twice	<u>47.75</u>	<u>0.3315972</u>
	566.125	3.9314236

Calculation of Length of Weir:

	(in)	(ft)
Total Perimeter of Grate	90	7.5
Short Cross Bars	-3.5	-0.291667
End Supports	-9.25	-0.770833
Bearing Bars	-13	-1.083333
Curb Openings	<u>72</u>	<u>6</u>
	136.25	11.354167

$$\text{BASIN 2} = 9.0 \text{ CFS} / 2 = 4.5 \text{ CFS / INLET}$$

$$h = 0.30' \checkmark$$

$$2 \times 100 \text{ YL} = 9.0 \text{ CFS / INLET}$$

$$h = 0.45' \checkmark$$

EXHIBITS

EXHIBIT 1: PRELIMINARY PLAT

EXHIBIT 2: FULLY DEVELOPED BASIN MAP

EXHIBIT 3: GRADING PLAN

EXHIBIT 4: SUPPLEMENTAL EXHIBITS

EXHIBIT 1

PRELIMINARY PLAT

EXHIBIT 2

FULLY DEVELOPED BASIN MAP

EXHIBIT 3

GRADING PLAN

EXHIBIT 4

SUPPLEMENTAL EXHIBITS

Bohannon Huston

Albuquerque

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Albuquerque, NM
87109-4335

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facsimile: 505.798.7988
toll free: 800.877.5332

Las Cruces

425 S. Telshor Blvd.
Suite C-103
Las Cruces, NM
88011-8237

voice: 575.532.8670
facsimile: 575.532.8680

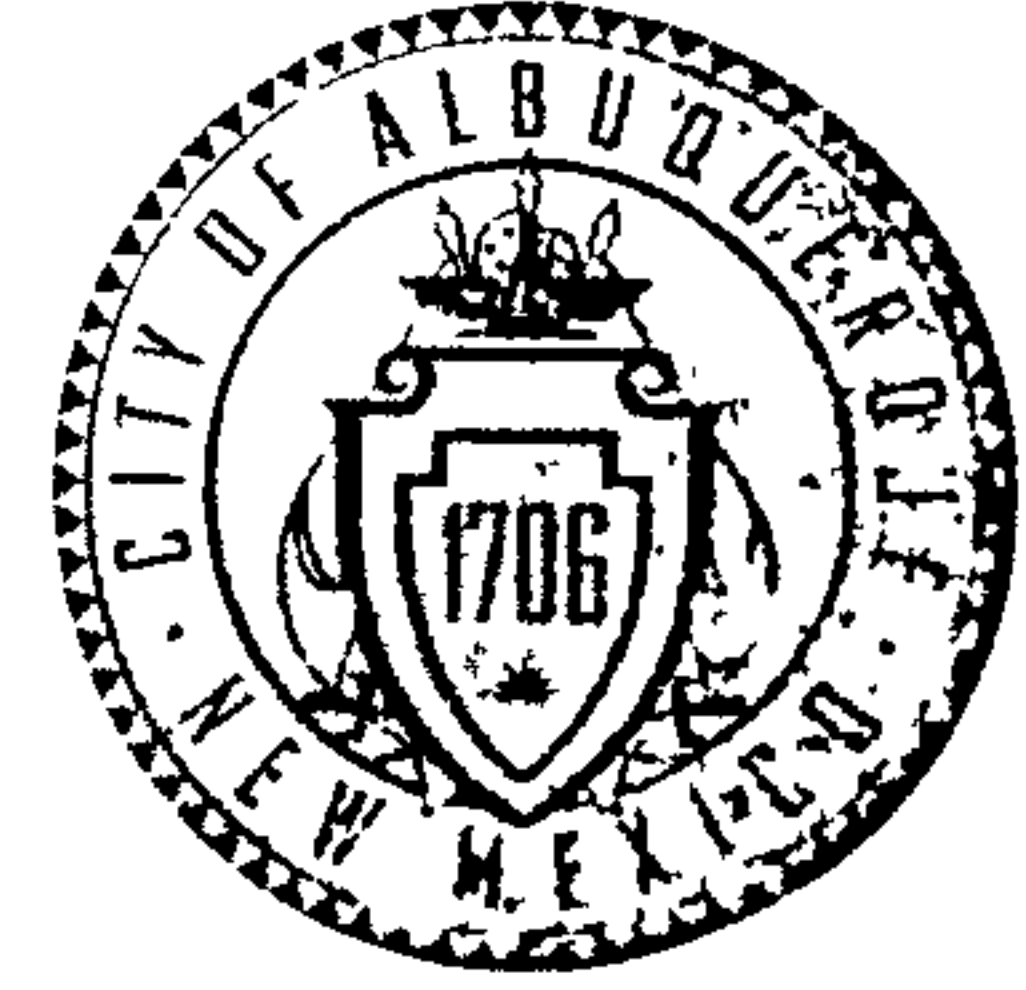
Denver

Meridian One
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facsimile: 303.799.5104
toll free: 877.799.5103

www.bhinc.com

CITY OF ALBUQUERQUE



September 30, 2008

Angela N. Valdez, P.E.
Wilson & Company, Inc.
2600 The American Rd. SE Ste. 100
Rio Rancho, NM 87124

RE: Valle Vista @ The Trails Unit II, (C-09/D009)
Engineers Certification for Release of Financial Guaranty
Engineers Stamp dated 4/19/2006
Engineers Certification dated 09/11/2008

Ms. Valdez,

Based upon the information provided in your Engineer's Certification submittal dated 09/12/2008, the above referenced plan is adequate to satisfy the Grading and Drainage Certification for Release of Financial Guaranty.

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

Sincerely,

Timothy E. Sims
Plan Checker, Planning Dept. - Hydrology
Development and Building Services

C: Marilyn Maldonado, COA# 730086
File

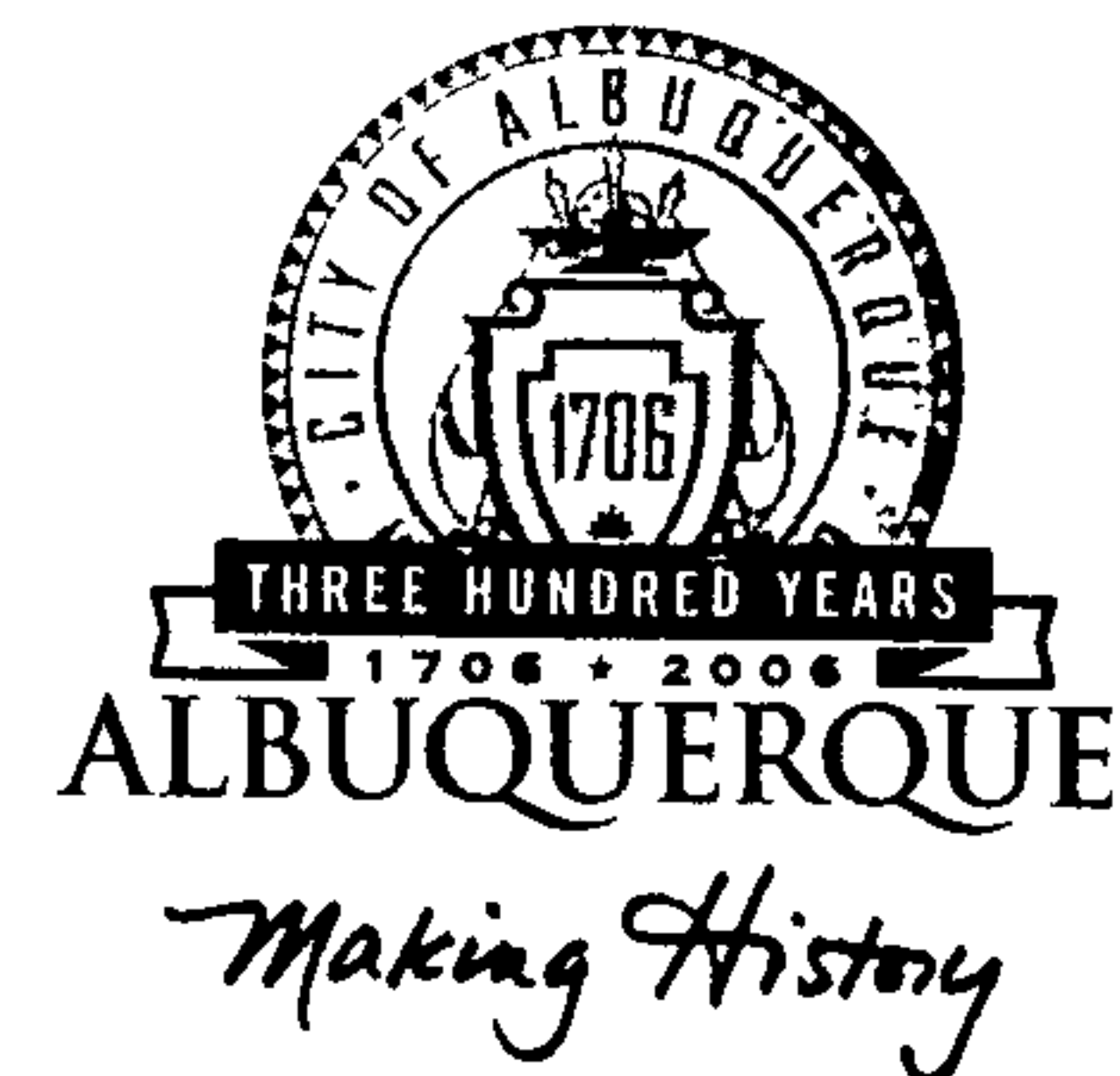
PO Box 1293

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NM 87103

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CITY OF ALBUQUERQUE



April 27, 2006

Angela Valdez, P.E.
Wilson & Company
4900 Lang Ave. NE
Albuquerque, NM 87109

Re: Valle Vista – at the Trails Unit II, Tract 11 of the Trails Unit II bulk land plat, Grading and Drainage Plan
Engineer's Stamp dated 4-19-06 (C9-D9)

Dear Ms. Valdez,

Based upon the information provided in your submittal received 4-19-06, the above referenced plan is approved for Grading Permit. Upon completion of the project, please provide an Engineer Certification for our files.

This project requires a National Pollutant Discharge Elimination System (NPDES) permit. If you have any questions regarding this permit please feel free to call the DMD Storm Drainage Design section at 768-3654 (Charles Caruso).

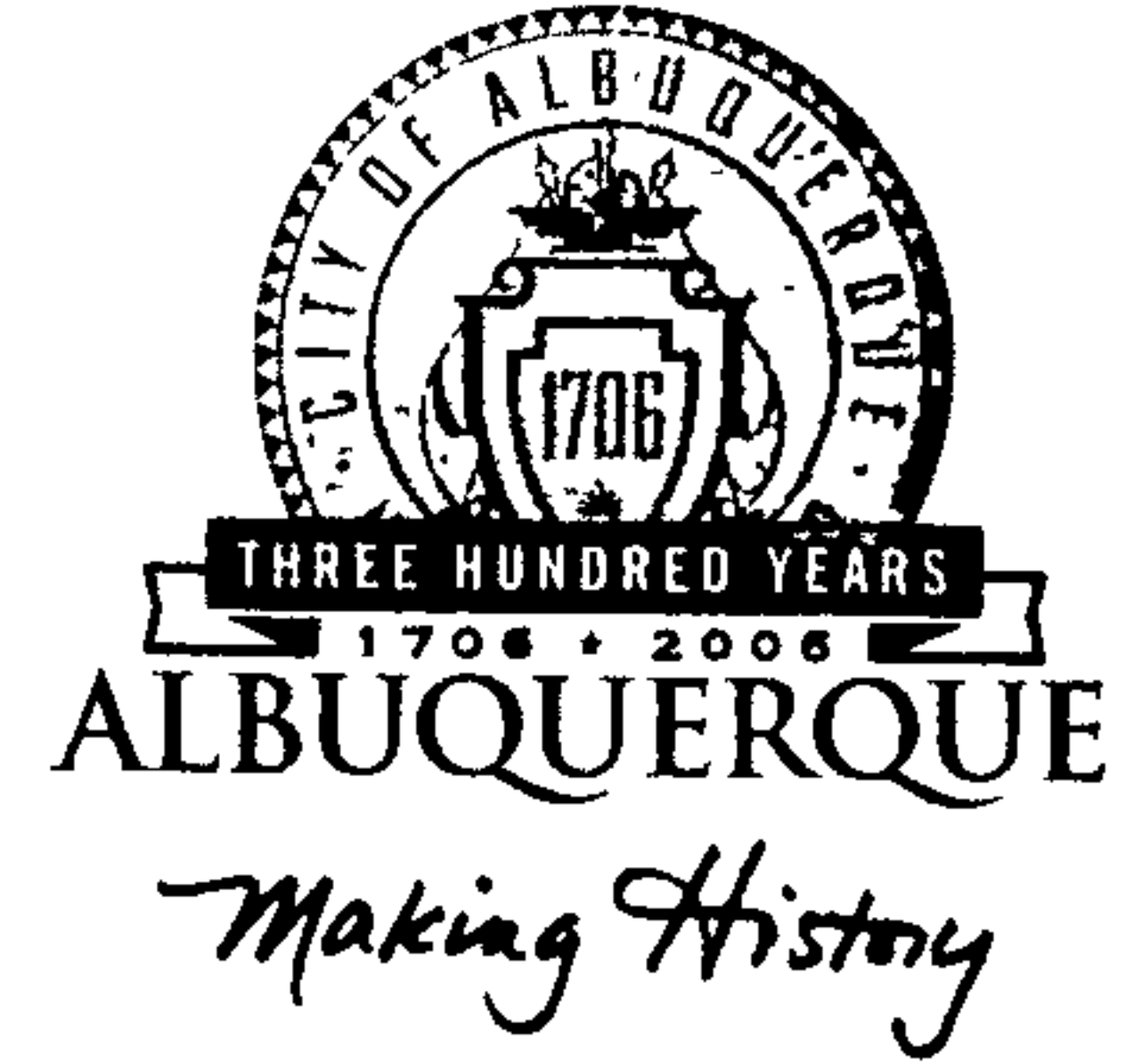
If you have any questions, you can contact me at 924-3981.

Sincerely,

Kristal D. Metro, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: Charles Caruso, DMD Storm Drainage Design
File

CITY OF ALBUQUERQUE



January 10, 2006

Steve Salazar, PE
Wilson & Company
2600 American Rd, SE, Ste. 100
Rio Rancho, NM 87124

Re: Valle Vista at the Trails Subdivision Drainage Report

Engineer Stamp 12-12-05 (C9/D9)

Dear Mr. Salazar,

12-14-05

Based upon information provided in your submittal dated ~~12-23-05~~, the above referenced report is approved for Preliminary Plat action by the DRB. Once that board approves the grading plan, please submit a mylar copy for my signature in order to obtain a Rough Grading Permit.

This project requires a National Pollutant Discharge Elimination System (NPDES) permit. If you have any questions about this process please feel free to call the Municipal Development Department, Hydrology section at 768-3654 (Charles Caruso).

If you have any questions, you can contact me at 924-3986.

Sincerely,

Bradley L. Bingham, PE
Principal Engineer, Planning Dept.
Development and Building Services

C: file

P.O. Box 1293

Albuquerque

New Mexico 87103

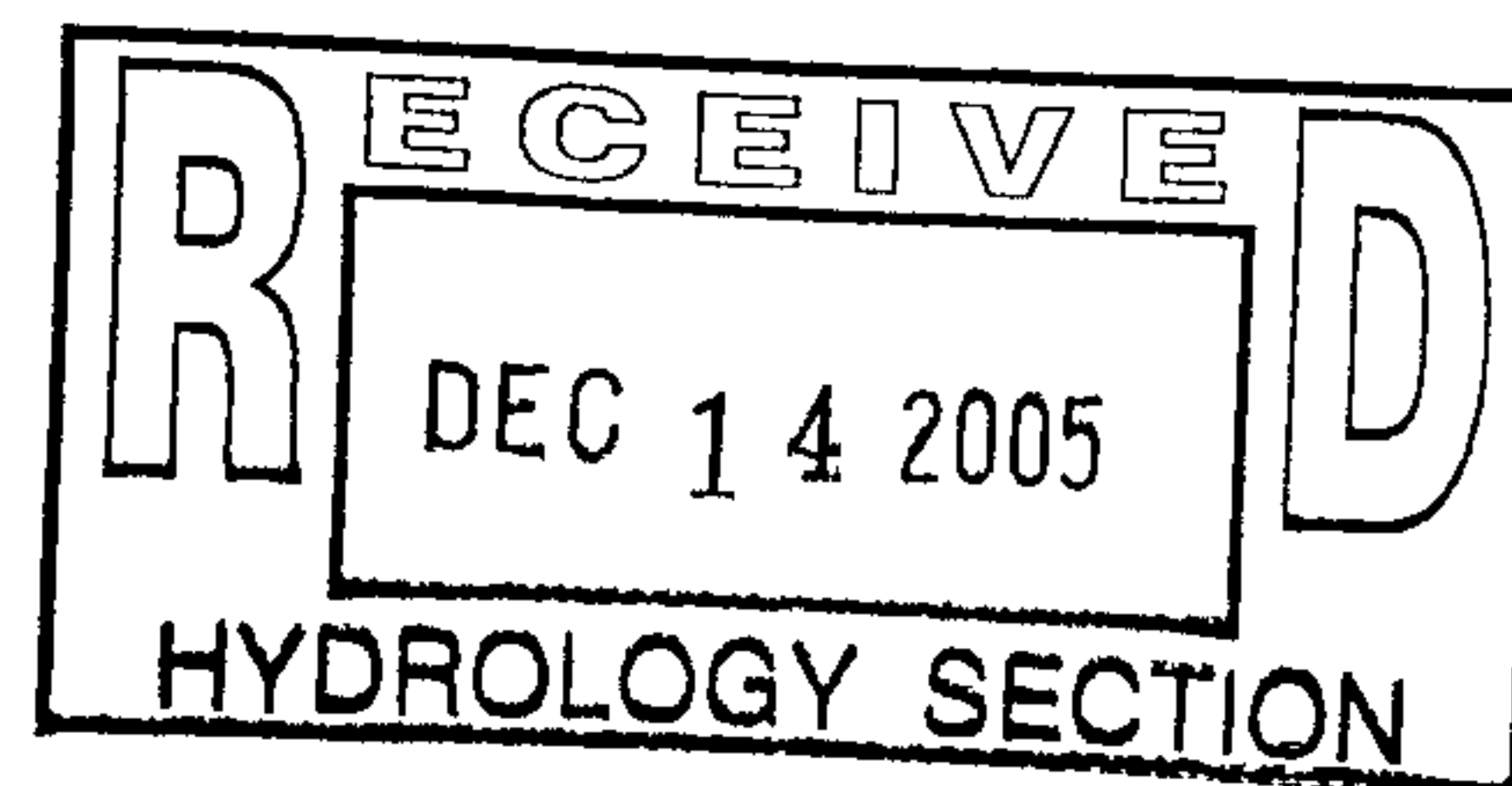
www.cabq.gov

DRAINAGE REPORT

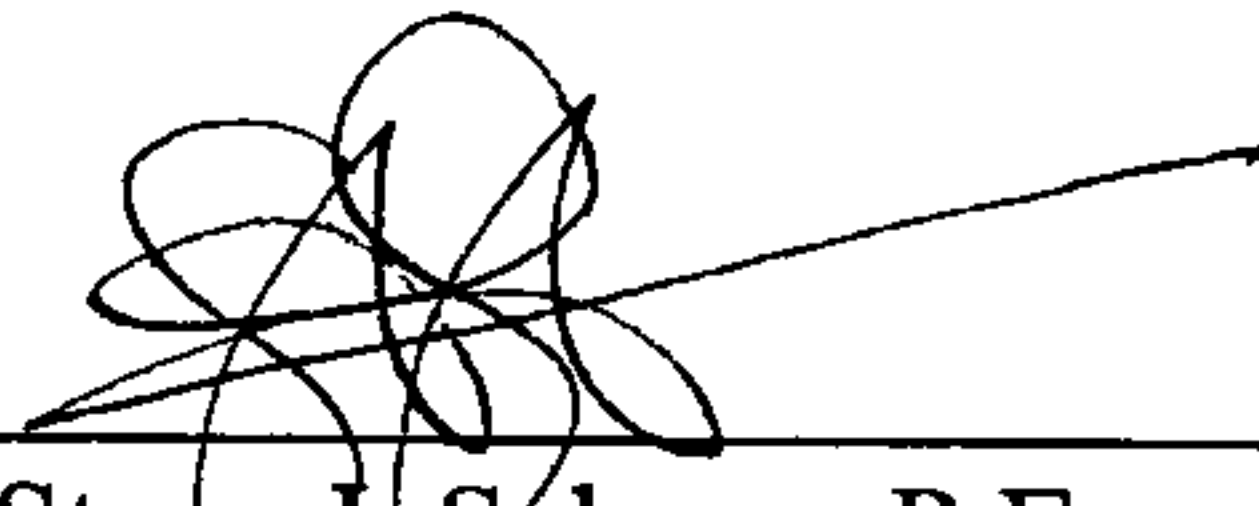
for

**TRACT 11 OF THE TRAILS UNIT II
(VALLE VISTA AT THE TRAILS UNIT II)
Albuquerque, New Mexico**

DECEMBER 2005



I, Steve J. Salazar, do hereby certify that this report was prepared by me or under my direction and that I am a duly registered Professional Engineer under the laws of the State of New Mexico.



Steve J. Salazar, P.E.
NM No. 16241
12/12/05

Date



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List of Exhibits

Exhibit A: Vicinity Map

Exhibit B: FEMA Flood map with site

Exhibit C: Zone Atlas Sheet C-9-Z with site

Exhibit D: Soils Map

List of Plates

(Located in Pockets)

Plate 1: Overall Pond Grading & Drainage plan - Interim Conditions

Plate 2: Overall Pond Grading & Drainage plan - Future Developed Conditions (Drainage Master Plan)

Plate 3: Grading & Drainage Plan

List of Appendices

Appendix A: AHYMO Input and Output for Interim Conditions

Appendix B: AHYMO Input and Output for Fully Developed Conditions

Appendix C: FLOWMASTER Street Capacity Analysis

Appendix D: HYDRAFLOW Storm Drain Sizing Analysis

Appendix E: MISCELLANEOUS CALCULATIONS

Introduction

Wilson & Company prepared this drainage report under contract to Longford Homes. The document provides a basis for the design of storm water conveyance systems within Tract 11 of the Trails Unit II (subject property). The objective of this report is to analyze the hydrologic characteristics associated with the existing and developed conditions.

Tract 11 of the Trails Unit II is a single-family subdivision with 18 total lots within The Trails master planned community. Each lot is approximately 0.5 acres in area. The "Master Drainage Study for The Trails Subdivision", dated December 2003, prepared by Bohannan-Huston, Inc (BHI Study) outlines the major drainage requirements for the entire Trails development. This DMP covers a large area surrounding the subject property. The master planned area will drain through a series of detention surge ponds to the southeast corner of the Trails project to reduce flows. As established in the "Amendment to The Trails Subdivision Master Drainage Study", dated May 5, 2004 and prepared by Wilson & Company, a future storm drain system (currently under design, COA #761281) is scheduled to carry developed flows from the southeast corner of the Trails south to the Boca Negra Detention Dam. Wilson & Company has revised the BHI Study as the project progresses to more accurately model the drainage conditions. This revised Drainage Master Plan is included in this report as Plate 2 (also referred to as the Overall Pond Grading & Drainage Plan for Future Developed Conditions). The Drainage Master Plan establishes revised Basin, Pond and Hydrologic summary data. Tract 11 of the Trails Unit II drains to Pond H, Trails Unit II COA # 730085 as outlined in the BHI Drainage Master Plan.

Project Description

The proposed development is located within the city limits of Albuquerque, New Mexico. The subject property consists of approximately 11.73 acres of undeveloped land on the west side of Albuquerque, south of Ventana Ranch subdivision. The Trails Subdivision is located on Albuquerque's Northwest Mesa, west of Universe Boulevard and south of Paseo Del Norte. Rainbow Blvd binds the subject property to the east, Woodmont Avenue to the north, unplatted land to the west and state land to the south. There is a 50 feet PNM Gas Easement on the east side of the tract, which runs parallel to Rainbow Blvd. See Exhibit A, Vicinity Map.

There are currently 6 other tracts within the Trails Subdivision that are developed or under construction - Santa Fe at the Trails (Tract C of the Trails), Taos at the Trails (Tract D of the Trails), Heritage at the Trails Units I and II (Tract A & B of the Trails respectively), The Reserve at the Trails (Tract F of the Trails), and Santa Fe at the Trails Unit II (Tract 6 of the Trails Unit II). The Trails Unit II (COA #730084) is also currently under construction, which includes the development of Woodmont Avenue, Oakridge Street, Rainbow Boulevard, Paseo Del Norte and Universe Boulevard within the boundaries of The Trails Unit II. Also included is the construction of all major

drainage facilities necessary for the development of The Trails Unit II, including facilities within Tract 11.

The current legal description of the proposed development is "Tract 11 of the Trails Unit II" (Filed in Book 2004C, Page 332, on 10/18/2004). The site is located on Zone Atlas Sheet C-9-Z. See Exhibit C for site location on this Zone Atlas Sheet. Tract 11 of the Trails Unit II is currently zoned R-D. No portion of Tract 11 lies within the 100-year flood zone based on FIRM Map #35001C0111D dated September 20, 1996. See Exhibit B for site location on the Flood Insurance Rate Map.

Existing Conditions

Tract 11 of Trails Unit II consists of approximately 11.73 acres of undeveloped land on the west side of Albuquerque, south of Ventana Ranch subdivision. Currently, the site drains to the southeast with slopes ranging from 2% to 5% and is covered with native grasses, scrub brush, and exposed basaltic ridges. The soils are classified as Alemeda Sandy Loam (AmB) for slopes based on sheet 10 of Soil survey of Bernalillo County. See Exhibit D for site location on the Soils map. A shallow basaltic layer runs subsurface of the natural grade, and varies in depth from 0 ft to 9 ft.

Developed Conditions

(Refer to Plates 1 & 2 – Interim and Developed Conditions)

The developed site will consist of 18 lots of single-family housing, each lot approximately of 0.5 acres. Tract 11 of the Trails Unit II is contained within Basin H1 of the The Trails Unit II of the overall Grading & Drainage plan, which follows Drainage Master Plan. The total generated runoff for Tract 11 under fully developed conditions is 33.32 cfs. (See Appendix B of AHYMO Input and Output for Fully Developed Conditions). Table A-5 from Section 22.2 of the City of Albuquerque Development Process Manual was used for determining the percentage of Land Treatment D (Impervious) for Tract 11 of The Trails Unit II. (See Appendix E of Miscellaneous Calculations).

Drainage system was designed based on the grades established in the grading & drainage plan, and by street flow capacity and storm drain requirements. (See the Grading & Drainage Plans in Plate 3, Street Flow Capacity Calculations in Appendix C, and Storm Drain Sizing Analysis in Appendix D). Grading was affected mostly by the existing grading of Pond E and design of Woodmont Ave. & Rainbow Blvd per The Trails Unit II Construction Plans.

The total developed onsite flows from Tract 11, which is 33.32cfs (Basin H1) is captured through a series of inlets and shall be routed to Pond H, which is built as part of The Trails Unit II, City Project # 730084. Proposed offsite flows from the park to north of Tract 11 (Basin E1) are captured by inlets on north side of intersection of Woodmont Ave. and Rainbow Blvd. Developed offsite flows on Rainbow Blvd (Basin H2) are captured by inlets on north side of intersection of Woodmont Ave. and Rainbow Blvd

and then routed to Pond H. Developed offsite flows from Woodmont Ave to the north are captured by inlets on the Woodmont Avenue and then routed to Pond E. See plate 2, Overall Pond Grading and Drainage plan developed conditions. See Sub-Basin Analysis point summary under developed conditions in Plate 2, Overall Pond Grading and Drainage plan developed conditions. The storm drain system for Tract 11 of The Trails Unit is designed to safely carry a discharge of 33.32 cfs. See the HydraFlow Storm Drain Calculations and Inlet Capacity Calculations in Appendix D.

In the interim conditions, Ponds E & H will be plugged to retain upstream flows from a 100 year 10 day event until COA # 730085 is built out. See Plate 1, Overall Pond Grading & Drainage Plan - Interim Conditions for summary tables. See Appendix A for AHYMO input and output. See Appendix E for 10-day volume calculations. An undeveloped basin of 94.66 acres to the west of Tract 11 drains through Pond E, so as part of this development, a temporary detention pond will be built to accommodate these flows. This pond was designed for a 100 year 10 day volume of 3.39 AC-FT with a capacity of 3.8 AC-FT. See Plate 3, Grading and Drainage plan for Pond Design.

In the future developed conditions, Ponds E & H will be detention surge ponds. Upstream flows from Ponds E & H will be conveyed directly into the Universe storm drain system. According to the "Amendment to the Trails Subdivision Master Drainage Study", a maximum of flowrate of 200 cfs is allowed from the Trails Subdivision. According to the revised Drainage Master Plan, a maximum 100 year, 24 hour flowrate of 194 cfs will enter the Universe Blvd. storm drain system to the Boca Negra Dam, with a 100 year, 24 hour volume of 68.2 AC-FT. See Plate 2 for the Overall Pond Grading & Drainage Plan for Developed Conditions.

Once the storm drain from The Trails to the Boca Negra Detention Dam is completed, the plugs in the pond E within Tract 11 of The Trails Unit II can be removed, creating a detention surge facility and eliminating the need to retain runoff from the Trails.

The hydrologic analysis for the interim and developed condition was completed using the Arid Lands Hydrologic Model (AHYMO) Version 1997.02. The 100-year 24-hour return frequency storm was used as the basis of analysis. (See Appendices A & B for input and output data). Methodology outlined in Section 22.2 of the City of Albuquerque Development Process Manual was also incorporated into this analysis. Street flows have been evaluated using Flow Master by Haested Methods. Street flows were analyzed for the use of roll type curb where capacities permitted. Inlets are located to prevent exceeding the street flow capacities per the DPM. See Appendix C for street capacity analysis. Storm Drain design and analysis was performed using *Hydraflow*. See Appendix D for *Hydraflow* output.

Grading Plan

The Tract 11 of Trails Unit II Grading Plan is attached as Plate 3. It illustrates the overall grading concept for the Tract 11 of Trails Unit II as well as the proposed storm drain system.

Conclusion

The analysis performed for this report demonstrates that the proposed system of streets and storm drainage improvements will safely convey and retain fully the 100-year storm runoff from the offsite and the onsite basins contributing to the site development. Wilson & Company recommends that the proposed storm drain system undergo regular maintenance activities. This should include removing debris from grate inlets, as well as removing sediment buildup within the pipe system. The future area contributing flow to the Tract 11 storm drainage system should be analyzed in greater detail at the time of development to ensure that the runoff is within the constraints of this design.

Per the Trails Unit II Construction Plans, a plug at Ponds E & H are scheduled to be installed. As a result of the interim conditions analysis, Ponds E & H safely retains the 100-year 10-day rainfall based on current conditions.

AHYMO PROGRAM SUMMARY TABLE (AHYMO_97) -
INPUT FILE = DEVF.WPD

- VERSION: 1997.02c

RUN DATE (MON/DAY/YR) =09/30/2005
USER NO.= AHYMO-C-9803c01UNMLIB-AH

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 1 NOTATION	
*S*****											
*S	100 YEAR 24 HOUR STORM, - DEVELOPED CONDITIONS										
*S	RAINFALL DATA FROM THE DPM SECTION 22.2										
*S*****											
START										TIME=	.00
RAINFALL TYPE= 2										RAIN24=	2.660
*S*****											
*S*****											
*S****	ONSITE BASIN - TRACT 11 TRAILS UNIT II										
*S****	COMPUTE HYD FOR BASIN E1										
*S*****											
*S*****											
*S	Basin E1 - Drainage Study for TRACT 11 TRAILS UNIT II - SEPT, 2005										
COMPUTE NM HYD	BASIN.E1	-	3	.01833	32.86	1.099	1.12450	1.499	2.801 PER IMP=	21.00	
*S*****											
*S****	OFFSITE BASIN										
*S****	COMPUTE HYD FOR BASIN OFFSITE 2										
*S*****											
*S	Basin OFFSITE 2										
COMPUTE NM HYD	OFFSITE2	-	4	.14791	26.39	3.394	.43023	2.065	.279 PER IMP=	.00	
FINISH											

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line size (in)	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line slope (%)	HGL down (ft)	HGL up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns line No.
1		33.32	36 c	208.0	5419.26	5421.34	1.000	5427.00*	5427.52*	0.35	5427.87	End
2		28.05	36 c	215.2	5421.34	5423.49	0.999	5427.97*	5428.35*	0.18	5428.53	1
3		28.05	30 c	38.8	5423.49	5423.88	1.004	5428.53*	5428.71*	0.28	5429.00	2
4		24.35	30 c	135.1	5423.88	5425.23	0.999	5429.12*	5429.60*	0.32	5429.92	3
5		24.35	30 c	71.9	5425.23	5425.95	1.001	5429.92*	5430.17*	0.38	5430.56	4
6		5.27	18 c	24.8	5421.34	5421.84	2.016	5428.07*	5428.14*	0.14	5428.27	1
Project File: SD-112905.stm							Number of lines: 6			Run Date: 11-29-2005		
NOTES: c = cir; e = ellip; b = box; Return period = 100 Yrs. ; *Surcharged (HGL above crown).												

Storm Sewer Profile

Elev. (ft)

