CASA LADERA APTS.

G11-D22A

2 PLANS

INFORMATION SHEET

PROJECT TITLE CASA LADERA APARTMENTS TYPE OF SUBMITTAL Drainage Report

ZONE ATLAS PAGE NO. G-11 Z CITY ADDRESS 6401 Sequoia NW

LEGAL DESCRIPTION Lots 3 & 4 Town of Atrisco Grant, Unit 8

ENGINEERING FIRM DMJM/Adam, Hamlyn, Anderson CONTACT Charles Burm

ADDRESS 4055 Montgomery Blvd. NE PHONE 881-1808

OWNER Presley Co. of New Mexico CONTACT Tom Burlison

ADDRESS 1909 Carlisle Blvd. NE PHONE 265-5811

ARCHITECT Jack Belcher CONTACT Jack Belcher

ADDRESS PO Box 1742, Corrales, NM 87048 PHONE 897-1297

SURVEYOR DMJM/Adam, Hamlyn, Anderson CONTACT W.T. Richards

ADDRESS 4055 Montgomery Blvd. NE PHONE 881-1808

CONTRACTOR Presley Co. of New Mexico CONTACT Tom Burlison

ADDRESS 1909 Carlisle Blvd. NE PHONE 265-5811

PRE-DESIGN MEETING:

X YES
___ NO
X COPY OF CONFERENCE RECAP SHEET PROVIDED

PLEASE CHECK TYPE OF APPROVAL EXPECTED WITH THIS SUBMITTAL:

___ SKETCH PLAT APPROVAL
___ PRELIMINARY PLAT APPROVAL
___ SITE DEVELOPMENT PLAN APPROVAL
___ FINAL PLAT APPROVAL
X BUILDING PERMIT APPROVAL
___ CERTIFICATE OF OCCUPANCY APPROVAL
___ ROUGH GRADING PERMIT APPROVAL
___ GRADING/PAVING PERMIT APPROVAL
___ OTHER _____ (SPECIFY)

RECEIVED
MAR 30 1984
HYDROLOGY SECTION

DATE SUBMITTED: 3-30-84

BY: Charles Burm

LOT - B

INFORMATION SHEET

PROJECT TITLE CASA LADERA APARTMENTS TYPE OF SUBMITTAL Plat - Drainage Report

ZONE ATLAS PAGE NO. G-11 - D22Z CITY ADDRESS 6401 Sequoia NW

LEGAL DESCRIPTION Lots 3 & 4 Town of Atrisco Grant, Unit 8

ENGINEERING FIRM DMJM/Adam, Hamlyn, Anderson CONTACT Charles Burm

ADDRESS 4055 Montgomery Blvd. NE PHONE 881-1808

OWNER Presley Co. of New Mexico CONTACT Tom Burlison

ADDRESS 1909 Carlisle Blvd. NE PHONE 265-5811

ARCHITECT Jack Belcher CONTACT Jack Belcher

ADDRESS PO Box 1742, Corrales, NM 87048 PHONE 897-1297

SURVEYOR DMJM/Adam, Hamlyn, Anderson CONTACT W.T. Richards

ADDRESS 4055 Montgomery Blvd. NE PHONE 881-1808

CONTRACTOR Presley Co. of New Mexico CONTACT Tom Burlison

ADDRESS 1909 Carlisle Blvd. NE PHONE 265-5811

PRE-DESIGN MEETING:

X YES
___ NO
___ COPY OF CONFERENCE RECAP SHEET PROVIDED

PLEASE CHECK TYPE OF APPROVAL EXPECTED WITH THIS SUBMITTAL:

___ SKETCH PLAT APPROVAL
___ PRELIMINARY PLAT APPROVAL
___ SITE DEVELOPMENT PLAN APPROVAL
___ FINAL PLAT APPROVAL
X BUILDING PERMIT APPROVAL
___ CERTIFICATE OF OCCUPANCY APPROVAL
___ ROUGH GRADING PERMIT APPROVAL
___ GRADING/PAVING PERMIT APPROVAL
___ OTHER _____ (SPECIFY)

DATE SUBMITTED: 4-4-84

BY: Charles Burm

APR 04 1984
HYDROLOGY SECTION

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

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

April 10, 1984

Mr. Jake Bordenave
DMJM/Adam, Hamlyn, Anderson
4055 Montgomery Boulevard NE Suite A
Albuquerque, NM 87109

REF: GRADING AND DRAINAGE PLAN FOR CASA LADERA APARTMENTS (**G11-D22A**)
RECEIVED MARCH 30, 1984

Dear Jake:

I have reviewed the above referenced report and forward the following comments:

1. As of yet the outfall for this entire development has not been approved. A building permit cannot be issued until the outfall can be resolved. The only other option is total retention on-site.

2. Paved access is required. Approved street grades are required.

3. There are no elevations given for Sequoia Road. How will this site interface with the street.

4. Bench-mark information and a vicinity map should be provided on the plan.

5. Weep-holes should be provided per City standard for areas that have a previous surface on the high side to eliminate hydrostatic pressure.

6. The roof drains should be directed onto asphaltic surface or other erosion resistant means provided.

Should you have any questions or comments, please contact me at 766-7644.

Yours truly,

Billy J. Goolsby

Billy J. Goolsby, PE
City/County Flood Plain Admin.

BJG:mrk

cc: Tom Burlson, Presley Co. of NM (1909 Carlisle Blvd NE)

INFORMATION SHEET

PROJECT TITLE CASA LADERA APARTMENTS TYPE OF SUBMITTAL Drainage Report-Revision

ZONE ATLAS PAGE NO. G-11 CITY ADDRESS 6041 Sequoia NW

LEGAL DESCRIPTION Tract -B, Wellington West

ENGINEERING FIRM DMJM/Adam, Hamlyn, Anderson CONTACT Charles Burm

ADDRESS 4055 Montgomery Blvd. NE PHONE 881-1808

OWNER Presley Co. of New Mexico CONTACT Tom Burlison

ADDRESS 1909 Carlisle Blvd. NE PHONE 265-5811

ARCHITECT Jack Belcher CONTACT Jack Belcher

ADDRESS PO Box 1742, Corrales, NM 87048 PHONE 897-1297

SURVEYOR DMJM/Adam, Hamlyn, Anderson CONTACT W.T. Richards

ADDRESS 4055 Montgomery Blvd. NE PHONE 881-1808

CONTRACTOR Presley Co. of New Mexico CONTACT Tom Burlison

ADDRESS 1909 Carlisle Blvd. NE PHONE 265-5811

PRE-DESIGN MEETING:

___ YES
___ NO
___ COPY OF CONFERENCE RECAP SHEET PROVIDED

PLEASE CHECK TYPE OF APPROVAL EXPECTED WITH THIS SUBMITTAL:

___ SKETCH PLAT APPROVAL
___ PRELIMINARY PLAT APPROVAL
___ SITE DEVELOPMENT PLAN APPROVAL
___ FINAL PLAT APPROVAL
_X_ BUILDING PERMIT APPROVAL
___ CERTIFICATE OF OCCUPANCY APPROVAL
___ ROUGH GRADING PERMIT APPROVAL
___ GRADING PAVING PERMIT APPROVAL
___ OTHER _____ (SPECIFY)

RECEIVED
APR 23 1984
HYDROLOGY SECTION

DATE SUBMITTED: 4/23/84

BY: _____

INFORMATION SHEET

PROJECT TITLE CASA LADERA APARTMENTS TYPE OF SUBMITTAL DRAINAGE

ZONE ATLAS PAGE NO. G-11 CITY ADDRESS 6041 Sequoia NW

LEGAL DESCRIPTION Tract -B, Wellington West

ENGINEERING FIRM DMJM/Adam, Hamlyn, Anderson CONTACT Charles Burm

ADDRESS 4055 Montgomery Blvd. NE PHONE 88[illegible]808

OWNER Presley Co. of New Mexico CONTACT To[illegible]urlison

ADDRESS 1909 Carlisle Blvd. NE PHONE 265-5811

ARCHITECT Jack Belcher CONTACT Jack Belcher

ADDRESS PO Box 1742, Corrales, NM 87048 PHONE 897-1297

SURVEYOR DMJM/Adam, Hamlyn, Anderson CONTACT W.T. Richards

ADDRESS 4055 Montgomery Blvd. NE PHONE 881-1808

CONTRACTOR Presley Co. of New Mexico CONTACT Tom Burlison

ADDRESS 1909 Carlisle Blvd. NE PHONE 265-5811

RECEIVED APR 30 1984

PRE-DESIGN MEETING:

___ YES
___ NO
___ COPY OF CONFERENCE RECAP SHEET PROVIDED

PLEASE CHECK TYPE OF APPROVAL EXPECTED WITH THIS SUBMITTAL:

___ SKETCH PLAT APPROVAL
___ PRELIMINARY PLAT APPROVAL
___ SITE DEVELOPMENT PLAN APPROVAL
___ FINAL PLAT APPROVAL
X BUILDING PERMIT APPROVAL
___ CERTIFICATE OF OCCUPANCY APPROVAL
___ ROUGH GRADING PERMIT APPROVAL
___ GRADING/PAVING PERMIT APPROVAL
___ OTHER _____ (SPECIFY)

DATE SUBMITTED: 4-30-84

BY: Charles Burm

CITY OF ALBUQUERQUE

ALBUQUERQUE, NEW MEXICO

INTER-OFFICE CORRESPONDENCE May 3, 1984 REF. NO._____

TO: Fred Aguirre, Design Hydrologist

FROM: Andre Houle, Quality Assurance, Design/MDD

SUBJECT: G11D22A - LADERA BASIN OUTFALL

I have reviewed the storm sewer outfall dated April 30, 1984, I offer the following comments for your consideration:

1. The proposed sediment basin is not an acceptable solution in that after a storm there would be water standing at elevation 06.30. This will effectively result in silt deposition along 95% of the proposed storm sewer. This will then become a high maintenace system.

2. A system I would recommend to you is to have a surface outfall just south of the Golf Course entrance. This could be followed by a retention pond lined with cobbles. This pond could be sized to store the 1-year storm, and the cobble lined pond would allow infiltration and easier maintenance access than the sediment basin. There may be a need to grade a swale for the pond outfall. Note also that this pond would act as a debris basin before discharging to the golf course.

3. I recommend that Parks and Golf Course Management review and approve this concept.

4. I have investigated the SAD possibility of this area, but there are not immediate plans for pavement much less storm sewer work.

5. I have checked the final street section on Ladera and there are not any ponds in the ROW from what I could gather. Any ponding along the east side of the dike is a temporary solution.

I feel that further analysis of the outfall is required at this time.

AH/dlw

cc: File

CDS

G11/D22A

INFORMATION SHEET

PROJECT TITLE CASA LADERA APARTMENTS TYPE OF SUBMITTAL Drainage Report - Revised DWG

ZONE ATLAS PAGE NO. G-11 CITY ADDRESS 6041 Sequoia NW

LEGAL DESCRIPTION Tract -B, Wellington West

ENGINEERING FIRM DMJM/Adam, Hamlyn, Anderson CONTACT Charles Burm

ADDRESS 4055 Montgomery Blvd. NE PHONE 881-1808

OWNER Presley Co. of New Mexico CONTACT Tom Burlison

ADDRESS 1909 Carlisle Blvd. NE PHONE 265-5811

ARCHITECT Jack Belcher CONTACT Jack Belcher

ADDRESS PO Box 1742, Corrales, NM 87048 PHONE 897-1297

SURVEYOR DMJM/Adam, Hamlyn, Anderson CONTACT W.T. Richards

ADDRESS 4055 Montgomery Blvd. NE PHONE 881-1808

CONTRACTOR Presley Co. of New Mexico CONTACT Tom Burlison

ADDRESS 1909 Carlisle Blvd. NE PHONE 265-5811

PRE-DESIGN MEETING:

___ YES
___ NO
___ COPY OF CONFERENCE RECAP SHEET PROVIDED

PLEASE CHECK TYPE OF APPROVAL EXPECTED WITH THIS SUBMITTAL

___ SKETCH PLAT APPROVAL
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___ SITE DEVELOPMENT PLAN APPROVAL
___ FINAL PLAT APPROVAL
X BUILDING PERMIT APPROVAL
___ CERTIFICATE OF OCCUPANCY APPROVAL
___ ROUGH GRADING PERMIT APPROVAL
___ GRADING/PAVING PERMIT APPROVAL
___ OTHER _____ (SPECIFY)

RECEIVED MAY 03 1984 HYDROLOGY SECTION

DATE SUBMITTED: 5-3-84

BY: Charles Burm

RECEIVED MAY 04 1984 HYDROLOGY SECTION

approved see letter

DMJM/ Adam, Hamlyn, Anderson

Reply To: ☐ Phoenix, Arizona 85014 — 4731 North Fifteenth Street — 602-264-1397
☒ Albuquerque, NM 87109 — 4055 Montgomery Blvd. N.E. — 505-881-1805

LETTER OF TRANSMITTAL

TO: City of Albuquerque
Hydrology

DATE: 5-03-84
PROJECT NO. 4622-03-02
PROJECT: CASA LADERA - 6041 Seq.

ATTN: Mr. Billy Goolsby.

RECEIVED MAY 04 1984 HYDROLOGY SECTION

WE TRANSMIT:
(X) herewith ( ) under separate cover via
( ) in accordance with your request

FOR YOUR:
(X) approval ( ) distribution to parties
( ) review & comment ( ) record
( ) use ( )

RECEIVED MAY 03 1984 HYDROLOGY SECTION

THE FOLLOWING:
(X) prints ( ) copy of letter ( ) change order
( ) originals ( ) specifications ( ) calculations
( ) shop drawings ( )

Copies	Dwg. No.	DESCRIPTION	Action Code
1 ea		Revised Dwg - for Drainage Report	E

Action Code
A. REVIEWED
B. REVIEWED AS NOTED
C. REVISE & RESUBMIT
D. REJECTED
E. See REMARKS below

REMARKS: Sequoia Road Plans are in for review that answers questions 1, 2 & 3. Bench mark has been added. No elev differences over 18" exist across the walls the roof Drains are onto the back yard so that areas.

COPIES TO: file

If enclosures are not as noted, please inform us immediately.

SIGNED: Charles Bean

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

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

May 5, 1984

Mr. Thomas N. Burlison
Development Manager
1909 Carlisle Boulevard, NE
Albuquerque, NM 87110

RE: VILLA LADERA (G11-D22) AND CASA LADERA (G11-D22A)

Dear Mr. Burlison:

The referenced plans dated May 3 and 5, 1984, are in substantial compliance with our comments of March 29 and 30, 1984 (respectively), with the exception of the required improvements within the Public Right-of-Way. However, this office will release building permits for these projects with the understanding that the Certificate of Occupancy cannot be released without a certificate of completion and acceptance by the City Engineer's office for these improvements. This requirement is an addition to the normal on-site inspections provided by Hydrology.

The drainage covenant regulating nuisance flows on-site is being routed to various City Departments for comments and if none are received, the agreements will be recorded and a copy forwarded to you.

Per our telephone conversation, it is my understanding that your engineer will certify the on-site drainage improvements (in accordance with the DPM checklist) for the purpose of obtaining the certificates of occupancy.

If you should have any questions regarding the above, please feel free to call me at 766-7644.

Sincerely,

Fred J. Aguirre
Design Hydrologist

FJA/dlw

cc: Jake Bordenave, DMJM

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

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 768-7644

May 7, 1984

Mr. Charles Burm
DMJM/Adam, Hamlyn, Anderson
4055-A Montgomery Boulevard NE
Albuquerque, NM 87109

REF: SEQUOIA ROAD IMPROVEMENT PLAN (PROJECT NUMBER 2116) G11-D22 & 22A

Dear Mr. Burm:

With respect to the referenced project, I submit the following comments:

1. The proposed sediment basin may not be desirable in that after a storm there would be water standing at elevation 06.30. This will effectively result in silt deposition along 95% of the proposed storm sewer. This will then become a high maintenance system.

2. A system I would recommend to you is to have a surface outfall just south of the Golf Course entrance. This could be followed by a retention pond lined with cobbles. This pond could be sized to store the one year storm, and the cobble lined pond would allow infiltration and easier maintenance access than the sediment basin. There may be a need to grade a swale for the pond outfall. Note also that this pond would act as a debris basin before discharging to the golf course.

3. Provide sufficient grades downstream of the storm drain to outfall to verify compliance with the Parks Department outfall requirements. This office will provide the required coordination with the Parks Department to satisfy their concerns.

4. Provide a signature block on the appropriate construction plan sheets for AMAFCA'S sign-off.

If you have any questions regarding any of the comments, please feel free to call me at 766-7644.

Please disregard the previous letter as it was incomplete.

Sincerely,

Fred J. Aguirre
Design Hydrologist

FJA:mrk

cc: Thomas L. Burlison

INFORMATION SHEET

PROJECT TITLE CASA LADERA APARTMENTS TYPE OF SUBMITTAL Record Drainage Plans for Temp. Certif. of Occupancy.

ZONE ATLAS PAGE NO. G-11/ DRAFT Certification CITY ADDRESS 6041 Sequoia NW

LEGAL DESCRIPTION Tract -B, Wellington West

ENGINEERING FIRM DMJM/Adam, Hamlyn, Anderson CONTACT Charles Burm

ADDRESS 4055 Montgomery Blvd. NE PHONE 881-1808

OWNER Presley Co. of New Mexico CONTACT Tom Burlison

ADDRESS 1909 Carlisle Blvd. NE PHONE 265-5811

ARCHITECT Jack Belcher CONTACT Jack Belcher

ADDRESS PO Box 1742, Corrales, NM 87048 PHONE 897-1297

SURVEYOR DMJM/Adam, Hamlyn, Anderson CONTACT W.T. Richards

ADDRESS 4055 Montgomery Blvd. NE PHONE 881-1808

CONTRACTOR Presley Co. of New Mexico CONTACT Tom Burlison

ADDRESS 1909 Carlisle Blvd. NE PHONE 265-5811

PRE-DESIGN MEETING:

___ YES
___ NO
___ COPY OF CONFERENCE RECAP SHEET PROVIDED

PLEASE CHECK TYPE OF APPROVAL EXPECTED WITH THIS SUBMITTAL:

___ SKETCH PLAT APPROVAL
___ PRELIMINARY PLAT APPROVAL
___ SITE DEVELOPMENT PLAN APPROVAL
___ FINAL PLAT APPROVAL
___ BUILDING PERMIT APPROVAL
X CERTIFICATE OF OCCUPANCY APPROVAL
___ ROUGH GRADING PERMIT APPROVAL
___ GRADING/PAVING PERMIT APPROVAL
___ OTHER _____ (SPECIFY)

AX-80-28 10/16/80
Z-80-132 " "

DATE SUBMITTED: Nov. 2, 1984

BY: Charles Burm

RECEIVED
NOV 02 1984
DESIGN HYDROLOGY SECTION

Construction Contracting & Management, Inc.
General Contracting • Design/Build • Construction Management
1423 Carlisle Blvd., N.E.
Albuquerque, New Mexico 87110
(505) 255-2255

November 2, 1984

City of Albuquerque
Design Hydrology Section
P.O. Box 1293
Albuquerque, New Mexico 87103

RE: Casa Ladera, 6041 Sequoia NW, Temporary Certificate of Occupancy

Dear Sirs:

We acknowledge that we have an obligation to convert this Temporary Certificate of Occupancy to a Certificate of Occupancy. In order to accomplish this conversion, we must complete the following punch list of items within the next thirty days:

1) Install four checkered plates on one half of each double D inlet
2) Install roof drain weirs (By Presley)
3) Install slotted manhole cover on sediment basin
4) Adjust manhole to grade at a 90% bend at the west entrance of Casa Ladera
5) Clean and flush storm sewer system and remove debris from sediment basins after flushing

Sincerely,

C.J. Mead, P.E.
President

CJM/dc

RECEIVED
NOV 02 1984
DESIGN HYDROLOGY SECTION

Presley Company Of New Mexico

November 2, 1984

City of Albuquerque
Design Hydrology Section
P.O. Box 1293
Albuquerque, New Mexico 87103

RE: Casa Ladera, 6041 Sequoia N.W.
Temporary Certificate of Occupancy

Dear Sirs,

We acknowledge we have an obligation to convert this Temporary Certificate of Occupancy to a Certificate of Occupancy. In order to accomplish this conversion we must complete the following punch list items within the next thirty (30) days:

1) Install checkered plates on modified double D catch basin.
2) Install roof drain weirs.
3) Install sediment basin graded cover.
4) Adjust manhole to grade at 90° bend.
5) Clean and flush system.

Sincerely,

Charles W. Reynolds
Vice-President Sales & Marketing

CWR:bk

RECEIVED
NOV 02 1984
DESIGN HYDROLOGY
SECTION

1909 Carlisle Blvd., N.E. • Albuquerque, New Mexico 87110 • (505) 265-5811

DMJM/Adam, Hamlyn, Anderson

November 2, 1984
MDD/Engineering, Hydrology
City of Albuquerque
PO Box 1293
Albuquerque, NM 87103

Attn: Mr. Bernie Montoya

Re: CASA LADERA CONDOMINIUMS

Dear Sir:

Submitted herewith are record drawings of the subject development. The major features of the drainage system have been installed and the paving has been completed.

A punch list, including the following items, has been submitted to the Contractor.

1. Install checkered plates on modified Dbl. "D" catch basins.
2. Install roof drain weirs.
3. Install sediment basin grated cover.
4. Adjust manhole to grade @ 90° bend.
5. Clean & flush system.

Letters from the Developer and the Contractor acknowledging the obligation to accomplish this work are attached.

The units and all downstream areas are protected with the system in its' present form; however, the system requires the punch list items completed to operate in its' design form, i.e. restricted flows.

Sincerely,

REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR NO. 5110 NEW MEXICO JEAN J. BORDENAVE

JEAN J. BORDENAVE, N.M.P.E. & L.S. #5110

RECEIVED NOV 02 1984 DESIGN HYDROLOGY SECTION

A Division of
Daniel, Mann, Johnson, & Mendenhall

Suite 280
5700 Harper Drive, N.E.
Albuquerque, New Mexico 87109
Telephone: 505/822-7955

Planning
Engineering
Systems
Economics

INFORMATION SHEET

PROJECT TITLE CASA LADERA APARTMENTS TYPE OF SUBMITTAL Certification + Record Drawings

ZONE ATLAS PAGE NO. G-11 CITY ADDRESS 6041 Sequoia NW G11-D22A

LEGAL DESCRIPTION Tract -B, Wellington West

ENGINEERING FIRM DMJM/Adam, Hamlyn, Anderson CONTACT Charles Burm

ADDRESS 4055 Montgomery Blvd. NE PHONE 881-1808 822-7955

OWNER Presley Co. of New Mexico CONTACT Tom Burlison

ADDRESS 1909 Carlisle Blvd. NE PHONE 265-5811

ARCHITECT Jack Belcher CONTACT Jack Belcher

ADDRESS PO Box 1742, Corrales, NM 87048 PHONE 897-1297

SURVEYOR DMJM/Adam, Hamlyn, Anderson CONTACT W.T. Richards

ADDRESS 4055 Montgomery Blvd. NE PHONE 881-1808

CONTRACTOR Presley Co. of New Mexico CONTACT Tom Burlison

ADDRESS 1909 Carlisle Blvd. NE PHONE 265-5811

PRE-DESIGN MEETING:

___ YES
___ NO
___ COPY OF CONFERENCE RECAP SHEET PROVIDED

PLEASE CHECK TYPE OF APPROVAL EXPECTED WITH THIS SUBMITTAL:

___ SKETCH PLAT APPROVAL
___ PRELIMINARY PLAT APPROVAL
___ SITE DEVELOPMENT PLAN APPROVAL
___ FINAL PLAT APPROVAL
___ BUILDING PERMIT APPROVAL
X CERTIFICATE OF OCCUPANCY APPROVAL
___ ROUGH GRADING PERMIT APPROVAL
___ GRADING/PAVING PERMIT APPROVAL
___ OTHER _____ (SPECIFY)

DATE SUBMITTED: 11-21-84

BY: Charles Burm

RECEIVED
NOV 21 1984
HYDROLOGY SECTION

DMJM/Adam, Hamlyn, Anderson

November 21, 1984

City of Albuquerque
Design Hydrology Section
PO Box 1293
Albuquerque, N.M. 87103

Attn: Mr. Bernie Montoya

Re: Casa Ladera, 6041 Sequoia N.W.
G11-D22A DMJM #4622-03-02

Dear Sir:

Submitted herewith are record drawings of the subject development. The Major features of the drainage system have been installed. The offsite improvements (Sequoia Rd.), as we understand from Engineering Inspections, has been scheduled for Final Inspection today.

The drainage from the site is per the approved drainage plan; however, due to construction tolerance, the peak discharge from the 100 year event has increased approximately 0.6 cfs.

If there are any questions, please call.

Sincerely,

Jean J. Bordenave, PE

JJB/ccl
Enclosures

CC: Presley Homes of N.M.

RECEIVED
NOV 21 1984
HYDROLOGY SECTION

REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR NO 5110 NEW MEXICO JEAN J. BORDENAVE

JEAN J. BORDENAVE, N.M.P.E.& L.S.#5110

A Division of
Daniel, Mann, Johnson, & Mendenhall

Suite 280
5700 Harper Drive, N.E.
Albuquerque, New Mexico 87109
Telephone: 505/822-7955

Planning
Engineering
Systems
Economics

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

READING FILE

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

November 27, 1984

Mr. Jake Bordenave
DMJM/Adam, Hamlyn, Anderson
4055 Montgomery Boulevard NE
Albuquerque, NM 87108

REF: TRACT B WELLINGTON WEST CASA LADERA APARTMENTS (G11-D22A)
CERTIFICATION

Dear Mr. Bordenave:

Based on the information provided on your November 21, 1984 resubmittal of the above drainage plan, certification cannot be accepted until the items listed below have been addressed:

1. Information sheet with resubmittal designation.

2. Certification statement within plan, stamped and signed by Engineer.

3. Provide copies of construction approval from the appropriate government agencies for construction within their right-of-way and/or easements.

If you should have any questions or comments, feel free to call me at 766-7644.

Sincerely yours,

Bernie J. Montoya

Bernie J. Montoya
Engineering Assistant, CE

BJM:mrk

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION

HYDROLOGY SECTION PROJ. NO. _____ DATE: 11/28/83

PLANNING DIVISION NO. _____

CONFERENCE RECAP

SUBJECT: Presley Apartments (G11)

	WHO	REPRESENTING
ATTENDANCE:	Jake Bordenave	
	Billy Goolsby	

FINDINGS: ① Drainage Report required per DPM.

② Free discharge allowed into Ladera basin with coordination of involved parties

③ "Construction Within Public R/W" documents required for approval.

④ Lotlines to be removed or drainage agreement required

The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED: Billy Goolsby	SIGNED: [illegible]
TITLE: CE/Hydrology	TITLE: Div. Man.
DATE: 11/28/83	DATE: 11/28/83

INFORMATION SHEET

PROJECT TITLE CASA LADERA APARTMENTS TYPE OF SUBMITTAL Certificate of Occupancy

ZONE ATLAS PAGE NO. G-11 CITY ADDRESS 6041 Sequoia NW

LEGAL DESCRIPTION Tract -B, Wellington West

ENGINEERING FIRM DMJM/Adam, Hamlyn, Anderson CONTACT Charles Burm

ADDRESS 4055 Montgomery Blvd. NE PHONE 881-1808

OWNER Presley Co. of New Mexico CONTACT Tom Burlison

ADDRESS 1909 Carlisle Blvd. NE PHONE 265-5811

ARCHITECT Jack Belcher CONTACT Jack Belcher

ADDRESS PO Box 1742, Corrales, NM 87048 PHONE 897-1297

SURVEYOR DMJM/Adam, Hamlyn, Anderson CONTACT W.T. Richards

ADDRESS 4055 Montgomery Blvd. NE PHONE 881-1808

CONTRACTOR Presley Co. of New Mexico CONTACT Tom Burlison

ADDRESS 1909 Carlisle Blvd. NE PHONE 265-5811

PRE-DESIGN MEETING:

___ YES
___ NO
___ COPY OF CONFERENCE RECAP SHEET PROVIDED

PLEASE CHECK TYPE OF APPROVAL EXPECTED WITH THIS SUBMITTAL:

___ SKETCH PLAT APPROVAL
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___ SITE DEVELOPMENT PLAN APPROVAL
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X CERTIFICATE OF OCCUPANCY APPROVAL
___ ROUGH GRADING PERMIT APPROVAL
___ GRADING/PAVING PERMIT APPROVAL
___ OTHER _____ (SPECIFY)

RECEIVED
NOV 28 1984
DESIGN HYDROLOGY SECTION

DATE SUBMITTED: 11-28-84

BY: Charles Burm

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

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

November 29, 1984

Mr. Jake Bordenave
DMJM/Adam, Hamlyn, Anderson
4055 Montgomery Boulevard NE
Albuquerque, NM 87108

REF: TRACT B WELLINGTON WEST CASA LADERA APARTMENTS (G11-D22A)
CERTIFICATION

Dear Mr. Bordenave:

Based on the information provided on your November 28, 1984 resubmittal, certification for the above referenced plan is acceptable.

If you have any questions or comments, please feel free to call me at 766-7644.

Sincerely yours,

Bernie J. Montoya

Bernie J. Montoya
Engineering Assistant, C.E.

BJM:mrk

RECEIVED
MAY 22 1985
CITY ENGINEER

CITY OF ALBUQUERQUE
PARKS AND RECREATION DEPARTMENT
GOLF MANAGEMENT DIVISION
6401 Osuna Road, N. E.
Albuquerque, NM 87109
May 17, 1985

cc RWD

RECEIVED
MAY 21 1985
DH0126
HYDROLOGY SECTION

INTER-OFFICE CORRESPONDENCE

TO: Fred Acquirre, Civil Engineer, Engineering Division

FROM: Ernest Guillen, Superintendent, Golf Management Division

SUBJECT: Storm Drainage, Sequoia Road Project Villa Ladera and Casa Ladera

Approximately one year has passed since the installation of the storm drainage being put to use at Ladera Golf Course from the two appartment complexes, and we find it being unworkable as to our understanding and presented to us by the developers. Final grading on the golf course side was never completed. The storm drainage work done on the project properties appear to be completed, which it appears that their only concern was their part and not taking us into consideration thereafter. Now, their problem is on our property, emptying their drainage problems on us.

As you remember, we were told that the sediment basin would never overflow or have standing water, because it was to percolate at a rate that it would not allow water to surface. This past winter has been one of our wettest winters for some time, and we have experienced an overflow of this drain, causing damage to the front of Nos. 1 and 10 Tee, where, at times, mowing of the grass is not allowed because of the very wet areas in front of these tees. The other area holding water from this drain is between No. 1 Tee and the practice range.

We still insist that a concrete swale be constructed to carry water from the sediment basin to the sand draw located on the south end of the practice fairway.

We, in good faith, approved this encroachment with the understanding that the requesting party would further improve the drainage if the existing drain did not work. Therefore, I am requesting for your office to investigate the possibility of the extension of the swale drain as I am proposing. This project must be coordinated with the Golf Management Division Office to assure that the golfing public will not be inconvenienced. All cost for labor and materials required to modify the storm drainage problems must be paid by the Presley Company of New Mexico as per my understanding of the drainage covenant dated April 18, 1984.

I would appreciate it if you would look into this matter as soon as possible. Please call me if we need to meet further.

EG:mlk

c: Mike Walker, Assistant Director, Parks and Recreation Department
Park and Golf Management
Orlando Sedillo, Director, Parks and Recreation Department
David Chavez, Assistant Superintendent, Golf Management Division

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

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

June 13, 1985

Jake Bordenave
DMJM/Adam, Hamlyn, Anderson
5700 Harper Drive, NE Suite 280
Albuquerque, New Mexico 87109

RE: LADERA GOLF COURSE

Dear Mr. Bordenave:

I have recently received a letter from the Parks Department (copy attached) regarding the storm drain constructed within the Ladera Golf Course.

It appears that the storm drain system constructed is not functioning as designed, that is, water stands in the storm drain and outside the storm drain outlet pipe for days as depicted by the pictures enclosed. According to the Parks Department, this situation is not only the result of a storm water but also the result of nuisance waters eminating from Casa Ladera, Villa Ladera.

This situation according to the Parks Department, prohibits access and is damaging several of their tees. I am solicting your comments and recommendations to correct this problem since your organization designed the storm drain system and also certified compliance with the approved drainage plans for Villa Ladera and Casa Ladera, which were designed to percolate nuisance waters into the soil.

Your immediate attention to this matter will be greatly appreciated.

Cordially,

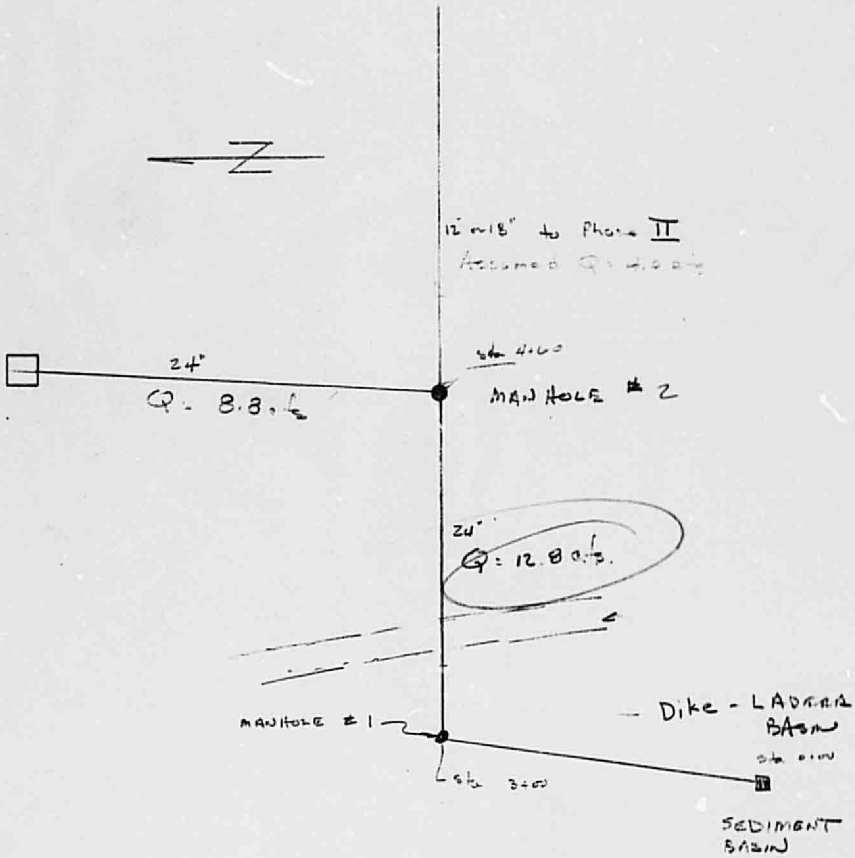
Fred J. Aguirre, P.E.
Design Hydrologist

cc: Rip Orr
C. Dwayne Sheppard
Presley Homes
Parks Department

DMJM / AHA ALBUQUERQUE	PROJECT	PROJECT NO.		PAGE
		BY:	DATE:	
SUBJECT				

REVISED

SKETCH - LADERA OUTFALL



SUMMARY OF HYDRAULIC CALCULATIONS

CLOSED CONDUIT

BY: C Burm
DATE: 3-15-84
SHEET: OF

PROJECT: Villa Ladera
LINE:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
STATION	STRUCT	D	C	A	V	K	S_f	L	Δ	JUNCTION D	JUNCTION θ	h_f	h_b	h_j	h_{mb}	h_t	h_{misc}	Σ	E.G.	h_v	H.G.
0+00	Terminal Basin																		7.0	—	7.0
																				0.26	
																			7.26		7.26
0+00		@ LADERA BASIN																			
		24	12.8	3.14	4.08	226.2	[illegible]	300	85°			0.26	0.05		0.01			1.02	10.28	"	10.02
3+00	MH #1																				
		24	12.8	3.14	4.08	226.2	[illegible]	160	—			0.01	—		—			0.51	11.38	.26	11.12
4+00	MH #2													0.59				0.59			
Phase	1																				
4+60	MH #1																		11.24	.12	11.12
		24	8.8	3.14	2.80	226.2	[illegible]	135	—			0.20	—					0.20	11.44	.12	11.32
5+95	Subbasin	BASIN																			

LADERA BASIN
Height to 7.0

REMARKS:

MANNING'S n:

REVISED 4-20-84

REV. 3-83

160

PLATE 22.8 B-5

22.8

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DMJM / AHA ALBUQUERQUE	PROJECT	PROJECT NO.		PAGE
		BY:	DATE:	
SUBJECT				

Revised 4-20-84

Hydraulic Grade line - onsite Phase I

Pipe: RCP n: 0.013

CONTROL POINT — from outfall analysis

SEDIMENT BASIN — Design EGL as Begin US: 11.84 − H_v = 0.38

Pipe INVERT = 8.0 — Pipe Size: 12" — 11.06

Length = 60' — S_f = 0.0070

Q: 8.8 cfs — H_f = 0.42' — 0.42

Area No. 12 — 11.48

Grate = 12.5 — Pipe INVERT = 8.5 — Pipe Size: 18"

Length = 385' — S_f = 0.001837

Q: 4.5 cfs — H_f = 0.71 — 0.71

Normal depth of Flow = 0.85' — S_o = 0.0065 — 12.19

Area No. 13

Grate = 14.0 — pipe INVERT = 11.0

Pipe Size = 12" — S_f = 0.0068

Length = 340' — h_f = 2.31

Q = 2.94 cfs — 2.31

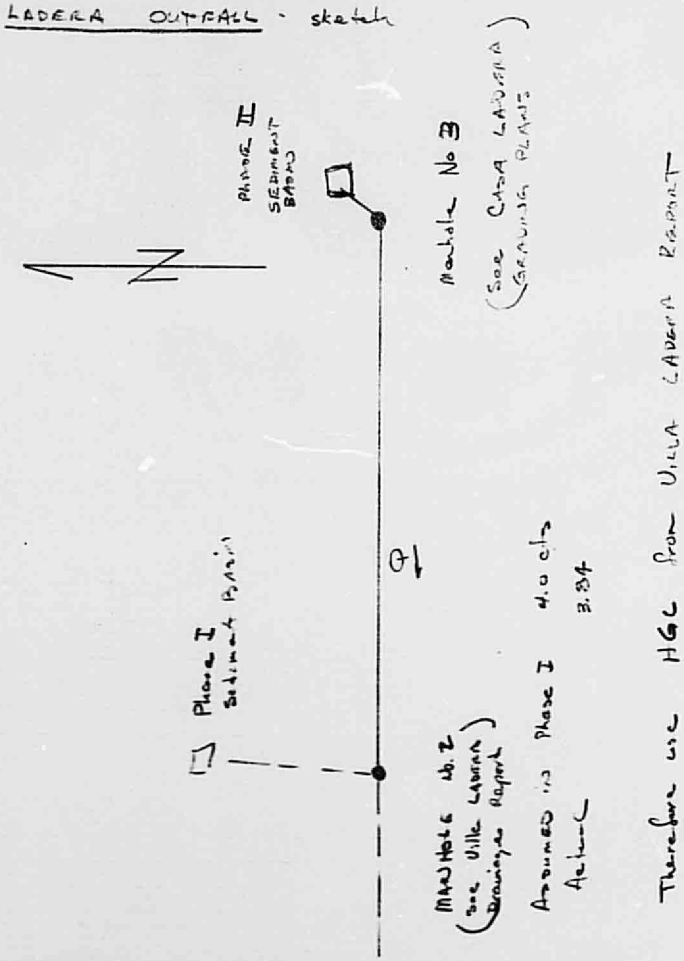
Area No. 8

Grate = 15.0 INVERT = 12.0 — 14.50

DMJM / AHA ALBUQUERQUE	PROJECT	PROJECT NO.	PAGE
		BY: C. Burch / DATE: 8-20-84	
SUBJECT			

Revised 11-20-84

LADERA OUTFALL - sketch



Assumed 1/3 Phase I 4.0 cfs
Actual 3.34

Therefore use HGL from Villa Ladera Report

DMJM / AHA ALBUQUERQUE	PROJECT	PROJECT NO.		PAGE
		BY:	DATE:	
SUBJECT				

Revised 4-20-84

HYDRAULIC GRADE LINE

MANHOLE NO. 2 — EGL = 11.44
From (Villa Ladana Report)

$- V^2/2g$ — $- 0.15$

Q = 3.84 cfs D = 15"

k = 64.6 S_f = 0.0035 HGL 11.29 MH #1

V = 3.6 ft/sec $V^2/2g$ = 0.15

Length: MH #1 to MH #3 = 218' + H_f = .77'

12.06 MH #2

+ Manhole Loss = .05 ($V^2/2g$) = 0.01 .01

12.07

Manhole #3 to Sediment Basin Phase II

Q = 3.84 D = 15"

K = 64.6 S_f = 0.0035 H_f = 0.08

Length = 22' $V^2/2g$ = 0.15

12.15 HGL Sediment Basin

Entrance Loss + $V^2/2g$ .15

At Sediment Basin Phase II → 12.30

DMJM / AHA ALBUQUERQUE	PROJECT	PROJECT NO.		PAGE
		BY:	DATE:	
SUBJECT				

Revised 4-20-88

LINE 'A'

EGL @ Sediment Basin 12.30

Sed. Basin to Area #4 $-V^2/2g$ 0.18

Q = 1.88 cfs D = 10" K = 21.9 12.12

$V^2/2g$ = 0.18 V = 3.45 fps $+ H_f$ = 0.50

Length of Pipe = 65' S_f 0.007

HGL @ Area #4 12.62

$-V^2/2g$ = .18

Area #4 EGL 12.80

From Area #4 to Area #3

Q = 0.64 cfs D = 8" $-V^2/2g$ 0.05

$V^2/2g$ = 0.05 V = 1.86 12.75

K = 12.1 Length = 370' H_f 1.07

S_f = 0.003

Area #2 → HGL 13.82

EGL + $V^2/2g$ = 0.05

13.87

DMJM / AHA ALBUQUERQUE	PROJECT	PROJECT NO.		PAGE
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SUBJECT				

Revised 4-20-84

LINE 'B'

EGL @ Sediment Basin 12.30

HGL → $-V^2/2g$ -.10

12.20

H_f = 1.02

SEDIMENT BASIN to Area #3

Q = 1.96 D = 12" K = 35.6

$V^2/2g$ = 0.10 V = 2.49 S_f = 0.003

Length = 336'

BASIN #3 → HGL 13.22

$+V^2/2g$ .10

EGL 13.32

$V^2/2g$ -0.05

13.27

H_f = 0.78

BASIN #3 to BASIN #1

Q = 0.65 D = 8" K = 12.1

$V^2/2g$ = 186 V = 0.05

Length = 270' S_f = 0.003

HGL = 14.05

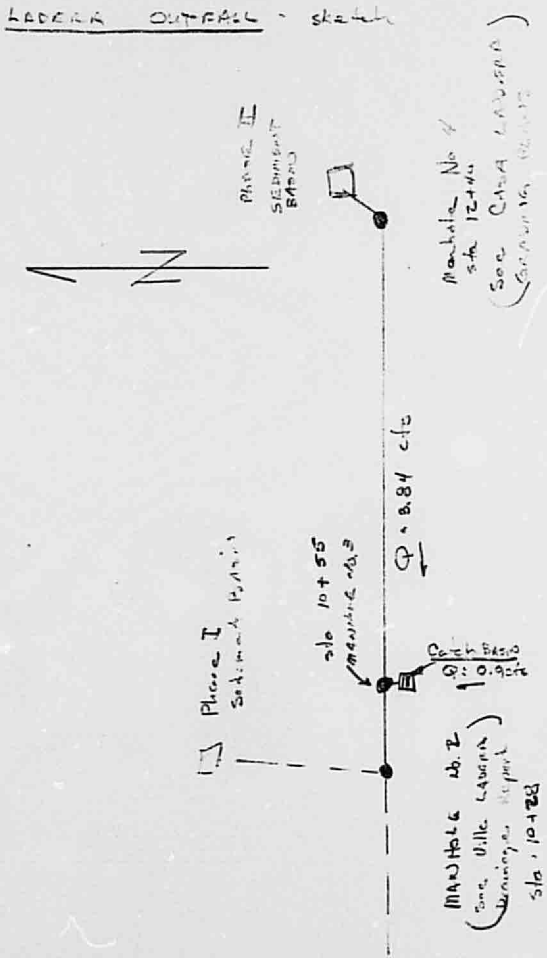
$+V^2/2g$ +.05

EGL - BASIN #1 14.10

CASA LADERA - 6041 Sequoia NW

DMJM / AHA ALBUQUERQUE	PROJECT	PROJECT NO.		PAGE
		BY:	DATE:	
SUBJECT				

LADERA OUTFALL - sketch



DMJM / AHA ALBUQUERQUE	PROJECT	PROJECT NO.		PAGE
		BY:	DATE:	
SUBJECT				

Revised [illegible] 4-26-84

HYDRAULIC GRADE LINE

MANHOLE NO. 2 (From Villa Lagunas [illegible])

EGL = 10.51

$-H_v$ = 0.12

HGL 10.39 MH #2

Q = 4.9 cfs D = 18"

k = 105.1 S_f = 0.0022

V = 2.77 ft/sec $V^2/2g$ = 0.12

Length: MH #2 to MH #3 = 27'

$+ H_f$ = 0.06

10.45 #3

+ Manhole Loss = .05 ($V^2/2g$) = 0.01

.01

10.46

Manhole #3 to Manhole #4

Q = 3.84 D = 18"

K = 105.1 S_f = 0.0013

Length = 185 $V^2/2g$ = 0.08

V = 2.25

H_f = 0.25

10.71 MH #4

MANHOLE #4 to SEDIMENT BASIN

Q = 3.84 cfs D = 15"

K = 64.7 S_f = 0.0035

Length = 22' $V^2/2g$ = 0.15

V = 3.4

H_f = 0.08

10.79

Entrance Loss (H_v) = .15 SEDIMENT BASIN

10.94

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DMJM / AHA ALBUQUERQUE	PROJECT	PROJECT NO.		PAGE
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SUBJECT				

Revised 4-26-84
4-26-84

LINE 'A'

EGL @ Segment Begin 11.00

SED. from Area #4 $-V^2/2g$ 0.18

Q: 1.88 cfs D: 10" K: [illegible] 10.82

$V^2/2g$ = 0.18 V = 3.45 fps $-H_f$ = 0.50

Length of Pipe: 65' S_f 0.007

HGL @ Area #4 11.32

$-V^2/2g$ = .18

Area #4 EGL 11.50

From Area #4 to Area #3

Q: 0.64 cfs D: 8" $-V^2/2g$ 0.05

$V^2/2g$ = 0.05 V = 1.80 11.45

K: 12.1 Length: 870' H_f 1.07

S_f = 0.003

Area #2 → HGL 12.52

EGL + $V^2/2g$ = 0.05

12.57

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DMJM / AHA ALBUQUERQUE	PROJECT	PROJECT NO.		PAGE
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SUBJECT				

Revised 4-26-84

LINE 'B'

EGL @ Sediment Basin 11.00
HGL → + $V^2/2g$ −.10
10.90
H_f = 1.02

SEDIMENT BASIN to Area #3

Q = 1.96 D = 12" K = 35.6

$V^2/2g$ = 0.10 V = 2.49 S_f = 0.003

Length = 336'

Basin #3 → HGL 11.92
+ $V^2/2g$ .10
EGL 12.02
$V^2/2g$ −0.05
11.97
H_f = 0.78

BASIN #3 to BASIN #1

Q = 0.65 D = 8" K = 12.1

$V^2/2g$ = 186 V = 0.05

Length = 270' S_f = 0.003

HGL = 12.75
+ $V^2/2g$ + .05
EGL - Basin #1 12.80

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Villa LADERA 6101 Sequoia NW

DMJM / AHA ALBUQUERQUE	PROJECT Villa Ladera & Villa Ladera 6101 Seq. & Sequoia Seq.	PROJECT NO. 4627.[illegible]	PAGE
		BY: [illegible] DATE: [illegible]	
SUBJECT Sequoia Road - Hydraulics [illegible]			

Drainage Area = North ½ of Seq. Rd. from Catch Basin to High Point in the Road.

Catch Basin ≈ sta 10+55
High Point ≈ sta 14+15

Area = L x W
= (14+15 - 10+55) (30)
= 12,240 S.F.

C = 0.98
i = 4.65 in/hr * (0.657) (10 year storm)
= 3.14 in/hr.

Q = C i A
= (0.98)(3.14)(12,240/43560) cfs
= 0.86 cfs. ⇒ 0.9 cfs

Slope of street = 0.0096 %
Depth of flow = from Plate 22.3 D-3
= .23'

USE TYPE 'A' CATCH BASIN

DMJM / AHA ALBUQUERQUE	PROJECT	PROJECT NO.		PAGE
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SUBJECT				

Revised 4-26-84

LADERA OUTFALL

High Water LADERA BASIN ≈ 9.0 (from Floodway Map)

Total Q to BASIN:

Phase I :	8.8 cfs.	
Phase II :	3.8 cfs	(From Casa Ladera Report)
STREET Flow :	0.9 cfs.	
TOTAL Flow :	13.5 cfs.	

DMJM / AHA ALBUQUERQUE	PROJECT	PROJECT NO.		PAGE
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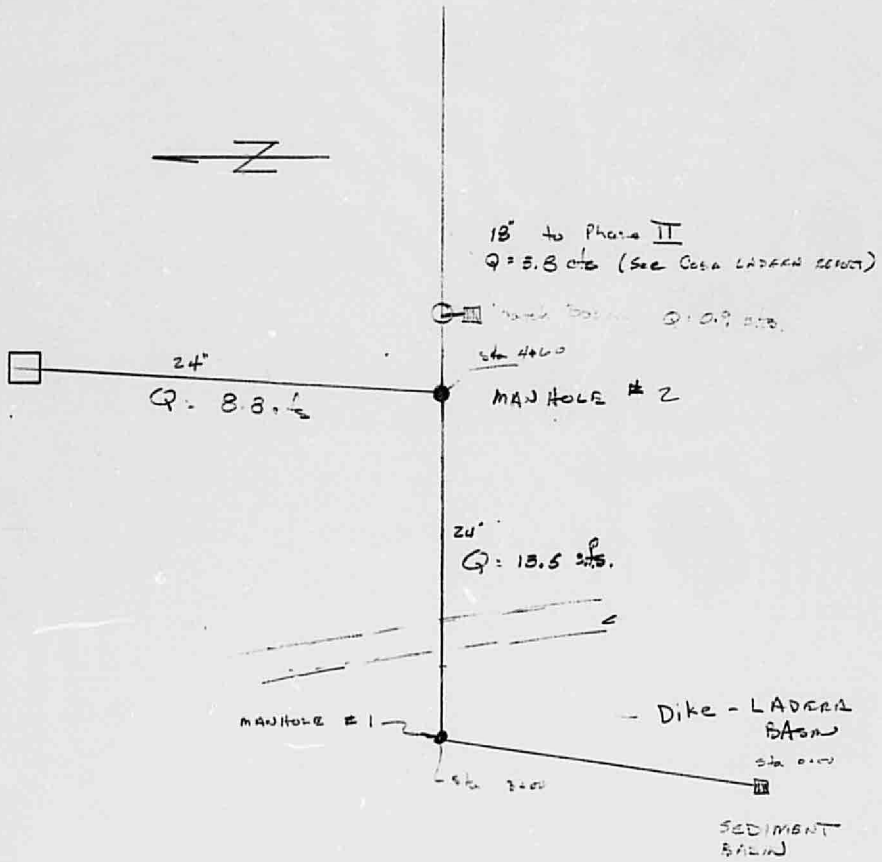
SUBJECT				

SKETCH - LADERA OUTFALL

REVISED 4-20-84
REVISED 4-26-84



REV. 3-83

SUMMARY OF HYDRAULIC CALCULATIONS

CLOSED CONDUIT

BY: C. Burm
DATE: 3-15-84
SHEET: DF1

PROJECT: Villa Ladera
LINE:

LAGUNA BASIN
Height 9.00

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
STATION	STRUCT	D	Q	A	V	K	S_f	L	Δ	JUNCTION D	JUNCTION Q	LOSSES h_f	h_p	h_j	h_{mb}	h_f	h_{misc}	Σ	E.G.	h_v	H.G.
0+00	Spillway Basin																		9.0	—	7.0
																				0.18	
0+00			LADERA		BASIN														9.18		7.0
		27"	13.5	3.98	3.4	3076	0.0019	300	85°			0.57	0.05		0.01			0.63	9.81	"	9.63
3+00	MH #1																				
			13.5	3.98	3.4	3076	0.0019	160	—			0.30	—		—			0.30	10.27	"	10.19
4+60	MH #2													0.26				0.26			
Phase	1																				
N+60	MH #2																		10.51	.12	10.17
		24	8.8	3.14	2.80	2216.2	0.0045	135	—			0.20	—					0.20	10.51	.12	10.39
6+75	Outlet	BASIN	(Outlet)																		

REMARKS:

MANNING'S n:

Revised 4-26-84

Note: Hydraulic Grade Line for 10 year Storm is 2.4' lower because outlet is not submerged. Therefore basin is 6.5 2.5' lower than the 100 year outlet.

160

PLATE 22.8 B-5

22.8

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DMJM / AHA ALBUQUERQUE	PROJECT	PROJECT NO.		PAGE
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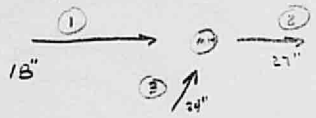
SUBJECT				

MANHOLE # 2

Junction Loss



Q_2 = 13.5 cfs

A_2 = 3.976 SF (27")

V_2 = 3.4 ft/sec

h_{v_2} = 0.18

$Q_1' = Q_2 \left(A_1/A_2\right)$

$= 13.5 \left(\frac{1.767}{3.967}\right)$

$= 6.0$ cfs

A_1 1.767 SF (18")

V_1' = 3.4 ft/sec

h_{v_1}' = 0.18

$Q_3' = Q_2 - Q_1'$

$13.5 - 6.0$

$= 7.5$ cfs

A_3 = 3.14

V_3' = 2.4 ft/sec

h_{v_3}' = 0.09

θ = 87°

$\cos\theta$ = 0.05

$$\Delta Y = \frac{Q_2 V_2 - Q_1' V_1' - Q_3' V_3' \cos\theta}{\left(\frac{A_1 + A_2}{2}\right) g}$$

$$= \frac{(13.5)(3.4) - (6.0)(3.4) - (7.5)(2.4)(0.05)}{\left(\frac{1.767 + 3.976}{2}\right)(32.2)} = \frac{24.552}{92.410}$$

$= 0.26$

$h_j = \Delta Y + h_{v_1} - h_{v_2} = 0.26 + 0.18 - 0.18$

$= 0.26$

DMJM / AHA ALBUQUERQUE	PROJECT	PROJECT NO.		PAGE
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SUBJECT				

REVISED 4-20-84
Revised 4-26-84

EG₀ for Phase 1

= HG at MH #1 + h_0

= 10.19 + 0.12

= 10.31

DMJM / AHA ALBUQUERQUE	PROJECT	PROJECT NO.		PAGE
		BY:	DATE:	
SUBJECT				

REVISED 4/20/84
4/26/84

Hydraulic Grade line - Onsite Phase I

Pipe: RCP n = 0.013

CONTROL POINT — from outfall analysis

SEDIMENT BASIN — Design EGL at Right of 10.81 − H_L = 0.68 = 10.13

Pipe INVERT = 8.0 — Pipe Size: 18"

Length = 60' — S_f = 0.0070

Q = 8.8 cfs — H_f = 0.42' — 0.42

Area No. 12 — 10.55

Grate = 12.5 — Pipe INVERT = 8.5 — Pipe Size: 18"

Length = 385' — S_f = 0.001837

Q = 4.5 cfs — H_f = 0.71 — 0.71

Normal depth of Flow = 0.85' — S_o = 0.0065 — 11.26

Area No. 13

Grate = 14.0 — pipe INVERT = 11.0

Pipe Size = 12" — S_f = 0.0068

Length = 340' — h_f = 2.31

Q = 2.94 cfs — 2.31

Area No. 8

Grate = 15.0 INVERT = 12.0 — 13.57

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Sd-39588 923

DRAINAGE COVENANT

THIS COVENANT made this 18th day of April, 1984, by and between the City of Albuquerque, a municipal corporation, (City) and Presley Company of New Mexico, a New Mexico Corporation (Owner, which term includes successors and assigns.)

RECITAL

The Owner is owner of certain real property located at 6041 and 6101 Sequoia Road, NW in Albuquerque, New Mexico, (the Property) and more particularly described as follows:

Tracts A and B of Wellington West Subdivision as the same is shown and designated on the plat of said subdivision filed in the office of the County Clerk of Bernalillo County, New Mexico on April 3, 1984.

That pursuant to City ordinances, regulations, and other applicable laws, the Owner is required to install and/or maintain certain drainage facilities on the Property, and the parties wish to provide for an agreement as to the obligations and responsibilities for same.

DESCRIPTION OF FACILITIES

The following facilities are to be constructed and/or maintained by the owner:

Two (2) separate on site drainage systems (surface and underground) for each Tract aforementioned. These systems shall be maintained in such a manner as to insure that the irrigation systems for these Tracts shall not discharge onto the property of others. It is the intent of these drainage systems to discharge storm water run-off only.

CONSTRUCTION OF DRAINAGE FACILITIES

The Owner shall construct the drainage facilities in accordance with standards, plans, and specifications prescribed and approved by the City.

MAINTENANCE OF FACILITIES

The Owner shall, at his cost in accordance with the standards, plans, and specifications prescribed by the City, maintain said drainage facility. The City shall have the right to enter periodically upon the Property to inspect the drainage facility.

FAILURE TO COMPLY AND LIEN

In the event that the Owner shall fail to construct the drainage facility in accordance with standards, plans, and specifications prescribed and approved by the City or fail to adequately maintain said facilities, the City shall give the Owner notice in writing to construct, correct, or maintain said facilities, and if the Owner fails to comply therewith within sixty (60) days, the City may enter upon said property to perform the necessary construction or maintenance. The cost of the City's performing such construction or maintenance shall be paid by the Owner. In the event the Owner fails to pay said cost within thirty (30) days after being billed for same, the City may file a lien against the Property.

LIABILITY

The City shall not be liable for any damages to the Owner resulting from its construction, modification, or maintenance of said facilities.

Recorded -
5/29/84
Misc 119A Pg 923-924

NOTICE

The written notice provided for herein shall be accomplished by mailing same to:

Presley Company of New Mexico
1909 Carlisle Boulevard, NE
Albuquerque, New Mexico 87110

The Owner may change said address by giving written notice, certified mail, return receipt requested, to the City Engineer, City Hall, at 505 Marquette Street, Albuquerque, New Mexico, 87103.

INDEMNIFICATION AND HOLD HARMLESS

The Owner agrees to defend, indemnify, and hold harmless, the City, its officials, agents and employees from and against any and all claims, actions, suits, or proceedings of any kind brought against said parties for or on account of any matter arising from the drainage facility provided for herein or the Owner's failure to construct, maintain, or modify the drainage facility under this Covenant.

COVENANT RUNNING WITH THE PROPERTY

The obligation of the Owner is set forth herein shall be binding upon the Owner, his heirs, and assigns, and the property of the Owner as described herein and will run with said property until released by the City.

CITY OF ALBUQUERQUE

Ernest Guillen, Superintendent
Golf Course Management

OWNER: PRESLEY COMPANY OF NEW MEXICO

BY: Charles E. Cook
CHARLES E. COOK, PRESIDENT

REVIEWED BY THE LEGAL DEPARTMENT

ASSISTANT CITY ATTORNEY

CITY OF ALBUQUERQUE

Frank A. Kleinhenz
CHIEF ADMINISTRATIVE OFFICER

ATTEST: Theresa Chavez
City Clerk/Deputy

ACKNOWLEDGEMENTS

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this 18th day of April, 1984, by Charles E. Cook, President, Presley Company of New Mexico, a New Mexico Corporation, on behalf of said corporation.

Pamela Ann E. Pengo
NOTARY PUBLIC

My Commission Expires:
7-8-85

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this 23rd day of May, 1984, by Frank A. Kleinhenz, Chief Administrative Officer of the City of Albuquerque, municipal corporation, on behalf of said corporation.

Dolores L. Grant
NOTARY PUBLIC

My Commission Expires:
12/18/84

G11/D22A

DRAINAGE REPORT
FOR
CASA LADERA APARTMENTS

RECEIVED
MAR 30 1984
HYDROLOGY SECTION

Prepared for:

Presley Company of New Mexico
1909 Carlisle Blvd. NE
Albuquerque, NM 87110

Prepared by:

DMJM/Adam, Hamlyn, Anderson
4055 Montgomery Blvd. NE
Albuquerque, NM 87109

3/30/84

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CASA LADERA APARTMENTS
DRAINAGE REPORT

PURPOSE

The purpose of this report is to provide recommendations to the developer regarding grading of the proposed development and for controlling runoff resulting from improvements in a manner that is acceptable to the City of Albuquerque. This report covers the second phase of the Presley Company's development, at this site. Reference is made to the Drainage report for Phase I; Villa Ladera Apartments, G-11 D-22.

LOCATION AND TERRAIN

Site is located at the northeast corner of Ladera Road NW and Sequoia Road NW. See Plates I, II and III for site location. The site slopes from east to west with a slope of 1%.

OFFSITE DRAINAGE

There is a ridge line which separates the drainage east and west along the east property line. The area east of this line drains east and south towards Atrisco Dr. Therefore, no offsite drainage will be considered contributing to the site.

INTERNAL DRAINAGE

All internally generated flows are directed into ponds located within the parking areas. Rooftop ponding has been included on the apartment buildings. The runoff from the basins are picked up by a catch basin and a pipe system and carried to a sediment basin in the southwest corner of the site. The outfall line carries flows to the Ladera Retention Basin. The peak discharge from this phase of the project is less than the assumed flow covered in the Villa Ladera Report.

INTERNAL DRAINAGE(CONT'D)

The sediment basin has been provided for two reasons. One, is to trap and reduce the amount of sediment from the site. Second, is to reduce the discharge frequency to the Ladera Basin. The nuisance flows will be discharged into the soil by percolation.

The rooftop storage is provided by means of a weir plate across the opening of the roof drains. The weir plate is 3" high with a 2" wide notch for discharge. The maximum ponding depth is 3" at the roof drain outlet. (See basin routing for roof top storage)

An emergency outfall has been provided in case the pipe system should fail. The outfall is the 22' wide driveway south to Sequoia Road.

EROSION CONTROL

There are no public roads or streets downstream of the site. Historically runoff that could carry sediment is to the west. The runoff is ponded against the Ladera Retention Dike approximately 100 to 200 feet west of the site. Therefore, no specific construction will be provided for erosion control.

CONCLUSION:

Internally generated flows have been handled conservatively. The developed 100 year peak flow of 3.8 cfs is 76% of the 100 year undeveloped peak flow. The sediment basin will reduce the sediment carried to the Ladera Basin and should handle the discharge of nuisance flows.

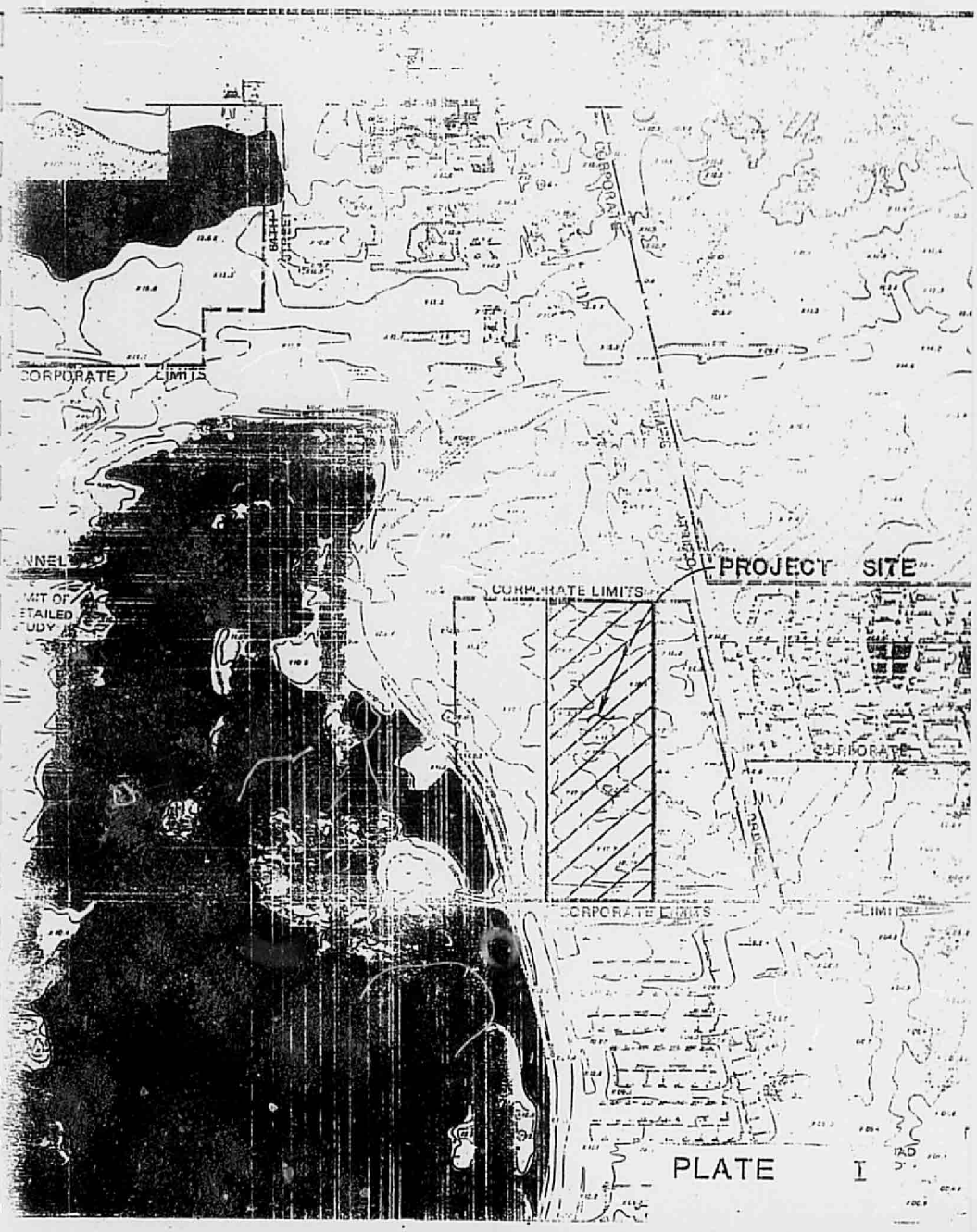

PROJECT SITE
CORPORATE LIMITS
CORPORATE LIMITS
CORPORATE LIMITS
CORPORATE LIMITS
CORPORATE
BATH STREET

PLATE I

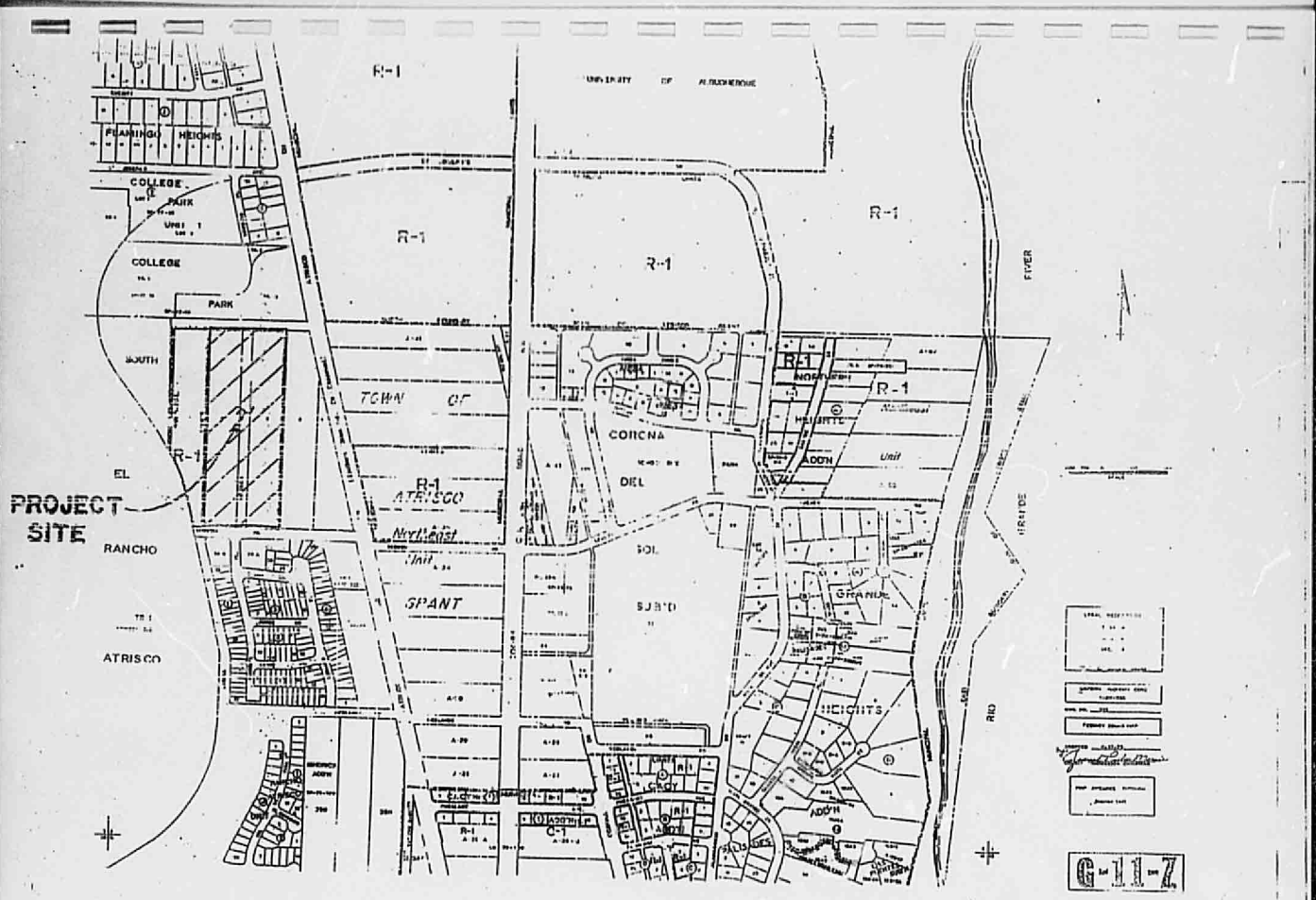

R-1
UNIVERSITY OF ALBUQUERQUE
FLAMINGO HEIGHTS
COLLEGE
PARK
UNIT
COLLEGE
PARK
SOUTH
EL
RANCHO
ATRISCO
PROJECT SITE
TOWN OF
ATRISCO
Northeast
Unit
SPANT
CORONA
DEL
SOL
SUB'D
NORTHGATE
Unit
GRANDE
HEIGHTS
ADDN
RIVER
RIO
G-11-Z

PLATE II

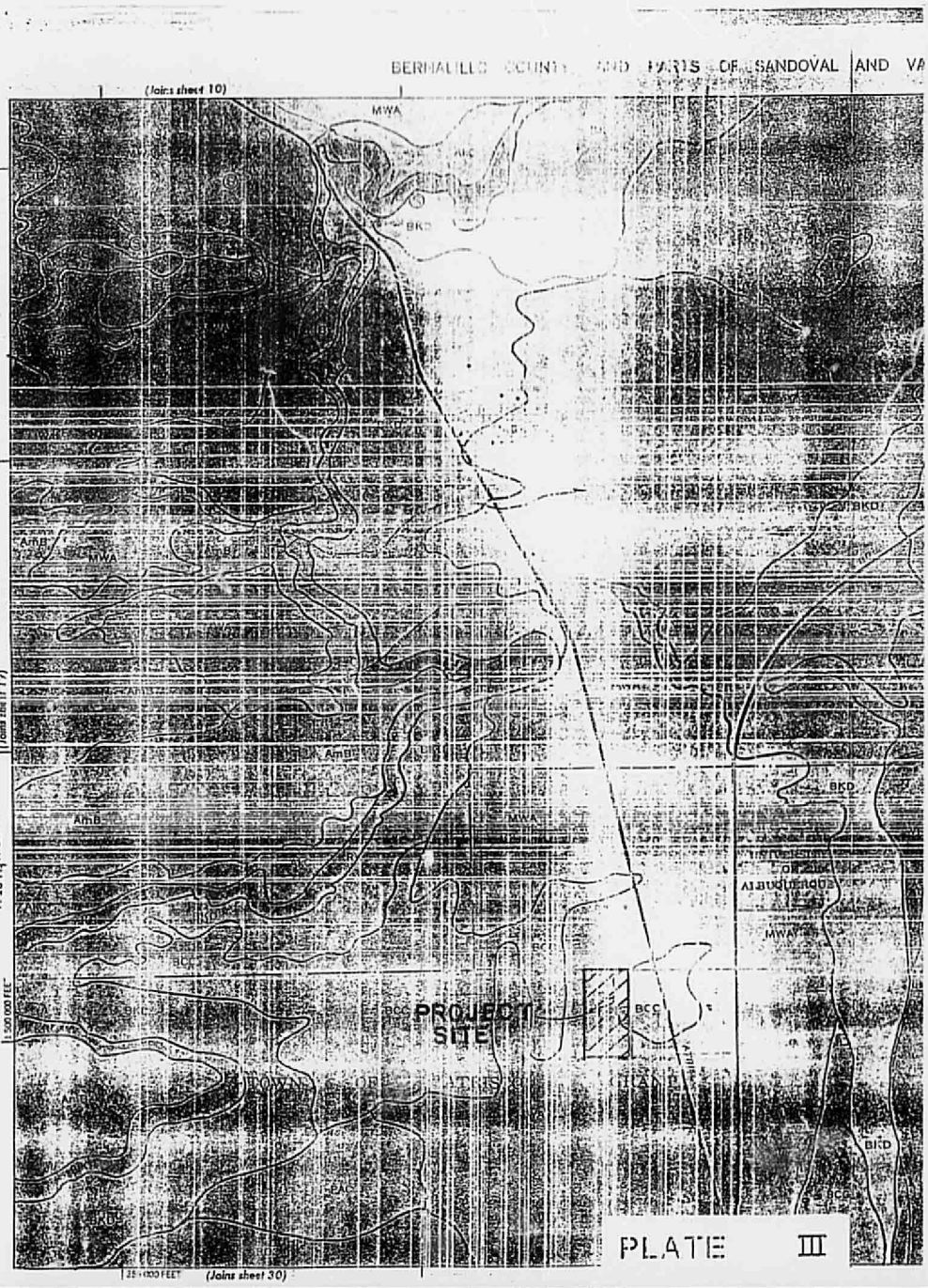

BERNALILLO COUNTY AND PARTS OF SANDOVAL AND VA
(Joins sheet 10)
MWA
BKD
BKD
MWA
Amb
Amb
BKD
MWA
BKD
MWA
BCC
PROJECT SITE
BCC
BKD
T. 10 N.
T. 11 N.
Scale 1:24000
(Joins sheet 17)
10000 Feet
5000
0
1000
2000
3000
4000
5000
(Joins sheet 30)

PLATE III

COMPUTATIONS

DMJM / AHA ALBUQUERQUE	PROJECT	PROJECT NO.		PAGE
		BY: C. Burm	DATE: 3-29-84	
SUBJECT CASA LADERA				

EXISTING CONDITIONS

Area = 5.1 Acres

C = 0.40

T_c = 590' / 0.75 fps = 13 min. (overland flow)

Q = CIA

$i = 2.2(6.84)(13)^{-.51}$

$i = 4.07$ "/hr.

$Q_{100} = 0.4(4.07)(3.1)$

$= 5.0$ cfs

$Q_{10} = (0.657)\,Q_{100}$

$= (0.657)(5.0)$

$= 3.3$ cfs.

DMJM / AHA ALBUQUERQUE	PROJECT	PROJECT NO.		PAGE
		BY: J. Burn	DATE: 5-25-84	
SUBJECT CASA LADERA				

PEAK DISCHARGE - DEVELOPED CONDITION (See Basin Routing)

Area No.	Peak Discharge (cfs)
1	0.65
2	0.54
3	1.31
4	1.24
TOTAL	3.84 cfs

DMJM/AHA
ALBUQUERQUE

PROJECT

SUBJECT

PROJECT NO.

BY: C. Butler

DATE: 8-23-84

PAGE

LADERA OUTFALL - sketch

Assumed in Phase I 4.0 cfs

Actual 3.84

Therefore use HGL from Villa Cabana Report

DMJM / AHA ALBUQUERQUE	PROJECT	PROJECT NO.		PAGE
		BY:	DATE:	
SUBJECT				

HYDRAULIC GRADE LINE

MANHOLE NO. 1 — EGL = 10.60
from (Villa Labana Resort)

$- V^2/2g$ — $- 0.15$

Q = 3.84 cfs D = 15"

K = 64.6 S_f = 0.0035 HGL = 10.45 MH #1

V = 3.4 ft/sec $V^2/2g$ = 0.15

Length: MH #1 to MH #2 = 218' + H_f = .77'

11.22 MH # 2

+ Manhole Loss = .05 ($V^2/2g$) = 0.01 .01

11.23

Manhole #2 to Sediment Basin Phase II

Q = 3.84 D = 15"

K = 64.6 S_f = 0.0035 H_f = 0.08

Length = 22' $V^2/2g$ = 0.5

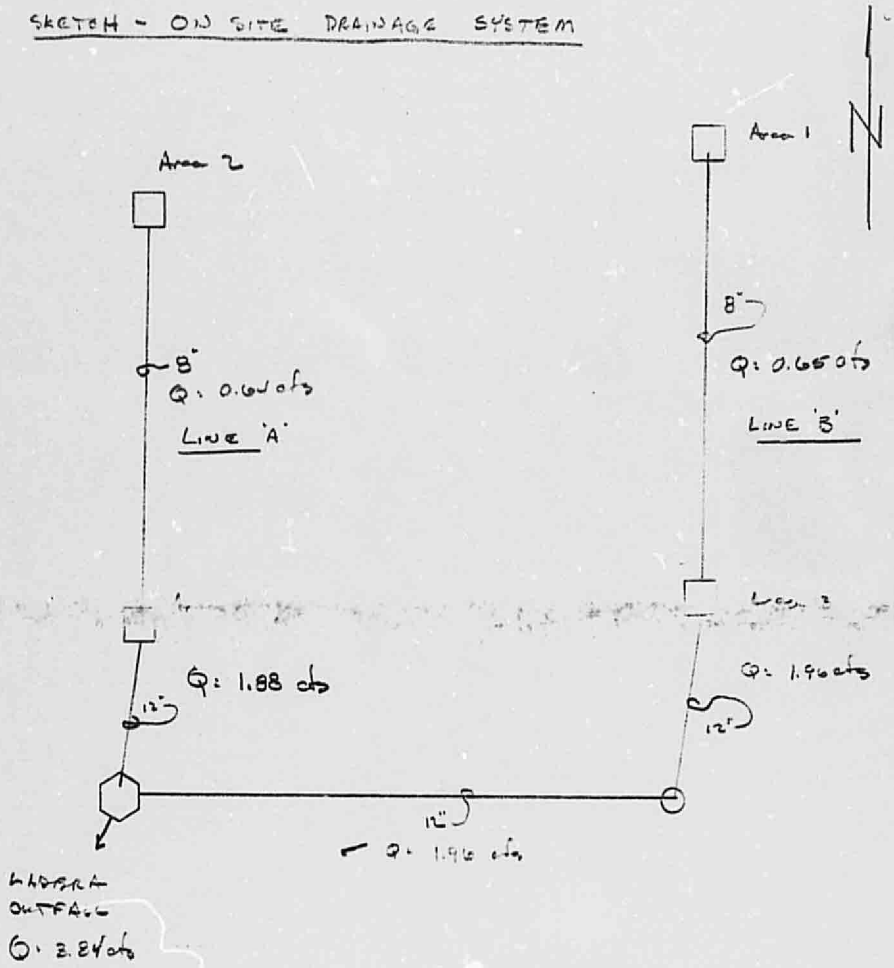
11.31 HGL Sediment Basin

Entrance Loss = $V^2/2g$ .05

At Sediment Basin Phase II → 11.46

DMJM / AHA ALBUQUERQUE	PROJECT	PROJECT NO.		PAGE
		BY:	DATE:	
SUBJECT				

SKETCH - ON SITE DRAINAGE SYSTEM



DMJM / AnA ALBUQUERQUE	PROJECT	PROJECT NO.		PAGE
		BY:	DATE:	
SUBJECT				

LINE 'A'

EGL @ SEDIMENT BASIN 11.46

SED. BASIN to Area #4 $- V^2/2g$ 0.18

Q: 1.88 cfs D: 10" K: 21.9 11.26

$V^2/2g = 0.18$ V: 3.45 fps $+ H_f$: 0.50

Length of Pipe: 65' S_f 0.007

HGL @ Area #4 11.76

$- V^2/2g$: .08

Area #4 EGL 11.94

From Area #4 to Area #3

Q: 0.64 cfs D: 8"

$V^2/2g = 0.05$ V: 1.86 11.89

K: 12.1 Length: 370' H_f 1.07

S_f: 0.003

Area #2 → HGL 12.96

EGL $+ V^2/2g$ → 0.05

13.01

DMJM / AHA ALBUQUERQUE	PROJECT	PROJECT NO		PAGE
		BY:	DATE:	
SUBJECT				

LINE 'B'

EGL @ Sediment Basin 11.46

HGL → $-V^2/2g$ -.10

11.36

H_f = 1.02

SEDIMENT BASIN to Area #3

Q = 1.96 D = 12" K = 35.6

$V^2/2g$ = 0.10 V = 2.49 S_f = 0.003

Length = 336'

BASIN #3 → HGL 12.38

$+V^2/2g$ .10

EGL 12.48

BASIN #3 to BASIN #1

$V^2/2g$ -0.05

12.43

Q = 0.65 D = 8" K = 12.1

$V^2/2g$ = 1.60 V = 0.05

H_f = 0.78

Length = 270' S_f = 0.003

HGL = 13.21

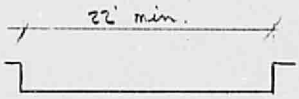
$+V^2/2g$ +.05

EGL - BASIN #1 13.26

DMJM / AHA ALBUQUERQUE	PROJECT	PROJECT NO.		PAGE
		BY:	DATE:	
SUBJECT				

EMERGENCY OUTFALL

22' WIDE DRIVE WAY



for Depth of 0.2'

$Q = 2.6 (22) (0.2)^{3/2}$

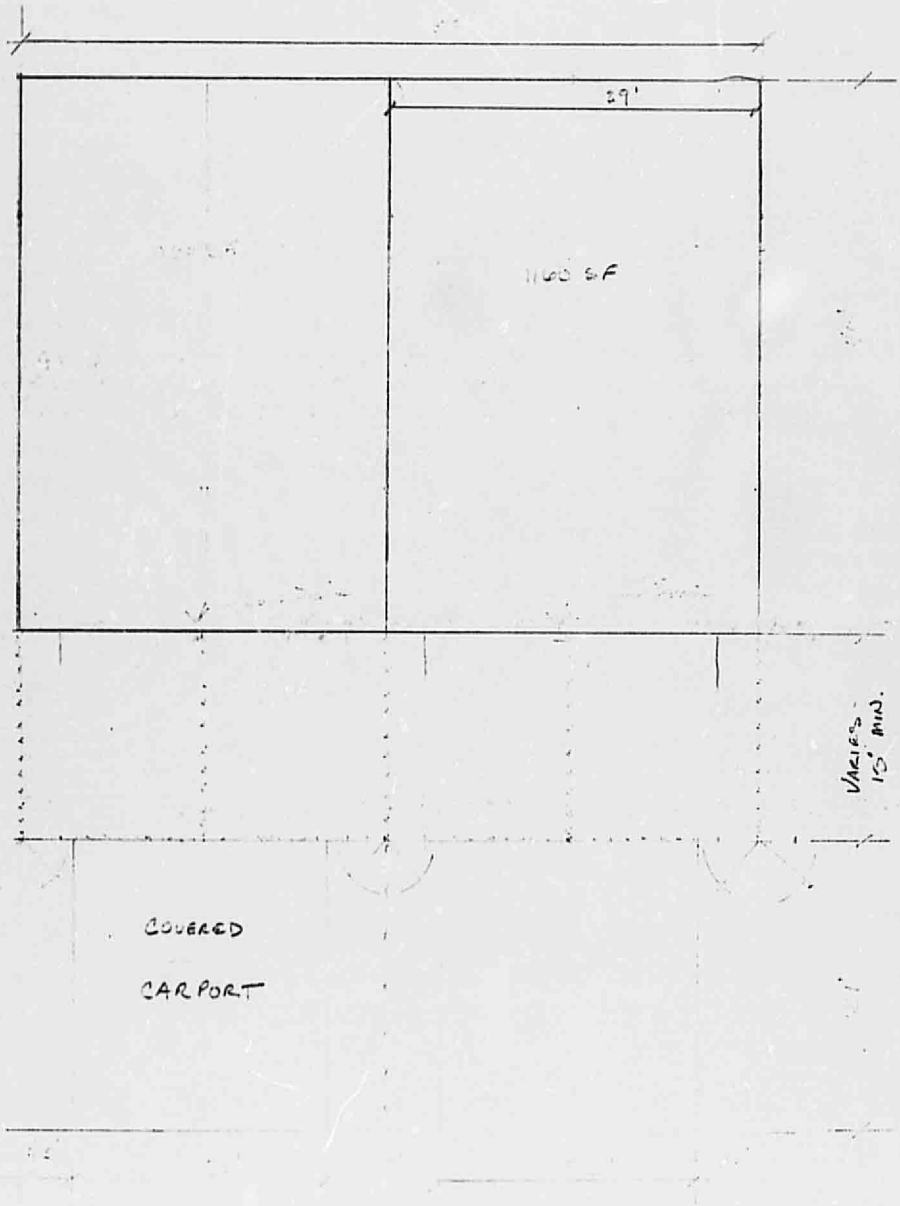
$= 5.12$ cfs → Take it from the site as:

DMJM / AHA ALBUQUERQUE	PROJECT CASA LAPERIA	PROJECT NO. 4522-03-02		PAGE
		BY: C Burm	DATE: 5-26-94	
SUBJECT DRAINAGE AREAS				

DRAINAGE BASINS

Area No.	Parking Area	Roof Area	Landscape	Overall
1	12,420	6-units 6960	5140	1084
2	12,250	6-units 6960	4350	1020
3	15,650	10-units 11,600	5400	5820
4	16,810	8-units 9280	6150	10,210

DMJM / AHA ALBUQUERQUE	PROJECT Transit Unit	PROJECT NO. 4622-03-02		PAGE
		BY: C. Burr	DATE: 3-15-84	
SUBJECT				



BASIN ROUTING

DRJN/NM
4056 MONTGOMERY BLVD. NE
ALBUQUERQUE, NEW MEXICO 87109

PROJECT: CASA LADERA ROOF STORAGE
DATE: 3/26/84

EFFECTIVE AREA 1160 SQ.FT.
TOTAL RAINFALL 2.20 INCHES

STORAGE BASIN

ELEV	AREA SQ.FT.	VOLUME CU.FT.
10.00	0	0
10.25	900	112

INFILTRATION 1ST HALF HOUR = 0.00 IN./HR.
INFILTRATION 2ND HALF HOUR = 0.00 IN./HR.
INFILTRATION AFTER 1 HOUR = 0.00 IN./HR.

OUTLET INFORMATION:

WEIR

LENGTH FEET	INVERT ELEV.
0.16	10.00
1.00	10.25

TIME MIN.	RAINFALL INCHES	ACCUM. INFLOW CUBIC FEET	POND ELEV.	AVG. POND ELEV.	ACCUM. OUTFLOW CUBIC FEET	STORAGE CUBIC FEET
0	0.000	0	10.000	10.000	0	0
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.000 CFS	0 CU.FT.		
	WEIR FLOW		0.003 CFS	1 CU.FT.		
5	0.125	12	10.077	10.038	1	10
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.000 CFS	0 CU.FT.		
	WEIR FLOW		0.012 CFS	3 CU.FT.		
10	0.281	27	10.112	10.095	4	22
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.000 CFS	0 CU.FT.		
	WEIR FLOW		0.021 CFS	6 CU.FT.		
15	0.624	60	10.165	10.139	11	49
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.000 CFS	0 CU.FT.		
	WEIR FLOW		0.033 CFS	10 CU.FT.		
20	1.045	101	10.210	10.188	21	79
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.000 CFS	0 CU.FT.		
	WEIR FLOW		0.040 CFS	12 CU.FT.		
25	1.203	116	10.214	10.212	33	83
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.000 CFS	0 CU.FT.		
	WEIR FLOW		0.041 CFS	12 CU.FT.		
30	1.315	127	10.212	10.213	45	81
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.000 CFS	0 CU.FT.		
	WEIR FLOW		0.039 CFS	23 CU.FT.		
40	1.513	146	10.206	10.209	69	76
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.000 CFS	0 CU.FT.		
	WEIR FLOW		0.037 CFS	22 CU.FT.		
50	1.689	163	10.198	10.202	92	71

```
        INFILTRATION                    0 CU.FT.
        ORIFICE FLOW  0.000 CFS         0 CU.FT.
        WEIR  FLOW    0.038 CFS        21 CU.FT.

 60     1.865      180    10.192    10.195        114          66

        INFILTRATION                    0 CU.FT.
        ORIFICE FLOW  0.000 CFS         0 CU.FT.
        WEIR  FLOW    0.028 CFS        34 CU.FT.

 80     1.931      186    10.145    10.168        148          38

        INFILTRATION                    0 CU.FT.
        ORIFICE FLOW  0.000 CFS         0 CU.FT.
        WEIR  FLOW    0.018 CFS        22 CU.FT.

100     1.986      192    10.108    10.126        171          21

        INFILTRATION                    0 CU.FT.
        ORIFICE FLOW  0.000 CFS         0 CU.FT.
        WEIR  FLOW    0.011 CFS        14 CU.FT.

120     2.032      196    10.078    10.093        185          11

        INFILTRATION                    0 CU.FT.
        ORIFICE FLOW  0.000 CFS         0 CU.FT.
        WEIR  FLOW    0.006 CFS        11 CU.FT.

150     2.083      201    10.046    10.062        197           3

        INFILTRATION                    0 CU.FT.
        ORIFICE FLOW  0.000 CFS         0 CU.FT.
        WEIR  FLOW    0.003 CFS         5 CU.FT.

180     2.116      204    10.029    10.038        202           1

        INFILTRATION                    0 CU.FT.
        ORIFICE FLOW  0.000 CFS         0 CU.FT.
        WEIR  FLOW    0.001 CFS         3 CU.FT.

210     2.142      207    10.024    10.026        206           1

        INFILTRATION                    0 CU.FT.
        ORIFICE FLOW  0.000 CFS         0 CU.FT.
        WEIR  FLOW    0.001 CFS         2 CU.FT.

240     2.162      209    10.019    10.021        208           0

        INFILTRATION                    0 CU.FT.
        ORIFICE FLOW  0.000 CFS         0 CU.FT.
        WEIR  FLOW    0.000 CFS         3 CU.FT.

300     2.198      212    10.013    10.016        211           0

        INFILTRATION                    0 CU.FT.
        ORIFICE FLOW  0.000 CFS         0 CU.FT.
        WEIR  FLOW    0.000 CFS         1 CU.FT.

360     2.200      212    10.001    10.007        212           0
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```
MAXIMUM OUT FLOW IS AT POND ELEV. 10.214
ORIFICE OUTFLOW IS    0.000 CFS
WEIR OUTFLOW IS       0.041 CFS
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DMJM / AHA ALBUQUERQUE	PROJECT	PROJECT NO.		PAGE
		BY: C. Burm	DATE: 3-26-84	
SUBJECT AREA 1 - CASA LADERA				

Area #1

Effective Area = .95(12420 - 1050) + .25(5400)

= 14,110

+ Discharge from 6 200 ft.

Period	6 x Inlet	Accumulation
2	1	6
3	3	24
4	6	60
5	10	120
6	12	192
7	12	264
8	23	402
9	22	534
10	21	660
11	24	864
12	22	996
13	14	1080
14	11	1146
15	5	1176
16	3	1194
17	2	1206
18	3	1224

Basin	Flow	Area
	14.45	[illegible]
	16.54	[illegible]
	17.0	2490 SF

Outlet 2

4' @ 14.45

BASIN ROUTING

DMJM/NM
4055 MONTGOMERY BLVD. NE
ALBUQUERQUE, NEW MEXICO 87109

PROJECT: CASA LADERA AREA 1
DATE: 3/27/84

EFFECTIVE AREA 14110 SQ.FT.
TOTAL RAINFALL 2.20 INCHES

STORAGE BASIN

ELEV	AREA SQ.FT.	VOLUME CU.FT.
14.45	6	0
16.50	6	12
17.00	2790	711

INFILTRATION 1ST HALF HOUR = 0.00 IN./HR.
INFILTRATION 2ND HALF HOUR = 0.00 IN./HR.
INFILTRATION AFTER 1 HOUR = 0.00 IN./HR.

OUTLET INFORMATION:

ROUND ORIFICE

DIAMETER INCHES	INVERT ELEV.
4.0	14.45

WEIR

LENGTH FEET	INVERT ELEV.
5.00	17.00

TIME MIN.	RAINFALL INCHES	ACCUM. INFLOW CUBIC FEET	POND ELEV.	AVG. POND ELEV.	ACCUM. OUTFLOW CUBIC FEET	STORAGE CUBIC FEET
0	0.000	0	14.450	14.450	0	0
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.597 CFS	115 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
5	0.125	147	16.574	15.512	119	28
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.589 CFS	176 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
10	0.281	337	16.600	16.587	296	41
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.607 CFS	182 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
15	0.624	758	16.809	16.704	478	280
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.633 CFS	189 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
20	1.045	1288	16.966	16.887	668	620
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.645 CFS	193 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
25	1.203	1534	16.986	16.976	862	673
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.647 CFS	194 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
30	1.315	1738	16.989	16.987	1056	682
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.645 CFS	387 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
40	1.513	2043	16.958	16.974	1443	600
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.641 CFS	385 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
50	1.687	2388	16.942	16.950	1828	560

	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW	0.639 CFS		383 CU.FT.		
	WEIR FLOW	0.000 CFS		0 CU.FT.		
60	1.866	2727	16.924	16.933	2712	515
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW	0.590 CFS		708 CU.FT.		
	WEIR FLOW	0.000 CFS		0 CU.FT.		
80	1.931	2931	16.284	16.590	2920	19
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW	0.360 CFS		432 CU.FT.		
	WEIR FLOW	0.000 CFS		0 CU.FT.		
100	1.986	3199	14.450	15.353	3200	0
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW	0.151 CFS		182 CU.FT.		
	WEIR FLOW	0.000 CFS		0 CU.FT.		
120	2.032	3386	15.056	14.753	3382	3
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW	0.151 CFS		273 CU.FT.		
	WEIR FLOW	0.000 CFS		0 CU.FT.		
150	2.083	3529	14.450	14.753	3530	0
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW	0.057 CFS		102 CU.FT.		
	WEIR FLOW	0.000 CFS		0 CU.FT.		
180	2.116	3634	14.487	14.618	3632	2
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW	0.057 CFS		102 CU.FT.		
	WEIR FLOW	0.000 CFS		0 CU.FT.		
210	2.142	3695	14.450	14.615	3695	0
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW	0.022 CFS		39 CU.FT.		
	WEIR FLOW	0.000 CFS		0 CU.FT.		
240	2.162	3736	14.653	14.551	3735	1
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW	0.022 CFS		79 CU.FT.		
	WEIR FLOW	0.000 CFS		0 CU.FT.		
300	2.193	3785	14.450	14.551	3735	0
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW	0.006 CFS		24 CU.FT.		
	WEIR FLOW	0.000 CFS		0 CU.FT.		
360	2.200	3810	14.550	14.505	3809	1

```
MAXIMUM OUT FLOW IS AT POND ELEV. 16.989
ORIFICE OUTFLOW IS   0.647 CFS
WEIR OUTFLOW IS      0.000 CFS
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DMJM / AHA ALBUQUERQUE	PROJECT CASA LADERA	PROJECT NO		PAGE
		BY: C. Ferrin	DATE: 3-26-80	
SUBJECT Area No. 2				

Area No. 2

Effective Area = .95(12,250 + 1020) + .25(4350)

= 13,694

+ Discharge from 6 roofs

Period No.	6 × 1 unit	Accum. Inflow
2	1	6
3	3	24
4	6	60
5	10	120
6	12	192
7	12	264
8	23	402
9	22	534
10	21	660
11	34	864
12	22	996
13	14	1080
14	11	1146
15	5	1176
16	3	1194
17	2	1206
18	3	1224

BASIN	Elev	Area
	14.4	6
	16.5	6
	17.0	2950

Outlets

4" @ 14.4

5' wide @ 17.0

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**********************************************************************
**                          BASIN   ROUTING                         **
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DMJM/HM
4055 MONTGOMERY BLVD. NE
ALBUQUERQUE, NEW MEXICO 87109

PROJECT: CASA LADERA AREA 2
DATE: 8/27/84

EFFECTIVE AREA 13694 SQ.FT.
TOTAL RAINFALL 2.20 INCHES

STORAGE BASIN

ELEV	AREA SQ.FT.	VOLUME CU.FT.
14.45	6	0
16.50	6	12
17.00	2950	751

INFILTRATION 1ST HALF HOUR = 0.00 IN./HR.
INFILTRATION 2ND HALF HOUR = 0.00 IN./HR.
INFILTRATION AFTER 1 HOUR = 0.00 IN./HR.

OUTLET INFORMATION:

ROUND ORIFICE

DIAMETER INCHES	INVERT ELEV.
4.0	14.45

WEIR

LENGTH FEET	INVERT ELEV.
5.00	17.00

TIME	RAINFALL	ACCUM. INFLOW	POND ELEV.	AVG. POND ELEV.	ACCUM. OUTFLOW	STORAGE
MIN.	INCHES	CUBIC FEET			CUBIC FEET	CUBIC FEET
0	0.000	0	14.480	14.480	0	0
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.396 CFS	118 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
5	0.125	143	16.562	15.506	118	24
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.587 CFS	176 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
10	0.281	327	16.581	16.572	295	32
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.604 CFS	181 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
15	0.624	737	16.789	16.685	476	260
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.630 CFS	189 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
20	1.045	1252	16.940	16.865	665	587
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.640 CFS	192 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
25	1.203	1493	16.959	16.949	858	635
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.643 CFS	192 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
30	1.315	1693	16.961	16.960	1051	642
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.641 CFS	384 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
40	1.513	1991	16.928	16.945	1435	555
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.637 CFS	382 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
50	1.689	2330	16.910	16.919	1818	512

	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW	0.635 CFS		361 CU.FT.		
	WEIR FLOW	0.000 CFS		0 CU.FT.		
60	1.865	2662	16.890	16.900	2199	463
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW	0.547 CFS		687 CU.FT.		
	WEIR FLOW	0.000 CFS		0 CU.FT.		
80	1.931	2864	15.741	16.316	2856	7
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW	0.290 CFS		349 CU.FT.		
	WEIR FLOW	0.000 CFS		0 CU.FT.		
100	1.986	3131	14.450	15.095	3131	0
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW	0.150 CFS		181 CU.FT.		
	WEIR FLOW	0.000 CFS		0 CU.FT.		
120	2.032	3315	15.053	14.751	3312	3
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW	0.150 CFS		271 CU.FT.		
	WEIR FLOW	0.000 CFS		0 CU.FT.		
150	2.083	3457	14.450	14.751	3457	0
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW	0.056 CFS		101 CU.FT.		
	WEIR FLOW	0.000 CFS		0 CU.FT.		
180	2.116	3561	14.785	14.617	3559	2
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW	0.056 CFS		101 CU.FT.		
	WEIR FLOW	0.000 CFS		0 CU.FT.		
210	2.142	3621	14.450	14.617	3621	0
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW	0.021 CFS		39 CU.FT.		
	WEIR FLOW	0.000 CFS		0 CU.FT.		
240	2.162	3661	14.651	14.550	3660	1
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW	0.021 CFS		78 CU.FT.		
	WEIR FLOW	0.000 CFS		0 CU.FT.		
300	2.193	3709	14.450	14.550	3709	0
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW	0.006 CFS		24 CU.FT.		
	WEIR FLOW	0.000 CFS		0 CU.FT.		
360	2.200	3734	14.550	14.503	3733	0

```
MAXIMUM OUT FLOW IS AT POND ELEV. 16.941
ORIFICE OUTFLOW IS    0.643 CFS
WEIR OUTFLOW IS       0.000 CFS
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DMJM / AHA ALBUQUERQUE	PROJECT CASA LADERA	PROJECT NO.		PAGE
		BY: C. Sum	DATE: 3-27-84	
SUBJECT				

AREA No. 3

Effective area .95 (15.6 ac + 5.3 ac) + .25 (5.0 ac)

= 21,750

+ Inflow from 10 roofs.

Period	10 x 1 unit	Accum. Inflow
2	1	10
3	5	40
4	6	100
5	10	200
6	12	320
7	17	440
8	23	670
9	22	890
10	21	1100
11	34	1440
12	22	1660
13	14	1800
14	11	1910
15	5	1960
16	3	1990
17	2	2010
18	3	2040

Basin Elev	Area
13.3	0
15.0	6
15.5	7230

Outlet [illegible] .75 13.3

[illegible] 5 @ 15.5

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**********************************************************
**                    BASIN   ROUTING                   **
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DMJM/NM
4055 MONTGOMERY BLVD. NE
ALBUQUERQUE, NEW MEXICO 87107

PROJECT: CASA LADERA AREA 3
DATE: 5/27/84

EFFECTIVE AREA 21750 SQ.FT.
TOTAL RAINFALL 2.20 INCHES

STORAGE BASIN

ELEV	AREA SQ.FT.	VOLUME CU.FT.
13.30	6	0
15.00	6	10
15.50	3230	817

INFILTRATION 1ST HALF HOUR = 0.00 IN./HR.
INFILTRATION 2ND HALF HOUR = 0.00 IN./HR.
INFILTRATION AFTER 1 HOUR = 0.00 IN./HR.

OUTLET INFORMATION:

ROUND ORIFICE

DIAMETER INCHES	INVERT ELEV.
6.0	13.30

WEIR

LENGTH FEET	INVERT ELEV.
5.00	15.50

TIME MIN.	RAINFALL INCHES	ACCUM. INFLOW CUBIC FEET	POND ELEV.	AVG. POND ELEV.	ACCUM. OUTFLOW CUBIC FEET	STORAGE CUBIC FEET
0	0.000	0	13.300	13.300	0	0
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.724 CFS	217 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
5	0.125	227	14.973	14.136	217	10
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.990 CFS	297 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
10	0.281	520	14.323	14.648	514	6
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		1.065 CFS	319 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
15	0.624	1172	15.318	14.821	834	338
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		1.286 CFS	385 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
20	1.045	1994	15.485	15.401	1220	774
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		1.314 CFS	394 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
25	1.203	2381	15.483	15.484	1614	766
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		1.310 CFS	393 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
30	1.315	2704	15.460	15.471	2007	696
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		1.287 CFS	772 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
40	1.513	3183	15.348	15.404	2780	403
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		1.249 CFS	749 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
50	1.669	3732	15.243	15.295	3525	202

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        INFILTRATION                    0 CU.FT.
        ORIFICE FLOW  1.196 CFS       716 CU.FT.
        WEIR  FLOW    0.000 CFS         0 CU.FT.

 60     1.865     4271    13.062    15.152      4248          23

        INFILTRATION                    0 CU.FT.
        ORIFICE FLOW  0.751 CFS       901 CU.FT.
        WEIR  FLOW    0.000 CFS         0 CU.FT.

 80     1.931     4601    13.300    14.161      4601           0

        INFILTRATION                    0 CU.FT.
        ORIFICE FLOW  0.362 CFS       434 CU.FT.
        WEIR  FLOW    0.000 CFS         0 CU.FT.

100     1.986     5040    14.124    13.712      5035           4

        INFILTRATION                    0 CU.FT.
        ORIFICE FLOW  0.362 CFS       434 CU.FT.
        WEIR  FLOW    0.000 CFS         0 CU.FT.

120     2.032     5344    13.300    13.712      5344           0

        INFILTRATION                    0 CU.FT.
        ORIFICE FLOW  0.127 CFS       228 CU.FT.
        WEIR  FLOW    0.000 CFS         0 CU.FT.

150     2.083     5576    13.750    13.525      5573           2

        INFILTRATION                    0 CU.FT.
        ORIFICE FLOW  0.127 CFS       228 CU.FT.
        WEIR  FLOW    0.000 CFS         0 CU.FT.

180     2.124     5748    13.300    13.525      5748           0

        INFILTRATION                    0 CU.FT.
        ORIFICE FLOW  0.053 CFS        95 CU.FT.
        WEIR  FLOW    0.000 CFS         0 CU.FT.

210     2.142     5843    13.583    13.441      5841           1

        INFILTRATION                    0 CU.FT.
        ORIFICE FLOW  0.053 CFS        95 CU.FT.
        WEIR  FLOW    0.000 CFS         0 CU.FT.

240     2.162     5909    13.300    13.441      5909           0

        INFILTRATION                    0 CU.FT.
        ORIFICE FLOW  0.020 CFS        74 CU.FT.
        WEIR  FLOW    0.000 CFS         0 CU.FT.

300     2.193     5955    13.474    13.337      5954           1

        INFILTRATION                    0 CU.FT.
        ORIFICE FLOW  0.020 CFS        75 CU.FT.
        WEIR  FLOW    0.000 CFS         0 CU.FT.

360     2.200     6027    13.300    13.337      6027           0
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MAXIMUM OUT FLOW IS AT POND ELEV. 15.450
ORIFICE OUTFLOW IS    1.315 CFS
WEIR OUTFLOW IS       0.000 CFS
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DMJM / AHA ALBUQUERQUE	PROJECT CASA LADERA	PROJECT NO.		PAGE
		BY:	DATE:	
SUBJECT				

AREA No 4

Effective area = .95 (16,310 + 10,210) + .25 (6150)

= 27,206

+ Inflow from 8 units

Period	8 x 1-Unit	Accum. Inflow
2	1	8
3	3	32
4	6	80
5	10	160
6	12	256
7	12	352
8	23	536
9	22	712
10	21	880
11	30	1152
12	22	1328
13	14	1440
14	11	1528
15	5	1568
16	3	1592
17	2	1608
18	3	1632

Basin	Elev	Area
	13.3	6
	14.8	6
	15.3	5480

Outlets

6" orifice 13.3

5' weir 15.3

BASIN ROUTING

DMJM/NM
4055 MONTGOMERY BLVD, NE
ALBUQUERQUE, NEW MEXICO 87109

PROJECT: CASA LADERA AREA 4
DATE: 3/27/84

EFFECTIVE AREA 27206 SQ.FT.
TOTAL RAINFALL 2.20 INCHES

STORAGE BASIN

ELEV	AREA SQ.FT.	VOLUME CU.FT.
13.30	6	0
14.80	6	9
15.30	3480	1380

INFILTRATION 1ST HALF HOUR = .00 IN./HR.
INFILTRATION 2ND HALF HOUR = 0.00 IN./HR.
INFILTRATION AFTER 1 HOUR = 0.00 IN./HR.

OUTLET INFORMATION:

ROUND ORIFICE

DIAMETER INCHES	INVERT ELEV.
6.0	13.30

WEIR

LENGTH FEET	INVERT ELEV.
5.00	15.30

TIME MIN.	RAINFALL INCHES	ACCUM. INFLOW CUBIC FEET	POND ELEV.	AVG. POND ELEV.	ACCUM. OUTFLOW CUBIC FEET	STORAGE CUBIC FEET
0	0.000	0	13.300	13.300	0	0
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		0.703 CFS	211 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
5	0.125	284	14.907	14.103	211	73
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		1.106 CFS	331 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
10	0.281	646	14.930	14.919	543	103
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		1.147 CFS	344 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
15	0.624	1448	15.117	15.024	887	561
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		1.211 CFS	363 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
20	1.045	2449	15.265	15.191	1250	1198
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		1.240 CFS	372 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
25	1.203	2889	15.278	15.272	1622	1265
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		1.242 CFS	372 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
30	1.315	3338	15.274	15.276	1995	1243
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		1.234 CFS	740 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
40	1.513	3783	15.235	15.254	2736	1047
	INFILTRATION			0 CU.FT.		
	ORIFICE FLOW		1.221 CFS	732 CU.FT.		
	WEIR FLOW		0.000 CFS	0 CU.FT.		
50	1.689	4386	15.202	15.218	3468	397

	INFILTRATION			0 CU.FT.			
	ORIFICE FLOW	1.208 CFS		725 CU.FT.			
	WEIR FLOW	0.000 CFS		0 CU.FT.			
60	1.865	4941	15.166	15.184	4194	747	
	INFILTRATION			0 CU.FT.			
	ORIFICE FLOW	0.885 CFS		1062 CU.FT.			
	WEIR FLOW	0.000 CFS		0 CU.FT.			
80	1.931	5259	13.687	14.427	5256	2	
	INFILTRATION			0 CU.FT.			
	ORIFICE FLOW	0.330 CFS		396 CU.FT.			
	WEIR FLOW	0.000 CFS		0 CU.FT.			
100	1.986	5655	13.690	13.689	5653	2	
	INFILTRATION			0 CU.FT.			
	ORIFICE FLOW	0.234 CFS		281 CU.FT.			
	WEIR FLOW	0.000 CFS		0 CU.FT.			
120	2.032	5936	13.543	13.617	5935	1	
	INFILTRATION			0 CU.FT.			
	ORIFICE FLOW	0.185 CFS		225 CU.FT.			
	WEIR FLOW	0.000 CFS		0 CU.FT.			
150	2.083	6163	13.504	13.523	6162	1	
	INFILTRATION			0 CU.FT.			
	ORIFICE FLOW	0.090 CFS		162 CU.FT.			
	WEIR FLOW	0.000 CFS		0 CU.FT.			
180	2.116	6325	13.470	13.487	6324	1	
	INFILTRATION			0 CU.FT.			
	ORIFICE FLOW	0.055 CFS		100 CU.FT.			
	WEIR FLOW	0.000 CFS		0 CU.FT.			
210	2.142	6426	13.420	13.445	6425	0	
	INFILTRATION			0 CU.FT.			
	ORIFICE FLOW	0.038 CFS		68 CU.FT.			
	WEIR FLOW	0.000 CFS		0 CU.FT.			
240	2.162	6494	13.416	13.417	6494	0	
	INFILTRATION			0 CU.FT.			
	ORIFICE FLOW	0.023 CFS		86 CU.FT.			
	WEIR FLOW	0.000 CFS		0 CU.FT.			
300	2.193	6580	13.369	13.393	6580	0	
	INFILTRATION			0 CU.FT.			
	ORIFICE FLOW	0.010 CFS		39 CU.FT.			
	WEIR FLOW	0.000 CFS		0 CU.FT.			
360	2.200	6617	13.356	13.362	6617	0	

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MAXIMUM OUT FLOW IS AT POND ELEV. 15.278
ORIFICE OUTFLOW IS   1.242 CFS
WEIR OUTFLOW IS      0.000 CFS
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