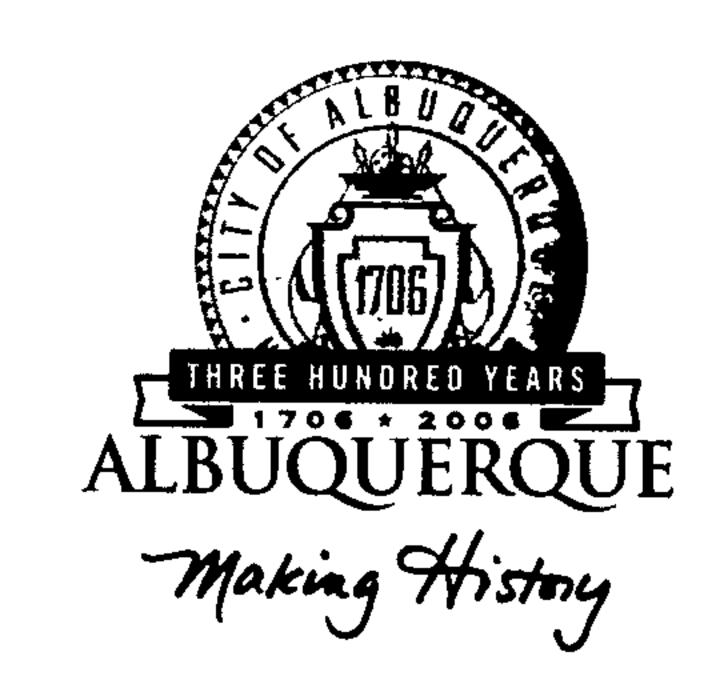
CITY OF ALBUQUERQUE



May 26, 2005

Larry Read, PE
LARRY READ & ASSOCIATES
4800 Juan Tabo Blvd. NE
Albuquerque, NM 87111

RE: ACEQUIA ESCONDIDO SUBDIVISION aka OSOFSKY SUBD. (H-13/D45)

Engineers Certification for Release of Financial Guaranty

Engineers Stamp dated 02/25/2003

Engineers Certification dated 02/19/2005

Dear Larry:

Based upon the information provided in your Engineer's Certification Submittal dated P.O. Box 1293 05/26/2005, 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.

Albuquerque

New Mexico 87103

www.cabq.gov

Sincerely, Orlene W. Portillo

Arlene V. Portillo

Plan Checker, Planning Dept.- Hydrology

Development and Building Services

C: Marilyn Maldonado, COA# 723281 (File)

DRAINAGE INFORMATION SHEET

(REV. 11/01/2001)

PROJECT TITLE: Oosofsky Subdivision	ZONE MAP/DRG. FILE #: <u>H-13/D45</u>
DRB #: 1001876 EPC #:	_WORK ORDER#:
LEGAL DESCRIPTION: TRACT 323 & Parcel A MRGCD Map 35	·
CITY ADDRESS:	
ENGINEERING FIRM: Larry Read & Associates, Inc.	CONTACT: Larry Read
ADDRESS: 4800 Juan Tabo NE, Suite C	_ PHONE: 237-8421
CITY, STATE: Albuquerque, NM	ZIP CODE: <u>87111</u>
OWNIED: William Ossfalas	
OWNER: William Osofsky	CONTACT: Bill Ososfsky
ADDRESS: 2515 Zearing SW CITY, STATE: Albuquerque, NM	PHONE: <u>242-1799</u> ZIP CODE: <u>87102</u>
CITT, STATE. Albuqueique, ivivi	_ ZIF CODE. <u>6/102</u>
ARCHITECT:	CONTACT:
ADDRESS:	PHONE:
CITY, STATE:	ZIP CODE:
<u></u>	
SURVEYOR:	CONTACT:
ADDRESS:	PHONE:
CITY, STATE:	
CONTRACTOR:	
ADDRESS:	
CITY, STATE:	_ ZIP CODE:
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DRAINAGE REPORT	XX_ SIA/FINANCIAL GUARANTEE RELEASE
X DRAINAGE PLAN	PRELIMINARY PLAT APPROVAL
CONCEPTUAL GRADING & DRAINAGE PLAN	S. DEV. PLAN FOR SUB'D. APPROVAL
GRADING PLAN	S. DEV PLAN FOR BLDG. PERMIT APPROVAL
EROSION CONTROL PLAN	SECTOR PLAN APPROVAL
XX ENGINEER'S CERTIFICATION (HYDROLOGY)	FINAL PLAT APPROVAL FOUNDATION PERMIT APPROVAL
CLOMR/LOMR TRAFFIC CIRCUIT ATION LAVOUT (TCL)	BUILDING PERMIT APPROVAL
TRAFFIC CIRCULATION LAYOUT (TCL) ENGINEER'S CERTIFICATION(TCL)	CERTIFICATE OF OCCUPANCY (PERM.)
ENGINEER'S CERTIFICATION (DRB APPR. SITE PLAN)	CERTIFICATE OF OCCUPANCY (TEMP.)
OTHER	GRADING PERMIT APPROVAL
	PAVING PERMIT APPROVAL
	WORK ORDER APPROVAL
	OTHER (SPECIFY)
	TENDER COEST
WAS A PRE-DESIGN CONFERENCE ATTENDED:	
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NO	
COPY PROVIDED	
	HYDROLOGY SECTION
	T TN TN 1 10 10 10 10 10 10 10 10 10 10 10 10 1
DATE SUBMITTED: May 17, 2005 BY:	Larry D. Read, PE
Requests for approvals of Site Development Plans and/or Subdivision I	Plats shall be accompanied by a drainage submittal. The

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

- 1. Conceptual Grading and Drainage Plan: Required for approval of Site Development Plans greater than five acres
- 2. Drainage Plans: Required for building permits, grading permits, paving permits, and site plans less than five (5)
- 3. Drainage Report: Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or

DRAINAGE INFORMATION SHEET

(REV. 11/01/2001)

PROJECT TITLE: Oosofsky Subdivision	ZONE MAP/DRG. FILE #: H-13/D45 WORK ORDER#: Acequia Escondido 723281
DRB #: 1001876 EPC #:	WORK ORDER#: Acequia Escondido
	723281
LEGAL DESCRIPTION: TRACT 323 & Parcel A MRGCD Map 35	
CITY ADDRESS:	
ENGINEERING FIRM: Larry Read & Associates, Inc.	CONTACT: Larry Read
ADDRESS: 4800 Juan Tabo NE, Suite C	PHONE: 237-8421
CITY, STATE: Albuquerque, NM	
OWNER: William Osofsky	CONTACT: Bill Ososfsky
ADDRESS: 2515 Zearing SW CITY STATE: Albuquerous NM	PHONE: 242-1799
CITY, STATE: <u>Albuquerque, NM</u>	ZIP CODE: 87102
ARCHITECT:	CONTACT:
ADDRESS:	PHONE:
CITY, STATE:	ZIP CODE:
CITT, SIAIL.	
SURVEYOR:	CONTACT:
ADDRESS:	PHONE:
CITY, STATE:	
CONTRACTOR:	_ CONTACT:
ADDRESS:	PHONE:
CITY, STATE:	ZIP CODE:
CHECK TYPE OF SUBMITTAL:	CHECK TYPE OF APPROVAL SOUGHT:
DRAINAGE REPORT	X SIA/FINANCIAL GUARANTEE RELEASE
X DRAINAGE PLAN	PRELIMINARY PLAT APPROVAL
CONCEPTUAL GRADING & DRAINAGE PLAN	S. DEV. PLAN FOR SUB'D. APPROVAL
GRADING PLAN	S. DEV PLAN FOR BLDG. PERMIT APPROVAL
EROSION CONTROL PLAN	SECTOR PLAN APPROVAL
XX ENGINEER'S CERTIFICATION (HYDROLOGY)	FINAL PLAT APPROVAL
CLOMR/LOMR	FOUNDATION PERMIT APPROVAL
TRAFFIC CIRCULATION LAYOUT (TCL)	BUILDING PERMIT APPROVAL
ENGINEER'S CERTIFICATION(TCL)	XX_ CERTIFICATE OF OCCUPANCY (PERM.)
ENGINEER'S CERTIFICATION (DRB APPR. SITE PLAN)	CERTIFICATE OF OCCUPANCY (TEMP.)
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L HYDH	OLOGI OLOIVI L
DATE SUBMITTED: May 17, 2005 BY:	Larry D. Read. PE

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

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City of Albuquerque P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 28, 2003

Larry D. Read, PE
Larry Read & Associates
4800-C Juan Tabo NE
Albuquerque, NM 87111

Re: Osofsky Subdivision Drainage Report

Engineer's Stamp dated 2-28-03, (H13/D45)

Dear Mr. Read,

Based upon the information provided in your submittal dated 3-21-03, the above referenced report is approved for Preliminary Plat action by the DRB.

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

Sincerely, /

Bradley L. Bingham, PE

Sr. Engineer, Planning Dept.

Development and Building Services

C: file

DRAINAGE INFORMATION SHEET

(REV. 11/01/2001)

PROJECT TITLE: Oosofsky Subdivision DRB #: 1001876 EPC #:	ZONE MAP/DRG. FILE #: H-13/D45 WORK ORDER#:
LEGAL DESCRIPTION: TRACT 323 & Parcel A MRGCD Map 35 CITY ADDRESS:	
ENGINEERING FIRM: Larry Read & Associates, Inc. ADDRESS: 4800 Juan Tabo NE, Suite C CITY, STATE: Albuquerque, NM	CONTACT: Larry Read PHONE: 237-8421 ZIP CODE: 87111
OWNER: William Osofsky ADDRESS: 2515 Zearing SW CITY, STATE: Albuquerque, NM	CONTACT: Bill Ososfsky PHONE: 242-1799 ZIP CODE: 87102
ARCHITECT: ADDRESS: CITY, STATE:	CONTACT:PHONE:ZIP CODE:
SURVEYOR: ADDRESS: CITY, STATE:	
CONTRACTOR: ADDRESS: CITY, STATE:	577 A 3 753
CHECK TYPE OF SUBMITTAL: DRAINAGE REPORT XX DRAINAGE PLAN CONCEPTUAL GRADING & DRAINAGE PLAN XX GRADING PLAN EROSION CONTROL PLAN ENGINEER'S CERTIFICATION (HYDROLOGY) CLOMR/LOMR TRAFFIC CIRCULATION LAYOUT (TCL) ENGINEER'S CERTIFICATION(TCL) ENGINEER'S CERTIFICATION (DRB APPR. SITE PLAN) OTHER	CHECK TYPE OF APPROVAL SOUGHT: SIA/FINANCIAL GUARANTEE RELEASE PRELIMINARY PLAT APPROVAL S. DEV. PLAN FOR SUB'D. APPROVAL S. DEV PLAN FOR BLDG. PERMIT APPROVAL SECTOR PLAN APPROVAL FINAL PLAT APPROVAL FOUNDATION PERMIT APPROVAL XX BUILDING PERMIT APPROVAL CERTIFICATE OF OCCUPANCY (PERM.) CERTIFICATE OF OCCUPANCY (TEMP.) XX GRADING PERMIT APPROVAL PAVING PERMIT APPROVAL YX WORK ORDER APPROVAL OTHER (SPECIFY)
WAS A PRE-DESIGN CONFERENCE ATTENDED: YES NO COPY PROVIDED	MAR 2 1 2003 HYDROLOGY SECTION
DATE SUBMITTED: March 20, 2003 BY:	Les Contractions of the second

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LARRY READ & ASSOCIATES, Inc.

Civil Engineers Site • Drainage • Utility Design

MEMORANDUM

DATE:

March 20, 2003

TO:

Mr. Brad Bingham, P.E.

City of Albuquerque PWD-Hydrology

PROJECT:

Osofsky Subdivision – Aspen Compound (Drainage File H13/D45)

Brad:

Attached is a copy of the executed License between Bill Osofsky and MRGCD, a copy of the plan for improvement of the Alameda Drain as approved by MRGCD, and a copy of the revised grading plan. The grading plan required revisions to gain MRGCD's approval notably the location and orientation of the pond. MRGCD wanted all of the land east of the drain either improved as roadway or left natural so we had to relocate the pond to the west side of the channel.

With regards to your previous comments dated December 31, 2002, I have thoroughly reviewed the drainage calculations and the water harvesting ponds were not included the proposed ponding volume – only the main pond on the south end of site. The revised pond shown on the attached grading plan provides a pond that is almost identical is size and depth to the one you reviewed in December. Since the new pond will function exactly as the previous pond configuration, I have not made any revisions to the drainage report.

If you have any questions or comments, please call.

Sincerely,

LARRY READ & ASSOCIATES, INC.

Larry D. Read, P.E.

MIDDLE RIO GRANDE CONSERVANCY DISTRICT LICENSE AGREEMENT

LICENSE WITH WILLIAM OSOFSKY FOR USE OF THE ALAMEDA DRAIN FOR INSTALLATION OF CULVERT CROSSING AND DRAIN MODIFICATION

This License Agreement is made and entered into this <u>/7</u> day of March, 2003, by and between the Middle Rio Grande Conservancy District ("District"), and WILLIAM OSOFSKY, ("Licensee").

WHEREAS, the District operates, maintains and controls and owns an easement for the ALAMEDA DRAIN ("the Easement"), as an integral part of the District's works; and

WHEREAS, William Osofsky is developing the Osofsky Subdivision and related Aspen Project ("the Project") and acknowledges the validity of the Easement;

WHEREAS, the Licensee has requested permission from the District, to the extent of the District's property interest, to utilize a small portion of the Easement in a manner more particularly described herein beginning on the date of execution of this Agreement and as reflected on the attached engineering plat map; and

WHEREAS, the District is willing to agree to the limited use of its Easement pursuant to the conditions more particularly specified herein; and

WHEREAS, Licensee is willing to continue to pay for all charges due and owing to the District or on the same basis they have been paid in the past;

NOW THEREFORE, a License for utilization for the District's Easement at the location indicated herein is hereby GRANTED to the Licensee, effective March 17, 2003 only to the extent and for the purpose set forth below:

- 1. Licensee represents it has approval of the planned flood water run-off scheme for the Project more particularly shown on the attached Engineering Plat Map No. H-13 from all responsible agencies. The District approves the planned flood water run-off scheme subject to this License, and subject to the approval by the City of Albuquerque and all other agencies provided that the water run-off scheme is consistent with all regulations and laws defining flood water run-off requirements.
- 2. The District hereby agrees to permit Licensee or its assignee to modify and subsequently maintain a portion of the Alameda Drain shown and detailed on the attached engineering map, hereinafter referred to as ("Licensed Property"), from the date of approval of the plan by the City of Albuquerque through the completion of the project. The project will be designed to ensure minimal weed growth in the future, within and around the existing drain. Thereafter, Licensee agrees to require the Buyers of the Project's residential units

to join a homeowners' association, which will succeed to the duty to maintain the Licensed Property in perpetuity at homeowners association's cost. This obligation will run with the land. In the event the Licensed Property is not maintained pursuant to this License, the District reserves the right to terminate the License upon thirty (30) days notice and perform necessary work to meet the District's specifications at the Licensee's expense. The District shall have the right to approve the assignment to the homeowners' association. Such approval shall not be unreasonably withheld. Termination shall not release the licensee from any liability or obligation that may have attached, accrued or was accruing.

During construction, how - //)

- 3. Licensee agrees to maintain a minimum cover of three feet over all culvert crossings used for access to the Project. All damaged culvert crossings and culvert crossings removed and/or disturbed by Licensee shall be restored and/or replaced to the satisfaction of the District and must comply with the District's specifications. All salvageable culverts, irrigation gates, and other District property must be returned to the District.
- 4. Any work to be performed within the Licensed Property shall be closely coordinated with the District's Engineering Department and appropriate field office. No work is to be done within the Licensed Property between March 1 and October 31, provided however, work may be permitted by the District if it can be shown that the work will not interfere with the operations of the District. All work to be done within the Licensed Property must be approved by the District prior to commencing work.
- 5. The Licensee shall not store equipment, new materials or debris within the District's Licensed Property which interferes with the District's operations and maintenance of the District's property. The Licensee shall not service vehicles or equipment within the Licensed Property. Seeding is required by Licensee of disturbed areas within the District due to Licensee's activities per the District's specifications.
- 6. Beginning from the date of Approval, Licensee agrees through himself and/or the homeowners' association to obtain and keep in force a bond in the amount of \$50,000, equal to the one year value of maintenance of the Licensed Property inclusive of weed control and structures repair and replacement and/or maintenance as calculated by the District. Such bond shall remain in effect during the term of this License. Failure to maintain this bond shall render this License null and void. Proof of such bond will be provided to the District March 1st of each year.
- 7. The privilege granted by this License shall not be exercised, nor shall any structure, accessory, or installation be constructed or maintained so as to obstruct in any manner the flow of water into or through the District's works so as to cause injury to the District, or to negatively interfere in any manner whatsoever with the construction, operation, maintenance and functions of the District.
- 8. Licensee and its assignees shall be liable for any and all bodily injuries and/or damages to the property of the District or the property of the Licensee or, subject to paragraphs 9 and 10, any third party or parties arising from or by reason of the use of any structures,

accessories or encroachments authorized by this License or by the exercise of the privilege conferred by this License. The Licensee shall defend, indemnify and hold harmless the District, its officials, agents and employees from and against any and all claims, actions, suits or proceedings of any kind brought against said parties arising from or by reason of the use of any structure, accessories or encroachments authorized by this License or by the exercise of the privilege conferred by this License, provided, however, to the extent, if at all, NMSA 1978, § 56-7-1 (1971) is applicable to this License, this agreement to indemnify shall not extend to liability, claims, damages, losses or expenses, including attorneys' fees, arising out of the giving of or the failure to give directions or instructions by the District or the agents or employees of the District, where such giving or failure to give directions or instructions is the primary cause of bodily injury to persons or damage to property.

- 9. This License is not intended by any of the provisions of any part of the License to create in the public, or any member thereof, a third-party beneficiary or to authorize anyone not a party to the license to maintain a suit for wrongful death, bodily and/or personal injury to person, damage to property and/or any claim(s) whatsoever pursuant to the provisions of this License.
- 10. By entering into this Agreement, each party shall be responsible for liability arising from personal injury or damage to person or property occasioned by its own agents or employees in the performance of this License Agreement, subject in all cases to the immunities and limitations of the New Mexico Tort Claims Act (NMSA 1978, § 41-4-1 et seq. (1981)) and any amendments thereto. This paragraph is intended only to define the liabilities as governed by common law or the New Mexico Tort Claims Act. The District and its "public employees" as defined in the New Mexico Tort Claims Act, do not waive sovereign immunity, do not waive any defense and/or do not waive any limitations of liability pursuant to law. No provision in this License modifies and/or waives any provision of the New Mexico Tort Claims Act.
- 11. As consideration for the License herein granted prior to the execution of this Agreement, Licensee has paid a non-fundable one-time sum of Two Hundred dollars (\$200.00) based on a fee amount for issuing and administering the Licensee by the District. Licensee agrees to continue to pay all water service charges due and owing to the District.
- 12. If the District is required to bring suit in any court for the purposes of enforcing this Agreement or any provisions or portions thereof, the Licensee shall be liable for all costs and attorney's fees incurred by the District in connection with such suit.
- 13. The Licensee shall comply with all applicable laws, ordinances, rules and regulations enacted or promulgated by any federal, state, or local government body having jurisdiction over the real property for which the License is granted.
- 14. The provisions of this Agreement shall enure to the benefit of and be binding upon the heirs, executors, administrators, personal representatives, successors, and assigns of the parties hereto; provided however, that no such heir, executor, administrator, personal

representative, successor or assign of the Licensee shall have the right to use, alter, or modify the installation/encroachment in a manner which will increase the burden of the installation/encroachment on the Licensed Property.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first written above.

APPROVED:

MIDDLE RIO GRANDE CONSERVANCY DISTRICT

Chief Executive Officer

DATE: 3 - 4-03

LICENSEE

WILLIAM OSOFSKY

ACKNOWLEDGMENT OF THE MIDDLE RIO GRANDE CONSERVANCY DISTRICT

STATE OF NEW MEXICO

COUNTY OF BERNALILLO

On the day of March, 2003, Subhas Shah personally appeared before me, known to me to be the individual described in and who executed the within and foregoing instrument, and acknowledged that he/she signed the within and foregoing instrument as his/her free and voluntary act and did for the uses and purposes therein mentioned.

SS.

Anabel L. Gallegos

NOTARY PUBLIC
STATE OF NEW MEXICO

My Commission Expires:

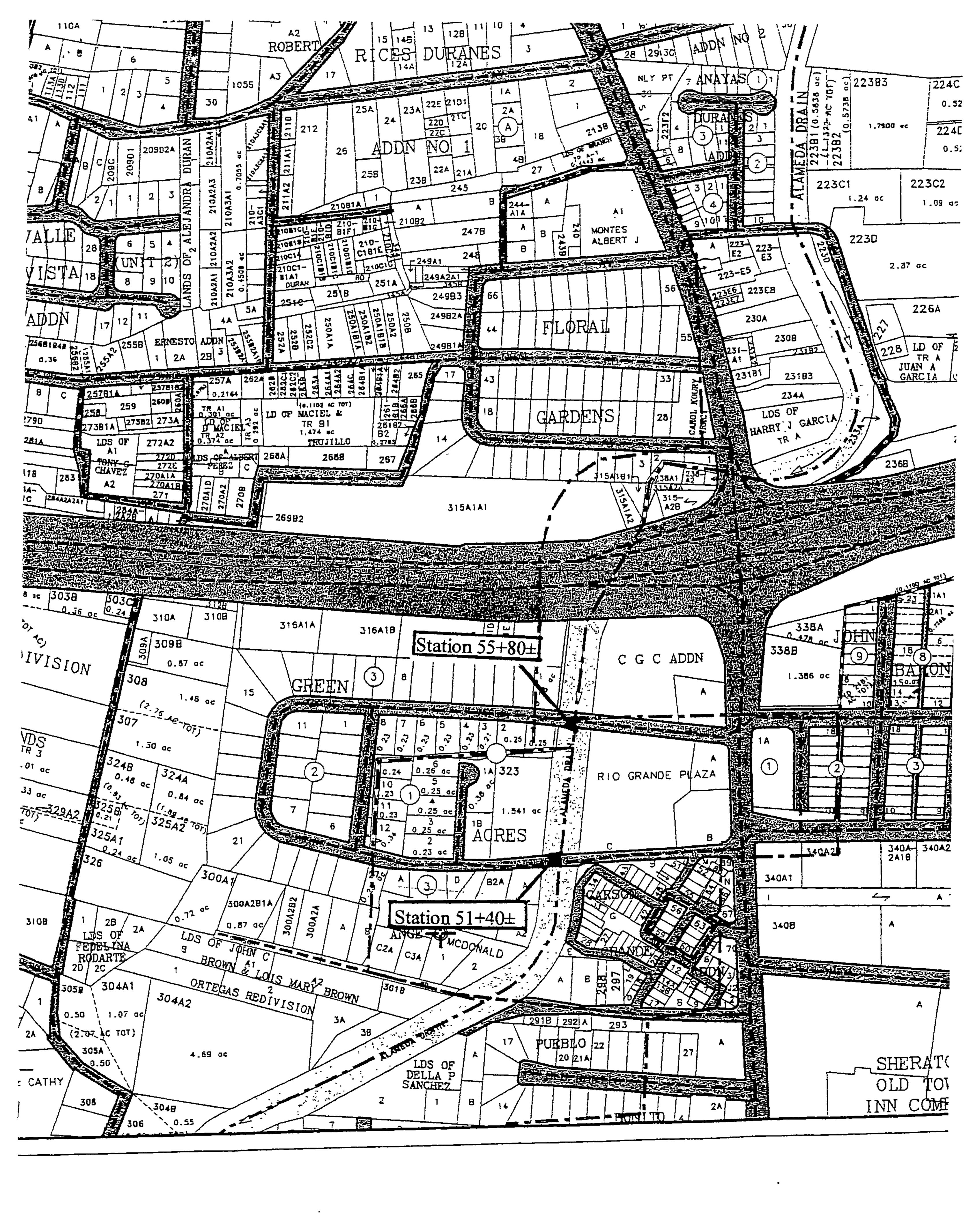
Notary Public

ACKNOWLEDGMENT OF THE LICENSEE

STATE OF NEW MEXICO	
COUNTY OF BERNALILLO) ss.
be the individual described in acknowledged that he/she signe	William Osofsky personally appeared before me, known to me to and who executed the within and foregoing instrument, and ed the within and foregoing instrument as his/her free and and purposes therein mentioned.
	Notary Public

My Commission Expires:

12-11-2003





City of Albuquerque P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 31, 2002

Larry D. Read, PE Larry Read & Associates 4800-C Juan Tabo NE Albuquerque, NM 87111

Re: Osofsky Subdivision Drainage Report

Engineer's Stamp dated 11-20-02, (H13/D45)

Dear Mr. Read,

Based upon the information provided in your submittal dated 11-25-02, the above referenced report cannot be approved for Preliminary Plat until the following comments are addressed.

- Ponding in the Alameda drain easement will require written concurrence from them.
- Water harvesting is allowed, even encouraged by the City. However, the pond must be sized as if there were no backyard ponds because there are no controls in place to prevent the homeowner from filling them in later.

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

Sincerely

Bradley L. Bingham, PE

Sr. Engineer, Planning Dept.

Development and Building Services

C: file

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/11/2002)

	(773/043)
PROJECT TITLE: DOFSKY SUBDIVISION DRB #: PENDING EPC#:	ZONE MAP/DRG. FILE #: 13
DRB #: JENOING EPC#:EPC#:	WORK ORDER#:
LEGAL DESCRIPTION: JRACE 323 PARCECA CITY ADDRESS: 2515 ZEKRING NW	
ENGINEERING FIRM: LARRY READ & ASSOC ADDRESS: ABOO SUAN TABONE BUTEC	CONTACT: LARY READ
CITY, STATE: A UB, NEWS	PHONE: 37-842[ZIP CODE: 871()
OWNER: LUCKAN OSOFSKY ADDRESS: 2515 BEARING NIM	CONTACT: Bic 1750FSE> PHONE: 292-1799
CITY, STATE: ALD NCK	ZIP CODE: 27/02
ARCHITECT:	CONTACT:
ADDRESS:CITY, STATE:	PHONE:
OIII, SIAIE.	ZIP CODE:
SURVEYOR:	CONTACT:
ADDRESS	PHONE:
CITY, STATE:	ZIP CODE:
CONTRACTOR:	
ADDRESS:	CONTACT:
CITY, STATE:	PHONE:
	ZIP CODE:
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WAS A PRE-DESIGN CONFERENCE ATTENDED: YES NO COPY PROVIDED OATE SUBMITTED:	NOV 25 2002 NOV SECTION

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

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DRAINAGE REPORT

for

OSOFSKY SUBDIVISION TRACT 323 AND PARCEL A, MRGCD MAP 35 CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

November 11, 2002



Prepared by
Larry D. Read, P.E.
4800-C Juan Tabo Blvd., N.E.
Albuquerque, New Mexico 87113
(505) 237-8421

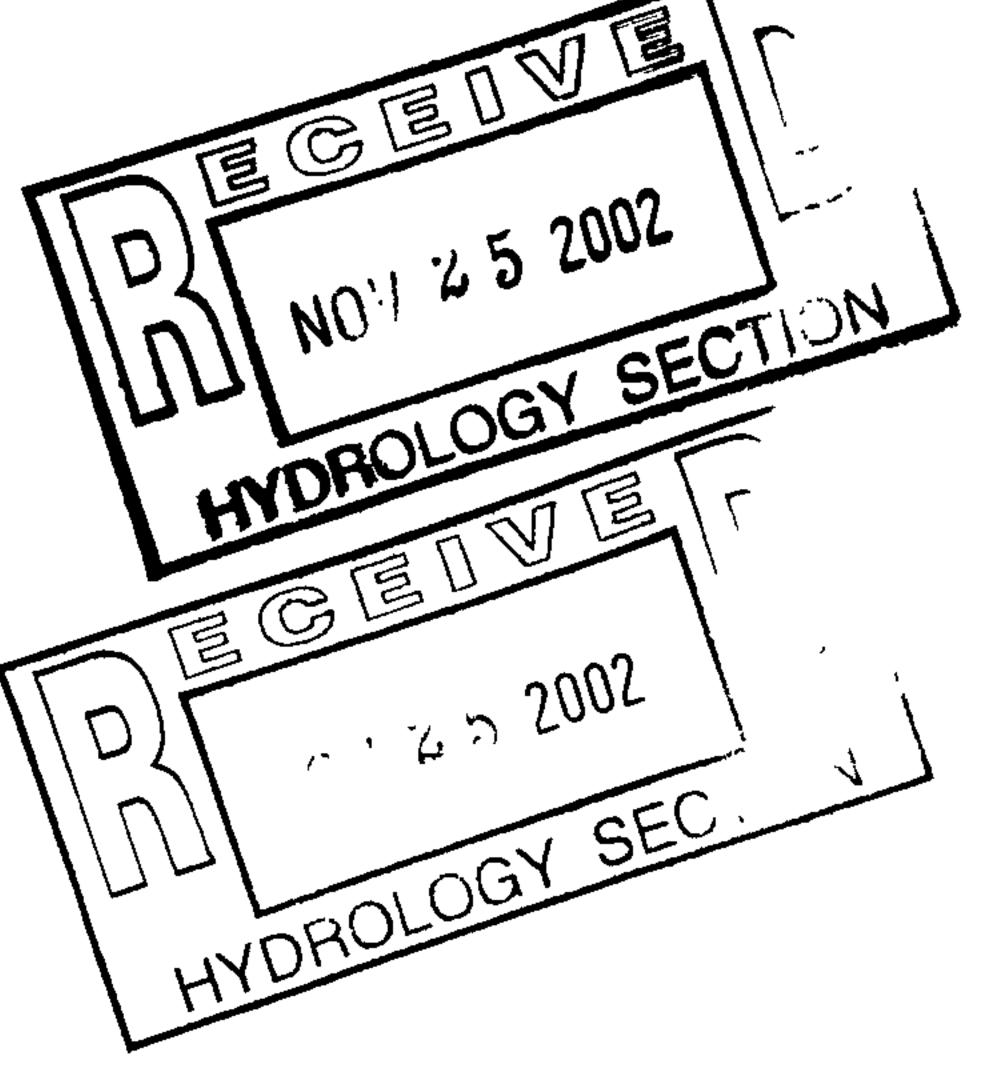


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•	Methodology	1
•	Precipitation	1
•	Existing Drainage Conditions	3
•	Developed Drainage Conditions	3
	TABLES AND CALCULATIONS	
1	Pond Volume and Outlet Structure Calculations	4
2	Street Capacity Calculations	5
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1	Vicinity Map	2
2	Grading and Drainage Plan	Pocket
3	FIRM Map Panel (on the Grading and Drainage Plan)	Pocket
	APPENDICES	
•	AHYMO Analyses	A

DRAINAGE REPORT for OSOFSKY SUBDIVISION TRACT 323 AND PARCEL A, MRGCD MAP 35 CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

November 11, 2002

LOCATION & DESCRIPTION

The proposed site is located two blocks south of I-40 and west of Rio grande Boulevard as shown on **Exhibit 1**. The site is currently developed with a single story residence and detached garage on the south end of the property near Zearing Avenue. The detached garage and a portion of the existing residence will be removed as part the subdivision construction. The remainder of Tract 323 remains undeveloped but has been bladed to remove all native vegetation and consists of hard packed dirt and gravel. It is extremely flat with perimeter adobe and rock walls. The Alameda Lateral along with unimproved service roads on each side comprise most of Parcel A. The proposed development will consist of 10 single family residential lots within Tract 323, including the existing residence, and associated private street. The street will be a one way loop from Aspen Avenue with the entrance west of the Alameda Lateral and the exit on the east side of the lateral. Improvements to the Alameda Lateral will include extending the existing 10' diameter culvert approximately 110 feet north from its current end at Zearing Avenue and stabilizing the channel bottom and banks. These improvements will be coordinated and approved by MRGCD.

FLOODPLAIN STATUS

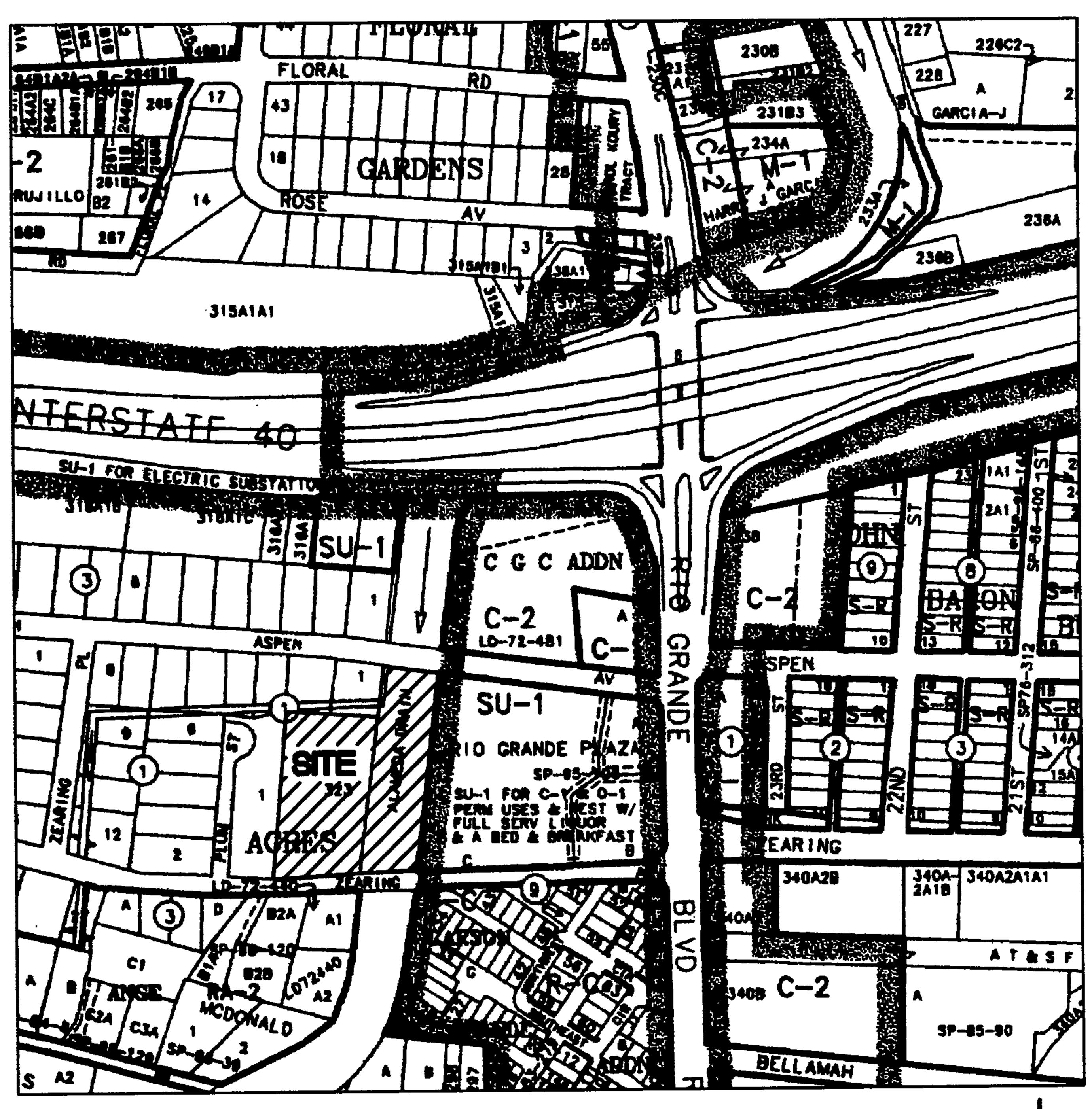
This property, as shown on FIRM Map Panel 35001C0331-D, effective September 20, 1996, is within Zone "X" (areas of 500-year floods; areas of 100-year floods with average depths of less than one foot (1') or with drainage areas less than one square mile; and areas protected from levees from the 100-year flood). A portion of this panel with the area designated on it is included on the **Grading and Drainage Plan** in a pocket at the end of this report.

METHODOLOGY

The hydrology for this project was analyzed using the 1997 release of the AHYMO computer modeling program as developed by AMAFCA. All procedures are in accordance with those shown in the June 1997 release of the City of Albuquerque Development Process Manual, Section 22.2.

PRECIPITATION

The 100-yr, 6-hour duration storm was used as the design storm for this analysis. This site is within Zone 2 as identified in the City of Albuquerque Development Process Manual, Section 22.2. Tables within this section were used to establish the 1-hour, 6-hour precipitation, and 24-hour precipitation.



VICINITY MAP H-13

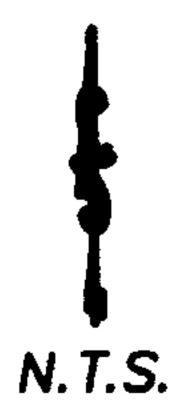


EXHIBIT 1

EXISTING DRAINAGE CONDITIONS

The existing site is developed as described above in "Location and Description." The perimeter walls have raised footings to prevent offsite drainage from entering the site. Therefore, there are no offsite basins analyzed with this study. The site has minimal slope to the south and currently free discharges into the Alameda Lateral and onto Zearing Avenue, which in turn drains into the lateral. There is an 18" storm drain in Zearing Avenue which drains into lateral just below this site.

The property has been divided into two basins for developed conditions in order to check street capacities. However, since the entire property drains to the Alameda Lateral, the two basins are added together in the AHYMO analysis in **Appendix A** to determine the total runoff from this site. Basin 110.0 is a 1.43 acre portion of Tract 323 and includes the existing residence and hard packed earth. Therefore, it is analyzed as 45% "B", 40% "C", and 10% "D" for existing conditions Land Treatments. Similarly Basin 120.0 is the remaining 1.12 acres that contribute to the Alameda Lateral from this site. There is a small portion of this site that is within the channel of the Alameda Drain and therefore does not contribute to the sites runoff. This area has been removed from the properties total acreage in the analysis. Basin 120.0 has been analyzed as 50% "B" and 50% "C" due to the compacted nature of the site and service roads. The combined runoff from these two basins (7.17-cfs) has been used to determine the allowable discharge from this property.

DEVELOPED DRAINAGE CONDITIONS

The proposed development has been designed to drain the majority of the residences (Basin 110.0) to the private street. The street will convey the runoff east to the detention pond located just north of Zearing Avenue over the existing Alameda Lateral. The runoff from Basin 120.0 will be contained in the private street and curb and gutter along the Alameda Drain. It will combine with the runoff from Basin 110.0 and drain through the detention pond. The pond has been designed with a 1% bottom draining to a standard 4' diameter manhole with a beehive grate. These calculations are shown in **Table 1**. The grate will operate under orifice control and discharge into the 18" storm drain in Zearing Avenue and then into the Alameda Lateral. Water harvesting is shown in places where it is not practical to drain to the private street. However, drainage swales have been provided to drain these areas to the street before they will fill up to the pad elevation. Therefore, each residence is protected from the 100-year storm event. The pond is sized for 100% of the property to drain to it so the design is conservative as long as the water harvesting areas are maintained. Based on 100% of the site draining to the pond, the maximum 100-year storage depth will be 1.47' and the pond has 4:1 side slopes. Therefore, no fencing is required around the pond. The 10' culvert will be extended upstream past the private drive. Therefore, the proposed pond location does not create a conflict with the function of the lateral.

This development can be constructed according to the **Grading and Drainage Plan** without increasing the downstream runoff in the Alameda Lateral and will decrease the runoff in Zearing Avenue. Therefore, there will not be any adverse drainage effects to the surrounding properties as a result of this development.

POND VOLUME AND OUTLET STRUCTURE CALCULATIONS

ELEV	AREA	INC VOL	TOTAL VOL		H	Q/orifice	Qweir
	(sq. ft.)	(cu. ft.)	(cu. ft.)	(acre-ft.)	(ft.)	(cfs)	(cfs)
0.00	0	0.00	0.00	0.0000	0.00	0.00	0.00
0.50	1,616	404	404	0.0093	0.50	4.09	7.11
1.00	1,964	895	1,299	0.0298	1.00	5.78	20.10
1.50	2,344	1,077	2,376	0.0545	1.50	7.08	36.93

Qo = CA(2gH) U.5 Co = 0.60 $Q = CLH^{1.5} = CW = 3.00$ AREA (ft.) = 1.20 LENGTH (ft.) = 6.70 WEIR ELEV = 0.00

MAXIMUM FLOW IN PRIVATE STREET

MANNING'S EQUATION FOR UNIFORM FLOW IN TRAPEZOIDAL CHANNELS

INPI	JT
-------	------------

DEPTH (FT): 0.26

MANNING'S "n" VALUE: 0.017

BED SLOPE (FT/FT): 0.0050

BOTTOM WIDTH (FT): 20.00

SIDE SLOPE #1 (HORZ:VERT): 0.00

SIDE SLOPE #2 (HORZ:VERT): 0.00

CROWN--NEG. FOR INVERTED (FT): 0.20

OUTPUT

FLOW RATE (CFS): 5.50

CROSS SECT. AREA (SF): 3.12

TOP WIDTH (FT): 20.00

WETTED PERIMETER (FT): 20.52

HYDRAULIC RADIUS (FT): 0.15

VELOCITY (FPS): 1.77

FROUDE NUMBER: 0.79

ENERGY GRADE: 0.30

APPENDIXA

AHYMO INPUT AHYMO SUMMARY OUTPUT AHYMO DETAILED OUTPUT

AHYMO INPUT

*S***** 100 YEAR, START RAINFALL	6 HOUR STORM (Section 22.2 Hydrology) 0.00 TYPE=1 RAIN QUARTER=0.0 RAIN ONE=2.01 RAIN SIX=2.35 RAIN DAY=2.75 DT=0.033333
* C * * * * * * * * * * * * * *	**************************************
	EXISTING CONDITIONS **********************

*S BASIN 110.0	
COMPUTE NM HYD	ID=1 HYD=110.0 DA=0.00224 SQ MI
	8A = 0.00 8B = 45.00 8C = 40.00 8D = 10.00
	TP=0.1333 RAINFALL=-1
PRINT HYD	ID=1 CODE=1
*S BASIN 120.0	
COMPUTE NM HYD	ID=2 HYD=120.0 DA=0.00175 SQ MI
	$\Re A = 0.00 \Re B = 50.00 \Re C = 50.00 \Re D = 0.00$
	TP=0.1333 RAINFALL=-1
PRINT HYD	ID=2 CODE=1
ADD HYD	ID=3 HYD=100.0 ID I=1 ID II=2
PRINT HYD	ID=3 CODE=1

- -	DEVELOPED CONDITIONS ****************************

*S BASIN 110.0	TD_{-1} $TTVD_{-110}$ 0 DN_{-0} 000004 CO MT
COMPUTE NM HYD	ID=1 HYD=110.0 DA=0.00224 SQ MI %A= 0.00 %B= 21.90 %C= 21.90 %D= 56.20
	TP=0.1333 RAINFALL=-1
PRINT HYD	ID=1 CODE=1
*S BASIN 120.0	
COMPUTE NM HYD	ID=2 HYD=120.0 DA=0.00175 SQ MI
	$8A = 0.00 \ 8B = 16.50 \ 8C = 16.50 \ 8D = 67.00$
	TP=0.1333 RAINFALL=-1
PRINT HYD	ID=2 CODE=1
ADD HYD	ID=3 HYD=100.0 ID I=1 ID II=2
PRINT HYD	ID=3 CODE=1
ROUTE RESERVOIR	ID=4 HYD=POND.1 INFLOW ID=3 CODE=10
	OUTFLOW (CFS) STORAGE (AC_FT) ELEVATION
	0.00 0.0000
	4.09 0.0093 0.50
	5.78 0.0298 1.00
	7.08 0.0545 1.50
PRINT HYD FINISH	ID=4 CODE=1

AHYMO SUMMARY OUTPUT

AHYMO PROGRAM S INPUT FILE = C:						VERSION:	1997.02d	RUN DATE USER NO.=	,	/YR) =11/1 9702c01000	
COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT	RUNOFF	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE =	
*S****** 100 \\ START RAINFALL TYPE= *S**********************************	- 1 ******	****	****	*****	****					TIME= RAIN6=	.00
*S********	************* ~	* * * * * *	****	*****	*****	*****					
*S BASIN 110.0 COMPUTE NM HYD	110.00		1	.00224	4.15	.126	1.0516	1.500	2.894	PER IMP=	10.53
*S BASIN 120.0 COMPUTE NM HYD ADD HYD	120.00	1& 2		.00175	3.02 7.17	.087	1.0011		2.700 2.809	PER IMP=	.00
*S********											
*S********	***********	× * * * * * *	* * * * *	*****	*****	*****	•				
*S BASIN 110.0 COMPUTE NM HYD *S BASIN 120.0	110.00		1	.00224	5.50	.191		9 1.500	3.833	PER IMP=	56.20
COMPUTE NM HYD			2	.00175	4.54	.161					67.00
ADD HYD ROUTE RESERVOI FINISH	100.00 R POND.1	_	3 4	.00399	10.03	.352				AC-FT=	.053

```
- Version: 1997.02d
   AHYMO PROGRAM (AHYMO_97) -
        RUN DATE (MON/DAY/YR) = 11/11/2002
                                            USER NO. = AHYMO-I-9702c01000W41-AH
        START TIME (HR:MIN:SEC) = 09:36:10
        INPUT FILE = C: L-R \setminus SOFSKY \setminus S1.TXT
*S***** 100 YEAR, 6 HOUR STORM (Section 22.2 Hydrology)
                  0.00
START
                  TYPE=1 RAIN QUARTER=0.0 RAIN ONE=2.01
RAINFALL
                  RAIN SIX=2.35 RAIN DAY=2.75 DT=0.033333
             COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
                                                      5.999940 HOURS
                                        END TIME =
                     .033333 HOURS
              DT ==
                                                             .0102
                                                      .0084
                                              .0066
                                       .0049
                        .0016
                                .0033
                 .0000
                                                      .0219
                                                             .0241
                                              .0199
                                       .0178
                               .0158
                        .0139
                 .0120
                                                      .0384
                                                             .0411
                                              .0358
                                       .0333
                                .0309
                        .0286
                 .0263
                                                             .0631
                                                      .0596
                                       .0529
                                              .0561
                        .0467
                                .0497
                 .0439
                                                      .0930
                                                             .1066
                                              .0866
                                       .0807
                                .0751
                 .0669
                        .0709
                                                             .8114
                                                      .6192
                                       .3438
                                              .4648
                                .2517
                        .1842
                 .1372
                                                            1.6176
                                                    1.5605
                                             1.4985
                                     1.4303
                              1.3536
                       1.2628
                1.0459
                                             1.8516
                                                    1.8906
                              1.7667
                                     1.8104
                1.6706
                       1.7202
                                             2.0851
                                                    2.0915
                              2.0269
                                     2.0568
                1.9624
                       1.9955
                                                            2.1330
                                                    2.1285
                                             2.1239
                                     2.1191
                              2.1141
                       2.1088
                2.1034
                                                            2.1604
                                             2.1532
                                                    2.1569
                              2.1455
                                     2.1494
                       2.1414
                2.1373
                                                     2.1802
                                                            2.1832
                                     2.1739
                                             2.1771
                              2.1707
                2.1639
                       2.1673
                                                     2.2002
                                                            2.2028
                                             2.1975
                              2.1920
                                     2.1948
                2.1862
                       2.1891
                                                            2.2202
                                             2.2154
                                                    2.2178
                              2.2105
                                     2.2130
                       2.2080
                2.2054
                                                    2.2336
                                             2.2315
                              2.2271 2.2293
                       2.2248
                2.2225
                              2.2420 2.2440
                                             2.2460
                                                    2.2480
                                                            2.2500
                2.2379
                       2.2400
                                     2.2576 2.2594
                                                            2.2631
                                                     2.2613
                              2.2557
                       2.2538
                2.2519
                                                    2.2736
                                     2.2701 2.2718
                2.2649 2.2666 2.2684
                2.2769 2.2786 2.2802 2.2818 2.2834 2.2850 2.2866
                2.2882 2.2897 2.2913 2.2928 2.2943 2.2958 2.2973
                2.2988 2.3002 2.3017 2.3031 2.3046 2.3060 2.3074
                2.3088 2.3102 2.3116 2.3129 2.3143 2.3156
                2.3183 2.3196 2.3209 2.3222 2.3235 2.3248
                      2.3286 2.3299 2.3311 2.3323 2.3336 2.3348
                2.3273
                2.3360 2.3372 2.3384 2.3396 2.3408 2.3420 2.3431
                2.3443 2.3454 2.3466 2.3477 2.3489 2.3500
*S***************************
```

*S**************************

*S BASIN 110.0

 $\Re A = 0.00 \Re B = 45.00 \Re C = 40.00 \Re D = 10.00$

TP=0.1333 RAINFALL=-1

****WARNING**** SUM OF TREATMENT TYPES DOES NOT EQUAL 100 PERCENT OR TOTAL AREA

K/TP RATIO = .545000SHAPE CONSTANT, N = 7.106420.133300HR .072649HR 526.28 P60 = 2.0100.9862 UNIT VOLUME = .93091 CFS UNIT PEAK = .04000 INCHES PER HOUR IA = .10000 INCHESINF =.000236 SQ MI RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

K = .120492HR TP = .133300HR K/TP RATIO = .903913 SHAPE CONSTANT, N = 3.919750 UNIT PEAK = 5.2591 CFS UNIT VOLUME = .9978 B = 349.78 P60 = 2.0100 AREA = .002004 SQ MI IA = .42941 INCHES INF = 1.05235 INCHES PER HOUR RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 110.00

RUNOFF VOLUME = 1.05162 INCHES = .1256 ACRE-FEET

PEAK DISCHARGE RATE = 4.15 CFS AT 1.500 HOURS BASIN AREA = .0022 SQ. MI.

*S BASIN 120.0

COMPUTE NM HYD ID=2 HYD=120.0 DA=0.00175 SQ MI

 $\Re A = 0.00 \Re B = 50.00 \Re C = 50.00 \Re D = 0.00$

TP=0.1333 RAINFALL=-1

K = .119767HR TP = .133300HR K/TP RATIO = .898476 SHAPE CONSTANT, N = 3.944947 UNIT PEAK = 4.6144 CFS UNIT VOLUME = .9976 B = 351.48 P60 = 2.0100 AREA = .001750 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

PRINT HYD ID=2 CODE=1

PARTIAL HYDROGRAPH 120.00

RUNOFF VOLUME = .93667 INCHES = .0874 ACRE-FEET

PEAK DISCHARGE RATE = 3.02 CFS AT 1.500 HOURS BASIN AREA = .0018 SQ. MI.

ADD HYD ID=3 HYD=100.0 ID I=1 ID II=2

PRINT HYD ID=3 CODE=1

PARTIAL HYDROGRAPH 100.00

RUNOFF VOLUME = 1.00111 INCHES = .2130 ACRE-FEET
PEAK DISCHARGE RATE = 7.17 CFS AT 1.500 HOURS BASIN AREA = .0040 SQ. MI.

*s BASIN 110.0

COMPUTE NM HYD

ID=1 HYD=110.0 DA=0.00224 SQ MI

%A= 0.00 %B= 21.90 %C= 21.90 %D= 56.20

TP=0.1333 RAINFALL=-1

K/TP RATIO = .545000SHAPE CONSTANT, N = 7.106420.133300HR .072649HR TP =526.28 P60 = 2.0100UNIT VOLUME = .9969 4.9701 CFS UNIT PEAK = .04000 INCHES PER HOUR .10000 INCHES INF =.001259 SQ MI IA =AREA =RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

K = .119767HR TP = .133300HR K/TP RATIO = .898476 SHAPE CONSTANT, N = 3.944947 UNIT PEAK = 2.5870 CFS UNIT VOLUME = .9951 B = 351.48 P60 = 2.0100 AREA = .000981 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 110.00

RUNOFF VOLUME = 1.59909 INCHES = .1910 ACRE-FEET

PEAK DISCHARGE RATE = 5.50 CFS AT 1.500 HOURS BASIN AREA = .0022 SQ. MI.

*S BASIN 120.0

COMPUTE NM HYD ID=2 HYD=120.0 DA=0.00175 SQ MI

 $8A = 0.00 \ 8B = 16.50 \ 8C = 16.50 \ 8D = 67.00$

TP=0.1333 RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420 UNIT PEAK = 4.6291 CFS UNIT VOLUME = .9969 B = 526.28 P60 = 2.0100 AREA = .001173 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .0333333

K = .119767HR TP = .133300HR K/TP RATIO = .898476 SHAPE CONSTANT, N = 3.944947 UNIT PEAK = 1.5227 CFS UNIT VOLUME = .9919 B = 351.48 P60 = 2.0100 AREA = .000578 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033333

PRINT HYD ID=2 CODE=1

PARTIAL HYDROGRAPH 120.00

RUNOFF VOLUME = 1.72639 INCHES = .1611 ACRE-FEET

PEAK DISCHARGE RATE = 4.54 CFS AT 1.500 HOURS BASIN AREA = .0018 SQ. MI.

ADD HYD ID=3 HYD=100.0 ID I=1 ID II=2

PRINT HYD ID=3 CODE=1

PARTIAL HYDROGRAPH 100.00

RUNOFF VOLUME = 1.65478 INCHES = .3521 ACRE-FEET

PEAK DISCHARGE RATE = 10.03 CFS AT 1.500 HOURS BASIN AREA = .0040 SQ. MI.

ROUTE RESERVO	DIR ID=	4 HYD=POND	.1 INFL	OW ID=3 CODE=10)	
OUT		FLOW (CFS)	STOR	AGE (AC_FT)	ELEVATION	
		0.00		0.000	0.00	
		4.09		0.0093	0.50	
		5.78		0.0298	1.00	
		7.08		0.0545	1.50	
* * *	* * *	* * * *	* * *	* * *		
				011M TT 017		
TIME	INFLOW	_	VOLUME	OUTFLOW		
(HRS)	(CFS)	(FEET)	(AC-FT)	(CFS)		
00	.00	.00	.000	.00		
.00	.00	.00	.000	.00		
. 67	.00	.00	.000	.00		
1.00	.00	.00	.000	.00		
1.33	2.41	.21	.004	1.74		
1.67	5.21	1.38	.049	6.77		
2.00	2.12	.28	.005	2.30		
2.33	.48	.06	.001	.53		
2.67	.19	.02	.000	.20		
3.00	.09	.01	.000	.09		
3.33	.06	.01	.000	.06		
3.67	.05	.01	.000	.05		
4.00	.04	.01	.000	.04		
4.33	.04	.01	.000	.04		
4.67	.04	.01	.000	.04		
5.00	.04	.01	.000	.04		
5.33	.04	.01	.000	.04		
5.67	.05	.01	.000	.05		
6.00	.05	.01	.000	.05		
6.33	.01	.00	.000	.01		
PEAK DISCHA	RGE =	7.006 CFS	5 - PEAK	OCCURS AT HOUR	1.60	
MAXIMUM WAT	ER SURFACE	ELEVATION =	=	1.472		
MAXIMUM STO	RAGE =	.0531 7	AC-FT	INCREMENTAL T	'IME = .0333333	HRS

ID=4 CODE=1

PRINT HYD

HYDROGRAPH FROM AREA POND.1

RUNOFF VOLUME = 1.65478 INCHES = .3521 ACRE-FEET

PEAK DISCHARGE RATE = 7.01 CFS AT 1.600 HOURS BASIN AREA = .0040 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 09:36:10