

## **Abiel X. Carrillo**

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**From:** Abiel X. Carrillo  
**Sent:** Thursday, May 05, 2016 4:09 PM  
**To:** 'David Soule'  
**Subject:** RE: H10D006B - ABQ Boat and RV

Also, please make sure you get an approved ESC plan in place before putting in the Grading Permit (ESC Permit) request in, I should have included that in the letter.

### **Abiel Carrillo, PE, CFM**

**Principal Engineer - Hydrology**  
**Planning Department**  
Development Review Services Division  
City of Albuquerque  
505-924-3986  
[acarrillo@cabq.gov](mailto:acarrillo@cabq.gov)  
600 2<sup>nd</sup> Street NW  
Albuquerque, NM 87102

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**From:** Abiel X. Carrillo  
**Sent:** Thursday, May 05, 2016 3:24 PM  
**To:** 'David Soule'  
**Subject:** H10D006B - ABQ Boat and RV

David,

See attached for the above-referenced project.

You will notice that I did put a condition for CO, which is to make sure during construction that all flows are directed to the driveways. Your report makes it clear, but there seems to be a gap between the wall and the curb on the southern entrance. Figured that is easier than to re-submit just for that.

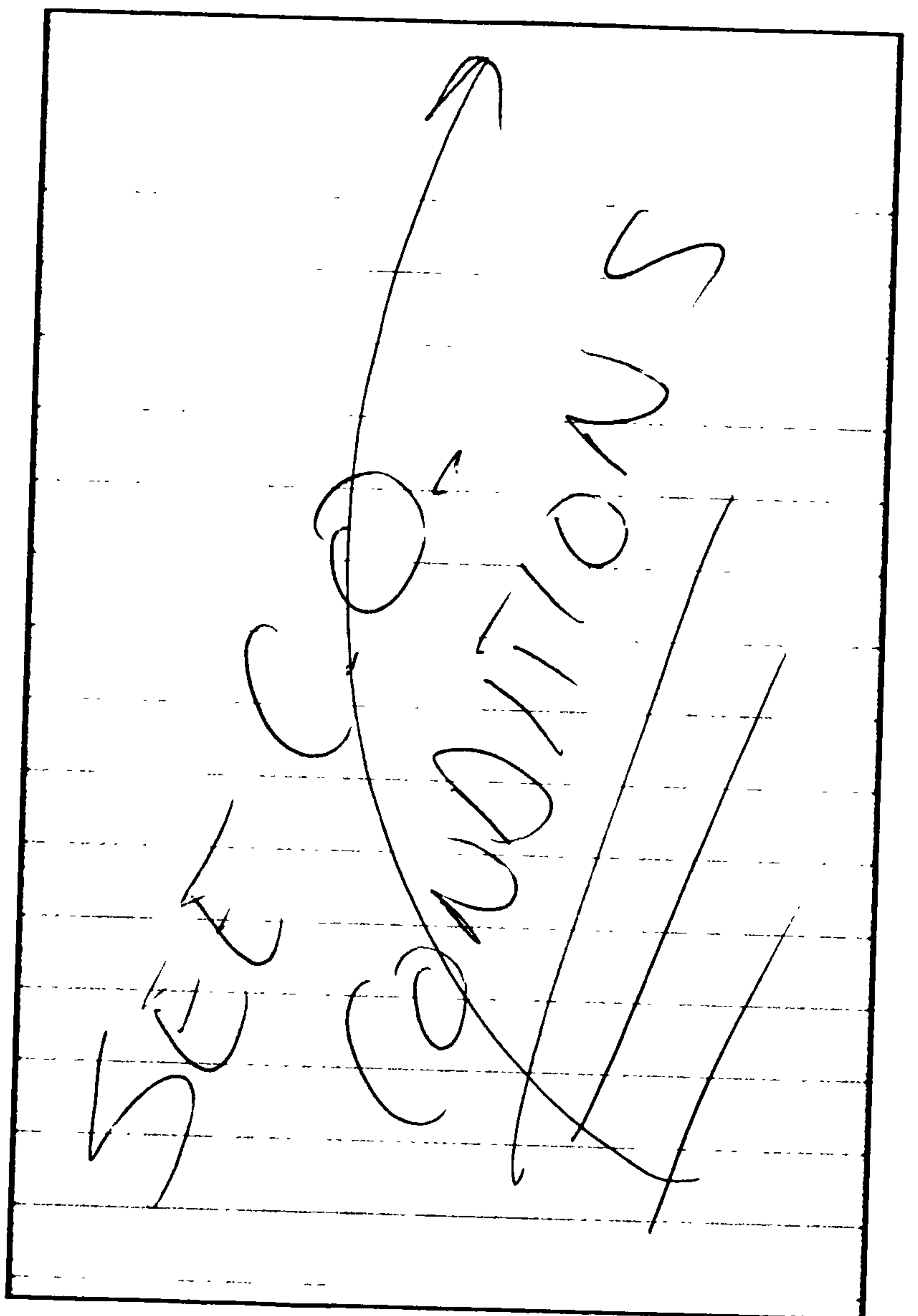
### **Abiel Carrillo, PE, CFM**

**Principal Engineer - Hydrology**  
**Planning Department**  
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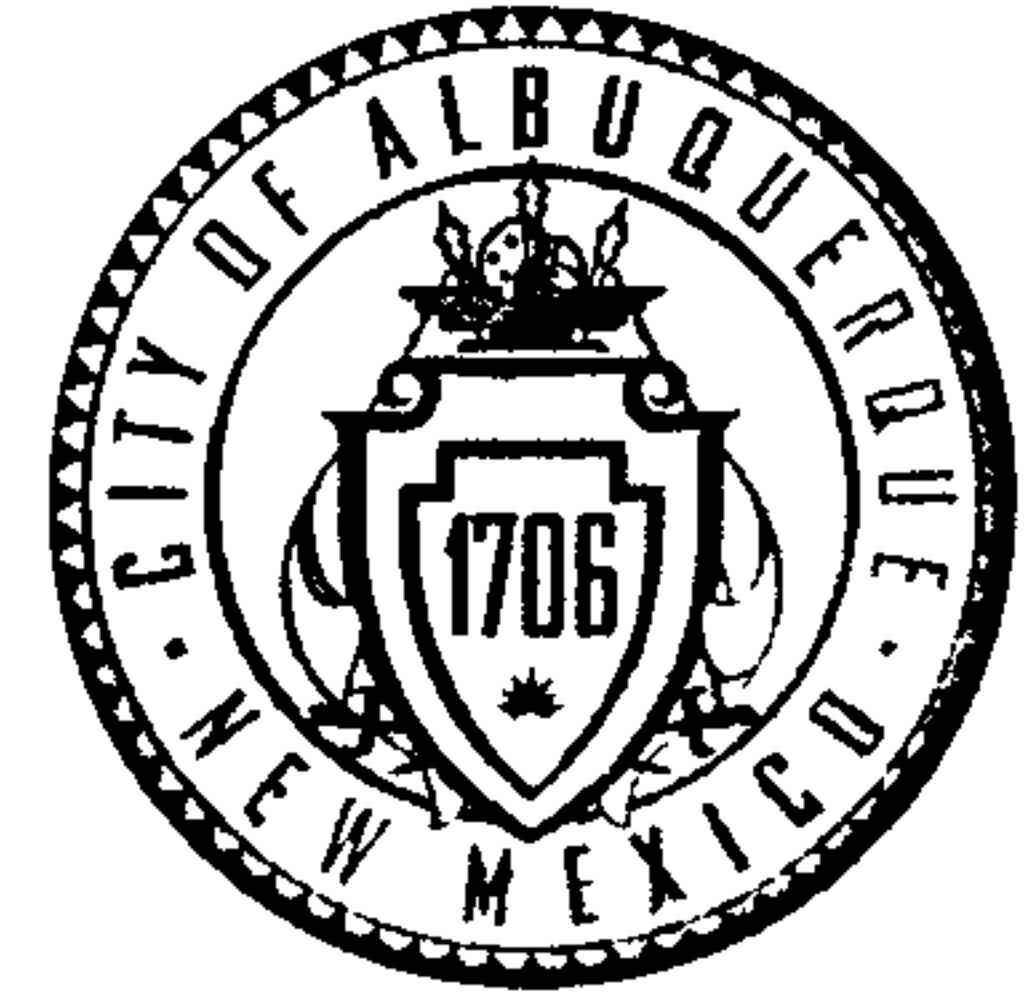
This project  
was moved to  
another site,

See DRB 1001523  
for latest layout

- AC 1-15-17



# CITY OF ALBUQUERQUE



May 5, 2016

Richard J. Berry, Mayor

David Soule, PE  
Rio Grande Engineering  
P.O. Box 93924  
Albuquerque, NM 87199

**RE: Albuquerque Boat & RV Storage  
Grading and Drainage Plan  
Engineer's Stamp Date -- 4-15-16  
Hydrology File: H10D006B**

Dear Mr. Soule:

Based upon the information provided in your submittal received 4-15-2016, the above referenced Grading and Drainage Plan is approved for Site Plan for Building Permit, Building Permit, and Grading Permit.

Prior to approval for Certificate of Occupancy, Engineer Certification per the DPM checklist will be required, and the following conditions must be met:

PO Box 1293

1. All flows to La Morada must be routed through the driveways as stated in the Drainage Report. If substantial flows are overtopping the sidewalk, a sidewalk culvert will be required.

Albuquerque

A Certificate of Occupancy release will not be issued if the above-mentioned items are not resolved.

New Mexico 87103

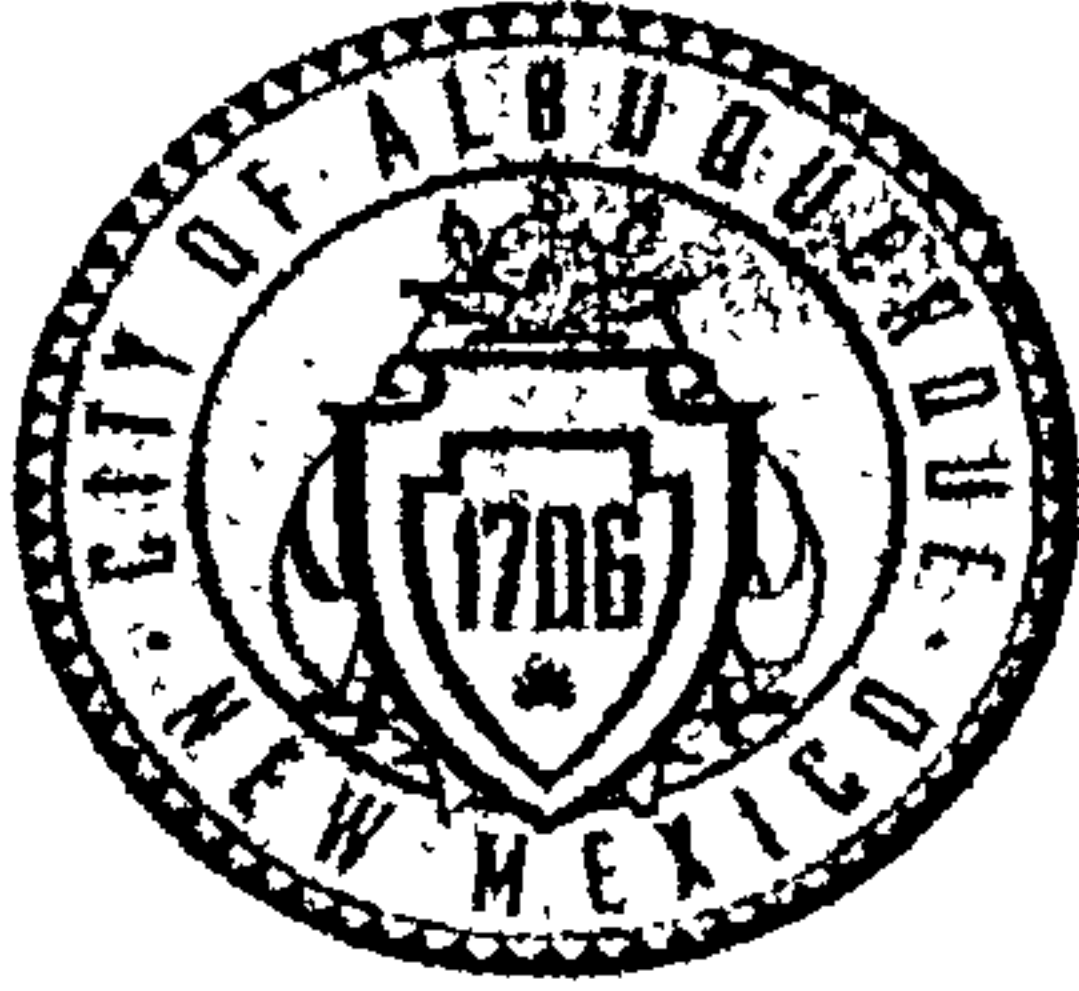
If you have any questions, you can contact me at 924-3986.

Sincerely,

[www.cabq.gov](http://www.cabq.gov)

Abiel Carrillo, P.E.  
Principal Engineer, Planning Dept.  
Development Review Services

Orig: Drainage file



# City of Albuquerque

Planning Department

Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: Albuquerque Boat and RB Storage Building Permit #: \_\_\_\_\_ City Drainage #: H10-D006B

DRB#: \_\_\_\_\_ EPC#: \_\_\_\_\_ Work Order#: \_\_\_\_\_

Legal Description: LOTS 28 AND 25, LADERA BUSINESS PARK

City Address: \_\_\_\_\_

Engineering Firm: RIO GRANDE ENGINEERING Contact: DAVID SOULE

Address: PO BOX 93924, ALBUQUERQUE, NM 87199

Phone#: 505.321.9099 Fax#: 505.872.0999 E-mail: DAVID@RIOGRANDEENGINEERING.COM

Owner: EMERALD PROPERTIES Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Architect: KEVIN JUNO Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Surveyor: CONSTRUCTION SURVEY TECHNOLOGIES Contact: JOHN GALLEGOS

Address: \_\_\_\_\_

Phone#: 917.8921 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: 4/24/14 By: \_\_\_\_\_

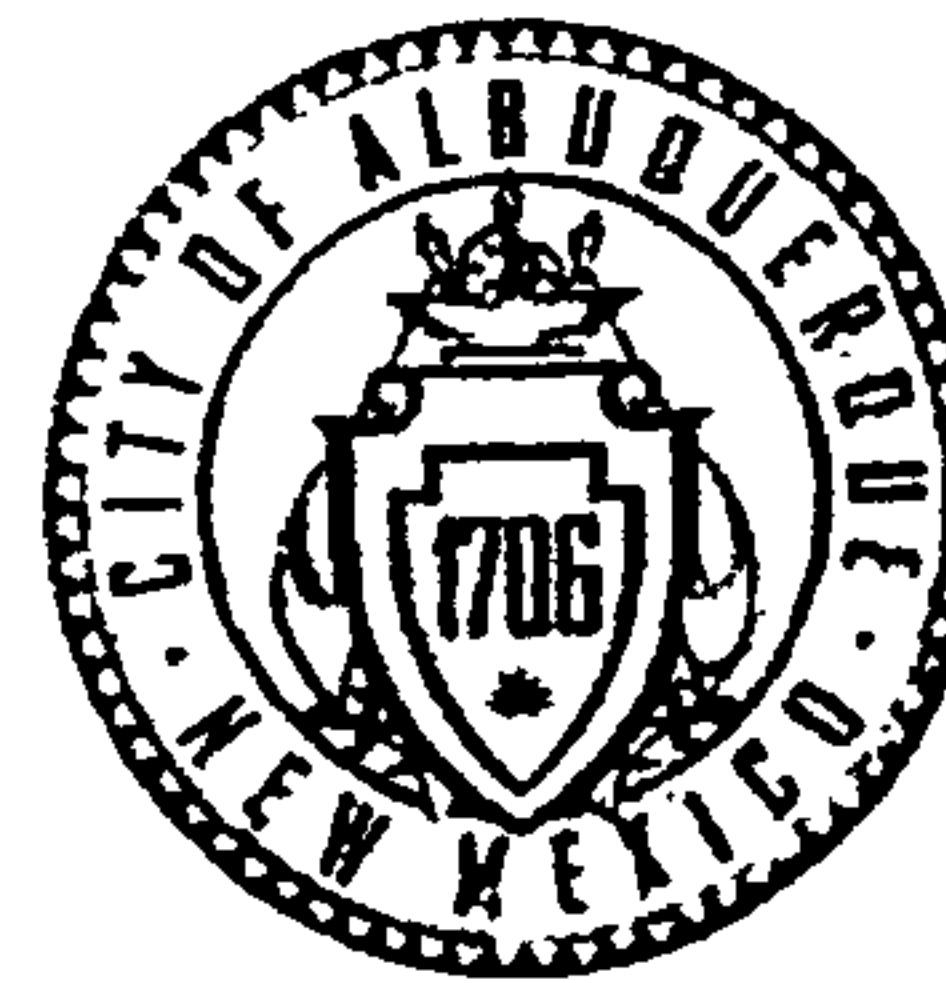
Requests for approvals of Site Development Plans and/or Subdivision Plans shall be accompanied by a drainage submittal. The particular nature, location, and scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based 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



May 2, 2014

David Soule, P.E.  
Rio Grande Engineering  
P.O. Box 93924  
Albuquerque, NM 87199

**Re: Albuquerque Boat Storage Grading and Drainage Plan  
Engineer's Stamp Date 1-24-14 (H10D006B)**

Dear Mr. Soule,

Based upon the information provided in your submittal received 4-24-14, the above referenced plan is approved for Site Plan for Building Permit action by the DRB. The following comments should be addressed when submitting for Building Permit approval:

1. Show the site basin divide. **provided basin map**
2. Show the location and quantify offsite flows. **added flows to plan**
3. Clarify the build note for the openings in the block wall in southeast corner and provide calculations for capacity of the openings. **we provided 20' open fence. 10 cfs**
4. Show pervious area. **we labeled**
5. Show phasing. **added phasing**
6. Impervious areas ~~are not to drain~~ across the Phase 2 area if it is dirt. How will this be addressed? **added curb**
7. Provide adequate private drainage easements and show them on the plan. **attached**
8. Flows from Tract 20A and 27 may enter site at relatively high velocities. Provide erosion protection and a detail for each of these outfalls. **added rip rap**
9. Provide direction of roof flows for all buildings on Lot 28. **added flow arrows**
10. The grades in the two parking spots near the east entrance on Lot 25 should be lowered to allow better access in the PNM easement. **lines are overhead. want separation**
11. It appears flows will drain through the wall then across the sidewalk west of the east entrance on Lot 25. ~~This area should be raised so flows can drain out the drive entrance(s).~~ **drains against block wall**
12. Bollard details should be removed from the plan as they are not drainage features. **removed**

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

Sincerely,

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

DRAINAGE REPORT

For

**ALBUQUERQUE BOAT AND RV  
LOTS 28 & 25  
LADERA BUSINESS PARK  
Albuquerque, New Mexico**

Prepared by

Rio Grande Engineering  
PO Box 93924  
Albuquerque, New Mexico 87199

APRIL 2016



David Soule P.E. No. 14522

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### **Appendix**

Site Hydrology .....	A
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### **Map Pocket**

Site Grading and Drainage Plan

## **PURPOSE**

The purpose of this report is to provide the Drainage Management Plan for the development of two lots located Vista Oriente and La Morada Place, Northwest. This plan was prepared in accordance with the City of Albuquerque design regulations, utilizing the City of Albuquerque's Development Process Manual drainage guidelines. This report will demonstrate that the grading does not adversely affect the surrounding properties, nor the upstream or downstream facilities.

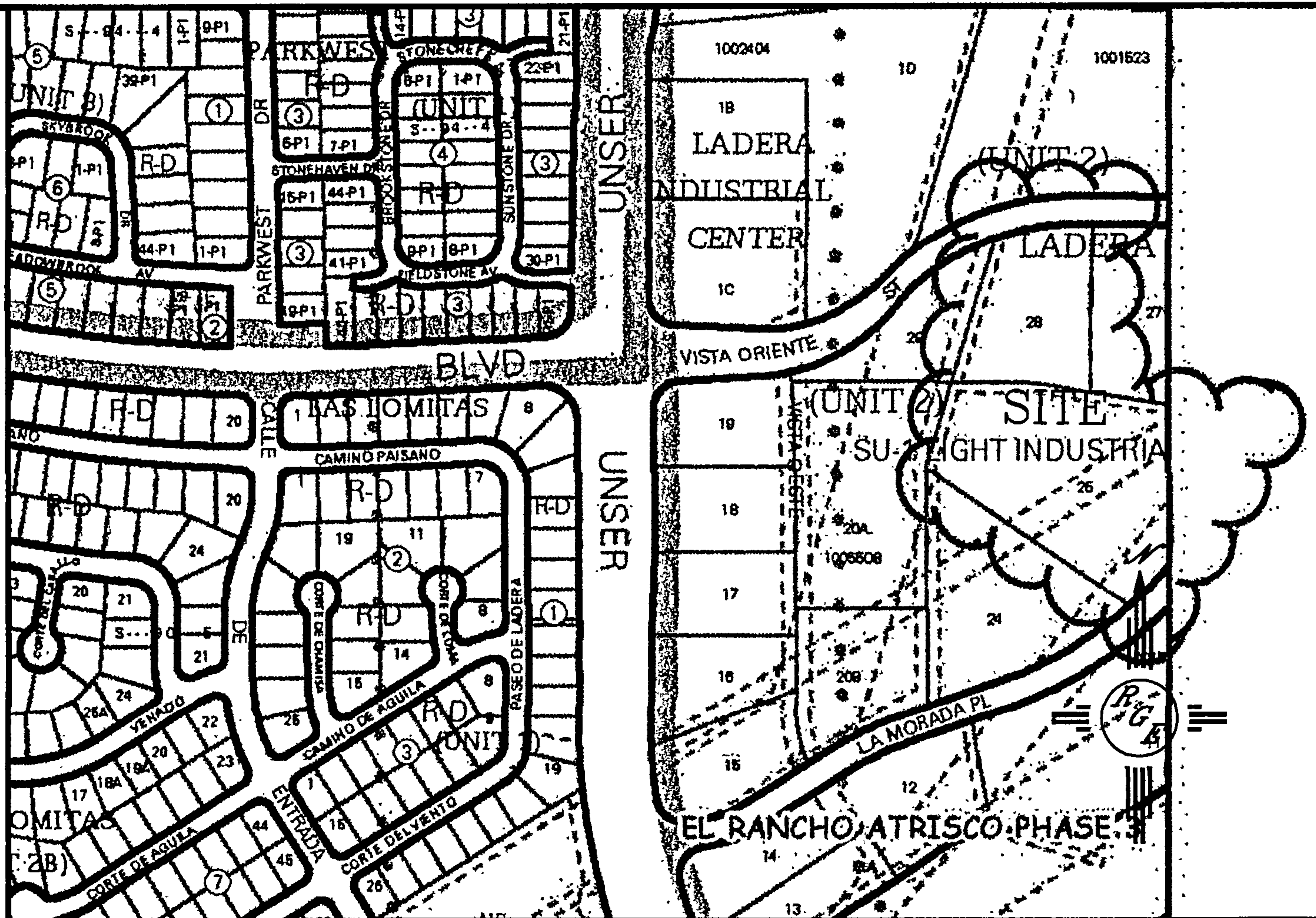
## **INTRODUCTION**

The subject of this report, as shown on the Exhibit A, is a 6.75-acre parcel of land located on the south side of Vista Oriente, east of Unser. The legal description of this site is lots 28 and 25, Ladera Business Park. As shown on FIRM map35013C0326H, the entire site is located within Flood Zone X.

## **EXISTING CONDITIONS**

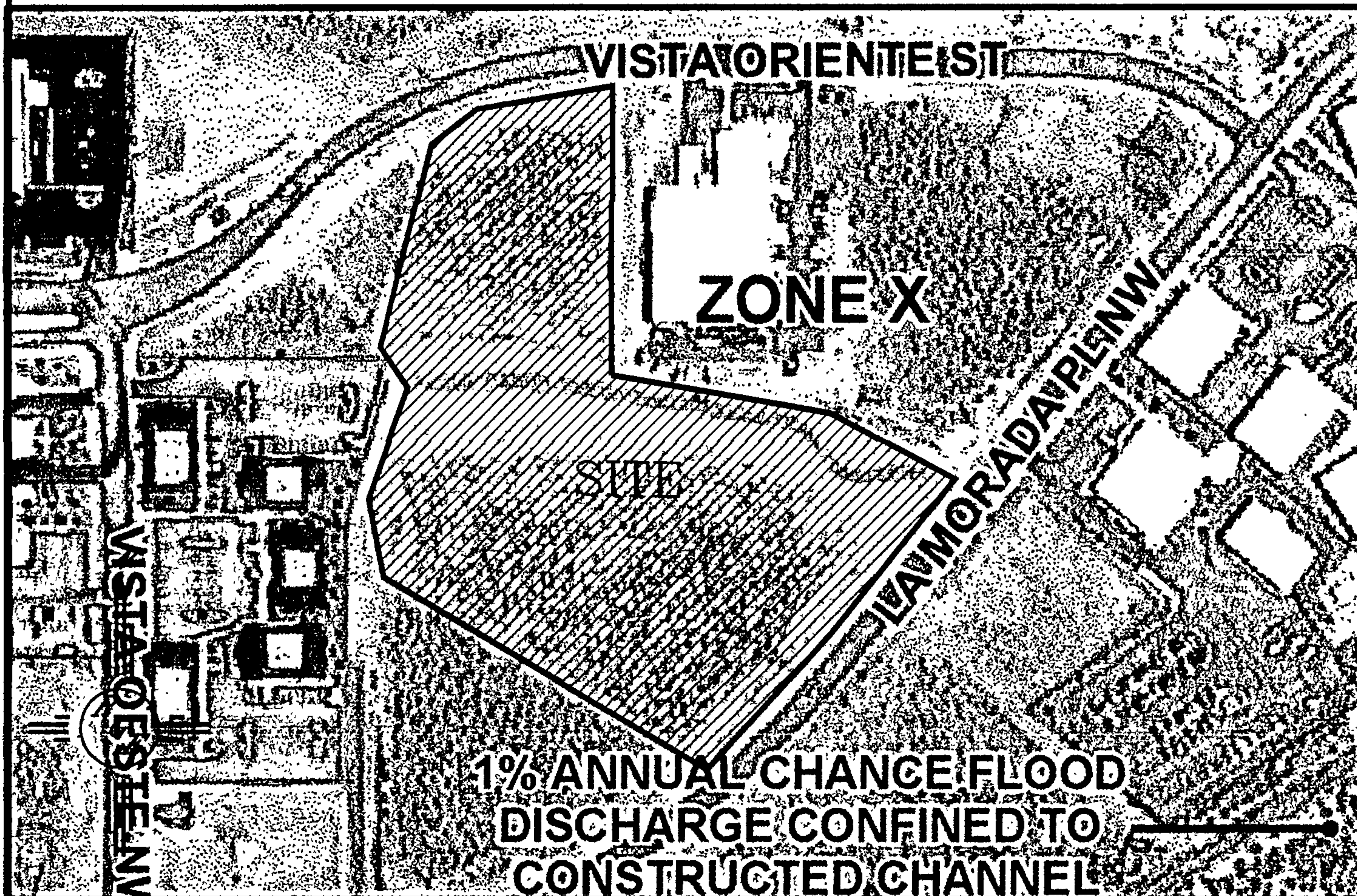
The site is currently undeveloped, yet part of an overall business park. The site currently allows 10 cfs from the west and 9 cfs from the north to pass thru the site. The site currently contains an asphalt swale that conveys the flow thru the site, where the flow is discharged thru 4 sidewalk culverts onto La Morada Place. This flow is conveyed down stream to the Mire haven channel. This site is part of a master drainage plan prepared by Mark Goodwin and Associates 11/21/02.





VICINITY MAP:

H-09-Z



FIRM MAP:

35001C0326H



## **PROPOSED CONDITIONS**

The proposed improvements consist of a large indoor storage building and several covered and uncovered parking spaces. The majority of the site will be paved. As shown in appendix A, the site is delineated by 4 drainage basins, these basins have been identified at the cities requests. The drainage calculations are based upon the flow generated by each lot, to be consistent with the basins identified within the master drainage study. All of the basins drain to the La Morada. As shown within the hydraulic calculations, the site discharge more than allowed in the master drainage plan. The increase of .55 cfs was allowed by city hydrology department during previous reviews. Since the initial submittal the adoption of the city 'first-flush' ordinance will required the retention of 6699 cubic feet . The contributing basin to this ponds are adjacent tracts parking lots. The ponds are 2' deep and comprised of Blue point Loamy Fine Sand, with a percolation rate of 6"-20" per hour, therefore the pond will drain within 4 hours. While it is difficult to model, the ponding will increase the initial abstraction and infiltration and the peak flow will be less than calculated. The onsite flow has been diverted to discharge out the driveway, per the City Hydrologist's recommendation. It is proposed the development will be performed in two phases. The site grading will be completed the initiation of this project. A portion of the site will be reserved for future use and will be graveled and the upland flow will be diverted by the construction of an asphalt curb.

## **SUMMARY AND RECOMMENDATIONS**

This project is a development of two lots within a master planned business park. The site is within an area of fully developed drainage infrastructure. The site has been designed in substantial conformance with the Ladera Business Park Master drainage plan. Since the effected area site encompasses and area greater than 3/4 acres, a NPDES permit and Erosion and Sediment Control plan will be required prior to any construction activity.

**APPENDIX A**  
**SITE HYDROLOGY**

Weighted E Method

Existing Developed Basins

											100-Year, 6-hr.		
Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
			%	(acres)	%	(acres)	%	(acres)	%	(acres)			
ALLOWED PER MDP	294365	6.758	0%	0	20.0%	1.352	0.0%	0	80%	5.406	1.710	0.963	26.37
PROPOSED LOT 28	85813	1.970	0%	0	4.0%	0.079	10.0%	0.197	86%	1.694	1.820	0.299	8.13
PROPOSED LOT 25	208552	4.788	4%	0.19151	6.0%	0.287	12.0%	0.57452	78%	3.734	1.713	0.684	18.80
COMPARISON				0.000		1.273		-0.197		3.712		0.019	0.559

Equations:

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

FIRST FLUSH 6699.976

Volume = Weighted D \* Total Area

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

Where for 100-year, 6-hour storm (zone 2)

Ea= 0.44	Qa= 1.29
Eb= 0.67	Qb= 2.03
Ec= 0.99	Qc= 2.87
Ed= 1.97	Qd= 4.37

$1.0 = 10.5 \text{ ac} = 5.4$   
 $2 = 17.4 \text{ ac} = 6.7$

POND INCREASED VOLUME 842.23 CF  
DISCHARGE TO STREET 0.56 CFS

## FENCE OPENING

Weir Equation:

$$Q = CLH^{3/2}$$

Q = 10 cfs

C = 2.95

H = 0.5 ft

L = Length of weir

$$L = \frac{10}{2.95(0.5)^{3/2}}$$

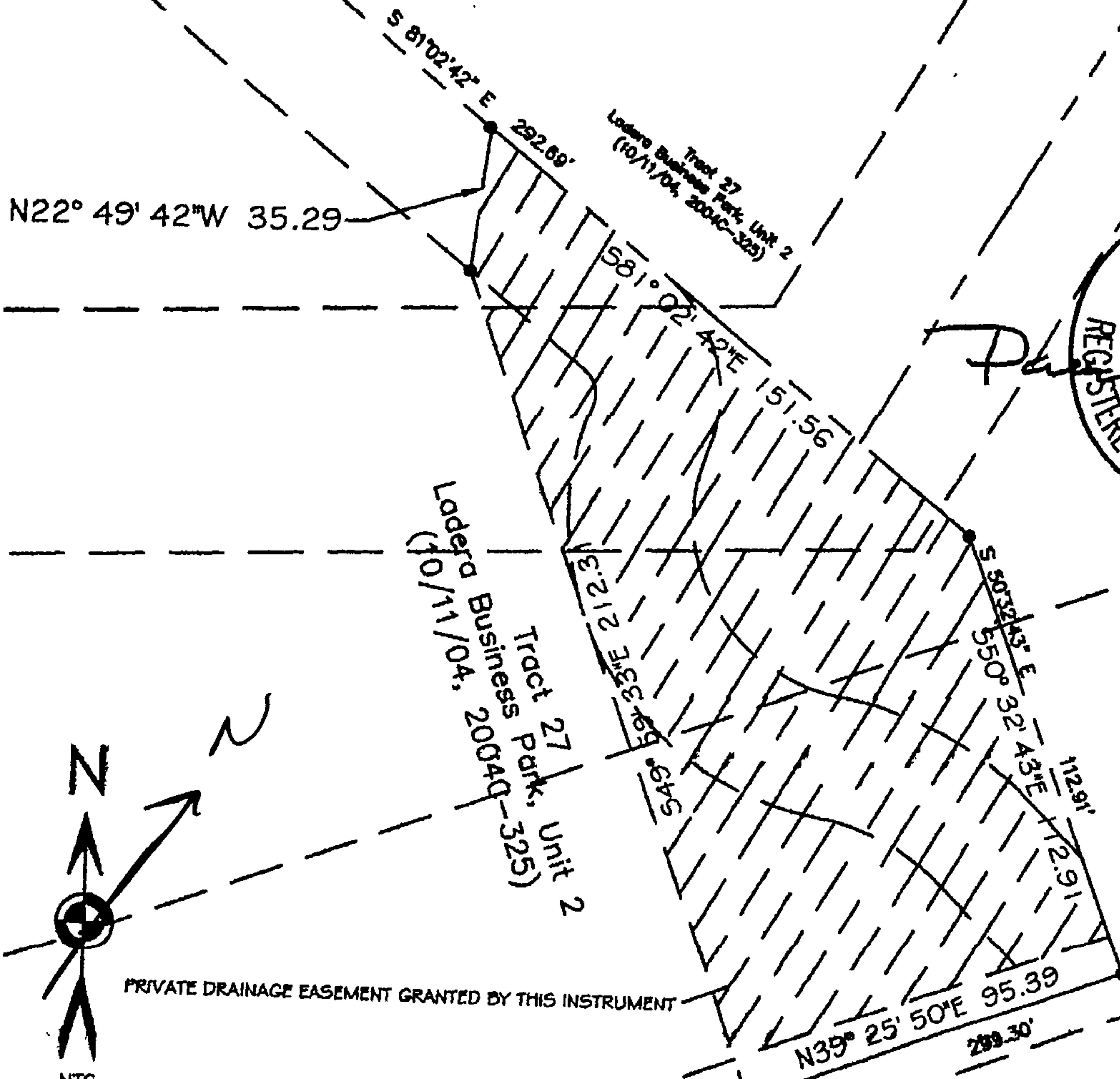
**L = 9.58 ft**

Use 20 feet for length of weir





EXHIBIT A  
PRIVATE DRAINAGE EASEMENT WITHIN  
TRACT 27  
LADERA BUSINESS PARK, UNIT 2  
ALBUQUERQUE, BERNALILLO COUNTY, NM  
APRIL 2014



04-23-2014

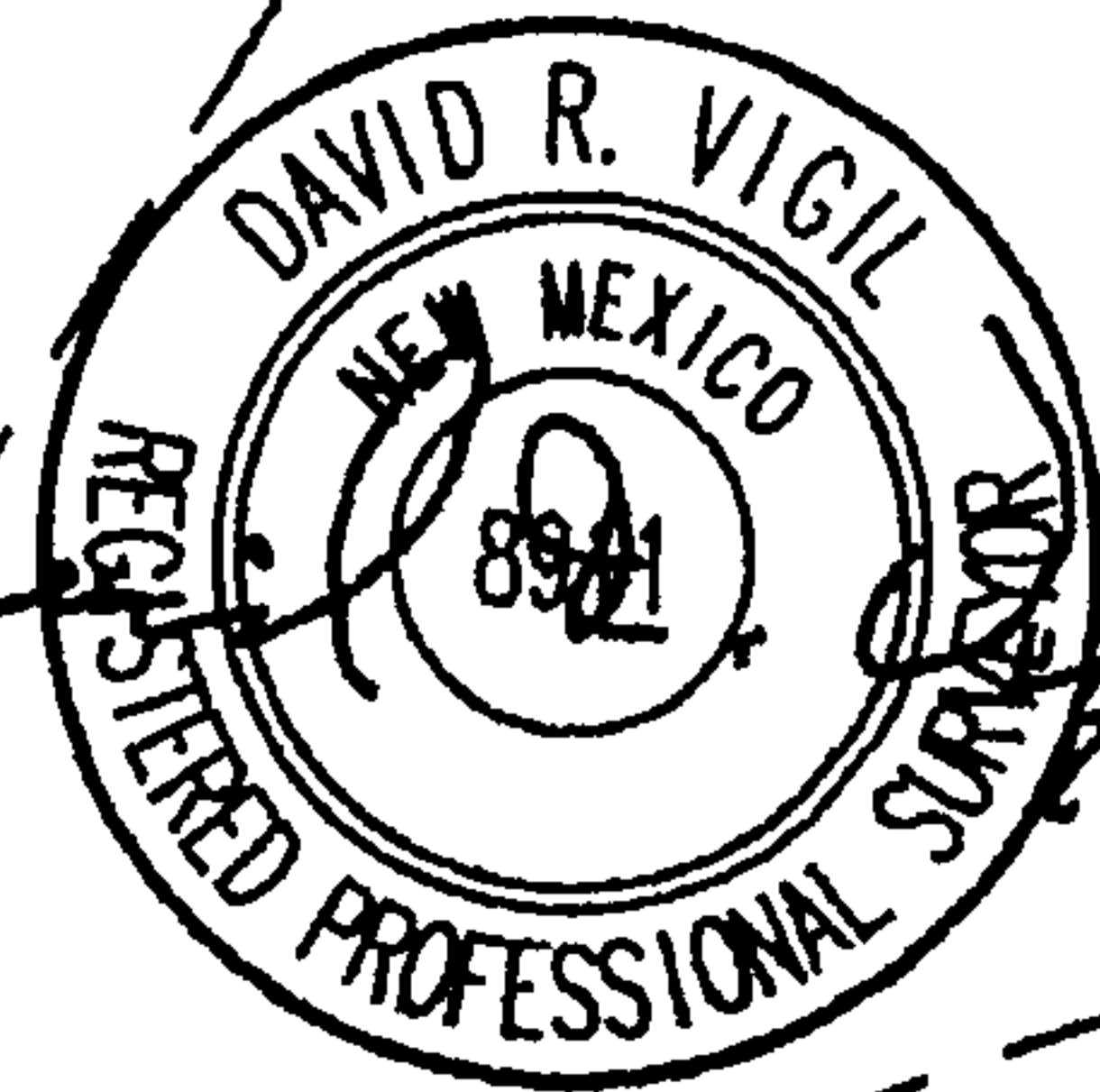


EXHIBIT A

CONSTRUCTION SURVEY TECHNOLOGIES, INC

PO BOX 65395, ALBUQUERQUE, NM 87193 505-917-8921



GRANT OF EASEMENT  
FOR PRIVATE DRAINAGE

DLK ENTERPRISES, ( "Grantor"), being the owner of property described herein, for good and valuable consideration, the receipt of which is hereby acknowledged, hereby grant, bargain, sell and convey to the Lot 27,28,29 LADERA BUSINESS PARK UNITS 1 AND 2 in Bernalillo County ("Grantee"), the permanent right and easement for drainage, and the conveyance of storm water and maintenance of, and access to, area as may be necessary on and across the following described real estate:

The land in which the foregoing rights and easement are granted is located on the North easterly portion within LOT 25, LADERA BUSINESS PARK UNIT 2 in Bernalillo County, New Mexico as shown plat filed 10/11/04, as in Book 2004C, page 325, being more particularly described in Exhibit "A", attached hereto and incorporated herein by reference.

Except with the mutual approval of Grantee and Grantors, the grading within said easement will conform to the approved grading plan located in file H10-D006B . Once grading complete, no fence, wall, building, or other obstruction may be placed or maintained in said easement, and there shall be no alteration of the grade or contours in said easement from what is shown on approved grading plan. Grantee shall only maintain area of easement and/or improvements that it specifically agrees, by written agreement filed for public record, to maintain. Landscaping or maintenance work by the Grantors, within the easement hereby conveyed, shall not alter the flow or capacity, of the easement area, except in an emergency. If emergency work is performed, Grantors shall notify Grantee as soon as practical thereafter.

Grantors covenant and warrant that they are the owners in fee simple of the property and that they have a good and lawful right to grant the easement described herein. The grant and other provisions of this easement constitute covenants running with the land for the benefit of Grantee and its successors and assigns until terminated.

TO HAVE AND TO HOLD the said right and easement for the uses and purposes aforesaid, unto Grantee, its successors and assigns, to run with the land forever. However, to the extent any portion of the above granted easement area is declared unnecessary for drainage by the City of Albuquerque, said portion of the easement shall revert to the Grantor. Any such reversion shall be accomplished by way of a quitclaim deed to Grantor, his successors or assigns.

THERE IS RESERVED to the Grantors, their successors and assigns, the right to use said lands as needed. Such uses shall not interfere with the rights and easements granted to Grantee. Other purposes, which will not interfere with the rights and easements hereby granted, may be permitted, provided that Grantors obtain Grantee's written licensed approval for such use, not to be unreasonably withheld.

WITNESS \_\_\_\_\_ hand and seal this 25<sup>th</sup> day of April, 2014.

GRANTORS:

[Signature]

Dan Rich  
Managing Member  
DLK Enterprises, LLC  
12231 Academy Blvd NE, STE 301  
Albuquerque, NM 87111

ACKNOWLEDGMENT FOR NATURAL PERSONS

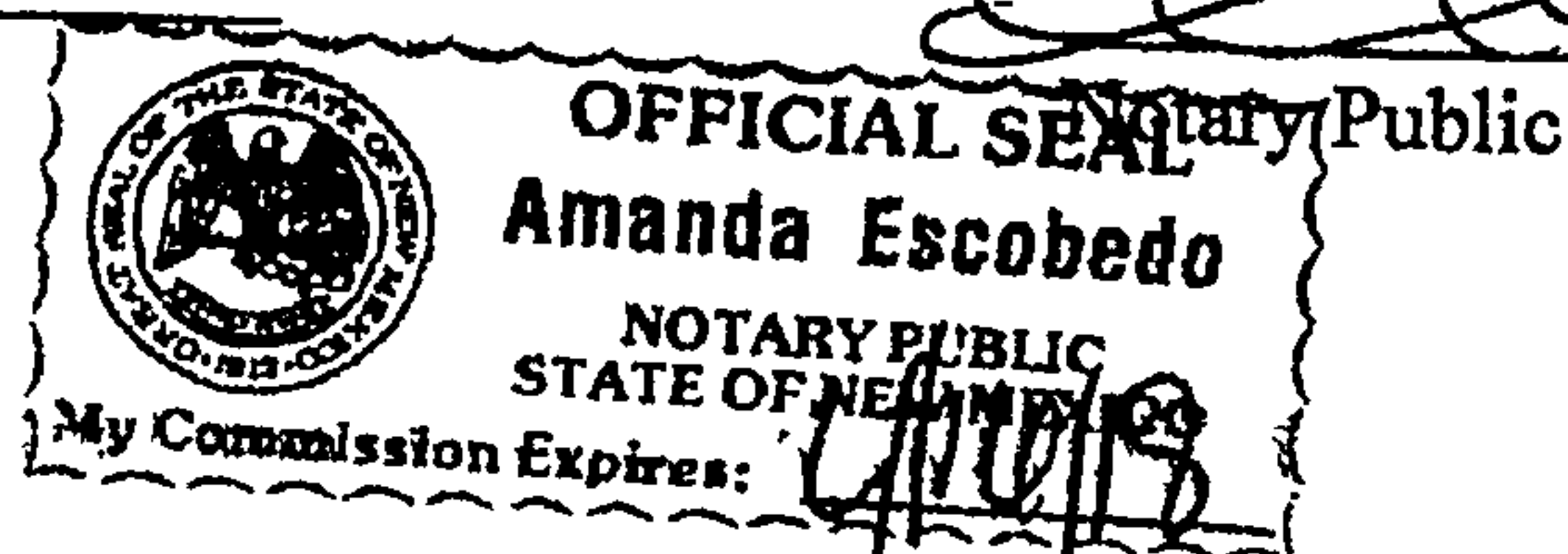
STATE OF NEW MEXICO    )  
                                      )SS  
COUNTY OF BERNALILLO)

This instrument was acknowledged before me on April 25,  
2013 by Dan Rich.

My commission expires:

4/16/18

[Signature]





EXISTING UTILITIES ARE NOT SHOWN.  
IT SHALL BE THE SOLE RESPONSIBILITY  
OF THE CONTRACTOR TO CONDUCT ALL  
NECESSARY FIELD INVESTIGATIONS PRIOR  
TO ANY EXCAVATION TO DETERMINE THE  
ACTUAL LOCATION OF UTILITIES & OTHER  
IMPROVEMENTS.





GRANT OF EASEMENT  
FOR PRIVATE DRAINAGE

DLK ENTERPRISES, ( "Grantor"), being the owner of property described herein, for good and valuable consideration, the receipt of which is hereby acknowledged, hereby grant, bargain, sell and convey to the Lot 27,28,29 LADERA BUSINESS PARK UNITS 1 AND 2 in Bernalillo County ("Grantee"), the permanent right and easement for drainage, and the conveyance of storm water and maintenance of, and access to, area as may be necessary on and across the following described real estate:

*Lot 26A OK?*

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*LADERA BUSINESS PARK, UNIT 2  
ALBUQUERQUE, BERNALILLO COUNTY, NM  
APRIL 2014*



PO BOX 65395, ALBUQUERQUE, NM 87193 505-917-8921

# CITY OF ALBUQUERQUE



May 2, 2014

David Soule, P.E.  
Rio Grande Engineering  
P.O. Box 93924  
Albuquerque, NM 87199

**Re: Albuquerque Boat Storage Grading and Drainage Plan  
Engineer's Stamp Date 1-24-14 (H10D006B)**

Dear Mr. Soule,

Based upon the information provided in your submittal received 4-24-14, the above referenced plan is approved for Site Plan for Building Permit action by the DRB. The following comments should be addressed when submitting for Building Permit approval:

- ✓ 1. Show the site basin divide.
- ✓ 2. Show the location and quantify offsite flows.
- ✓ 3. Clarify the build note for the openings in the block wall in southeast corner and provide calculations for capacity of the openings.
- ✓ 4. Show pervious area.
- ✓ 5. Show phasing.
- ✓ 6. Impervious areas are not to drain across the Phase 2 area if it is dirt. How will this be addressed?
- ✓ 7. Provide adequate private drainage easements and show them on the plan.
- ✓ 8. Flows from Tract 20A and 27 may enter site at relatively high velocities. Provide erosion protection and a detail for each of these outfalls.
- ✓ 9. Provide direction of roof flows for all buildings on Lot 28.
- 10. The grades in the two parking spots near the east entrance on Lot 25 should be lowered to allow better access in the PNM easement.
- 11. It appears flows will drain through the wall then across the sidewalk west of the east entrance on Lot 25. This area should be raised so flows can drain out the drive entrance(s).
- ✓ 12. Bollard details should be removed from the plan as they are not drainage features.

PO Box 1293

Albuquerque

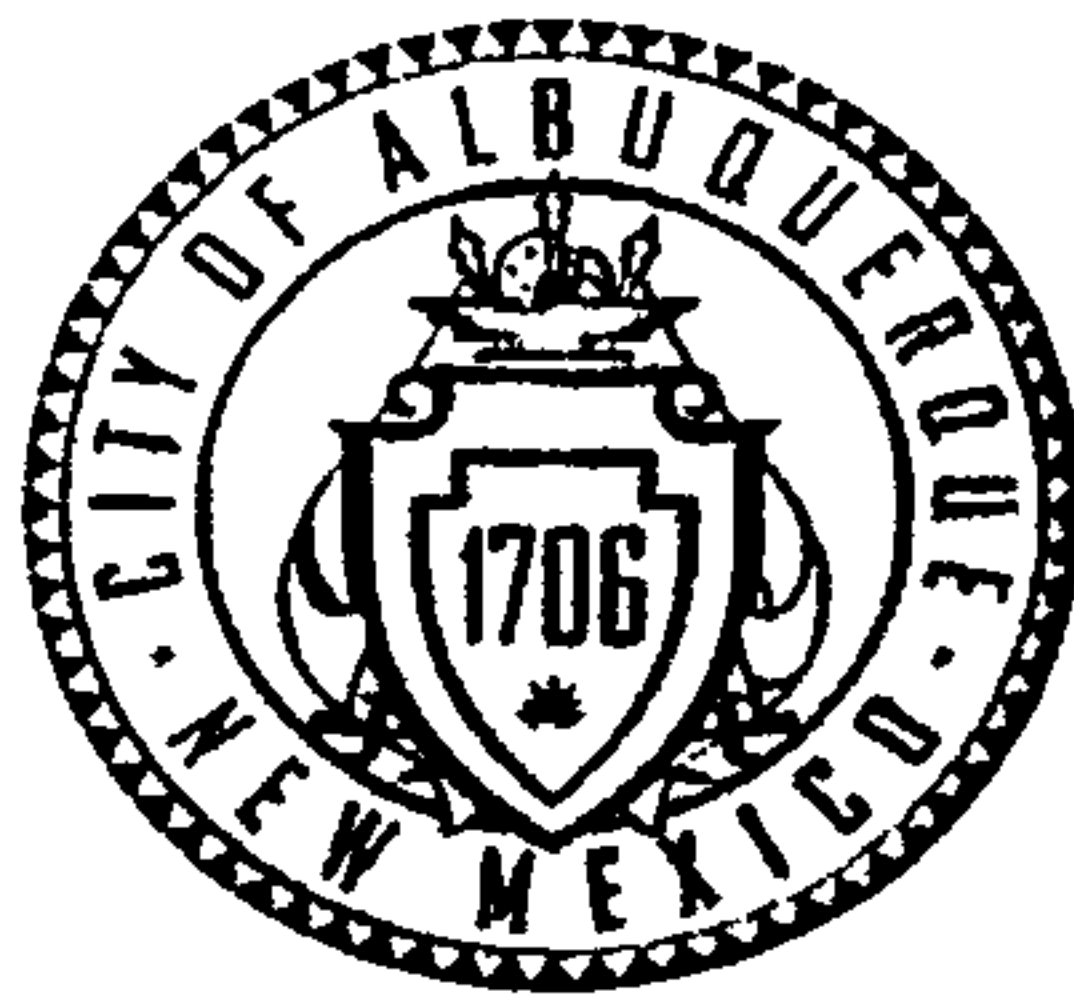
New Mexico 87103

[www.cabq.gov](http://www.cabq.gov)

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

Sincerely,

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



# City of Albuquerque

Planning Department

Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: Albuquerque Boat and RB Storage Building Permit #: \_\_\_\_\_ City Drainage #: H10-D006B

DRB#: \_\_\_\_\_ EPC#: \_\_\_\_\_ Work Order#: \_\_\_\_\_

Legal Description: LOTS 28 AND 25, LADERA BUSINESS PARK

City Address: \_\_\_\_\_

Engineering Firm: RIO GRANDE ENGINEERING Contact: DAVID SOULE

Address: PO BOX 93924, ALBUQUERQUE, NM 87199

Phone#: 505.321.9099 Fax#: 505.872.0999 E-mail: DAVID@RIOGRANDEENGINEERING.COM

Owner: EMERALD PROPERTIES Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Architect: KEVIN JUNO Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Surveyor: CONSTRUCTION SURVEY TECHNOLOGIES Contact: JOHN GALLEGOS

Address: \_\_\_\_\_

Phone#: 917.8921 Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Contractor: \_\_\_\_\_ Contact: \_\_\_\_\_

Address: \_\_\_\_\_

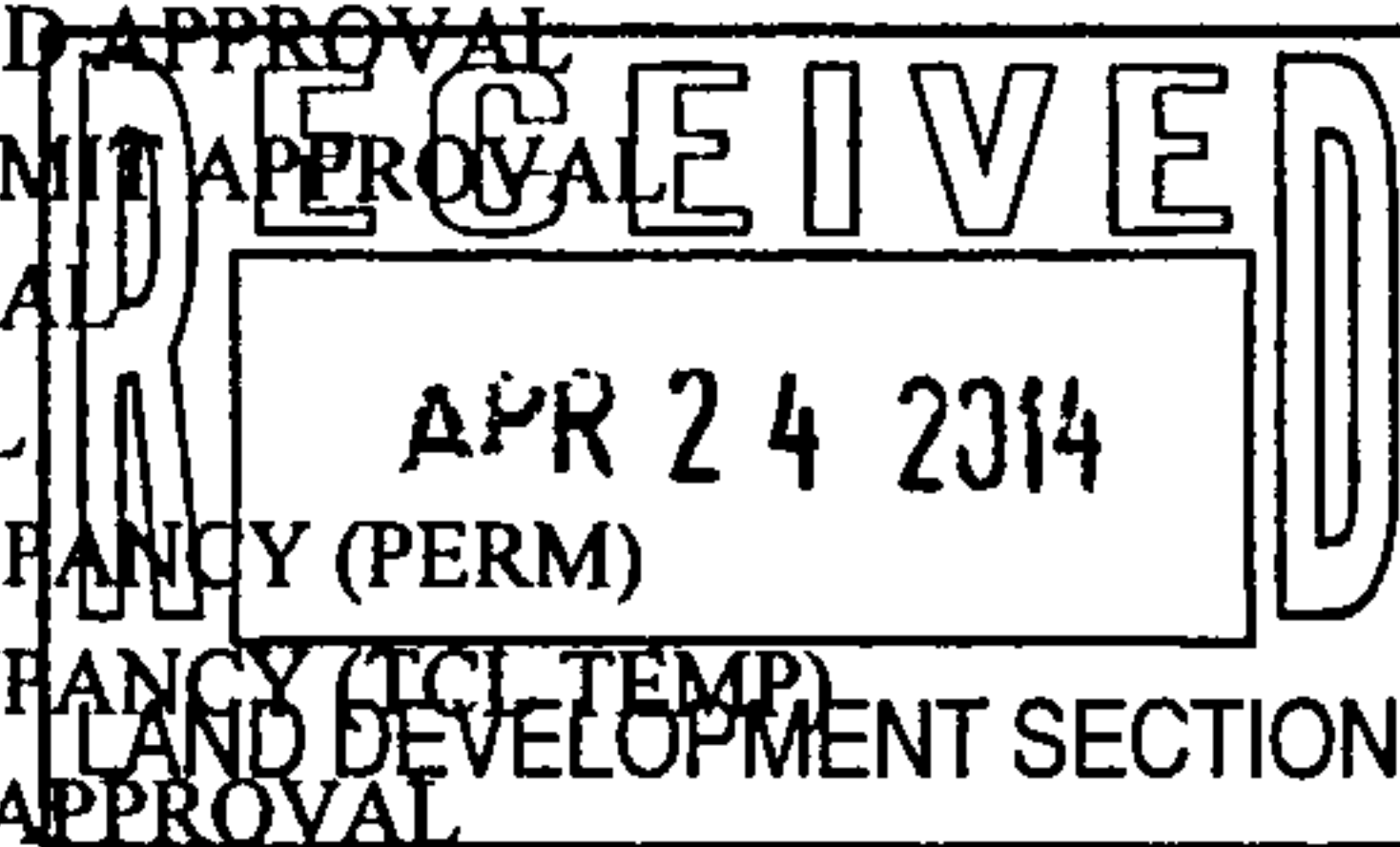
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### TYPE OF SUBMITTAL:

- ☐ 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:

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- ☐ 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: 4/24/14 By: \_\_\_\_\_

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and type 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:

- Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans
- Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres
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- Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including lots less than 1-acre that are part of a larger common plan of development



Weighted E Method  
stock

Existing Developed Basins

											100-Year, 6-hr.		
Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
			%	(acres)	%	(acres)	%	(acres)	%	(acres)			
ALLOWED PER MDP	294365	6.758	0%	0	20.0%	1.352	0.0%	0	80%	5.406	1.710	0.963	26.37
SUB BASIN TO NORTH	5845	0.134	0%	0	8.0%	0.011	18.0%	0.02415	74%	0.099	1.690	0.019	0.53
PROPOSED LOT 28	85813	1.970	0%	0	4.0%	0.079	10.0%	0.197	86%	1.694	1.820	0.299	8.13
PROPOSED LOT 25	208552	4.788	4%	0.19151	6.0%	0.287	12.0%	0.57452	78%	3.734	1.713	0.684	18.80
COMPARISON				0.000		1.273		-0.197		3.712		0.019	0.559

Equations:

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

Volume = Weighted D \* Total Area

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

Where for 100-year, 6-hour storm (zone 2)

Ea= 0.44	Qa= 1.29
Eb= 0.67	Qb= 2.03
Ec= 0.99	Qc= 2.87
Ed= 1.97	Qd= 4.37

POND INCREASED VOLUME      842.23 CF  
DISCHARGE TO STREET      0.53 CFS

RIO GRANDE ENGINEERING OF NEW MEXICO, LLC

April 24, 2014

Ms. Rita Harmon, PE  
Senior Engineer  
Hydrology  
City of Albuquerque

**RE: Grading and Drainage Plan  
Albuquerque Boat and RV Storage (H10-D006B)**


Dear Ms. Harmon:

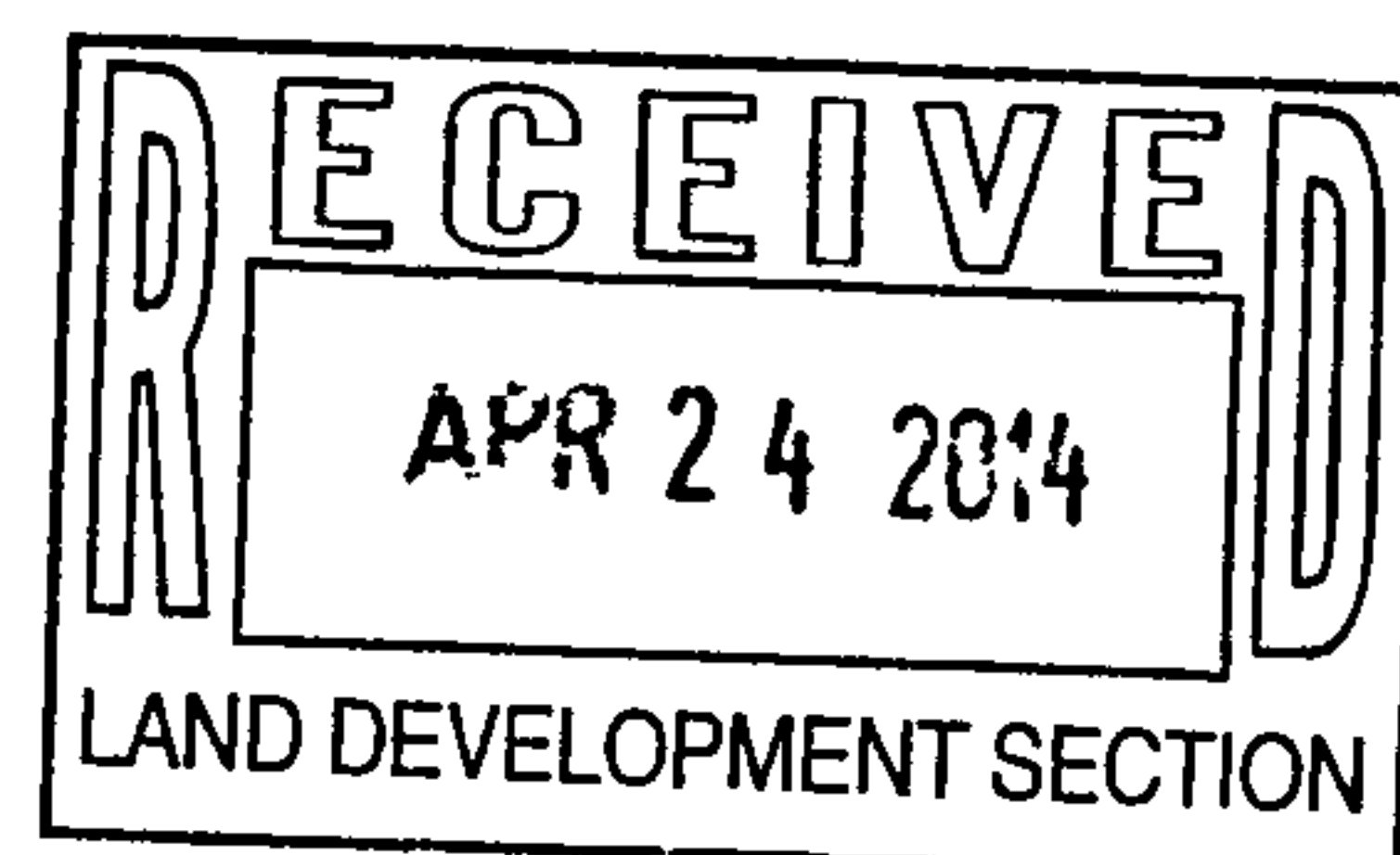
The purpose of this letter is to accompany the enclosed grading plan for the referenced project. This plan has been modified to address your verbal comments dated April 14, 2014. The following is a summary of your comments with the annotation as to how the plans were modified to address the comments.

1. No ponding within PNM easement  
**We have found alternative areas and added an area of pervious pavement to get the discharge rate to that which is allowed.**

Due to size of lot, a SWPPP has to be prepared and to the best of my knowledge and understanding will be submitted under separate cover. Should you have any questions regarding this re-submittal, please do not hesitate to call me.

Sincerely,

  
David Soule, PE  
Rio Grande Engineering  
505.321.9099





# CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



April 14, 2014

Richard J. Berry, Mayor

David Soule, PE  
Rio Grande Engineering  
PO Box 93924  
Albuquerque, New Mexico 87199

RE: **Albuquerque Boat and RB Storage** - Lots 28 & 25  
Ladera Business Park  
Grading & Drainage Plan  
**Engineer's Stamp Date 4-8-2014 (File: H10D006B)**

Dear Mr. Soule:

*will most likely call previous  
areas to parking spots. ce 4-19-14*

Based upon the information provided in your submittal received 4-10-14, the above referenced plan is approved for Site Plan for Building Permit action by the DRB. The following comments have to be addressed prior to an approval for Building Permit:

PO Box 1293

1. Show cross-lot private drainage easements.
2. Clarify the apparent wall along La Morada Place.

Albuquerque

Since the disturbed area on this site exceeds 1.0 acre, an Erosion and Sediment Control (ESC) Plan, prepared by a NM PE and approved by the City's Stormwater Engineer, will be required for this site, prior to Hydrology approval of a Building Permit or Work Order.

New Mexico 87103 If you have any questions, you can contact me at 924-3695.

www.cabq.gov

Sincerely,

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

*Phrasing introduced  
& outfall in Phase 2.*



*need to revise*

Orig: Drainage file  
c.pdf Addressee via Email

*4/16/14*

*Verbal NO  
Due to PNM  
anchors near pond.  
PNM easement Feas. RTH*

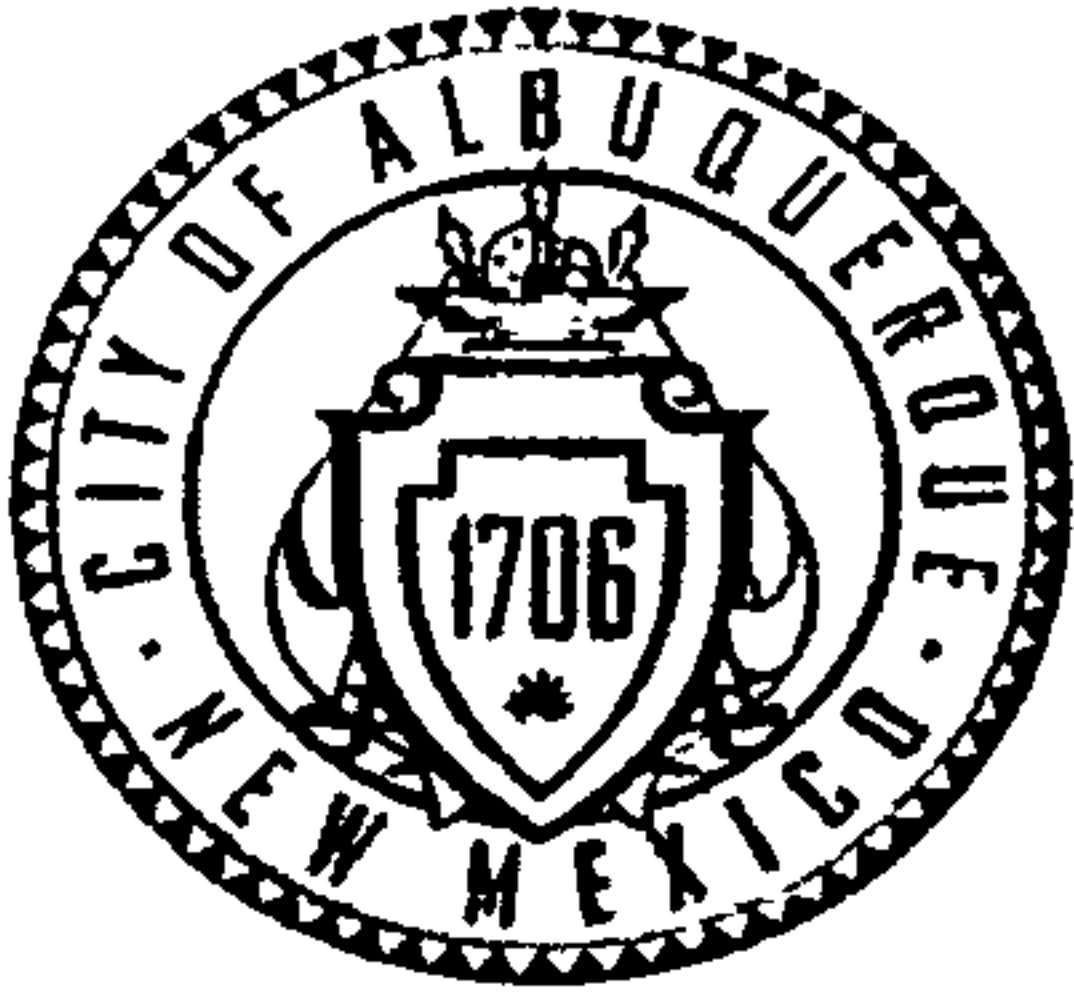
DRB on 4/14:

- Pond to be relocated

- Phasing I flows to

Phase II to  
be corrected (wall delineated)

See DRB - Dnd. till  
4/23



# City of Albuquerque

Planning Department

Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: Albuquerque Boat and RB Storage Building Permit #: \_\_\_\_\_ City Drainage #: H10-D006B  
DRB#: \_\_\_\_\_ EPC#: \_\_\_\_\_ Work Order#: \_\_\_\_\_  
Legal Description: LOTS 28 AND 25, LADERA BUSINESS PARK  
City Address: \_\_\_\_\_

Engineering Firm: RIO GRANDE ENGINEERING Contact: DAVID SOULE  
Address: PO BOX 93924, ALBUQUERQUE, NM 87199  
Phone#: 505.321.9099 Fax#: 505.872.0999 E-mail: DAVID@RIOGRANDEENGINEERING.COM

Owner: EMERALD PROPERTIES Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Architect: KEVIN JUNO Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Surveyor: CONSTRUCTION SURVEY TECHNOLOGIES Contact: JOHN GALLEGOS  
Address: \_\_\_\_\_  
Phone#: 917.8921 Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

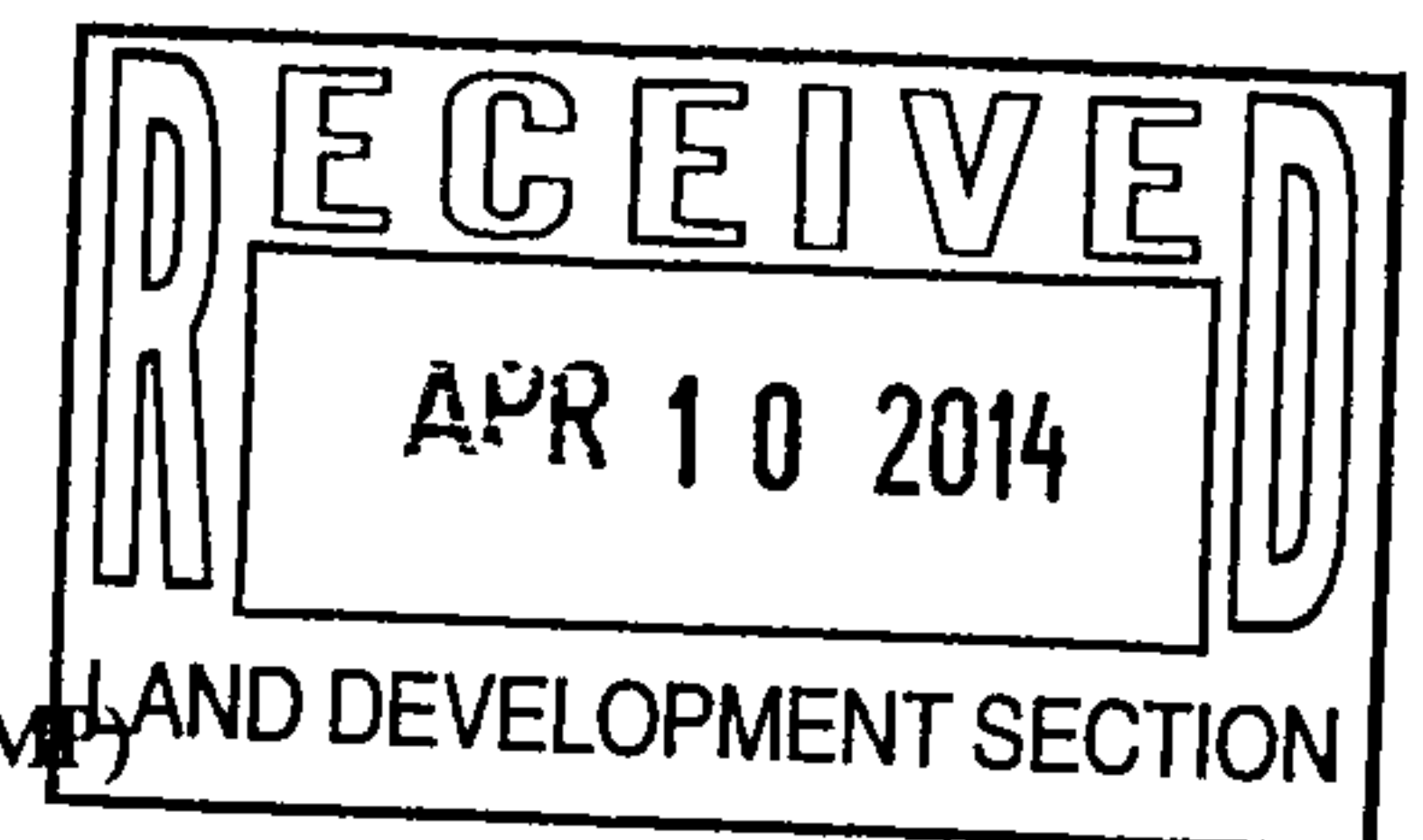
Contractor: \_\_\_\_\_ Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

### 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)
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- ☐ SO-19
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- ☐ WORK ORDER APPROVAL
- ☐ GRADING CERTIFICATION



WAS A PRE-DESIGN CONFERENCE ATTENDED: \_\_\_\_\_ Yes ☒ No \_\_\_\_\_ Copy Provided \_\_\_\_\_

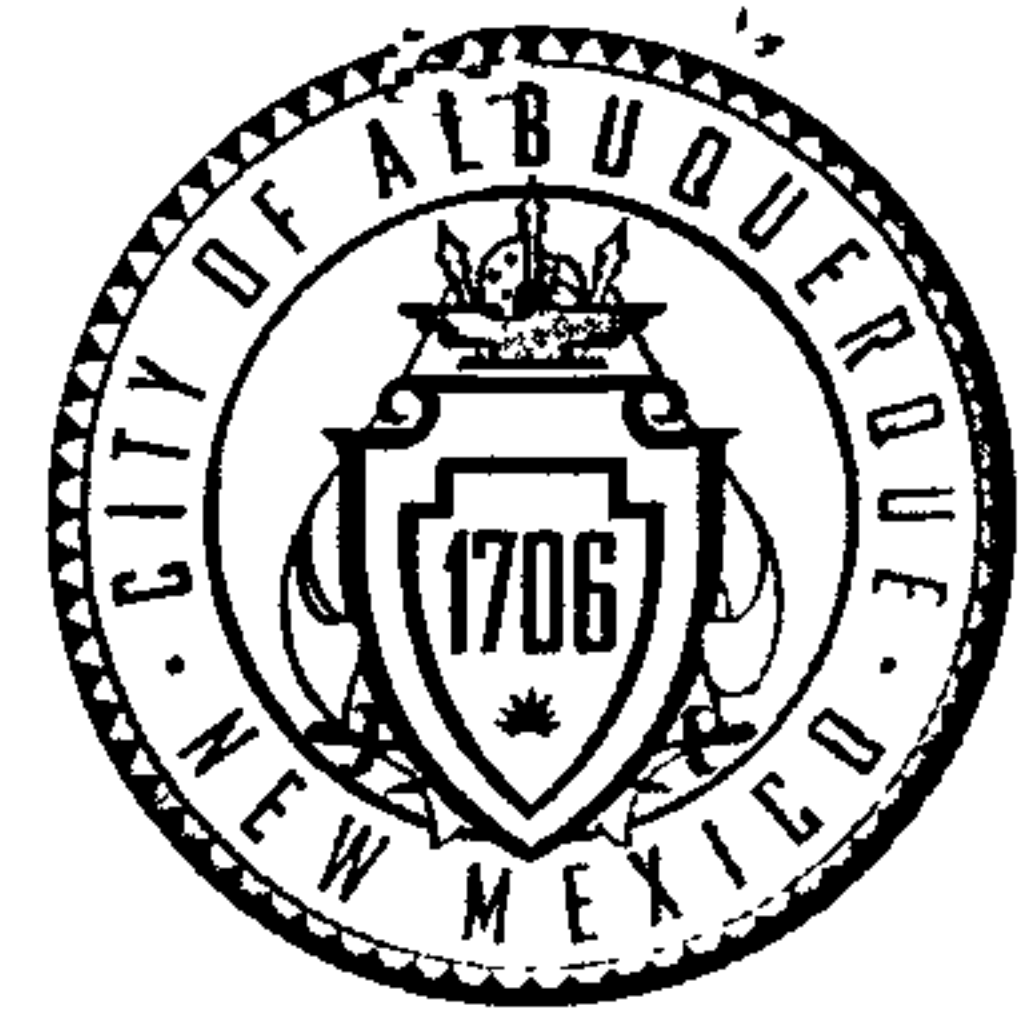
DATE SUBMITTED: 3/14/14 By: \_\_\_\_\_

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:

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# CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



April 2, 2014

Richard J. Berry, Mayor

David Soule, PE  
Rio Grande Engineering  
PO Box 93924  
Albuquerque, New Mexico 87199

RE: **Albuquerque Boat and RB Storage** - Lots 28 & 25  
Ladera Business Park  
Grading & Drainage Plan

File: **H10-D006B**

PE Stamp: **3-14-2014**

Dear Mr. Soule:

Based upon the information provided in your submittal received 3-17-14, the above referenced plan cannot be approved for Site Plan for Building Permit by the DRB until the following comments are addressed:

1. Show proposed contours.
2. Show private drainage easements, both existing and proposed. Show that the drainage remains within the extents of the drainage easement.
3. How is LOT 20 draining into Lot 25 & 28? Show on plan.
4. How does North side of Lot 28 drain? Quantify Basin draining to Vista Oriente St. Show curb cut.
5. Show cross section of channel along North edge of Lot 25
6. Curb needed along E side of Lot 28.
7. Show overflow path from pond to sidewalk culvert

PO Box 1293

Albuquerque

New Mexico 87103

[www.cabq.gov](http://www.cabq.gov)

Since the disturbed area on this site exceeds 1.0 acre, an Erosion and Sediment Control (ESC) Plan, prepared by a NM PE and approved by the City's Stormwater Engineer, will be required for this site, prior to Hydrology approval of a Building Permit or Work Order.

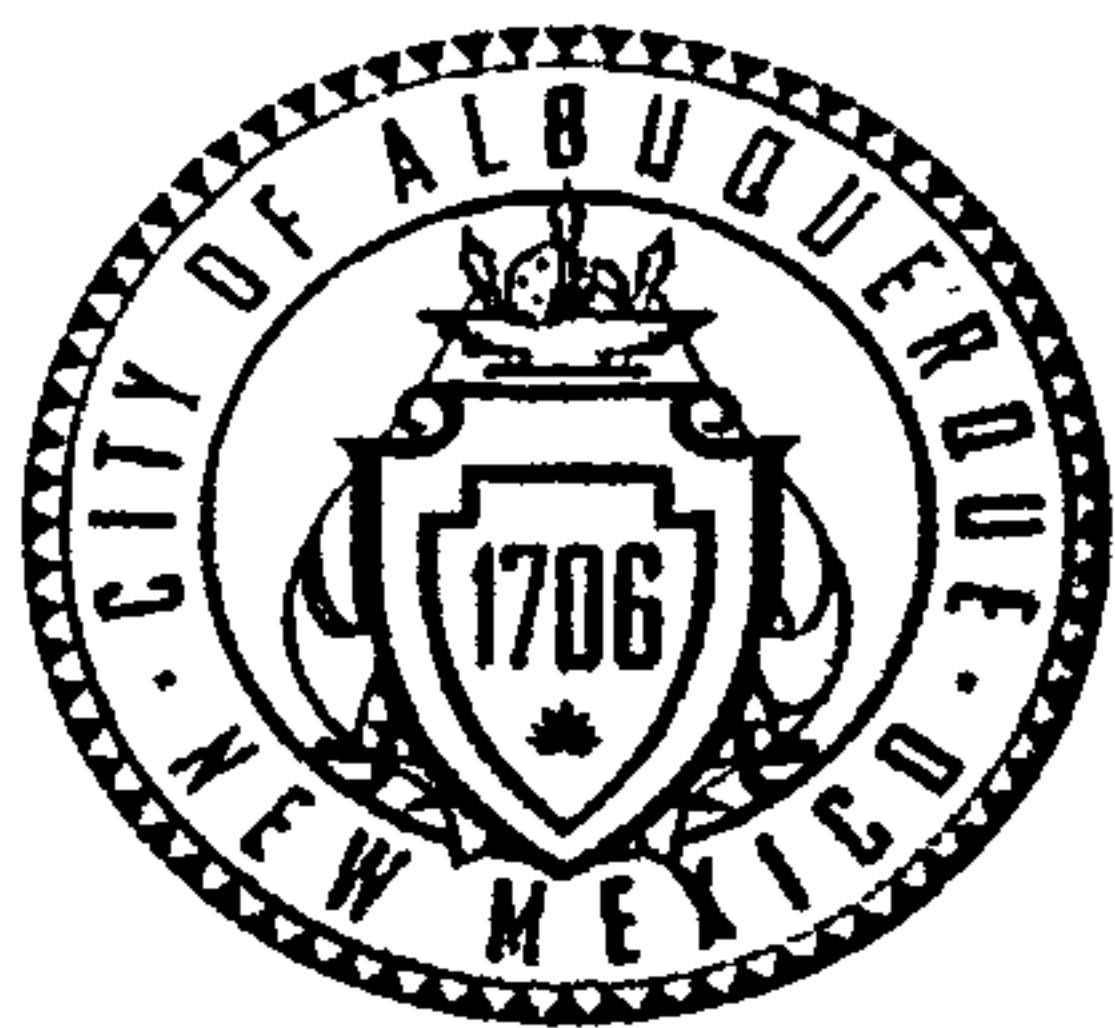
If you have any questions, you can contact me at 924-3695.

Sincerely,

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

Orig: Drainage file: **H10/D006B9**  
c.pdf Addressee via Email [david@riograndeengineering.com](mailto:david@riograndeengineering.com)





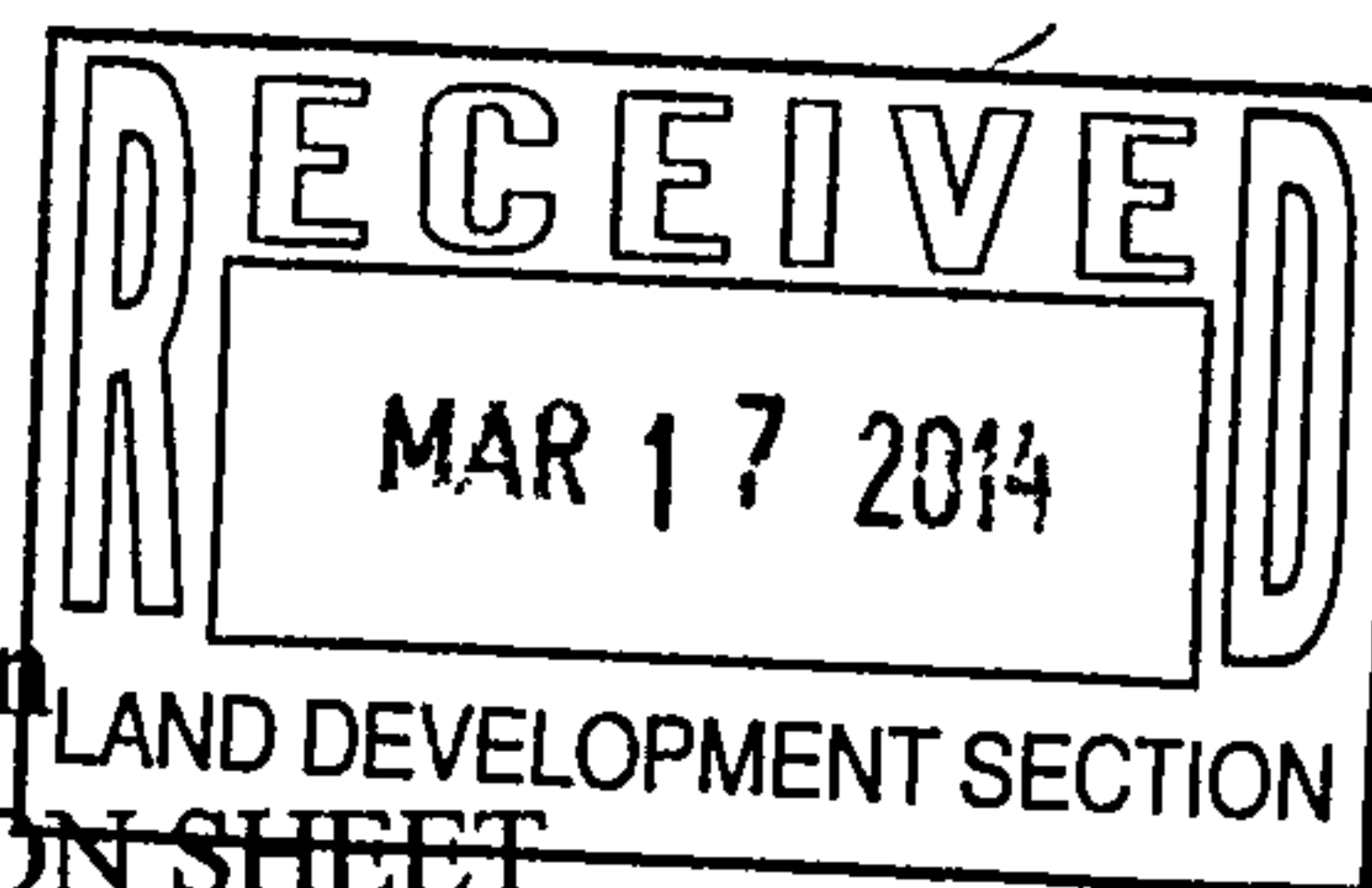
# City of Albuquerque

Planning Department

Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)



Project Title: Albuquerque Boat and RB Storage Building Permit #: \_\_\_\_\_ City Drainage #: H10 D066B

DRB#: \_\_\_\_\_ EPC#: \_\_\_\_\_ Work Order#: \_\_\_\_\_

Legal Description: LOTS 28 AND 25, LADERA BUSINESS PARK

City Address: \_\_\_\_\_

Engineering Firm: RIO GRANDE ENGINEERING Contact: DAVID SOULE

Address: PO BOX 93924, ALBUQUERQUE, NM 87199

Phone#: 505.321.9099 Fax#: 505.872.0999 E-mail: DAVID@RIOGRANDEENGINEERING.COM

Owner: EMERALD PROPERTIES Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Architect: KEVIN JUNO Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

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- ☐ ESC CERT. ACCEPTANCE
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WAS A PRE-DESIGN CONFERENCE ATTENDED: \_\_\_\_\_ Yes ☒ No \_\_\_\_\_ Copy Provided

DATE SUBMITTED: 3/14/14 By: \_\_\_\_\_

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DRAINAGE REPORT

For

**ALBUQUERQUE BOAT AND RV  
LOTS 28 & 25  
LADERA BUSINESS PARK  
Albuquerque, New Mexico**

Prepared by

Rio Grande Engineering  
PO Box 93924  
Albuquerque, New Mexico 87199

March 2014



3/14/14

David Soule P.E. No. 14522

TABLE OF CONTENTS

Purpose .....3

Introduction.....3

Existing Conditions.....3

Exhibit A-Vicinity Map .....4

Proposed Conditions .....5

Summary .....5

**Appendix**

Site Hydrology ..... A

**Map Pocket**

Site Grading and Drainage Plan

## **PURPOSE**

The purpose of this report is to provide the Drainage Management Plan for the development of two lots located Vista Oriente and La Morada Place, Northwest. This plan was prepared in accordance with the City of Albuquerque design regulations, utilizing the City of Albuquerque's Development Process Manual drainage guidelines. This report will demonstrate that the grading does not adversely affect the surrounding properties, nor the upstream or downstream facilities.

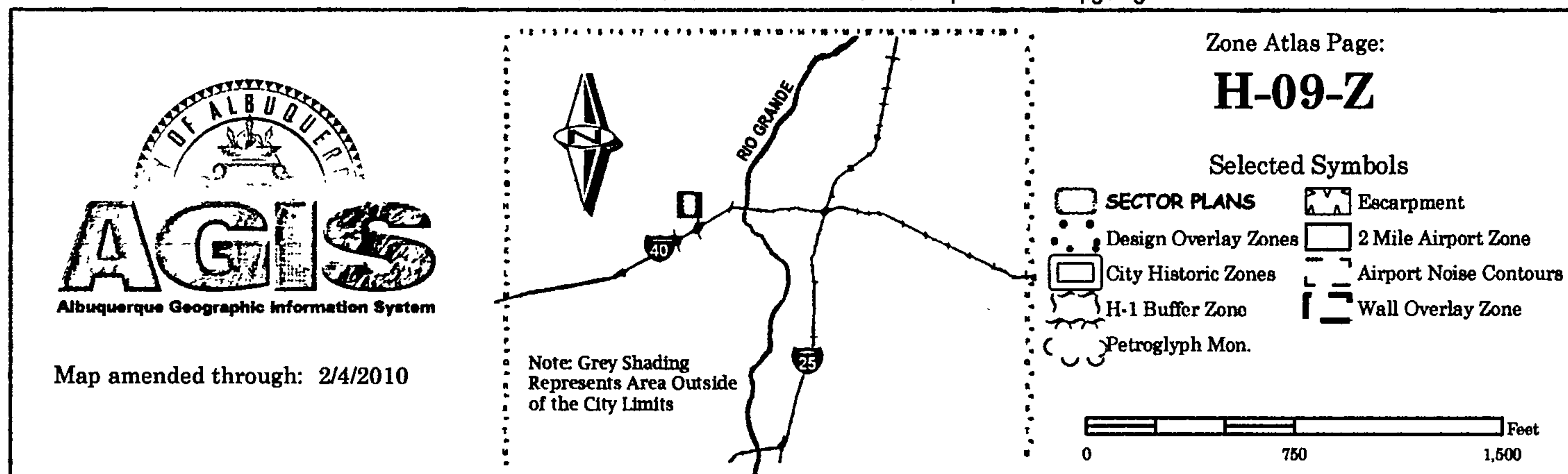
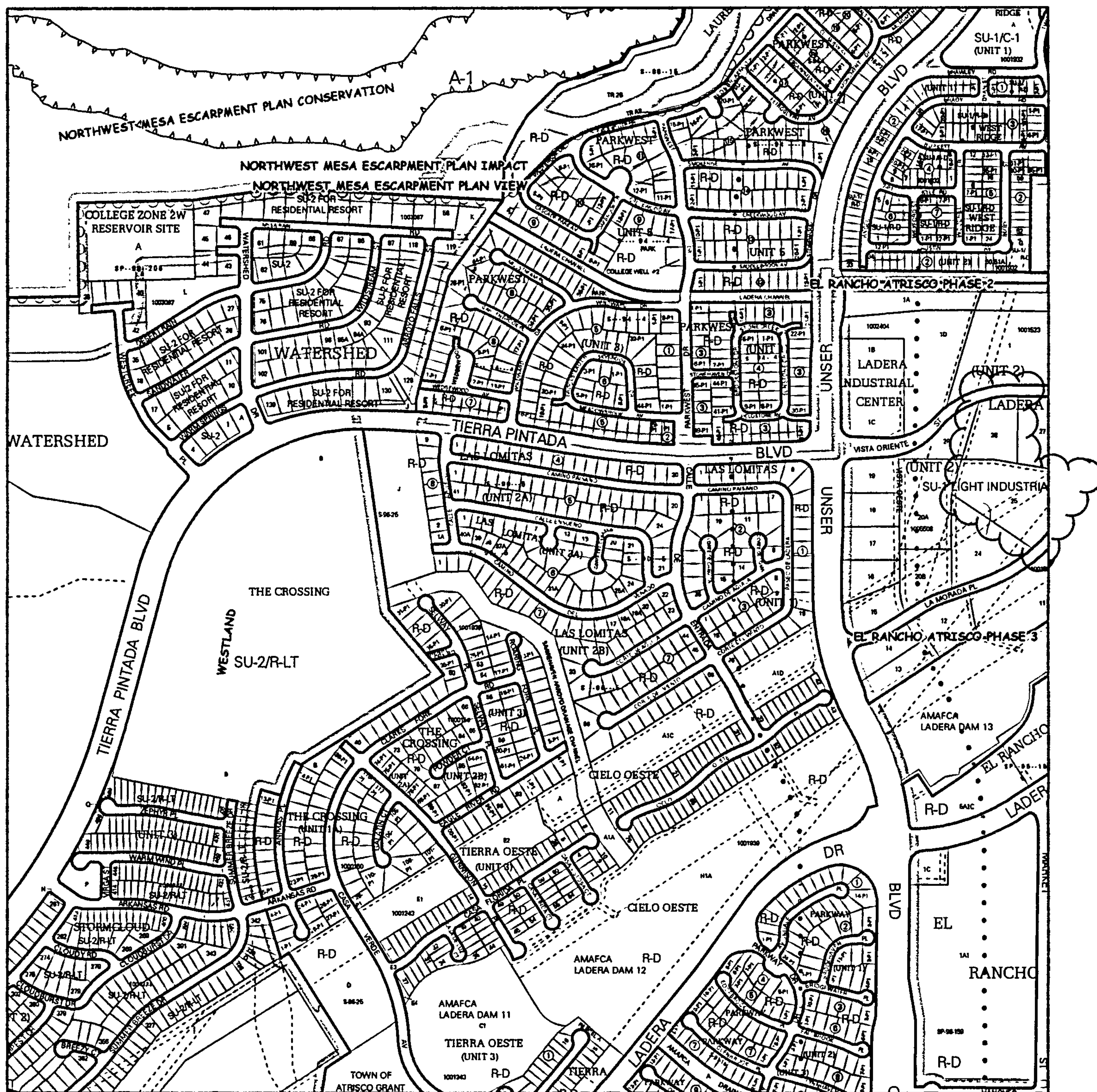
## **INTRODUCTION**

The subject of this report, as shown on the Exhibit A, is a 6.75-acre parcel of land located on the south side of Vista Oriente, east of Unser. The legal description of this site is lots 28 and 25, Ladera Business Park. As shown on FIRM map35013C0326H, the entire site is located within Flood Zone X.

## **EXISTING CONDITIONS**

The site is currently undeveloped, yet part of an overall business park. The site currently <sup>20+29</sup> allows <sup>Parcel 28</sup> 10 cfs from the west and 9 cfs from the north. The site currently contains an asphalt swale that conveys the flow thru the site, where the flow is discharged thru 4 sidewalk culverts onto La Morada Place. This flow is conveyed down stream to the Mire haven channel. This site is part of a master drainage plan prepared by Mark Goodwin and Associates 11/21/02.







## PROPOSED CONDITIONS

The proposed improvements consist of a large indoor storage building and several covered and uncovered parking spaces. The majority of the site will be paved. As shown in appendix A, the site is delineated by two drainage basins, these basins are consistent with the basins identified within the master drainage study. All of the basins drain to the La Morada. As shown within the hydraulic calculations, the site discharge<sup>13</sup> more than allowed in the master drainage plan. To accommodate the increase a 2' deep harvest pond with volume of 4999 cubic feet is created at the existing outfall. The contributing basin to this pond is adjacent tract 27. The pond is 2' deep and comprised of Blue point Loamy Fine Sand, with a percolation rate of 6"-20" per hour, therefore the pond will drain within 4 hours. The onsite flow has been diverted to discharge out the driveway, per the City Hydrologist's recommendation. Based upon the capture of 4999 cubic feet, the site will discharge at a peak rate less than the 27 cfs allowed.

## SUMMARY AND RECOMMENDATIONS

This project is a development of two lots within a master planned business park. The site is within an area of fully developed drainage infrastructure. The site has been designed in accordance with the Ladera Business Park Master drainage plan. Since the effected area site encompasses an area greater than 3/4 acres, a NPDES permit and Erosion and Sediment Control plan will be required prior to any construction activity.

**APPENDIX A**

**SITE HYDROLOGY**

Weighted E Method  
stock

Existing Developed Basins

											100-Year, 6-hr.			10-day
Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Volume (ac-ft)
			%	(acres)	%	(acres)	%	(acres)	%	(acres)				
ALLOWED PER MDP	294365	6.758	0%	0	20.0%	1.352	0.0%	0	80%	5.406	1.710	0.963	26.37	1.684
PROPOSED LOT 28	85813	1.970	0%	0	12.0%	0.236	0.0%	0	88%	1.734	1.814	0.298	8.06	0.529
PROPOSED LOT 25A	208552	4.788	3%	0.14363	9.0%	0.431	0.0%	0	88%	4.213	1.807	0.721	19.47	1.283
COMPARISON				0.000		1.115		0.000		3.673		0.056	1.159	0.128

Equations:

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

Volume = Weighted D \* Total Area

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

Where for 100-year, 6-hour storm (zone 2)

Ea= 0.44	Qa= 1.29
Eb= 0.67	Qb= 2.03
Ec= 0.99	Qc= 2.87
Ed= 1.97	Qd= 4.37

POND INCREASED VOLUME      2431.25 CF



# LADERA INDUSTRIAL PARK EXHIBIT "B" DRAINAGE BASIN PLAN MAP

## NOTE

THIS IS A SEPARATE  
SET OF ANALYSIS POINTS  
WITHIN EACH AREA  
OF THE PLAN

## LEGEND DRAINAGE

- LIMITS OF DRAINAGE AREA
- DRAINAGE SUB-BASIN BOUNDARY
- ANALYSIS POINTS
- SUB-BASIN NUMBERS

\* EACH AREA HAS ITS OWN  
SET OF ANALYSIS POINTS

SCALE: 1" = 300'

DATE: 10-10-80

AP-1	18	cfs
AP-2	30	cfs
AP-3	36	cfs
AP-4	38	cfs
AP-5	9	cfs
AP-6	14	cfs
AP-7	54	cfs
AP-8	10	cfs
AP-9	17	cfs
AP-10	71	cfs

## AREA III SUMMARY

AP-1	=	18 cfs
AP-2	=	30 cfs
AP-3	=	36 cfs
AP-4	=	38 cfs
AP-5	=	9 cfs
AP-6	=	14 cfs
AP-7	=	54 cfs
AP-8	=	10 cfs
AP-9	=	17 cfs
AP-10	=	71 cfs

