



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

June 22, 2001

Sara Levy, P.E.
Tierra West, LLC
8509 Jefferson NE
Albuquerque, New Mexico 87113

RE: RED ROOF INN (Mulberry St SE) (M-15/D33)
CERTIFICATE OF OCCUPANCY APPROVAL-*Temporary*
ENGINEERS STAMP DATED 3/9/2000
ENGINEERS CERTIFICATION DATED 6/20/2001

Dear Ms. Levy:

Based on the information provided in your June 21, 2001 submittal, the above referenced project is approved for a TEMPORARY Certificate of Occupancy.

A Temporary Certificate of Occupancy has been issued for 30 days, allowing the remaining drainage issues in your 6/20/ 2001 Engineers Certification to be completed within this time scope.

When these remaining issues have been fully completed, are in substantial compliance, and an Engineers Certification has been resubmitted to the City's Hydrology office for approval, a Permanent Certificate of Occupancy can be issued.

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

Sincerely,

Teresa A. Martin
Hydrology Plan Checker
C.O.A./Public Works Department

c: Viekie Chavez, COA
✓ Drainage File
Approval File

Terri, what
is the status
of the permanent
C.O.? *Am*

DRAINAGE INFORMATION SHEET

PROJECT TITLE: <u>Red Roof Inn</u>	ZONE ATLAS/DRNG. FILE #: <u>M-15/D33</u>
DRB #: <u>1000073</u>	EPC #: _____ WORK ORDER #: <u>6431.81</u>
LEGAL DESCRIPTION: <u>Kirkland Addition, Unit 1</u>	
CITY ADDRESS: <u>2601 Mulberry, St. SE, (West of Mulberry Street and South of Gibson Blvd)</u>	
ENGINEERING FIRM: <u>TIERRA WEST, LLC</u>	CONTACT: <u>RONALD R. BOHANNAN</u>
ADDRESS: <u>8509 Jefferson NE, Albuquerque NM 87113</u>	PHONE: <u>(505) 858-3100</u>
OWNER: <u>Equus, Inc.</u>	CONTACT: <u>Phil Lamy</u>
ADDRESS: <u>7119 E. Shea Blvd. Ste. 109 PMB 139</u>	PHONE: _____
ARCHITECT: <u>S. K. Design, LLC</u>	CONTACT: _____
ADDRESS: <u>4721, West Banff Lane, Glendale AZ</u>	PHONE: <u>(602) 439-0631</u>
SURVEYOR: <u>Hall Surveying</u>	CONTACT: <u>Richard Hall</u>
ADDRESS: <u>12805 Menaul Blvd. NE</u>	PHONE: <u>(505) 292-6727</u>
CONTRACTOR: <u>Gearcon General Contractors</u>	CONTACT: <u>Dan Gear</u>
ADDRESS: <u>11728 Linn NE</u>	PHONE: <u>293-5256</u>

TYPE OF SUBMITTAL:

<input type="checkbox"/>	DRAINAGE REPORT
<input type="checkbox"/>	DRAINAGE PLAN
<input type="checkbox"/>	CONCEPTUAL GRADING & DRAINAGE PLAN
<input type="checkbox"/>	GRADING PLAN
<input type="checkbox"/>	EROSION CONTROL PLAN
<input checked="" type="checkbox"/>	ENGINEER'S CERTIFICATION
<input checked="" type="checkbox"/>	OTHER (G & D AS-BUILT DWG.)

PRE-DESIGN MEETING:

<input type="checkbox"/>	YES
<input checked="" type="checkbox"/>	NO
<input type="checkbox"/>	COPY PROVIDED

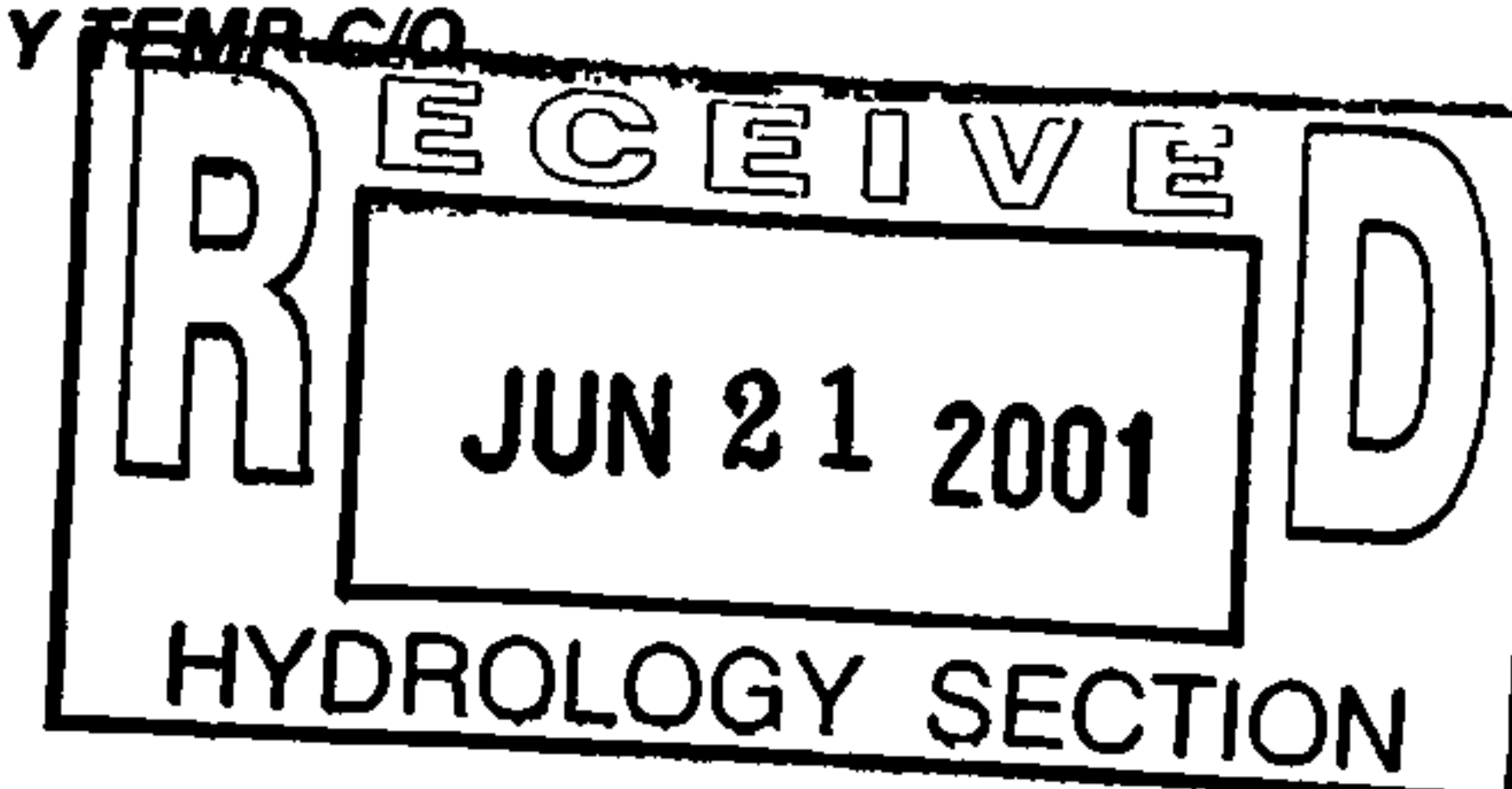
CHECK TYPE OF APPROVAL SOUGHT:

<input type="checkbox"/>	SKETCH PLAN APPROVAL
<input type="checkbox"/>	PRELIMINARY PLAT APPROVAL
<input type="checkbox"/>	S. DEV. PLAN FOR SUB'D. APPROVAL
<input type="checkbox"/>	S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
<input type="checkbox"/>	SECTOR PLAN APPROVAL
<input type="checkbox"/>	FINAL PLAT APPROVAL
<input type="checkbox"/>	FOUNDATION PERMIT APPROVAL
<input type="checkbox"/>	BUILDING PERMIT APPROVAL
<input type="checkbox"/>	CERTIFICATE OF OCCUPANCY APPROVAL
<input type="checkbox"/>	GRADING PERMIT APPROVAL
<input type="checkbox"/>	PAVING PERMIT APPROVAL
<input type="checkbox"/>	S. A. D. DRAINAGE REPORT
<input type="checkbox"/>	DRAINAGE REQUIREMENTS
<input checked="" type="checkbox"/>	OTHER 30-DAY TEMP C/O

DATE SUBMITTED: _____

06/18/01

BY: Sara Lavy



TIERRA WEST, LLC

8509 Jefferson NE
Albuquerque, NM 87113

(505) 858-3100
fax (505) 858-1118

e-mail: twdms@aol.com
1-800-245-3102

June 18, 2001

Mr. Brad Bingham
Senior Engineer/Hydrology
City of Albuquerque
PO Box 1293
Albuquerque, NM 87103

RE: 30-Day Temporary Certification of Drainage for Certificate of Occupancy
Red Roof Inn (M15/D33), 2601 Mulberry St, SE

Dear Mr. Bingham:

We are requesting a 30-day temporary Certification of Drainage for Certificate of Occupancy. Enclosed please find one copy of the as-built Grading and Drainage Plan for the Red Roof Inn located on Mulberry near Gibson. Gearcon General Contractors has completed the on-site paving and curb and gutter. Landscaping for the site is underway. The two drainage outfall channels for the site are in place and functional. All work is in substantial compliance with the approved plans. As-built information was supplied by Hall Surveying.

If you have any questions regarding this matter, please do not hesitate to call me.

Sincerely,

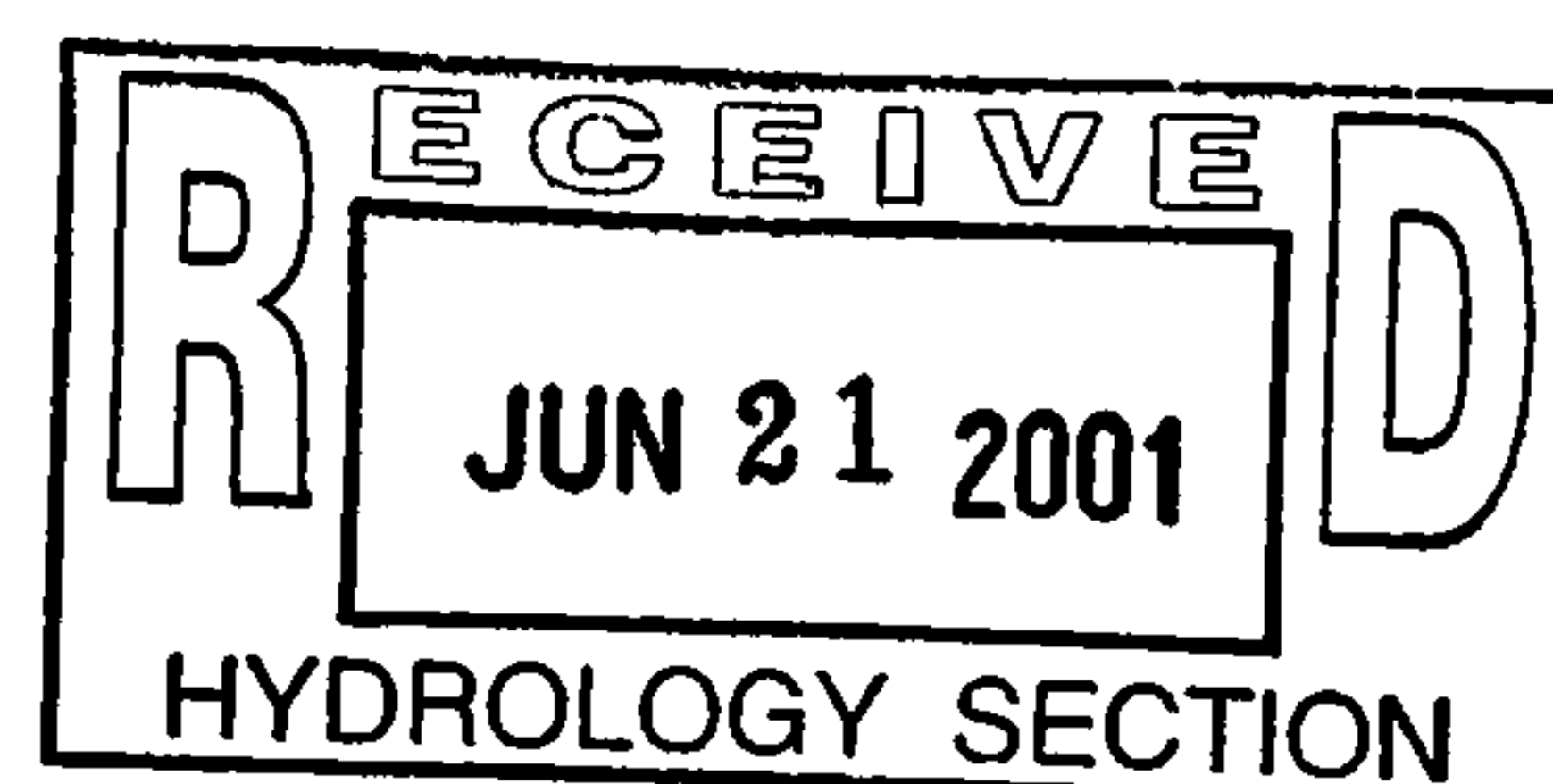
Sara Lavy
Sara Lavy, PE

Enclosures

cc: Philip Lama

JN: 990034
scl

9934 9934 temp CO hydrology ltr



TIERRA WEST, LLC

8509 Jefferson NE
Albuquerque, NM 87113

(505) 858-3100
fax (505) 858-1118

e-mail: twdms@aol.com
1-800-245-3102

August 30, 2000

Mr. Brad Bingham
Hydrology Review Engineer
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

Re: Red Roof Inn (M15/D33)

Dear Mr. Bingham:

We are resubmitting the Grading Plan and Drainage Report for your review. We have revised the layout and are going to DRB for an Administrative Amendment. The curve in the road was removed at the request of the owner and with concurrence from the neighborhood. This has affected the layout of the site. We have also added an entrance to the second motel from Mulberry. The drainage solution is the same, but the basins were revised. The site will continue to drain to the ~~North~~ ^{South} Diversion Channel via several small channels.

If you have any questions or need additional information, please contact me.

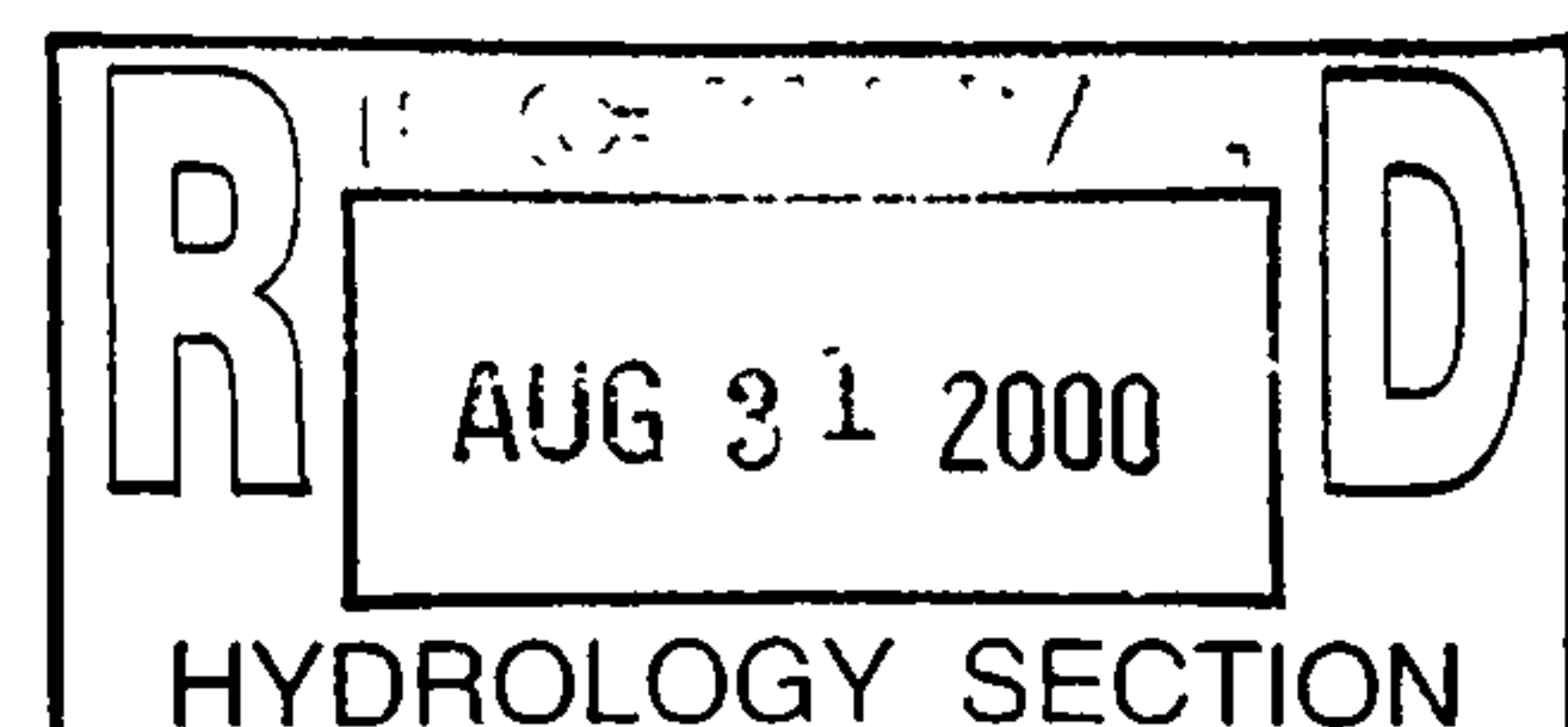
Sincerely,

Sara Lavy
Sara Lavy

cc: Philip Lama
Manuel Lujan

JN: 990034
scl

990034. 9934-hyd-resubmittal2.ltr



DRAINAGE INFORMATION SHEET

PROJECT TITLE: Red Roof Inn ZONE ATLAS/DRNG. FILE #: M-15/D33

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: Kirkland Addition, Unit 1

CITY ADDRESS: West of Mulberry Street and South of Gibson Blvd.

ENGINEERING FIRM: TIERRA WEST, LLC CONTACT: RONALD R. BOHANNAN

ADDRESS: 8509 Jefferson NE, Albuquerque NM 87113 PHONE: (505) 858-3100

OWNER: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: Precision Surveys CONTACT: Larry Medrano

ADDRESS: 8414-D Jefferson Street, NE PHONE: (505)856-5700

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

☒ DRAINAGE REPORT
☐ DRAINAGE PLAN
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☒ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERTIFICATION
☐ OTHER

PRE-DESIGN MEETING:

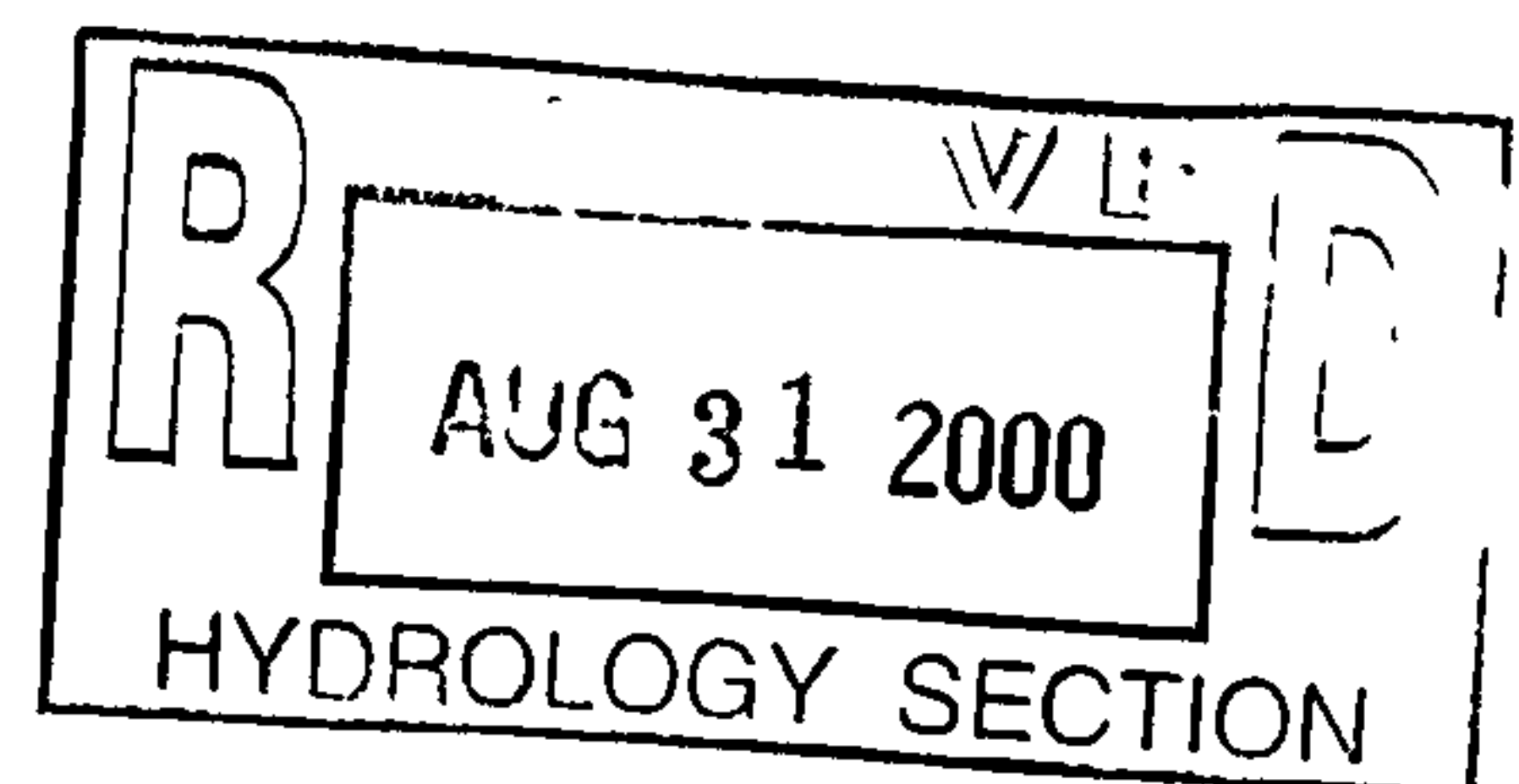
☐ YES
☒ NO
☐ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

☐ SKETCH PLAN APPROVAL
☐ 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
☒ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY APPROVAL
☒ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ S. A. D. DRAINAGE REPORT
☐ DRAINAGE REQUIREMENTS
☐ OTHER

DATE SUBMITTED: 08/30/00

BY: Sara Lavy





City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 9, 2000

Ron Bohannon, PE
Tierra West LLC
8509 Jefferson NE
Albuquerque, NM 87113

Re: Red Roof Inn – Kirtland Addition Drainage Report
Engineer's Stamp dated 8-30-00 (M15/D33)

Dear Mr. Bohannon,

Based upon information provided in your submittal dated 8-31-00, the above referenced plan is approved for Site Development Plan for Subdivision, Site Development Plan for Building Permit and Building Permit, contingent on AMAFCA's approval. AMAFCA's signature on the Site Plans will required prior to City Engineer signature.

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

Please be advised that prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

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

Sincerely,

Bradley L. Bingham, PE
Sr. Engineer, Hydrology

C: file

DRAINAGE REPORT

for

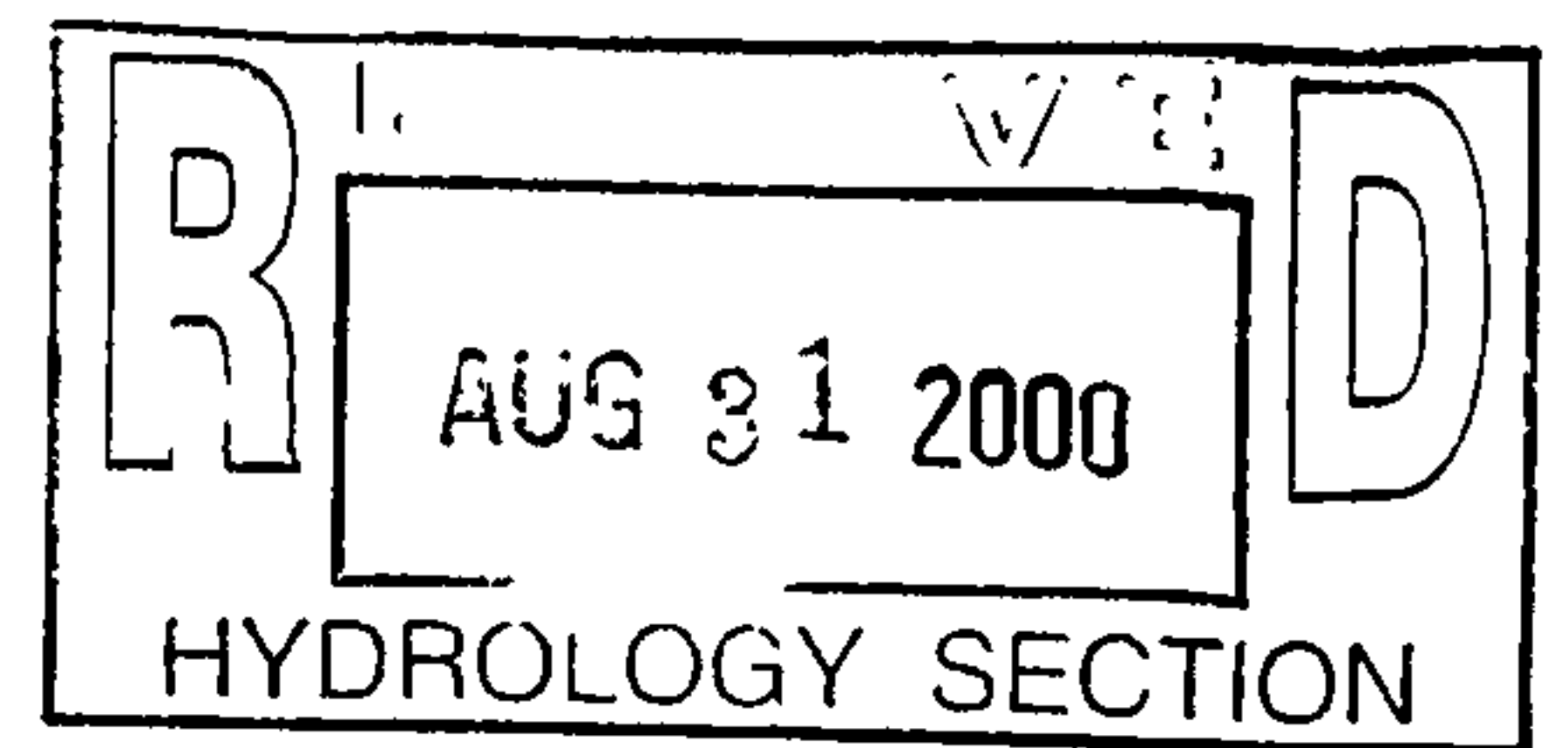
Red Roof Inn

Prepared by

Tierra West, LLC
4421 McLeod Road NE, Suite D
Albuquerque, New Mexico 87109

Prepared for

Philip Lama
EQUUS, Inc.
7119 E. Shea Blvd. Suite 109, PMB 139
Scottsdale, AZ 85254



August 2000



Ronald R. Bohannon P.E. No. 7868

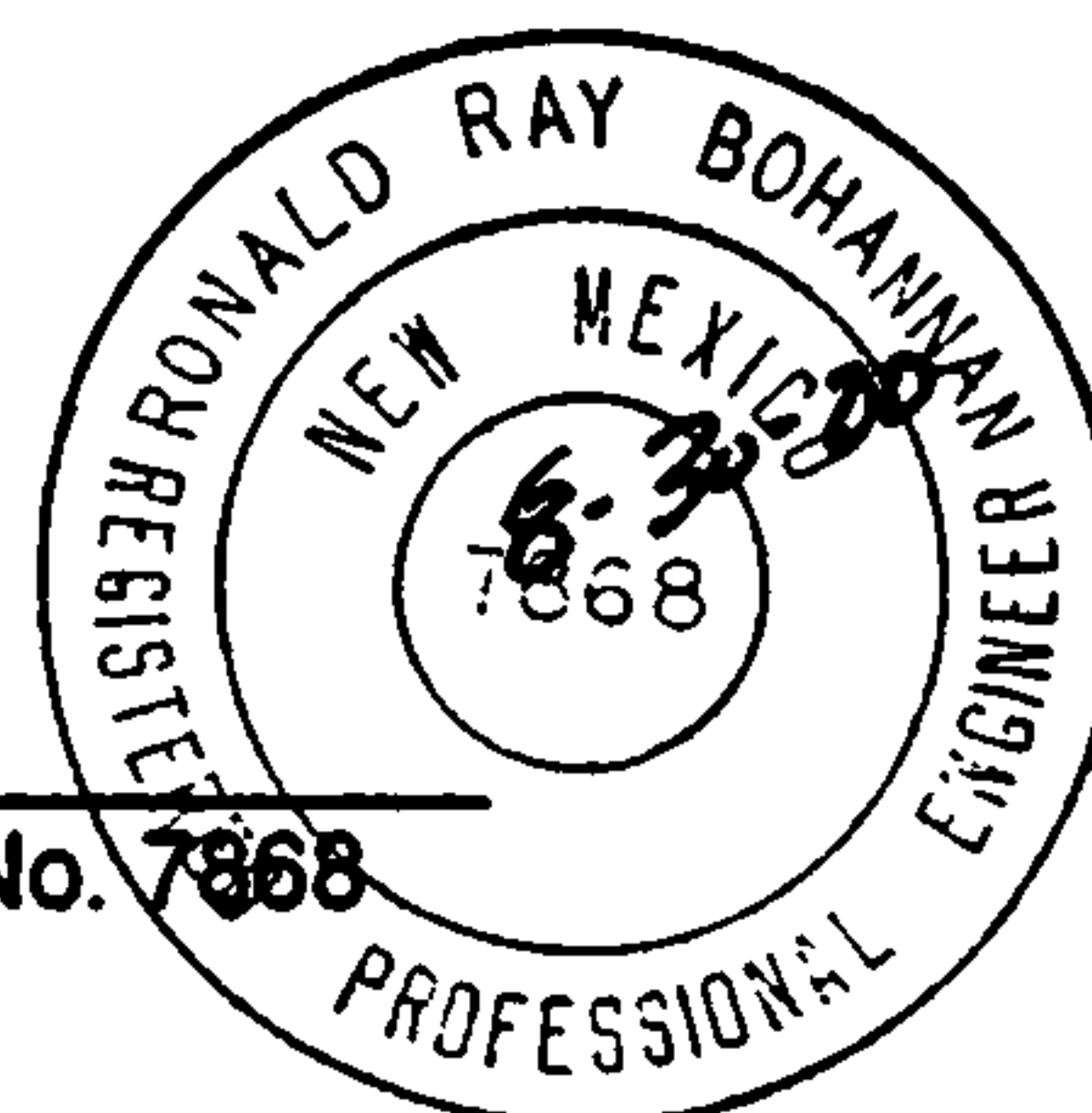
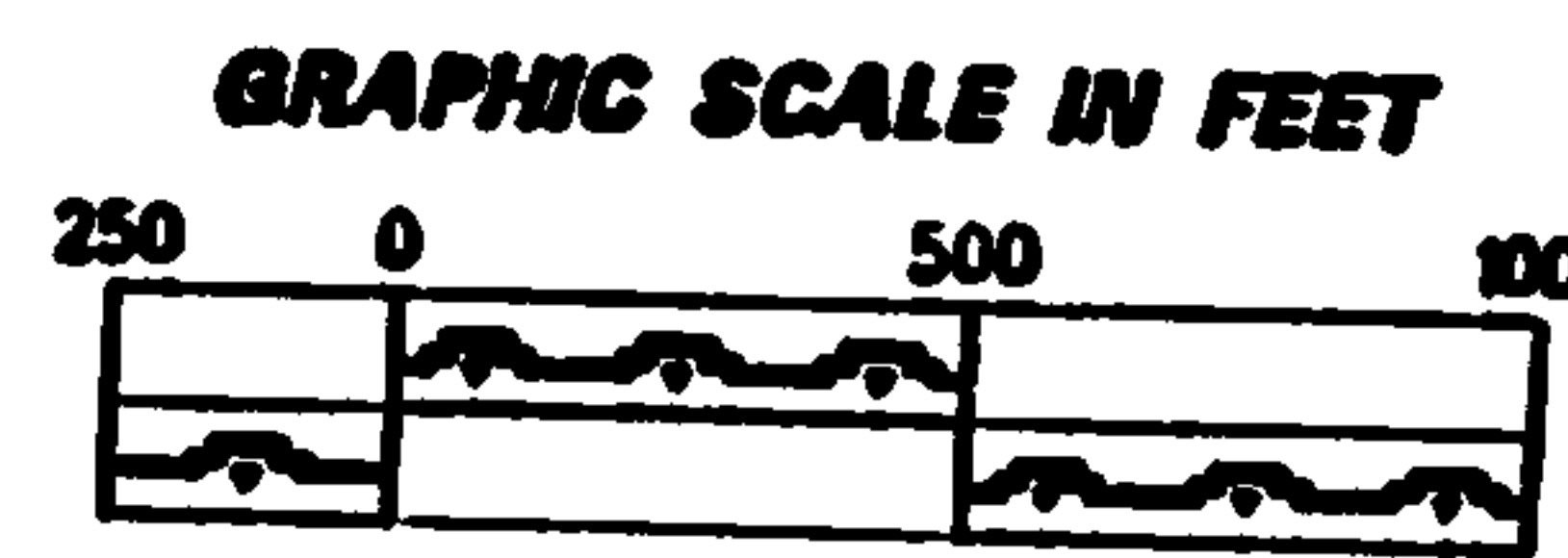
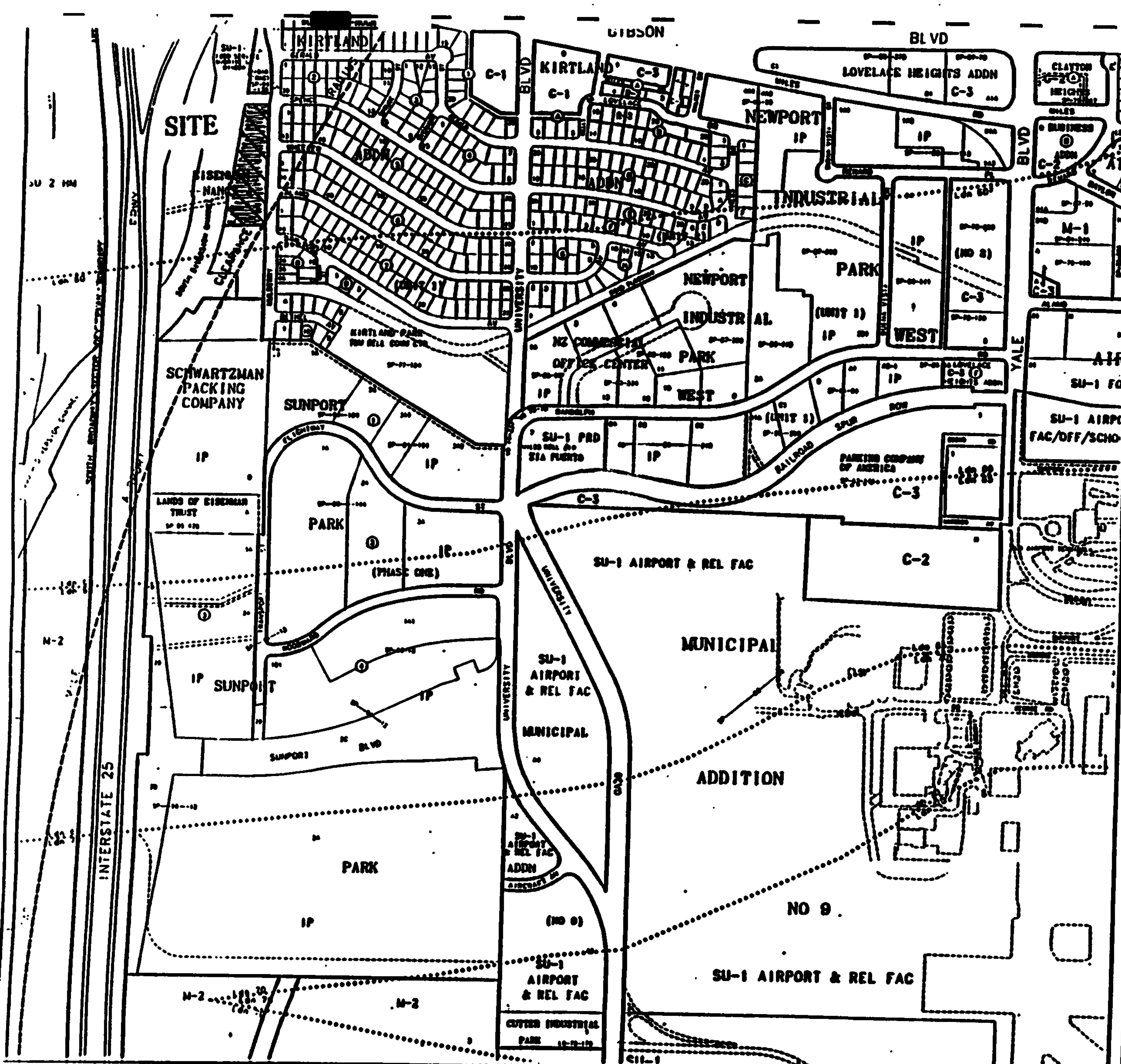
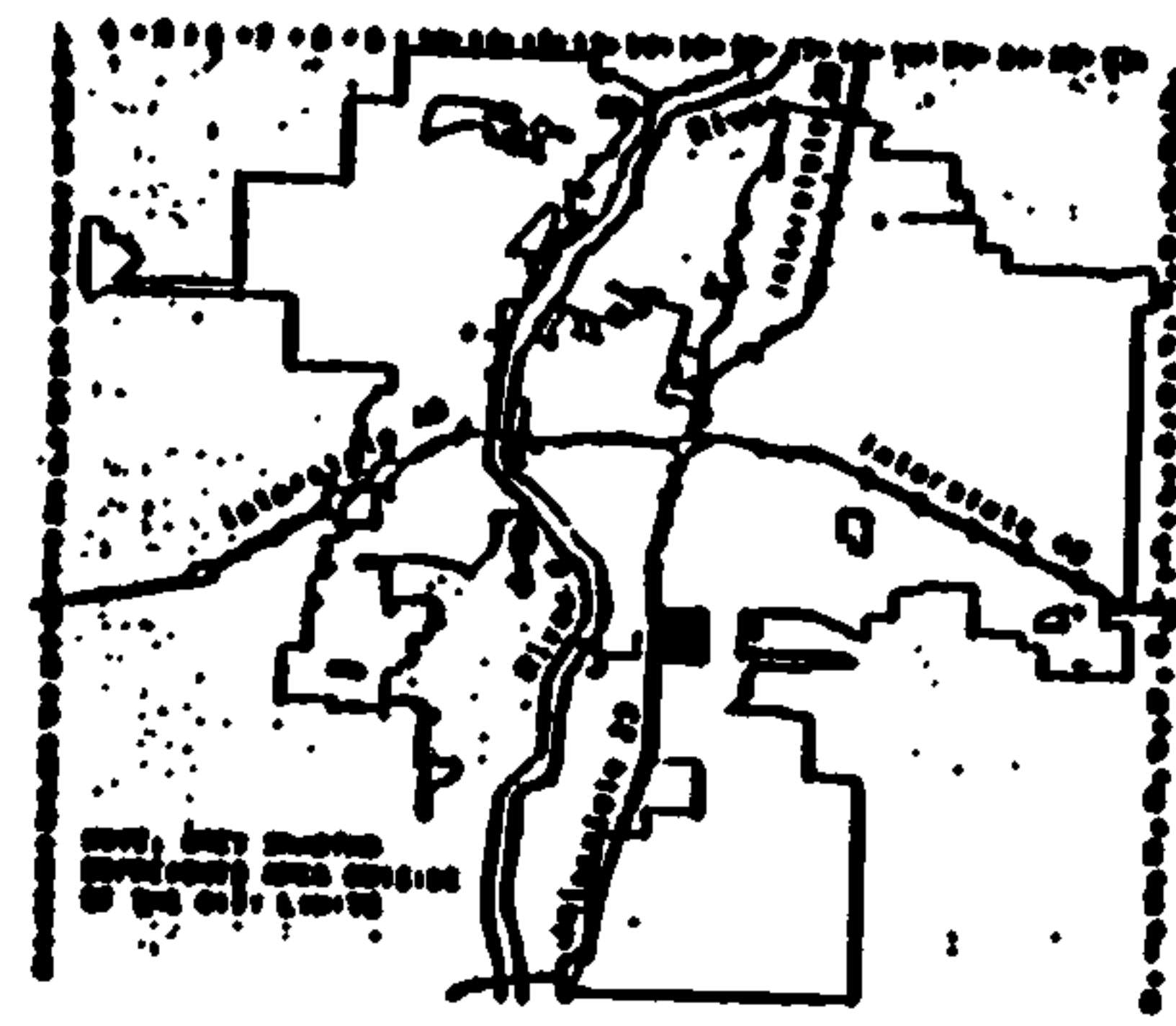


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Map Amended through February 12, 1997



LEGAL DESCRIPTION
 T10N
 R3E
 SEC 20
 UNIFORM PROPERTY CODE
 1-015-000

M-15-Z

Location

The Red Roof Inn is a proposed 42,000 square foot hotel located west of Mulberry Street and south of Gibson Boulevard. The site is shown on the attached Zone Atlas Map M-15 and is identified as Kirkland Addition, Unit 1. The site is part of a larger site that was approved by EPC for site development plan for subdivision purposes in March 1997. The site has been divided into two tracts. The Red Roof Inn occupies the northern tract and the other tract is shown for conceptual purposes only. The purpose of this report is to provide the drainage analysis and management plan for the site.

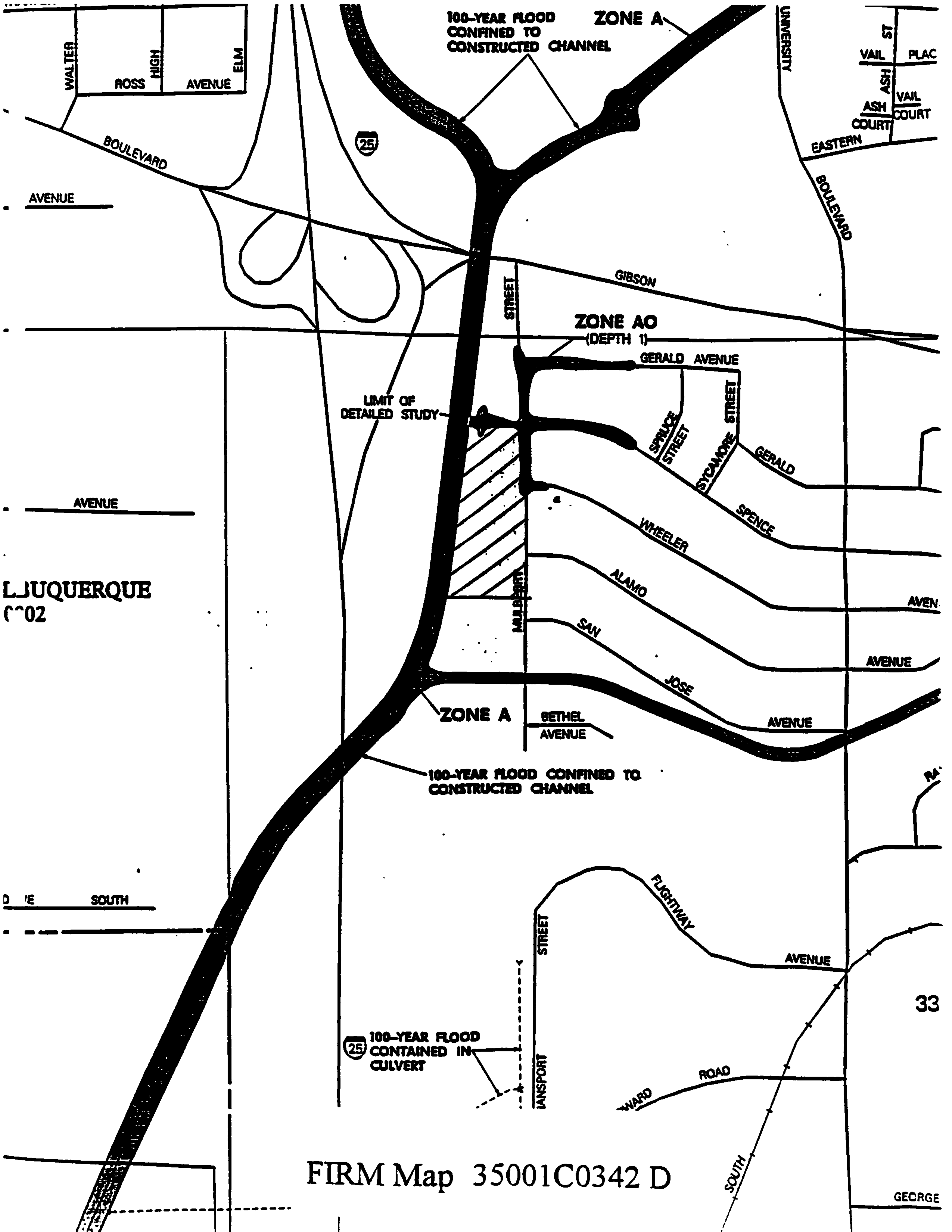
Existing Drainage Conditions

The site is currently undeveloped. There is one existing basin on the site with a undeveloped runoff of 11.20 cfs. The site flows west towards the South Diversion Channel where the flow is intercepted by an existing channel and routed to a concrete rundown to the Channel. There are no offsite flows entering the site. Mulberry Street to the east captures all flows coming from the east in a series of drop inlets and conveys the flow to the South Diversion Channel. There is an existing drainage channel located north of the site which intercepts any flows coming from the north. In the south, the remaining property will continue to drain west to the South Diversion Channel. The property on the west side of the channel currently drains east to the South Diversion Channel.

FIRM Map and Soil Conditions

The site is located on FIRM Map 35001C0342 D as shown on the attached excerpt. The map shows that the site does not lie within any 100 year flood plains. The 100 year flood plains located west and north of the site are confined to constructed channels. The flood plain located east of the site is confined to the existing streets and will not impact the site.

The site contains one soil type from the Soil Conservation Service Soil Survey of



100-YEAR FLOOD
CONFINED TO
CONSTRUCTED CHANNEL

ZONE A

VAIL ST
VAIL PLAC
ASH
VAIL COURT
ASH COURT

EASTERN
BOULEVARD

GIBSON

ZONE AO
(DEPTH 1)

GERALD AVENUE

LIMIT OF
DETAILED STUDY

SPRUCE
STREET

SYCAMORE
STREET

GERALD

SPENCE

WHEELER

ALAMO

SAN

JOSE

ZONE A

BETHEL
AVENUE

100-YEAR FLOOD CONFINED TO
CONSTRUCTED CHANNEL

100-YEAR FLOOD
CONTAINED IN
CULVERT

STREET

TRANSPORT

FUGITWAY

AVENUE

ROAD

WARD

SOUTH

GEORGE

FIRM Map 35001C0342 D

LUQUERQUE
002

D 1'E SOUTH

Bernalillo County. The site contains a Bluepoint loamy fine sand. This soil has slow runoff, rapid permeability, and a severe hazard of soil blowing.

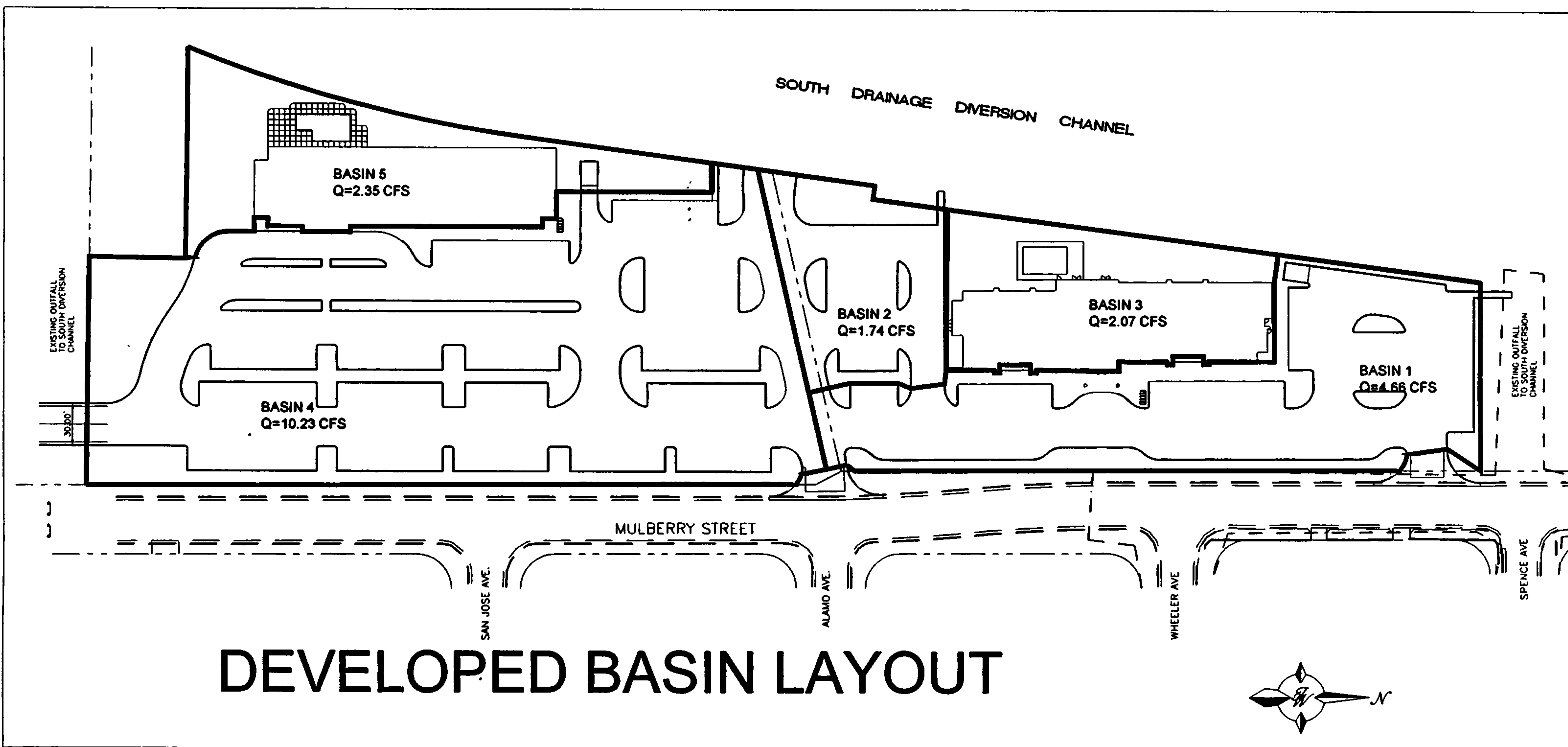
On-Site Drainage Management Plan

Due to the proximity to the South Diversion Channel the site is allowed free discharge to the Channel. The remaining tract when developed will also drain to the South Diversion Channel. The tracts in their current undeveloped conditions drain to the South Diversion Channel and the developed flows will continue to follow the same pattern. The Diversion Channel has such a large capacity that the increase from undeveloped to developed flows will be insignificant to the capacity of the Channel.

The Red Roof Inn site has been separated into three basins (1 thru 3) and the adjacent conceptual site has been divided into two basins (4 and 5). This is to determine the flows and to check the capacity of the channels conveying the flow on site to the South Diversion Channel.

Basin 1 consists of the northern parking lot and has a developed runoff of 4.66 cfs. It is proposed to drain to a new 4.00 feet wide concrete channel. The channel is located in the northeast corner of the site. This channel conveys the flow from the parking lot to the existing outfall to the Diversion Channel. Basin 2 consists of the southwest parking area of Red Roof Inn and has a developed runoff flow of 1.74 cfs. This runoff will drain to the west side of the site and discharge to a swale adjacent to the Diversion Channel in a proposed 4.0 feet wide concrete channel. Basin 3 consists of the landscaped area in the back of the hotel and the roof drainage from the building. This basin has a developed runoff flow of 2.07 cfs and sheet flows west towards the South Diversion Channel.

Basin 4 contains the largest portion of the adjacent future site located south of the Red Roof Inn site. This basin has a developed runoff of 10.23 cfs and will flow south to a new 4.0 feet wide channel. The channel will convey the developed flows to an existing AMAFCA channel, the Kirtland Channel, that discharges to the South Diversion Channel. Basin 5 consists



of the roof drainage from the proposed building and the rear landscaped area. This basin has a developed flow of 2.35 cfs and will sheet flow west towards the South Diversion Channel.

Both tracts will discharge a total of 21.05 cfs of developed flow into the South Diversion Channel. This is a 9.85 cfs increase over the existing discharge and is minimal compared to the total flow in the channel. The flow in the existing swale that will convey the runoff to the Diversion Channel has a velocity of 0.2 ft/sec. This is less than 2 ft/sec and will not cause any scouring of the channel.

Criteria

The site was analyzed using the procedures from the Development Process Manual Volume 2, Chapter 22. The Weighted-E method was used for estimating the volume and flow rate of runoff from each basin.

Summary

There are five proposed basins on the site. Basins 1, 2, and 4 will drain to new concrete channels. These channels will convey the developed flows to the South Diversion Channel. Basins 3 and 5 will sheet flow west towards the South Diversion Channel. The site will discharge a total of 21.05 cfs of developed runoff flow. This is an increase of 9.85 cfs from the existing flow rate of 11.20 cfs. This is incidental considering the size of the existing South Diversion Channel and the site's close proximity to the Channel.

Runoff Calculations

Weighted E Method

Existing Basins

											100-Year			10-Year		
Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
			%	(acres)	%	(acres)	%	(acres)	%	(acres)						
1	213908	4.911	0%	0	100%	4.911	0%	0	0%	0.000	0.780	0.319	11.20	0.280	0.115	4.67

Developed Basins

											100-Year			10-Year		
Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
			%	(acres)	%	(acres)	%	(acres)	%	(acres)						
1	45508	1.045	0%	0	10%	0.104	0%	0	90%	0.940	1.986	0.173	4.66	1.234	0.107	3.05
2	16990	0.390	0%	0	10%	0.039	0%	0	90%	0.351	1.986	0.065	1.74	1.234	0.040	1.14
3	23298	0.535	0%	0	34%	0.182	0%	0	66%	0.353	1.664	0.074	2.07	0.980	0.044	1.28
4	99956	2.295	0%	0	10%	0.229	0%	0	90%	2.065	1.986	0.380	10.23	1.234	0.236	6.70
5	28156	0.646	0%	0	44%	0.284	0%	0	56%	0.362	1.530	0.082	2.35	0.874	0.047	1.41
Total	213908	4.911		0		0.839		0		4.071		0.774	21.05		0.474	13.58

Equations:

Weighted E = $E_a \cdot A_a + E_b \cdot A_b + E_c \cdot A_c + E_d \cdot A_d$ / (Total Area)

Volume = Weighted D * Total Area

Flow = $Q_a \cdot A_a + Q_b \cdot A_b + Q_c \cdot A_c + Q_d \cdot A_d$

RUNOFF CALCULATIONS

The site is @ Zone 2

LAND TREATMENT

Existing (Basins 1-5)

B = 100 %

Proposed (Basins 1, 2, and 4)

B = 10 %

D = 90 %

Proposed (Basins 3)

B = 34 %

D = 66 %

Proposed (Basins 5)

B = 44 %

D = 56 %

EXCESS PRECIPITATION, E (INCHES)

<u>100-Year</u>	<u>10-Year</u>
$E_a = 0.53$	$E_a = 0.13$
$E_b = 0.78$	$E_b = 0.28$
$E_c = 1.13$	$E_c = 0.52$
$E_d = 2.12$	$E_d = 1.34$

PEAK DISCHARGE (CFS/ACRE)

<u>100-Year</u>	<u>10-Year</u>
$Q_a = 1.56$	$Q_a = 0.38$
$Q_b = 2.28$	$Q_b = 0.95$
$Q_c = 3.14$	$Q_c = 1.71$
$Q_d = 4.70$	$Q_d = 3.14$

Channel Calculations

Concrete Rundown Capacity

Basin	Top Width	Bottom Width	Depth	Area	WP	R	Slope	Q Provided	Q Required	Velocity
	(ft)	(ft)	(ft)	(ft^2)	(ft)		(%)	(cfs)	(cfs)	(ft/s)
1	4	4	0.5	2.00	8.12	0.2462113	10	28.48	4.66	2.33
2	4	4	0.5	2.00	8.12	0.2462113	10	28.48	1.74	0.87
4	4	4	0.5	2.00	8.12	0.2462113	9	27.01	10.23	5.12

Manning's Equation:

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

A = Area

R = D/4

S = Slope

n = 0.013

Riprap Requirements

Equation taken from Table 5-5 from the Urban Storm Drainage Criteria Manual Volume 2 by Wright-McLaughlin Engineers.

Basin 1

$$\frac{VS^{0.17}}{(S_s-1)^{0.66}} = \frac{2.33 * 0.1^{0.17}}{(2.5-1)^{0.66}} = 1.21$$

Where:

V = Velocity (ft/sec)

S = Slope (ft/ft)

S_s = Specific gravity of rock

from Table 5-5 use Rock Type VL with a d₅₀ of 6".

Basin 2

$$\frac{VS^{0.17}}{(S_s-1)^{0.66}} = \frac{0.87 * 0.10^{0.17}}{(2.5-1)^{0.66}} = 0.45$$

from Table 5-5 use Rock Type VL with a d₅₀ of 6".

Need table

Basin 4

$$\frac{VS^{0.17}}{(S_s-1)^{0.66}} = \frac{5.12 * 0.09^{0.17}}{(2.5-1)^{0.66}} = 2.60$$

from Table 5-5 use Rock Type VL with a d₅₀ of 6".

Infrastructure List

**TO SUBDIVISION IMPROVEMENT AGREEMENT
DEVELOPMENT REVIEW BOARD
REQUIRED INFRASTRUCTURE LISTING
(LEGAL DESCRIPTION OF SUBDIVISION)**

Red Roof Inn

(NAME and UNIT OF SUBDIVISION)

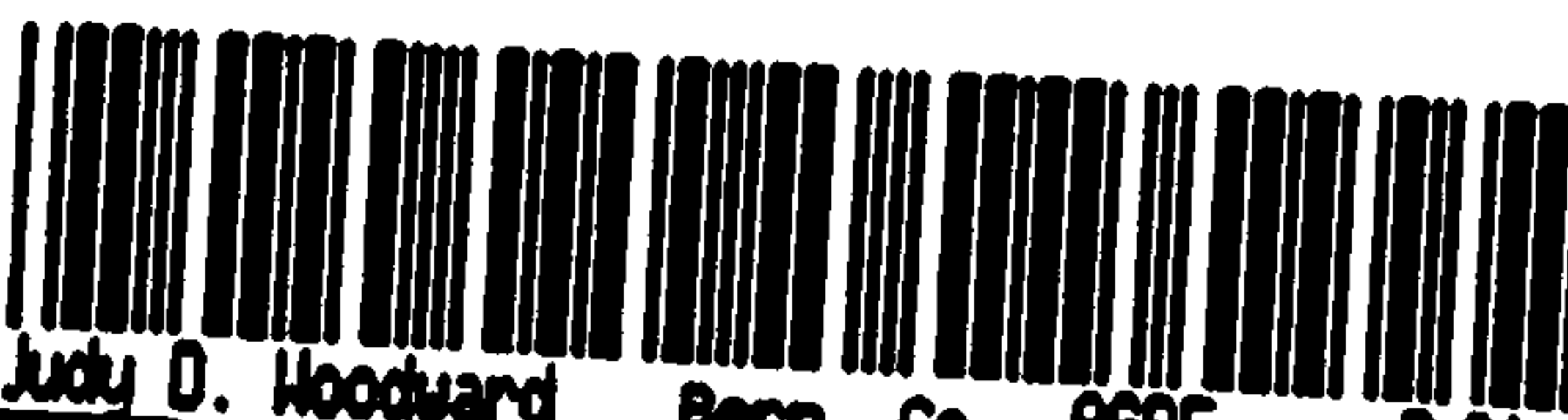
DRB Case No: 99420-00000-00072
DRC Project Number: 1000073
Prelim. Plat Approved: _____
Prelim. Plat Expires: _____
Site Plan Approved: Upon signature of DRC Chair
Date Submitted: 4-18-00

Following is a summary of PUBLIC/PRIVATE Infrastructure required to be constructed or financially guaranteed for the above development. This listing is not necessarily a complete listing. During the SIA process and/or in the review of the construction drawings, if the DRC Chair determines that appurtenant items and/or unforeseen items have not been included in the infrastructure listing, the DRC Chair may include those items in the listing and related financial guarantee. Likewise, if the DRC Chair determines that appurtenant or non essential items can be deleted from the listing, those items may be deleted as well as the related portion of the financial guarantees. All such revisions require approval by the DRC Chair, the User Department and the agent/owner. If such approvals are obtained, the revisions to the listing will be incorporated administratively. In addition, any unforeseen items which arise during construction which are necessary to complete the project and which normally are the Subdivider's responsibility will be required as a condition of project acceptance and close out by the City.

Size	Type Improvement	Location	From	To
\$100,000	Signal Improvements	Mulberry and Gibson		
	Street Reconfiguration (See Site Plan)	Mulberry Street	Wheeler Ave.	Spence Ave.
6"	Water PVC Line	Mulberry Street	North Property Line * (SPENCE AVE)	South Property Line * (ALAMO AVE)

* INCLUDES CONNECTION TO EXISTING 20" WATERLINE & ABANDON EXISTING 6" WATERLINE.

+ 6" ASPHALT TRAIL Mulberry St. FROM N. PROPERTY LINE TO SOUTH PROPERTY LINE



Judy D. Woodward

Bern. Co. AGRE

R 21.00

2000062935
5394112
Page: 8 of 8
06/29/2000 11:14A
Bk-A7 Pg-2686

Agent/Owner Name: DMH

Agent/Owner Name: David Soule, P.E.

Firm: Tierra West LLC

DEVELOPMENT REVIEW BOARD MEMBER APPROVALS

[Signature] 4-19-00
Transportation Dev. Date

Roger A. Green 4/19/00
Utility Dev. Date

Edmund A. [Signature] 4-25-00
Parks & Rec. Date

[Signature] 4/25/00
City Engineer Date

[Signature] 4/25/00
AMAFCA Date

[Signature] 4/1/00
DRB Chairman

DRC REVISIONS

Revisions	Date	DRC Chair	User Department	Agent/Owner

RONALD D. BROWN, CHAIR
DANIEL W. COOK, VICE-CHAIR
CLIFFORD E. ANDERSON, P.E., SECRETARY-TREASURER
LINDA STOVER, ASST. SECRETARY-TREASURER
DANIEL HERNANDEZ, DIRECTOR

JOHN P. KELLY, P.E.
EXECUTIVE ENGINEER



Albuquerque Metropolitan Arroyo Flood Control Authority

2600 PROSPECT N.E. • ALBUQUERQUE, NM 87107

PHONE: (505) 864-2215
FAX: (505) 864-0214

March 17, 2000

Sara Lavy
Tierra West, LLC
8509 Jefferson, NE
Albuquerque, NM 87113

RE: RED ROOF INN (ZAP M15)

Dear Sara :

Based on the information provided on your March 9, 2000 submittal and the granting of a storm drainage easement, AMAFCA has no objections to your request for Building Permit for the above referenced project.

If I can be of further assistance, please call me at 884-2215

Sincerely,
AMAFCA

Lisa Ann Manwill, P.E.
Development Review Engineer

c: Manuel Lujan, Jr.
Brad Bingham, PE - COA
File



City of Albuquerque

March 28, 2000

Ron Bohannon, PE
Tierra West LLC
8509 Jefferson NE
Albuquerque, NM 87113

Re: Red Roof Inn – Kirtland Addition Drainage Report
Engineer's Stamp dated 3-9-00 (M15/D33)

Dear Mr. Bohannon,

Based upon AMAFCA's letter dated 3-17-00, the above referenced plan is approved for Site Development Plan for Subdivision, Site Development Plan for Building Permit and Building Permit. AMAFCA's signature on the Site Plans will required prior to City Engineer signature.

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

Sincerely,

Bradley L. Bingham, PE
Hydrology Review Engineer

C:


file



City of Albuquerque

March 9, 2000

Ron Bohannon, PE
Tierra West LLC
8509 Jefferson NE
Albuquerque, NM 87113

Re: Red Roof Inn – Kirtland Addition Drainage Report
Engineer's Stamp dated 3-9-00 (M15/D33)

Dear Mr. Bohannon,

Based upon the information provided in your resubmittal dated 3-9-00, the above referenced plan is approved for Grading Permit. Prior to approval for Site Development Plan for Subdivision, Site Development Plan for Building Permit and Building Permit, you will need to address AMAFCA's comments.

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

Sincerely,

Bradley L. Bingham
Bradley L. Bingham, PE
Hydrology Review Engineer

C: Charles Aragon
file

RONALD D. BROWN, CHAIR
DANIEL W. COOK, VICE-CHAIR
CLIFFORD E. ANDERSON, P.E., SECRETARY-TREASURER
LINDA STOVER, ASST. SECRETARY-TREASURER
DANIEL HERNANDEZ, DIRECTOR

JOHN P. KELLY, P.E.
EXECUTIVE ENGINEER



**Albuquerque
Metropolitan
Arroyo
Flood
Control
Authority**

2600 PROSPECT N.E. • ALBUQUERQUE, NM 87107

PHONE: (505) 884-2215
FAX: (505) 884-0214

March 9, 2000

Sara Lavy
Tierra West, LLC
8509 Jefferson NE
Albuquerque, NM 87113

RE: RED ROOF INN (ZAP M 15)

Dear Sara:

Based on the information provided on your submittal, dated March 9, 2000, AMAFCA has no objection to granting a Grading Permit.

Previous discussions dedicated the Kirkland Channel as Right-of-Way to AMAFCA and your letter dated February 24, 2000 indicated that this is still the owners intent. Prior to Building Permit approval, please dedicate the subject Right-of-Way by deed or plat.

If I can be of further assistance, please call me at 884-2215

Sincerely,
AMAFCA

Lisa Ann Manwill, P.E.
Development Review Engineer

c: Brad Bingham, PE - COA
File

FAX TRANSMISSION



AMAFCA

2600 PROSPECT, NE
ALBUQUERQUE, NM 87107
(505) 884-2215
FAX: (505) 884-0214

To: BRAD BINGHAM Date: 3-9-00
Fax #: Auto Pages: 2, including this cover
From: LISA MANWILL sheet.
Subject: RED ROOF INN

COMMENTS:

SIERRA WEST, LLC

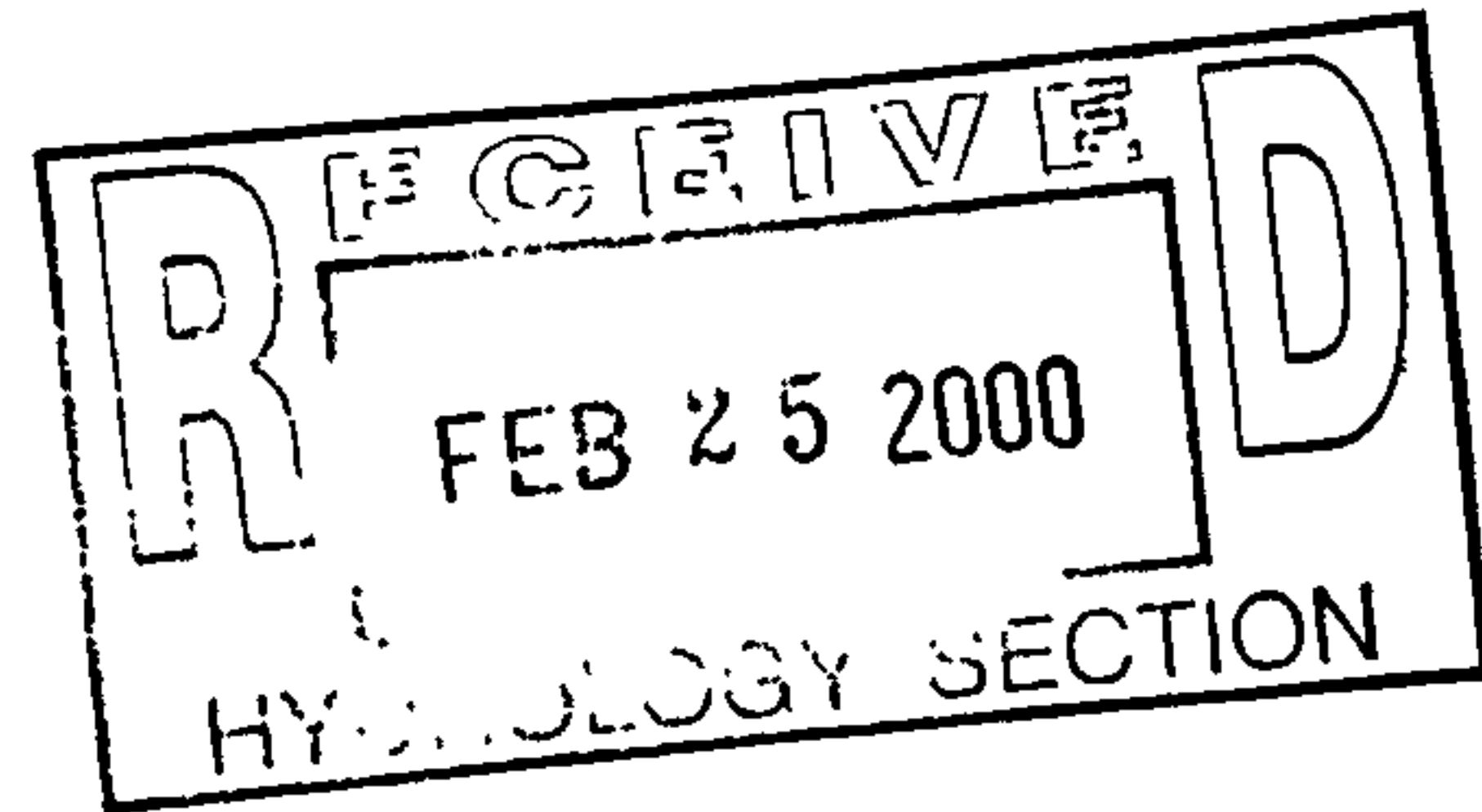
8509 Jefferson NE
Albuquerque, NM 87113

(505) 858-3100
fax (505) 858-1118

e-mail: twdms@aol.com
1-800-245-3102

February 24, 2000

Mr. Brad Bingham
Hydrology Review Engineer
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103



Re: Red Roof Inn (M15/D33)

Dear Mr. Bingham:

We are resubmitting the Red Roof Inn grading plan and drainage report for your review. We addressed your previous comments in the following manner:

- Please label existing contours. This is extremely critical when the subject site abuts a flood plain. The flood plain is designated "AO" with a 1 foot depth. As you know, the finish floor must be 1 foot above flood depth in the street directly in front of the building. Per comments generated by prior submittal (enclosed), finish floor elevation should be about 5049 +/-, not 5145.5. This will need to be checked once the labeled contours are available. Also, please include the approximate limits of the floodplain on the grading plan.**

We labeled the existing contours. The finished floor of the building was raised to 5047.66 to be above the floodplain in the adjacent street. We added the approximate location of the floodplain to the grading plan.
- Please tie your temporary benchmark to COA benchmark with location, description and elevation. Please include this on the next submittal. Also, please show water blocks on the plan.**

The COA benchmark is shown and ties to the property. We also show the water blocks on the grading plan.
- AMAFCA concurrence will be required for this project. Please provide written approval from them.**

We addressed AMAFCA's concerns on this grading plan and are waiting for their approval. I included AMAFCA's comments for your files. The AMAFCA comments did not require any changes to the on-site grades and were mostly concerned with the AMAFCA right-of-way.
- Please denote what you are building with this phase of construction. It appears from the plan that you are building all curb and gutter. If this is not so, please denote future work with a different line style. What will be the legal description of the tract containing the Hotel? Are you building the bike trail with this project.**

The overall grading plan is for the Site Plan for Subdivision and shows both tracts. The grading plan for Red Roof Inn is for the Site Plan for Building Permit and shows what is being built with this phase. The grading plans were labeled accordingly. The plat is not

completed and the legal description of the hotel is not certain. However, we are preparing a plat to subdivide the tract into two parcels. The bike trail was deleted from the site plan. After a conversation with Open Space the trail was relocated to Mulberry. The existing sidewalk will be expanded to 8' for the new trail.

5. **I think your intent is to create a water block at the proposed property line. Please add additional spot elevations to make this more evident.**

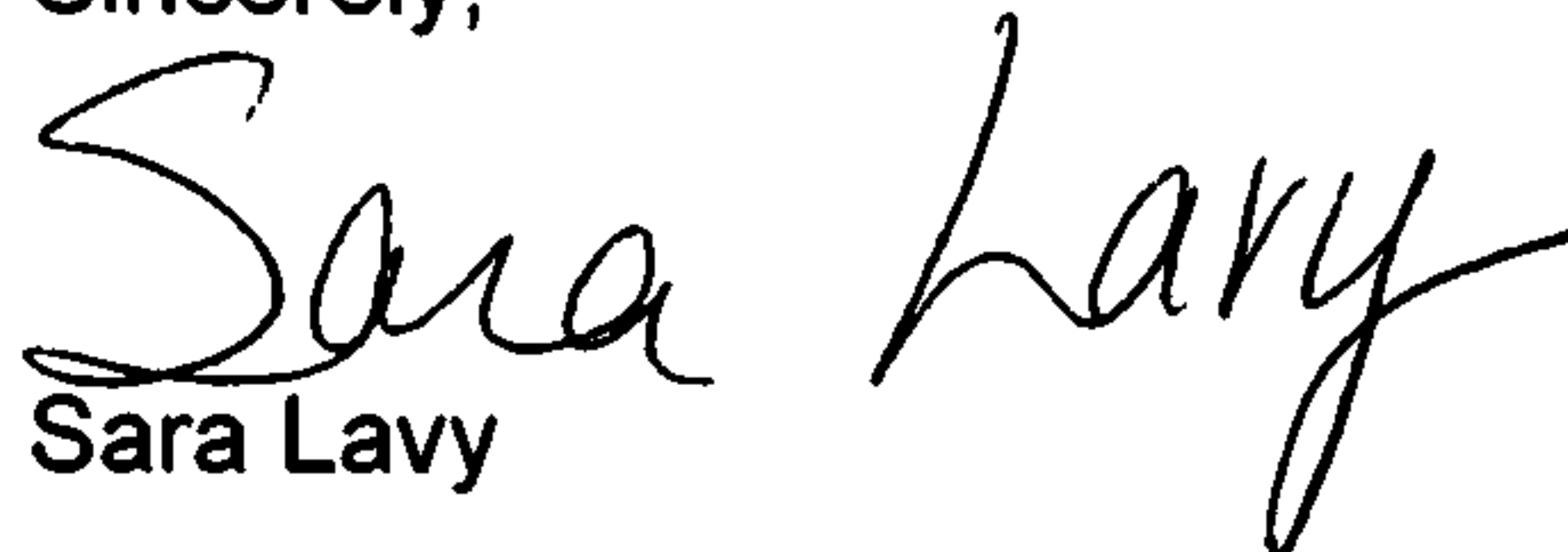
We added more spot elevations to show the basin boundaries more clearly. The site plan and the plat will show cross lot drainage and access easements.

6. **The report mentions a 2' wide, a 5' wide and a 7' wide V-shaped rundown but the grading plan only indicates a 5' wide rundown in 3 different places. Please clarify this. Also please describe how the water gets out of the bottom of the rundown and into the swale. Lastly, the section indicators for the rundowns are pointing the wrong way.**

The section indicators were revised to face the correct direction. At AMAFCA's request the V-ditch's were changed to rectangular channels. The dimensions were changed as a result and this is reflected on the grading plan and in the drainage report. The rectangular channels will have rip-rap at the bottom to prevent erosion of the small channel.

If you have any questions or need additional information, please contact me.

Sincerely,


Sara Lavy

cc: Philip Lama
Manuel Lujan

JN: 990034
scl

RONALD D. BROWN, CHAIR
DANIEL W. COOK, VICE-CHAIR
CLIFFORD E. ANDERSON, P.E., SECRETARY-TREASURER
LINDA STOVER, ASST. SECRETARY-TREASURER
DANIEL HERNANDEZ, DIRECTOR

JOHN P. KELLY, P.E.
EXECUTIVE ENGINEER



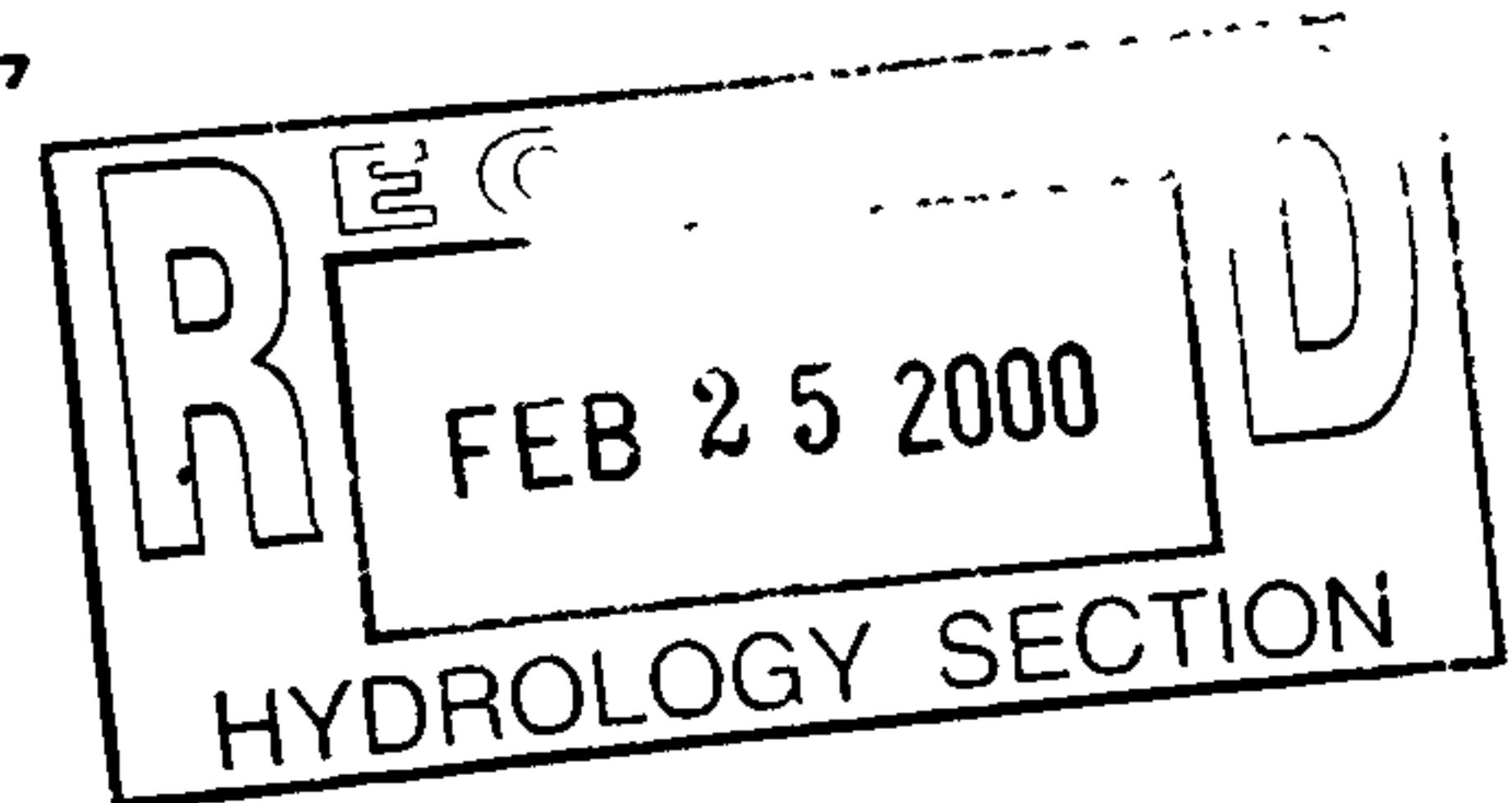
**Albuquerque
Metropolitan
Arroyo
Flood
Control
Authority**

2600 PROSPECT N.E. - ALBUQUERQUE, NM 87107

PHONE: (505) 884-2215

FAX: (505) 884-2216

February 3, 2000



WS90034
I aming
Drainage
Kase

Sara Lavy
Tierra West, LLC
8509 Jefferson NE
Albuquerque, NM 87113

RE: Red Roof Inn (ZAP M-15)

Dear Sara:

AMAFCA is in receipt of your submittal stamped 12-29-99 for the above referenced project and has the following comments:

1. AMAFCA requires a 15 foot access road.
2. Previous discussions dedicated the Kirkland channel as right of way to AMAFCA. Is this still the owners intent?
3. Label the outfall to the South Diversion Channel as an existing outfall.
4. More information (dimensions and specifics on rip rap) will be required for the proposed rip-rap area. Section D-D needs to be cut on the plan sheet.
5. Basin 5 will not be permitted to sheet flow to the South Diversion Channel.
6. Per a conversation with Ron Bohannon, it was learned that the proposed bridge (and road extension) will not be required because the New Mexico State Highway and Transportation Department is purchasing the property on the west site of the South Diversion Channel. Please provide documentation to this effect.
7. Use a rectangular channel section with rip-rap instead of the v-ditch. I have attached an example detail.

If you need further assistance, please don't hesitate to call me.

Sincerely,
AMAFCA

Lisa Ann Manwill, P.E.
Development Review Engineer

c: file

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Red Roof Inn ZONE ATLAS/DRNG. FILE #: M-15/D33

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: Kirkland Addition, Unit 1

CITY ADDRESS: West of Mulberry Street and South of Gibson Blvd.

ENGINEERING FIRM: TIERRA WEST, LLC CONTACT: RONALD R. BOHANNAN

ADDRESS: 4421 McLeod Rd. NE Suite D, 87109 PHONE: (505) 883-7592

OWNER: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: Precision Surveys CONTACT: Larry Medrano

ADDRESS: 8414-D Jefferson Street, NE PHONE: (505)856-5700

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

☒ DRAINAGE REPORT

☐ DRAINAGE PLAN

☐ CONCEPTUAL GRADING & DRAINAGE PLAN

☒ GRADING PLAN

☐ EROSION CONTROL PLAN

☐ ENGINEER'S CERTIFICATION

☐ OTHER

PRE-DESIGN MEETING:

☐ YES

☒ NO

☐ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

☐ SKETCH PLAN APPROVAL

☐ 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

☒ BUILDING PERMIT APPROVAL

☐ CERTIFICATE OF OCCUPANCY APPROVAL

☒ GRADING PERMIT APPROVAL

☐ PAVING PERMIT APPROVAL

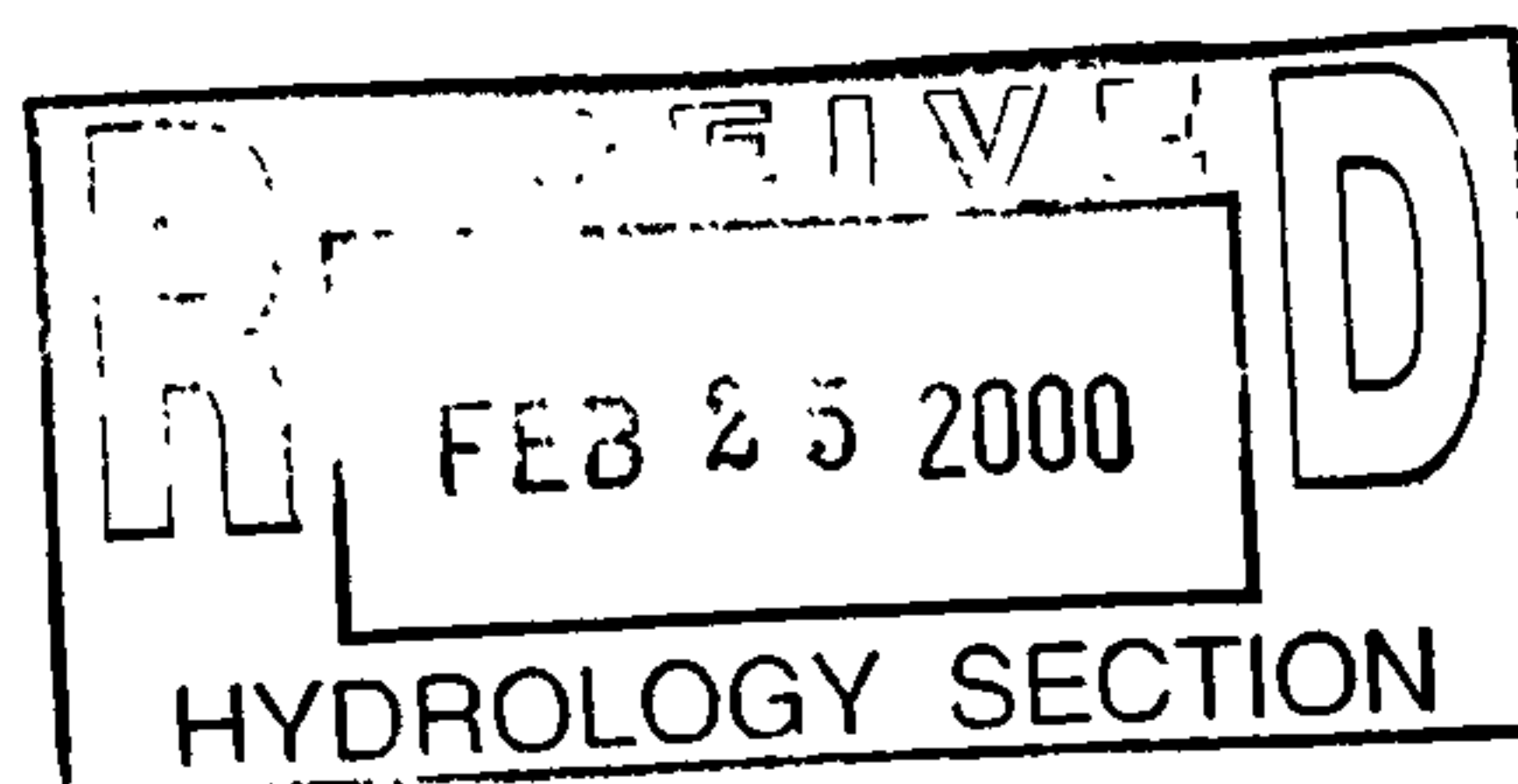
☐ S. A. D. DRAINAGE REPORT

☐ DRAINAGE REQUIREMENTS

☐ OTHER

DATE SUBMITTED: 02/24/00

BY: Sara Lavy



DRAINAGE REPORT

for

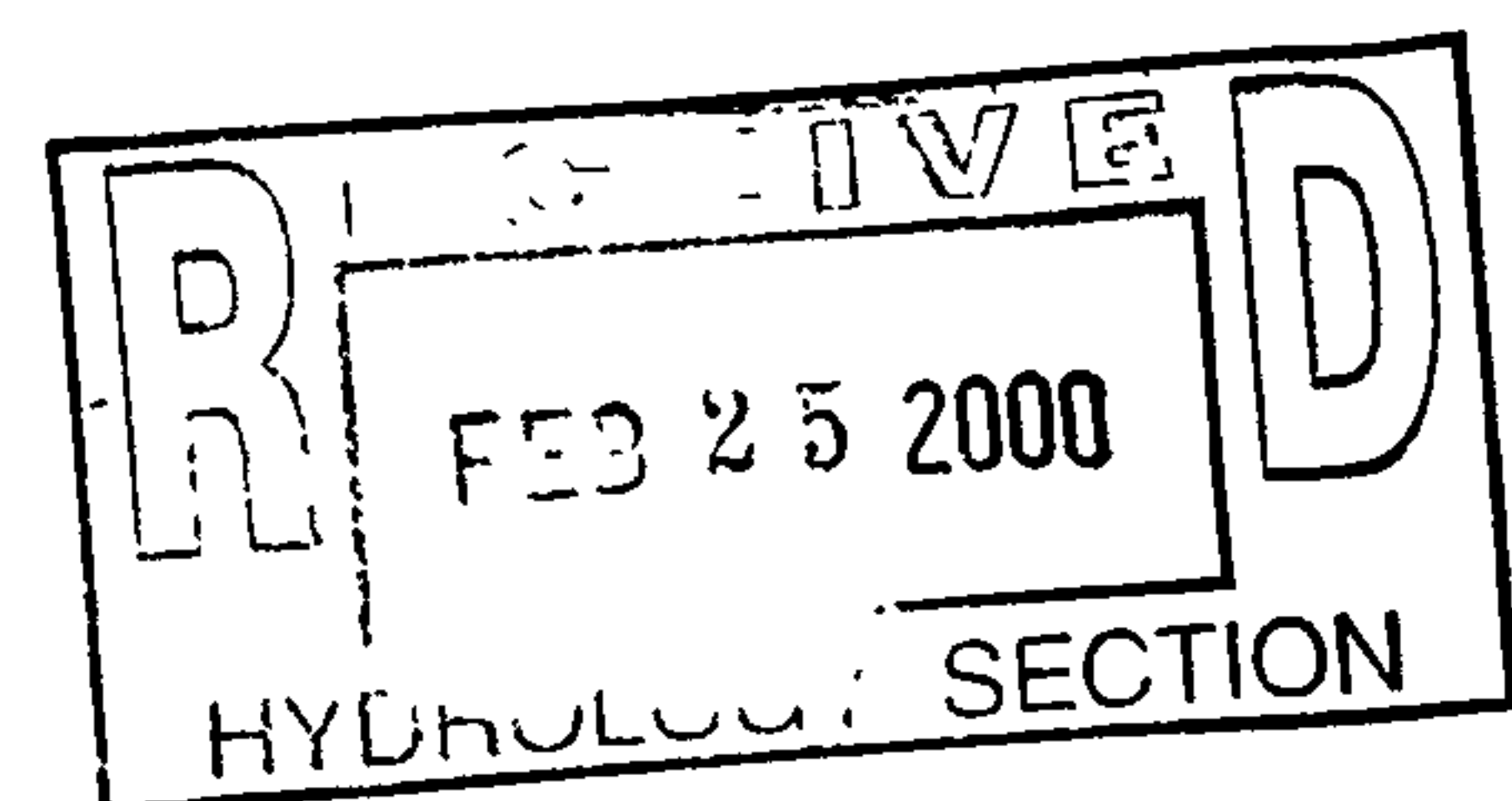
Red Roof Inn

Prepared by

Tierra West, LLC
4421 McLeod Road NE, Suite D
Albuquerque, New Mexico 87109

Prepared for

Philip Lama
EQUUS, Inc.
7119 E. Shea Blvd. Suite 109, PMB 139
Scottsdale, AZ 85254



January 2000

A handwritten signature in black ink, appearing to read "R. Bohannon".

Ronald R. Bohannon P.E.

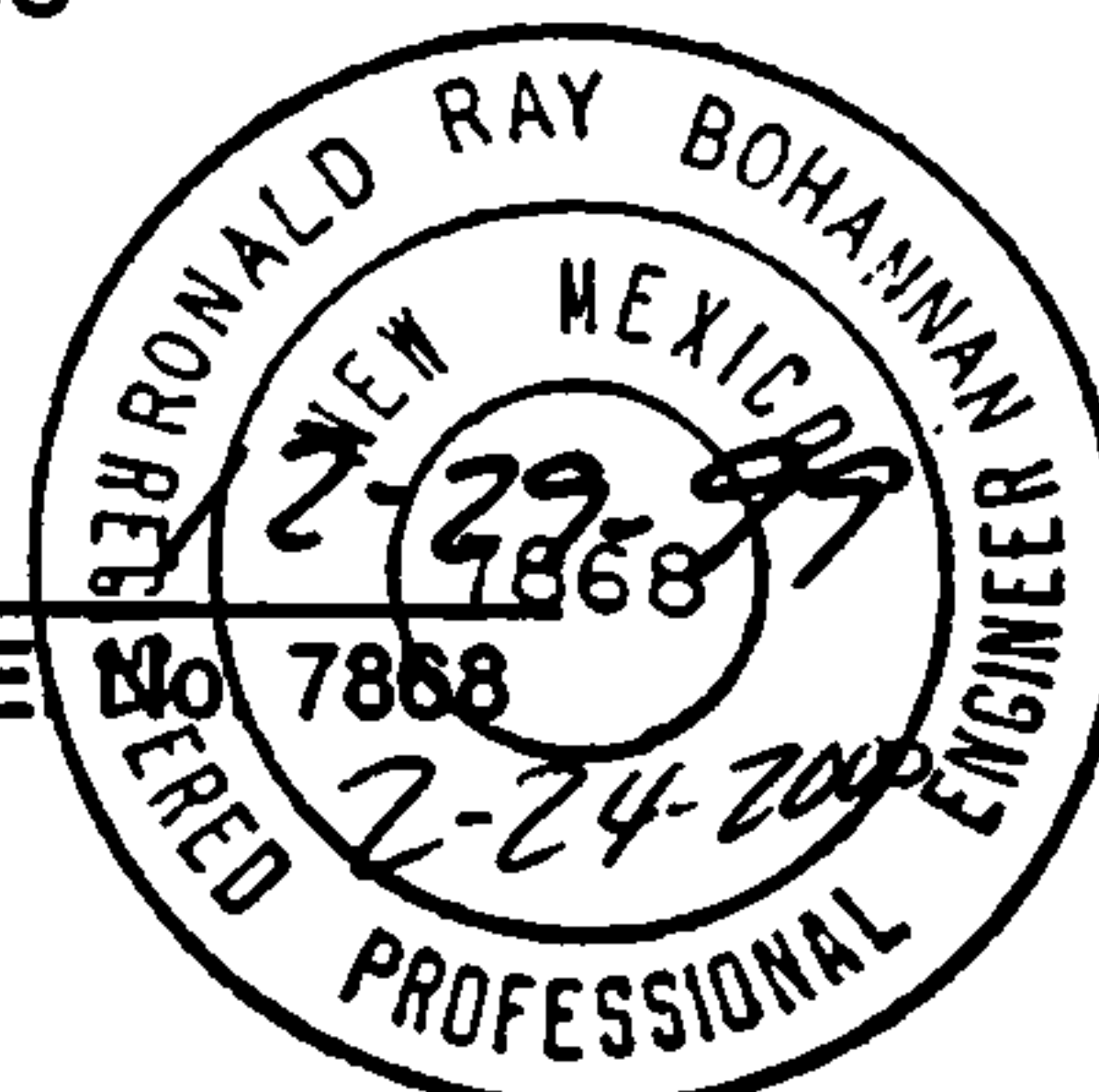


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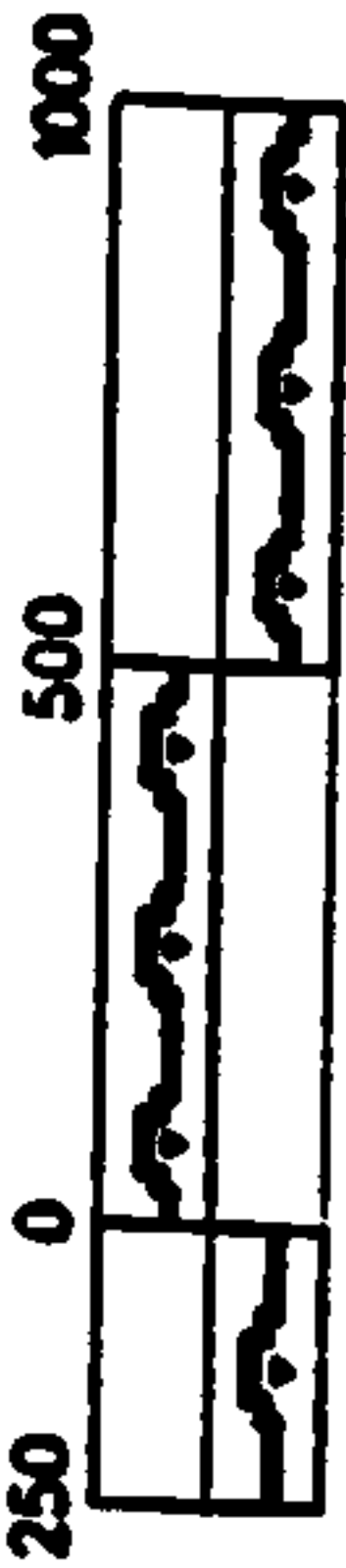
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GRAPHIC SCALE IN FEET



CITY OF
ALBUQUERQUE

Albuquerque
PLANNING DEPARTMENT

© Copyright 1997

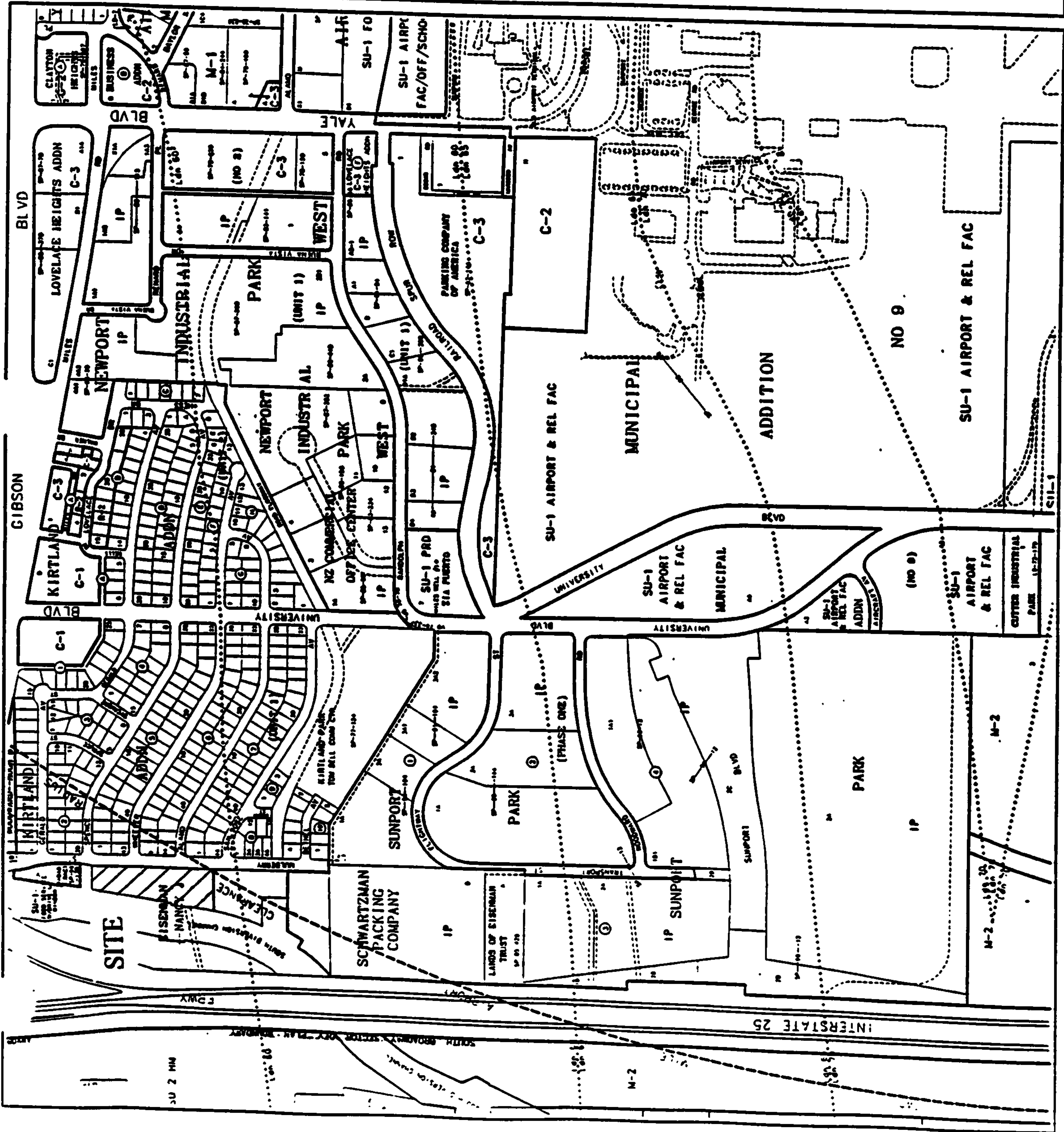
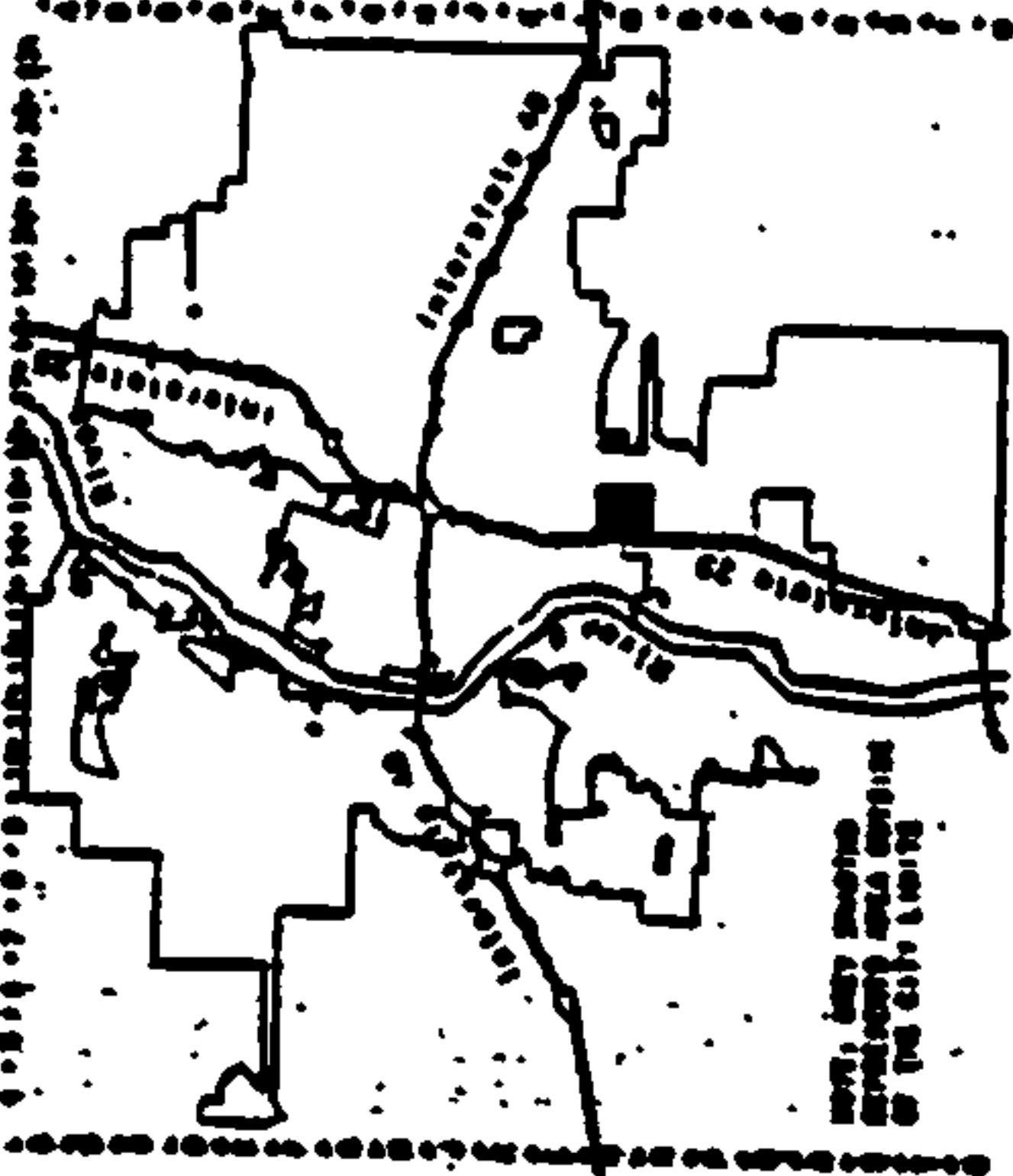
Map Amended through February 22, 1997

LEGAL DESCRIPTION

TOWN
RANGE
SECTION 30

UNIFORM PROPERTY CODE
1-018-008

M-15-Z



Location

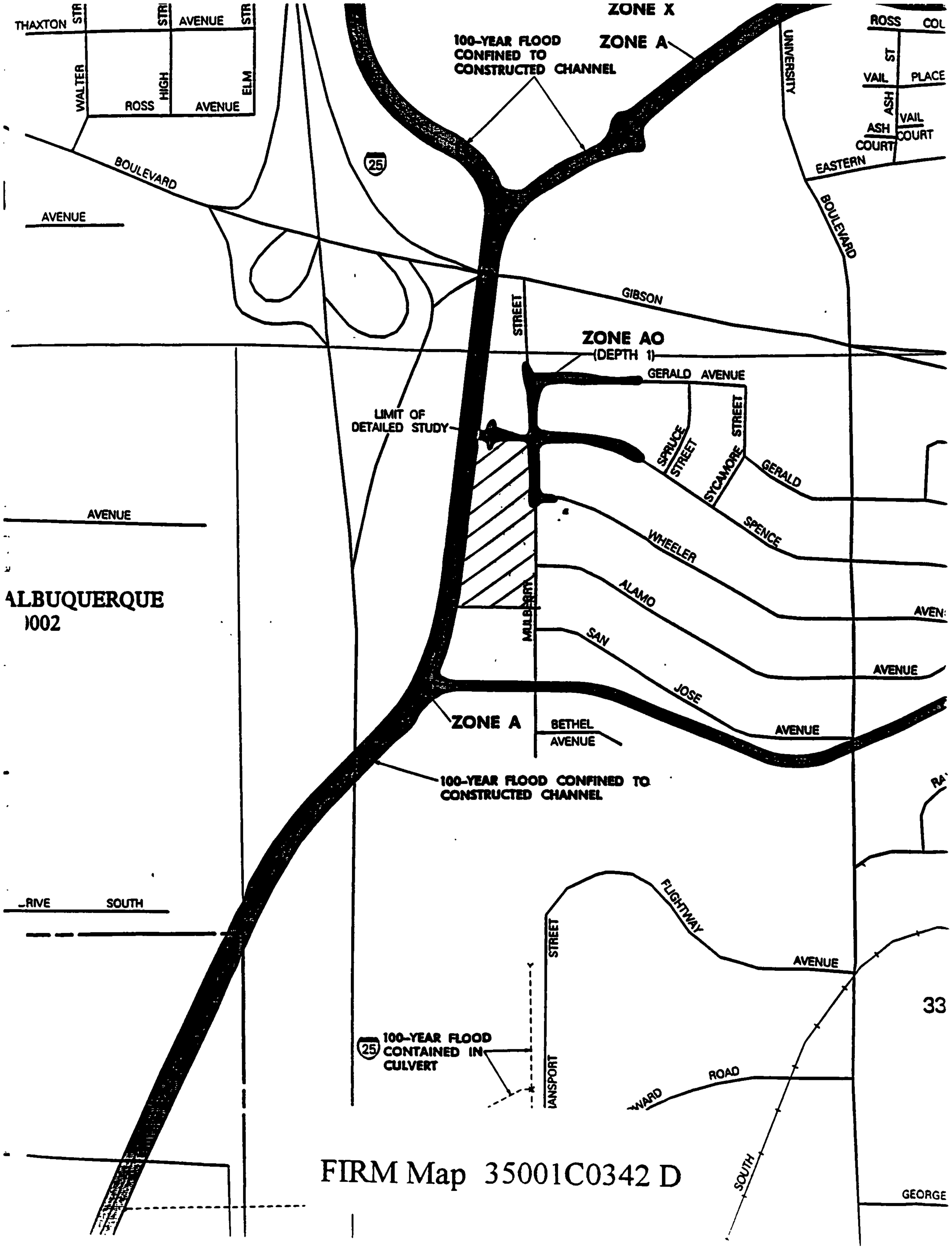
The Red Roof Inn is a proposed 42,000 square foot hotel located west of Mulberry Street and south of Gibson Boulevard. The site is shown on the attached Zone Atlas Map M-15 and is identified as Kirkland Addition, Unit 1. The site is part of a larger site that was approved by EPC for site development plan for subdivision purposes in March 1997. The site has been divided into two tracts. The Red Roof Inn occupies the northern tract and the other tract is shown for conceptual purposes only. The purpose of this report is to provide the drainage analysis and management plan for the site.

Existing Drainage Conditions

The site is currently undeveloped. There is one existing basin on the site with a undeveloped runoff of 11.38 cfs. The site flows west towards the South Diversion Channel where the flow is intercepted by an existing channel and routed to a concrete rundown to the Channel. There are no offsite flows entering the site. Mulberry Street to the east captures all flows coming from the east in a series of drop inlets and conveys the flow to the South Diversion Channel. There is an existing drainage channel located north of the site which intercepts any flows coming from the north. In the south, the remaining property will continue to drain west to the South Diversion Channel. The property on the west side of the channel currently drains east to the South Diversion Channel.

FIRM Map and Soil Conditions

The site is located on FIRM Map 35001C0342 D as shown on the attached excerpt. The map shows that the site does not lie within any 100 year flood plains. The 100 year flood plains located west and north of the site are confined to constructed channels. The flood plain located east of the site is confined to the existing streets and will not impact the site.



The site contains one soil type from the Soil Conservation Service Soil Survey of Bernalillo County. The site contains a Bluepoint loamy fine sand. This soil has slow runoff, rapid permeability, and a severe hazard of soil blowing.

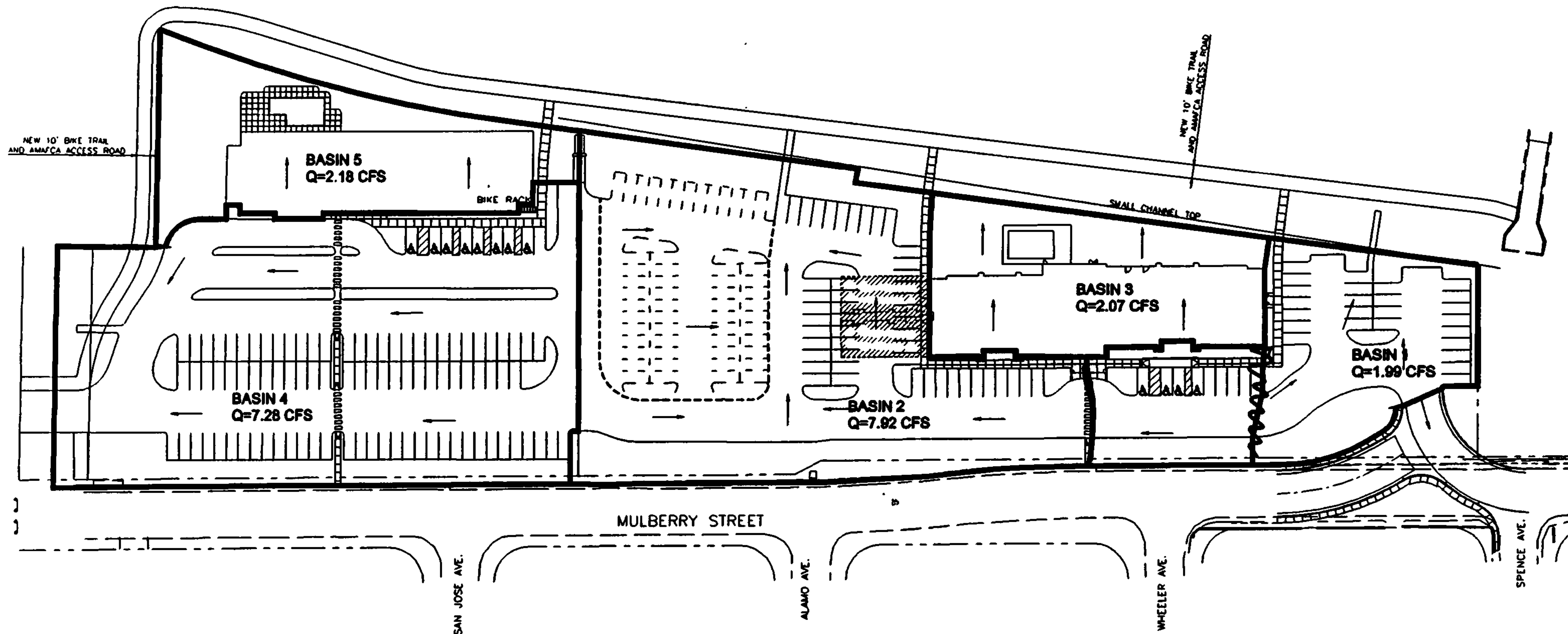
On-Site Drainage Management Plan

Due to the proximity to the South Diversion Channel the site is allowed free discharge to the Channel. The remaining tract when developed will also drain to the South Diversion Channel. The tracts in their current undeveloped conditions drain to the South Diversion Channel and the developed flows will continue to follow the same pattern. The Diversion Channel has such a large capacity that the increase from undeveloped to developed flows will be insignificant to the capacity of the Channel.

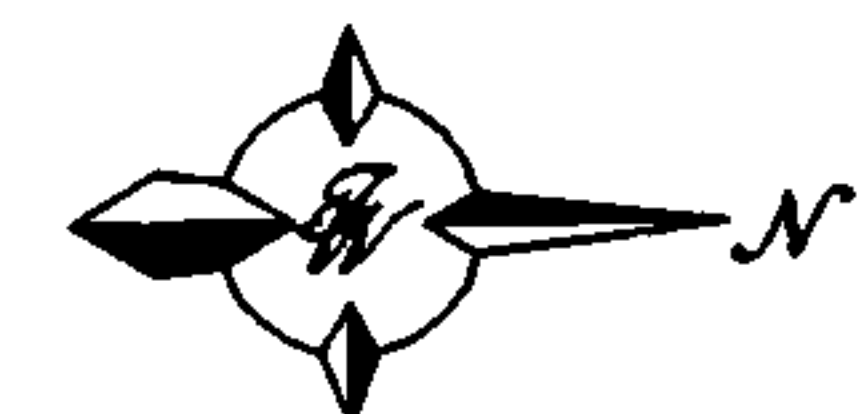
The Red Roof Inn site has been separated into three basins (1 thru 3) and the adjacent conceptual site has been divided into two basins (4 and 5). This is to determine the flows and to check the capacity of the channels conveying the flow on site to the South Diversion Channel.

Basin 1 consists of the northern parking lot and has a developed runoff of 1.99 cfs. It is proposed to drain to a new 2.00 foot wide concrete channel. The channel is located in the northeast corner of the site. This channel conveys the flow from the parking lot to the ^{1' on plan} ~~existing~~ ^{outfall North of the site} ~~swale~~ ^{adjacent to the Diversion Channel}. Basin 2 consists of the northern portion of the site and has a developed runoff flow of 7.92 cfs. This runoff will drain to the west side of the site and discharge to the ^{adjacent} ~~same~~ ^{3' on plan} swale in a proposed 5.0 foot wide concrete channel. Basin 3 consists of the landscaped area in the back of the hotel and the roof drainage from the building. This basin has a developed runoff flow of 2.07 cfs and sheet flows ^{west} ~~South~~ towards the Diversion Channel.

Basin 4 contains the largest portion of the adjacent future site located south of the Red



DEVELOPED BASIN LAYOUT



4' on plan

Roof Inn site. This basin has a developed runoff of 7.28 cfs and will flow south to a new 7.0 feet wide channel. The channel will convey the developed flows to an existing AMAFCA channel, the Kirtland Channel, that discharges to the South Diversion Channel. Basin 5 consists of the roof drainage from the proposed building and the rear landscaped area. This basin has a developed flow of 2.18 cfs and will sheet flow west towards the South Diversion Channel.

Both tracts will discharge a total of 21.44 cfs of developed flow into the South Diversion Channel. This is a 10.06 cfs increase over the existing discharge and is minimal compared to the total flow in the channel. The flow in the existing swale that will convey the runoff to the Diversion Channel has a velocity of 0.2 ft/sec. This is less than 2 ft/sec and will not cause any scouring of the channel.

Criteria

The site was analyzed using the procedures from the Development Process Manual Volume 2, Chapter 22. The Weighted-E method was used for estimating the volume and flow rate of runoff from each basin.

Summary

There are five proposed basins on the site. Basins 1, 2, and 4 will drain to new concrete channels. These channels will convey the developed flows to the South Diversion Channel. Basins 3 and 5 will sheet flow west towards the South Diversion Channel. The site will discharge a total of 21.44 cfs of developed runoff flow. This is an increase of 10.06 cfs from the existing flow rate of 11.38 cfs. This is incidental considering the size of the existing South Diversion Channel and the site's close proximity to the Channel.

Weighted E Method

Existing Basins

Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		100-Year			10-Year		
			Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
			%	(acres)	%	(acres)	%	(acres)	%	(acres)						
1	217377.78	4.990	0%	0	100%	4.990	0%	0	0%	0.000	0.780	0.324	11.38	0.280	0.116	4.74

Developed Basins

Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		100-Year			10-Year		
			Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
			%	(acres)	%	(acres)	%	(acres)	%	(acres)						
1	19427.23	0.446	0%	0	10%	0.045	0%	0	90%	0.401	1.986	0.074	1.99	1.234	0.046	1.30
2	77343.97	1.776	0%	0	10%	0.178	0%	0	90%	1.598	1.986	0.294	7.92	1.234	0.183	5.19
3	23297.86	0.535	0%	0	34%	0.182	0%	0	66%	0.353	1.664	0.074	2.07	0.980	0.044	1.28
4	71151.18	1.633	0%	0	10%	0.163	0%	0	90%	1.470	1.986	0.270	7.28	1.234	0.168	4.77
5	26157.54	0.600	0%	0	44%	0.264	0%	0	56%	0.336	1.530	0.077	2.18	0.874	0.044	1.31
Total	217377.78	4.990		0		0.832		0		4.159		0.789	21.44		0.484	13.85

Equations:

Weighted E = $E_a \cdot A_a + E_b \cdot A_b + E_c \cdot A_c + E_d \cdot A_d / (\text{Total Area})$

Volume = Weighted D * Total Area

Flow = $Q_a \cdot A_a + Q_b \cdot A_b + Q_c \cdot A_c + Q_d \cdot A_d$

RUNOFF CALCULATIONS

The site is @ Zone 2

LAND TREATMENT

Existing (Basins 1-5)

B = 100 %

Proposed (Basins 1, 2, and 4)

B = 10 %

D = 90 %

Proposed (Basins 3)

B = 34 %

D = 66 %

Proposed (Basins 5)

B = 44 %

D = 56 %

EXCESS PRECIPITATION, E (INCHES)

<u>100-Year</u>	<u>10-Year</u>
$E_a = 0.53$	$E_a = 0.13$
$E_b = 0.78$	$E_b = 0.28$
$E_c = 1.13$	$E_c = 0.52$
$E_d = 2.12$	$E_d = 1.34$

PEAK DISCHARGE (CFS/ACRE)

<u>100-Year</u>	<u>10-Year</u>
$Q_a = 1.56$	$Q_a = 0.38$
$Q_b = 2.28$	$Q_b = 0.95$
$Q_c = 3.14$	$Q_c = 1.71$
$Q_d = 4.70$	$Q_d = 3.14$

Channel Calculations

Concrete Rundown Capacity

Basin	Top Width	Bottom Width	Depth	Area	WP	R	Slope	Q Provided	Q Required	Velocity
	(ft)	(ft)	(ft)	(ft^2)	(ft)		(%)	(cfs)	(cfs)	(ft/s)
1	1	1	0.5	0.50	2.41	0.207107	10	6.34	1.99	3.98
2	3	3	0.5	1.50	6.16	0.243416	2.5	10.60	7.92	5.28
4	4	4	0.5	2.00	8.12	0.246211	1	9.00	7.28	3.64

Manning's Equation:

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

A = Area

R = D/4

S = Slope

n = 0.013

Riprap Requirements

Equation taken from Table 5-5 from the Urban Storm Drainage Criteria Manual Volume 2 by Wright-McLaughlin Engineers.

Basin 1

$$\frac{VS^{0.17}}{(S_s - 1)^{0.66}} = \frac{3.98 * 0.1^{0.17}}{(2.5 - 1)^{0.66}} = 2.06$$

Where:

V = Velocity (ft/sec)

S = Slope (ft/ft)

S_s = Specific gravity of rock

from Table 5-5 use Rock Type VL with a d₅₀ of 6".

Basin 2

$$\frac{VS^{0.17}}{(S_s - 1)^{0.66}} = \frac{5.28 * 0.025^{0.17}}{(2.5 - 1)^{0.66}} = 2.16$$

from Table 5-5 use Rock Type VL with a d₅₀ of 6".

Basin 4

$$\frac{VS^{0.17}}{(S_s - 1)^{0.66}} = \frac{3.64 * 0.01^{0.17}}{(2.5 - 1)^{0.66}} = 1.27$$

from Table 5-5 use Rock Type VL with a d₅₀ of 6".

Infrastructure List

**TO SUBDIVISION IMPROVEMENT AGREEMENT
DEVELOPMENT REVIEW BOARD
REQUIRED INFRASTRUCTURE LISTING
(LEGAL DESCRIPTION OF SUBDIVISION)**

Red Roof Inn

(NAME and UNIT OF SUBDIVISION)

DRB Case No: _____
DRC Project Number: _____
Prelim. Plat Approved: _____
Prelim. Plat Expires: _____
Site Plan Approved: _____

Date Submitted: _____

Following is a summary of PUBLIC/PRIVATE Infrastructure required to be constructed or financially guaranteed for the above development. This listing is not necessarily a complete listing. During the SIA process and/or in the review of the construction drawings, if the DRC Chair determines that appurtenant items and/or unforeseen items have not been included in the infrastructure listing, the DRC Chair may include those items in the listing and related financial guarantee. Likewise, if the DRC Chair determines that appurtenant or non essential items can be deleted from the listing, those items may be deleted as well as the related portions of the financial guarantees. All such revisions require approval by the DRC Chair, the User Department and the agent/owner. If such approvals are obtained, those revisions to the listing will be incorporated administratively. In addition, any unforeseen items which arise during construction which are necessary to complete the project and which normally are the Subdivider's responsibility will be required as a condition of project acceptance and close out by the City.

Size	Type Improvement	Location	From	To
	Signal Improvements	Mulberry and Gibbon		
	Street Reconfiguration	Mulberry Street	Wheeler Ave.	Spence Ave.
	Certified Grading & Drainage with Private Walls & Private Drainage (Non-work order item) Required for SIA/Financial Release			

Agent/Owner Name: _____

Agent/Owner Name: Ronald R. Bohannon, P.E.

Firm: Tierra West LLC

DEVELOPMENT REVIEW BOARD MEMBER APPROVALS

Transportation Dev. _____

Date _____

Utility Dev. _____

Date _____

Parks & GS. _____

Date _____

City Engineer _____

Date _____

AMAFCA _____

Date _____

DRB Chairman _____

Date _____

DRC REVISIONS

Revisions	Date	DRC Chair	User Department	Agent/Owner



City of Albuquerque

February 17, 2000

Ron Bohannon, PE
Tierra West LLC
8509 Jefferson NE
Albuquerque, NM 87113

Re: Red Roof Inn – Kirtland Addition Drainage Report
Engineer's Stamp dated 12-29-99 (M15/D33)

Dear Mr. Bohannon,

Based upon the information provided in your submittal dated 1-11-00, the above referenced plan is not approved for Site Development Plan for Subdivision, Site Development Plan for Building Permit, Building Permit or Grading Permit until the following comments are addressed:

1. Please label existing contours. This is extremely critical when the subject site abuts a flood plain. The flood plain is designated "AO" with a 1 foot depth. As you know, the finish floor must be 1 foot above flood depth in the street directly in front of the building. Per comments generated by prior submittal (enclosed), finish floor elevation should be about 5049 +/-, not 5145.5. This will need to be checked once the labeled contours are available. Also, please include the approximate limits of the floodplain on the grading plan.
2. Please tie your temporary benchmark to COA benchmark with location, description and elevation. Please include this on the next submittal. Also please show water blocks on the plan.
3. AMAFCA concurrence will be required for this project. Please provide written approval from them.
4. Please denote what you are building with this phase of construction. It appears ~~from the plan~~ that you are building all curb and gutter. If this is not so, please ~~denote~~ denote future work with a different line style. What will be the legal description of the tract containing the Hotel? Are you building the bike trail with this project?



City of Albuquerque

5. I think your intent is to create a water block at the proposed property line. Please add additional spot elevations to make this more evident.
6. The report mentions a 2' wide, a 5' wide and a 7' wide V-shaped rundown but the grading plan only indicates a 5' wide rundown in 3 different places. Please clarify this. Also, please describe how the water gets out of the bottom of the rundown and into the swale. Lastly, the section indicators for the rundowns are pointing the wrong way.

If you have any questions about my comments, you can contact me at 924-3986

Sincerely,

Bradley L. Bingham

Bradley L. Bingham, PE
Hydrology Review Engineer

C: file

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Red Roof Inn ZONE ATLAS/DRNG. FILE #: M-15/D33

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: Kirkland Addition, Unit 1

CITY ADDRESS: West of Mulberry Street and South of Gibson Blvd.

ENGINEERING FIRM: TIERRA WEST, LLC CONTACT: RONALD R. BOHANNAN

ADDRESS: 4421 McLeod Rd. NE Suite D, 87109 PHONE: (505) 883-7592

OWNER: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: Precision Surveys CONTACT: Larry Medrano

ADDRESS: 8414-D Jefferson Street, NE PHONE: (505)856-5700

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

☒ DRAINAGE REPORT

☐ DRAINAGE PLAN

☐ CONCEPTUAL GRADING & DRAINAGE PLAN

☒ GRADING PLAN

☐ EROSION CONTROL PLAN

☐ ENGINEER'S CERTIFICATION

☐ OTHER

PRE-DESIGN MEETING:

☐ YES

☒ NO

☐ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

☐ SKETCH PLAN APPROVAL

☐ 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

☒ BUILDING PERMIT APPROVAL

☐ CERTIFICATE OF OCCUPANCY APPROVAL

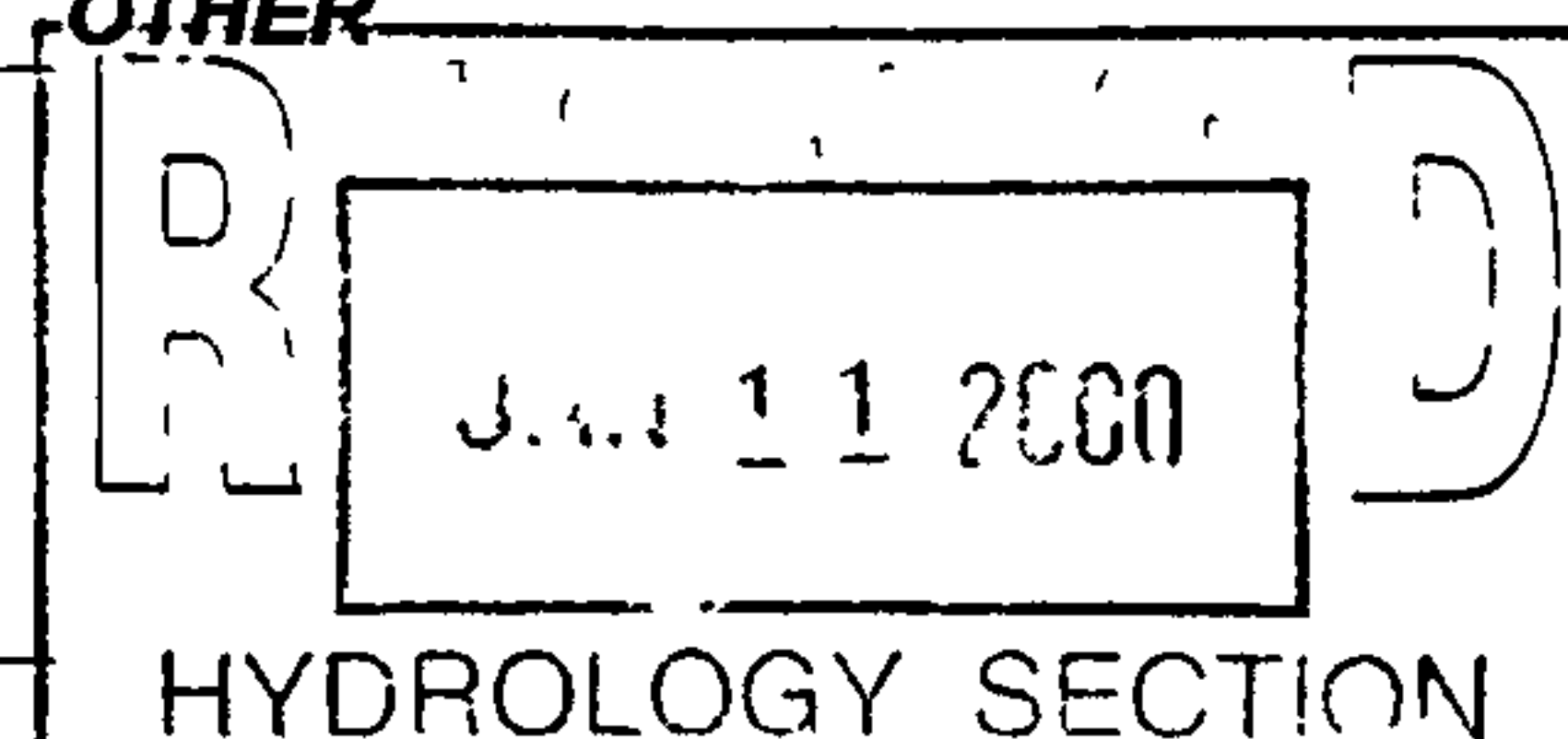
☒ GRADING PERMIT APPROVAL

☐ PAVING PERMIT APPROVAL

☐ S. A. D. DRAINAGE REPORT

☐ DRAINAGE REQUIREMENTS

OTHER



DATE SUBMITTED: 01/11/00

BY: Sara Lavy

FAX

**CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
DEVELOPMENT AND BUILDING SERVICES**

(ONE STOP SHOP)

600 2ND STREET - PLAZA DEL SOL - 2ND FLOOR WEST

FAX NO. 924-3864

DATE: 1-22-00

TIME: 10:00

NO. OF PAGES: 3
(INCLUDING COVER PAGE)

TO: Sara L

FROM: Brad B.

COMMENTS:

Red Roof Inn

DRAINAGE REPORT

for

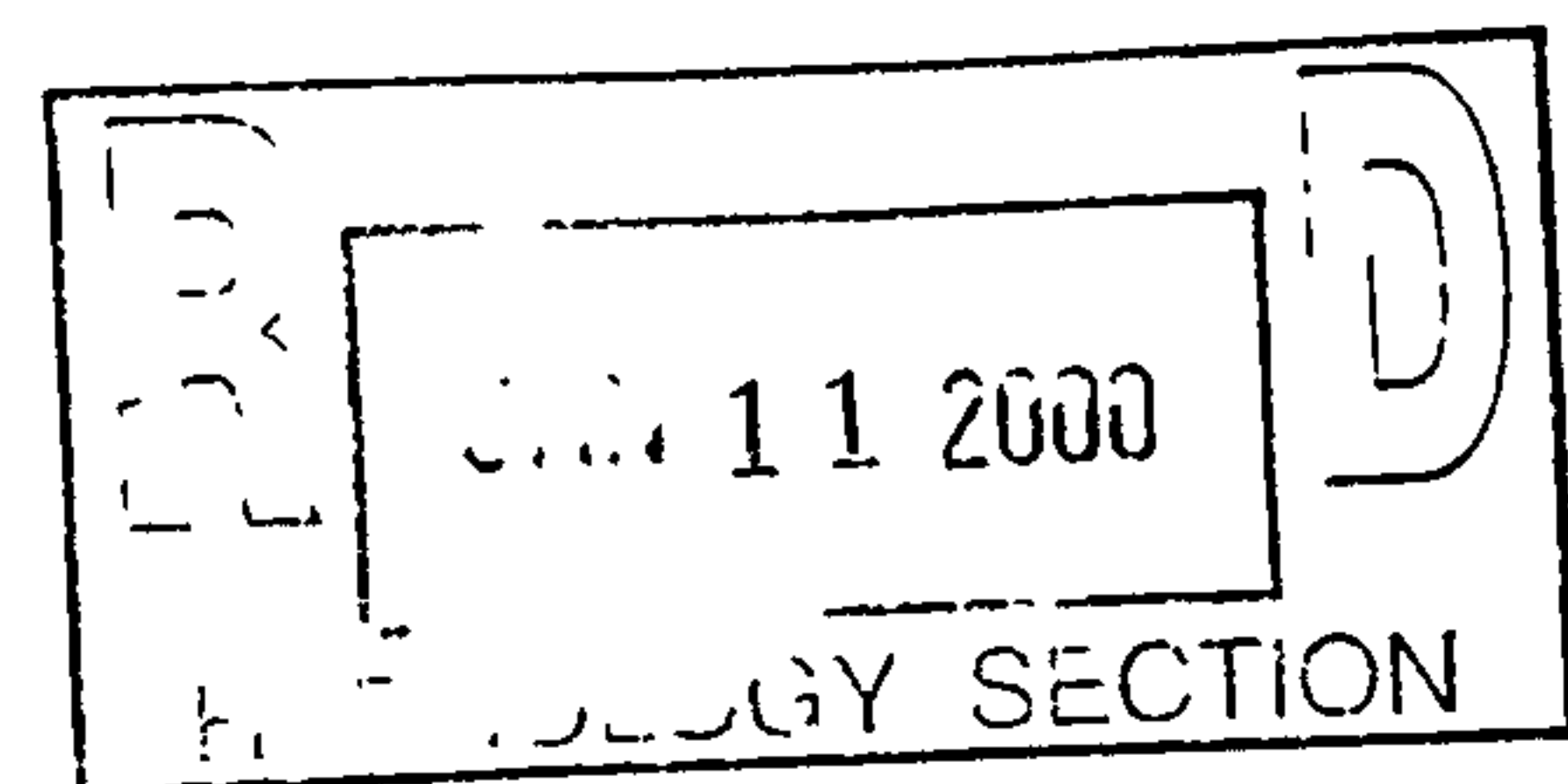
Red Roof Inn

Prepared by

Tierra West, LLC
4421 McLeod Road NE, Suite D
Albuquerque, New Mexico 87109

Prepared for

Philip Lama
EQUUS, Inc.
7119 E. Shea Blvd. Suite 109, PMB 139
Scottsdale, AZ 85254



January 2000

A handwritten signature in black ink, appearing to read "R. Bohannon".

Ronald R. Bohannon P.E.

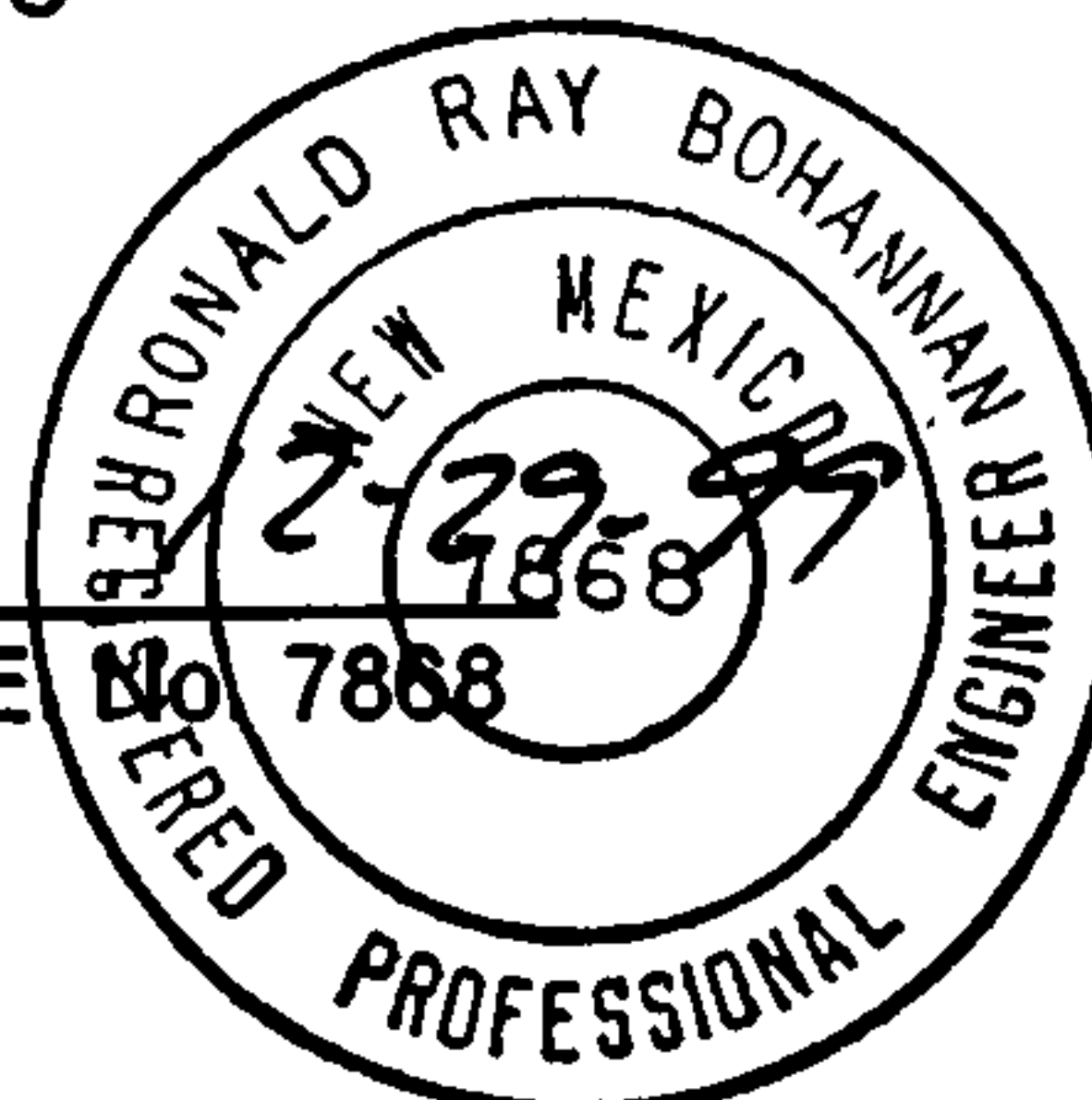


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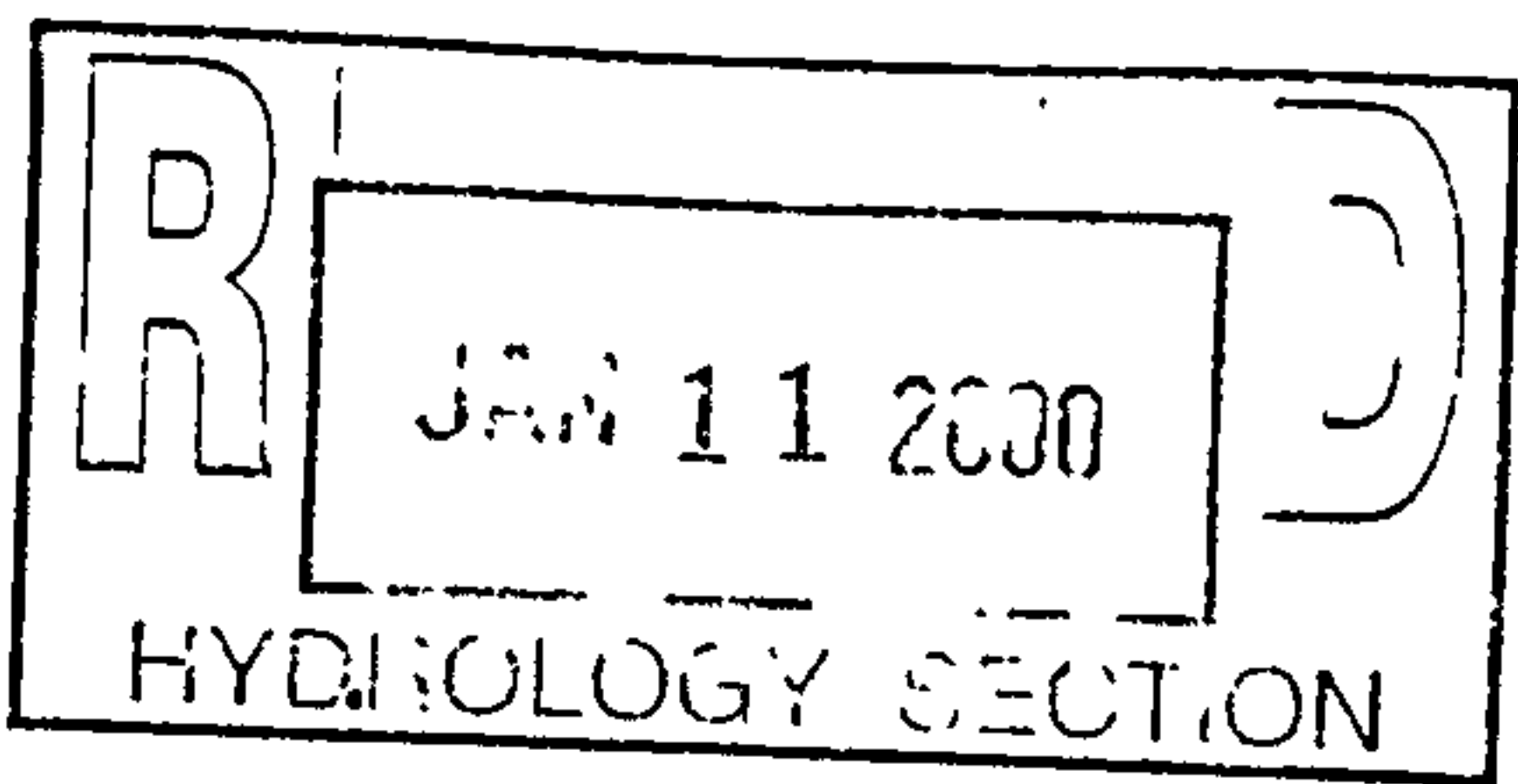
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Location

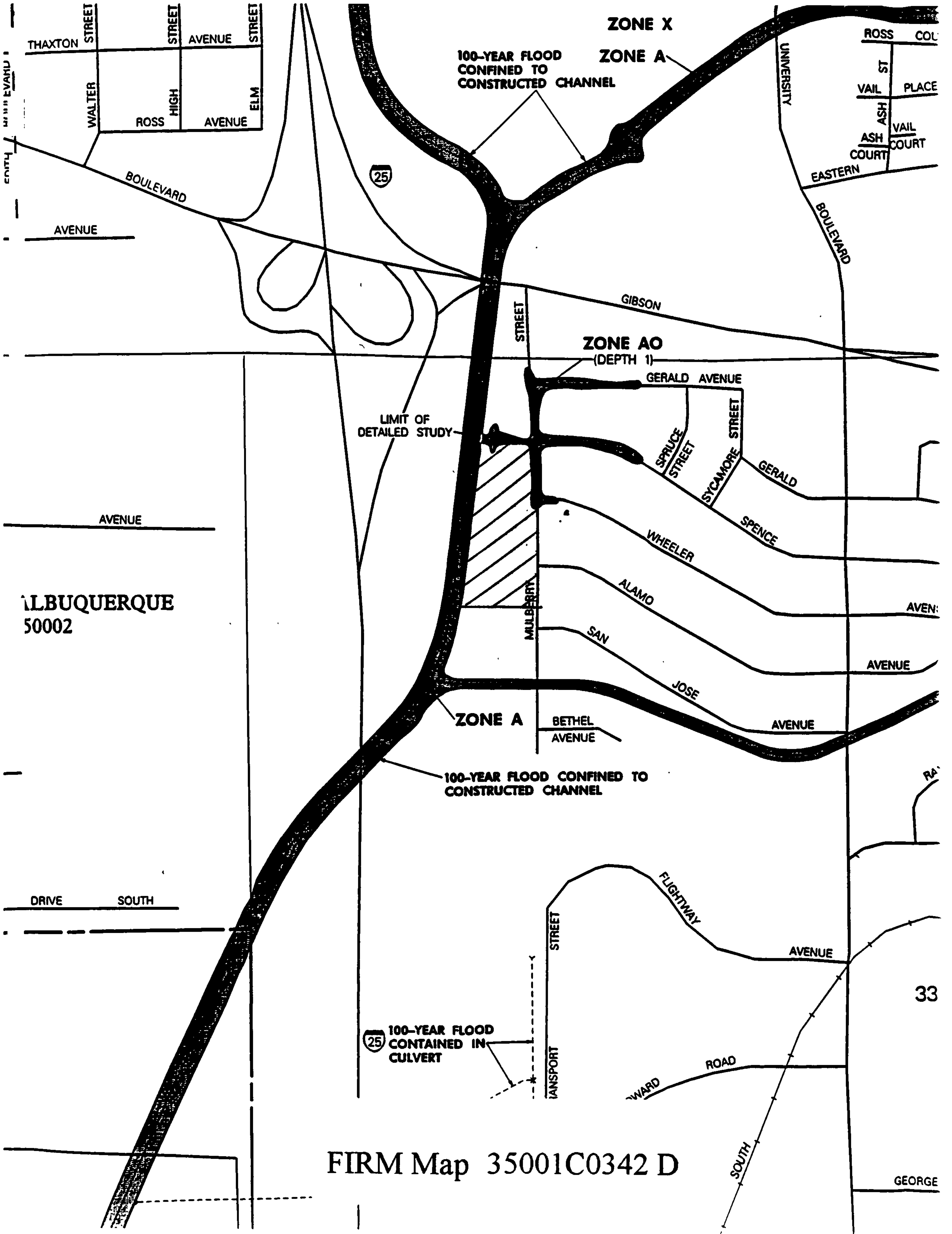
The Red Roof Inn is a proposed 42,000 square foot hotel located west of Mulberry Street and south of Gibson Boulevard. The site is shown on the attached Zone Atlas Map M-15 and is identified as Kirkland Addition, Unit 1. The site is part of a larger site that was approved by EPC for site development plan for subdivision purposes in March 1997. The site has been divided into two tracts. The Red Roof Inn occupies the northern tract and the other tract is shown for conceptual purposes only. The purpose of this report is to provide the drainage analysis and management plan for the site.

Existing Drainage Conditions

The site is currently undeveloped. There is one existing basin on the site with a undeveloped runoff of 11.38 cfs. The site flows west towards the South Diversion Channel where the flow is intercepted by an existing channel and routed to a concrete rundown to the Channel. There are no offsite flows entering the site. Mulberry Street to the east captures all flows coming from the east in a series of drop inlets and conveys the flow to the South Diversion Channel. There is an existing drainage channel located north of the site which intercepts any flows coming from the north. In the south, the remaining property will continue to drain west to the South Diversion Channel. The property on the west side of the channel currently drains east to the South Diversion Channel.

FIRM Map and Soil Conditions

The site is located on FIRM Map 35001C0342 D as shown on the attached excerpt. The map shows that the site does not lie within any 100 year flood plains. The 100 year flood plains located west and north of the site are confined to constructed channels. The flood plain located east of the site is confined to the existing streets and will not impact the site.



FIRM Map 35001C0342 D

The site contains one soil type from the Soil Conservation Service Soil Survey of Bernalillo County. The site contains a Bluepoint loamy fine sand. This soil has slow runoff, rapid permeability, and a severe hazard of soil blowing.

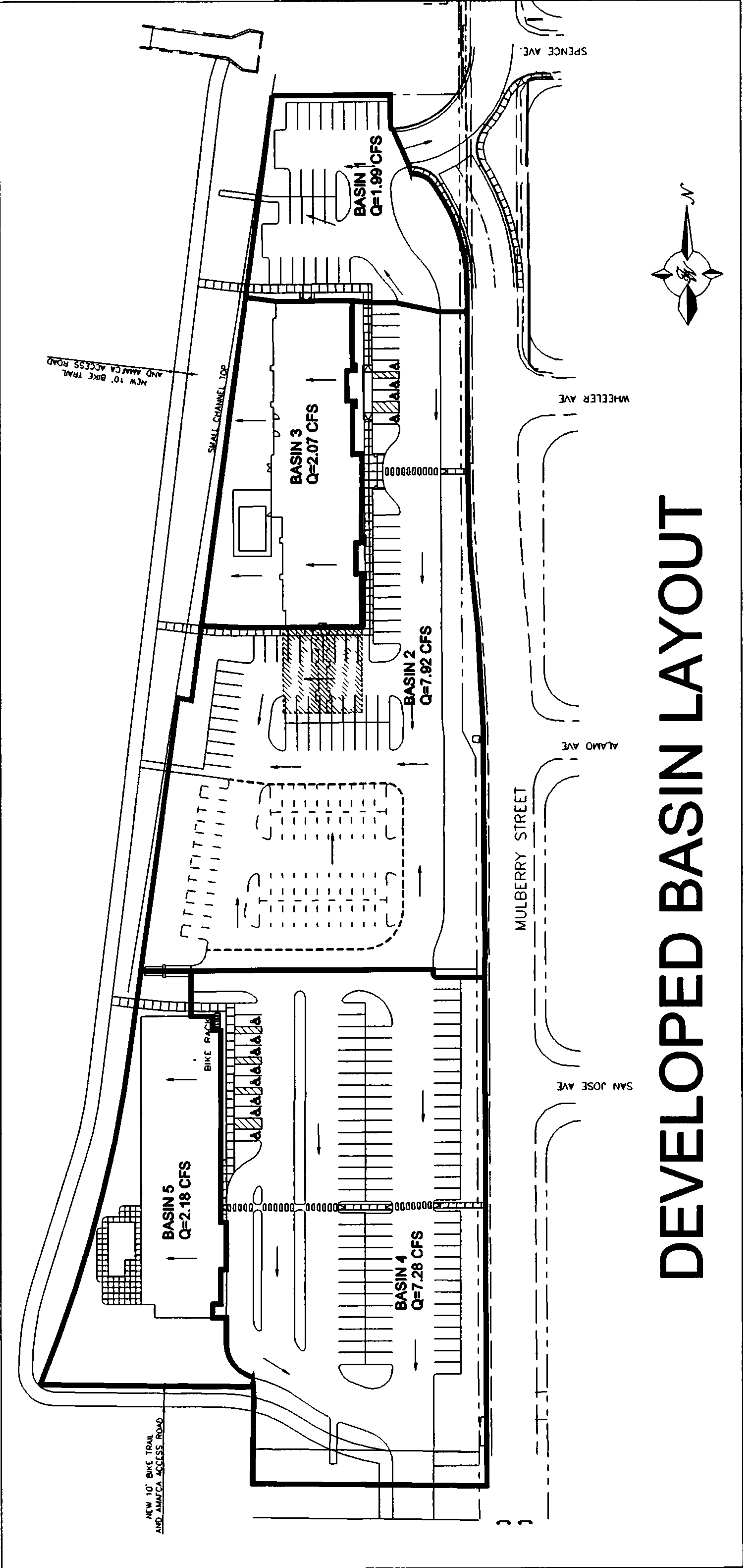
On-Site Drainage Management Plan

Due to the proximity to the South Diversion Channel the site is allowed free discharge to the Channel. The remaining tract when developed will also drain to the South Diversion Channel. The tracts in their current undeveloped conditions drain to the South Diversion Channel and the developed flows will continue to follow the same pattern. The Diversion Channel has such a large capacity that the increase from undeveloped to developed flows will be insignificant to the capacity of the Channel.

The Red Roof Inn site has been separated into three basins (1 thru 3) and the adjacent conceptual site has been divided into two basins (4 and 5). This is to determine the flows and to check the capacity of the channels conveying the flow on site to the South Diversion Channel.

Basin 1 consists of the northern parking lot and has a developed runoff of 1.99 cfs. It is proposed to drain to a new 2.00 feet wide concrete channel. The channel is located in the northeast corner of the site. This channel conveys the flow from the parking lot to the swale adjacent to the Diversion Channel. Basin 2 consists of the northern portion of the site and has a developed runoff flow of 7.92 cfs. This runoff will drain to the west side of the site and discharge to the same swale in a proposed 5.0 feet wide concrete channel. Basin 3 consists of the landscaped area in the back of the hotel and the roof drainage from the building. This basin has a developed runoff flow of 2.07 cfs and sheet flows west towards the South Diversion Channel.

Basin 4 contains the largest portion of the adjacent future site located south of the Red



DEVELOPED BASIN LAYOUT

Roof Inn site. This basin has a developed runoff of 7.28 cfs and will flow south to a new 7.0 feet wide channel. The channel will convey the developed flows to an existing AMAFCA channel, the Kirtland Channel, that discharges to the South Diversion Channel. Basin 5 consists of the roof drainage from the proposed building and the rear landscaped area. This basin has a developed flow of 2.18 cfs and will sheet flow west towards the South Diversion Channel.

Both tracts will discharge a total of 21.44 cfs of developed flow into the South Diversion Channel. This is a 10.06 cfs increase over the existing discharge and is minimal compared to the total flow in the channel. The flow in the existing swale that will convey the runoff to the Diversion Channel has a velocity of 0.2 ft/sec. This is less than 2 ft/sec and will not cause any scouring of the channel.

Criteria

The site was analyzed using the procedures from the Development Process Manual Volume 2, Chapter 22. The Weighted-E method was used for estimating the volume and flow rate of runoff from each basin.

Summary

There are five proposed basins on the site. Basins 1, 2, and 4 will drain to new concrete channels. These channels will convey the developed flows to the South Diversion Channel. Basins 3 and 5 will sheet flow west towards the South Diversion Channel. The site will discharge a total of 21.44 cfs of developed runoff flow. This is an increase of 10.06 cfs from the existing flow rate of 11.38 cfs. This is incidental considering the size of the existing South Diversion Channel and the site's close proximity to the Channel.

Runoff Calculations

Weighted E Method

Existing Basins

											100-Year			10-Year		
Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
			%	(acres)	%	(acres)	%	(acres)	%	(acres)						
1	217377.78	4.990	0%	0	100%	4.990	0%	0	0%	0.000	0.780	0.324	11.38	0.280	0.116	4.74

Developed Basins

											100-Year			10-Year		
Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
			%	(acres)	%	(acres)	%	(acres)	%	(acres)						
1	19427.23	0.446	0%	0	10%	0.045	0%	0	90%	0.401	1.986	0.074	1.99	1.234	0.046	1.30
2	77343.97	1.776	0%	0	10%	0.178	0%	0	90%	1.598	1.986	0.294	7.92	1.234	0.183	5.19
3	23297.86	0.535	0%	0	34%	0.182	0%	0	66%	0.353	1.664	0.074	2.07	0.980	0.044	1.28
4	71151.18	1.633	0%	0	10%	0.163	0%	0	90%	1.470	1.986	0.270	7.28	1.234	0.168	4.77
5	26157.54	0.600	0%	0	44%	0.264	0%	0	56%	0.336	1.530	0.077	2.18	0.874	0.044	1.31
Total	217377.78	4.990		0		0.832		0		4.159		0.789	21.44		0.484	13.85

Equations:

Weighted E = $E_a \cdot A_a + E_b \cdot A_b + E_c \cdot A_c + E_d \cdot A_d / (\text{Total Area})$

Volume = Weighted D * Total Area

Flow = $Q_a \cdot A_a + Q_b \cdot A_b + Q_c \cdot A_c + Q_d \cdot A_d$

RUNOFF CALCULATIONS

The site is @ Zone 2

LAND TREATMENT

Existing (Basins 1-5)

B = 100 %

Proposed (Basins 1, 2, and 4)

B = 10 %

D = 90 %

Proposed (Basins 3)

B = 34 %

D = 66 %

Proposed (Basins 5)

B = 44 %

D = 56 %

EXCESS PRECIPITATION, E (INCHES)

<u>100-Year</u>	<u>10-Year</u>
E _a = 0.53	E _a = 0.13
E _b = 0.78	E _b = 0.28
E _c = 1.13	E _c = 0.52
E _d = 2.12	E _d = 1.34

PEAK DISCHARGE (CFS/ACRE)

<u>100-Year</u>	<u>10-Year</u>
Q _a = 1.56	Q _a = 0.38
Q _b = 2.28	Q _b = 0.95
Q _c = 3.14	Q _c = 1.71
Q _d = 4.70	Q _d = 3.14

Channel Calculations

Concrete Rundown Capacity ?

Basin	Top Width	Bottom Width	Depth	Area	WP	R	Slope	Q Provided	Q Required	Velocity
	(ft)	(ft)	(ft)	(ft^2)	(ft)		(%)	(cfs)	(cfs)	(ft/s)
1	2	0	0.5	0.50	2.24	0.223607	10	6.68	1.99	3.98
2	5	0	0.5	1.25	5.10	0.245145	2.5	8.87	7.92	6.34
4	7	0	0.5	1.75	7.07	0.247487	1	7.91	7.28	4.16

Manning's Equation:

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

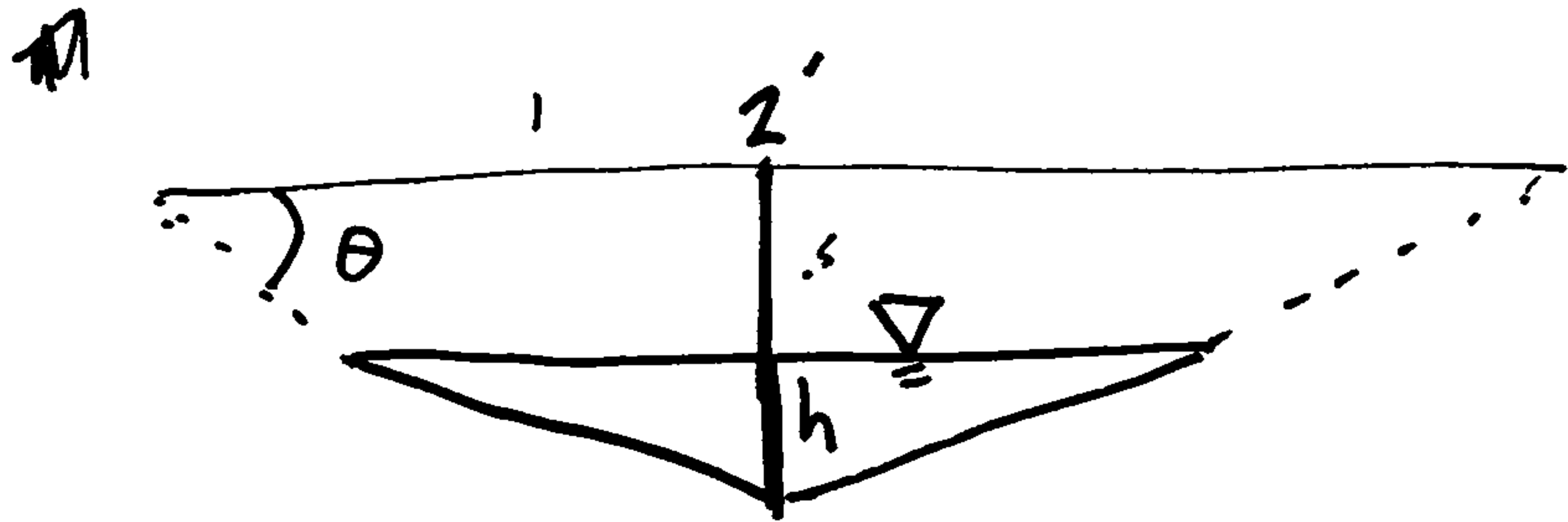
A = Area

R = D/4 — pipe only

S = Slope

n = 0.013

$R = \frac{A}{WP}$



$\frac{.5}{1}$

• **Infrastructure List**

EXHIBIT "A"
TO SUBDIVISION IMPROVEMENT AGREEMENT
DEVELOPMENT REVIEW BOARD
REQUIRED INFRASTRUCTURE LISTING
(LEGAL DESCRIPTION OF SUBDIVISION)
Red Roof Inn
(NAME and UNIT OF SUBDIVISION)

DRB Case No: _____
DRC Project Number: _____
Prelim. Plat Approved: _____
Prelim. Plat Expires: _____
Site Plan Approved: _____

Date Submitted: _____

Following is a summary of PUBLIC/PRIVATE Infrastructure required to be constructed or financially guaranteed for the above development. This listing is not necessarily a complete listing. During the SIA process and/or in the review of the construction drawings, if the DRC Chair determines that appurtenant items and/or unforeseen items have not been included in the infrastructure listing, the DRC Chair may include those items in the listing and related financial guarantee. Likewise, if the DRC Chair determines that appurtenant or non essential items can be deleted from the listing, those items may be deleted as well as the related portions of the financial guarantees. All such revisions require approval by the DRC Chair, the User Department and the agent/owner. If such approvals are obtained, these revisions to the listing will be incorporated administratively. In addition, any unforeseen items which arise during construction which are necessary to complete the project and which normally are the Subdivider's responsibility will be required as a condition of project acceptance and close out by the City.

Size	Type Improvement	Location	From	To
	Signal Improvements	Mulberry and Gibson		
	Street Reconfiguration	Mulberry Street	Wheeler Ave.	Spence Ave.
	Certified Grading & Drainage with Private Walls & Private Drainage (Non-work order item) Required for SIA/Financial Release			

Agent/Owner Name: _____

Agent/Owner Name: Ronald R. Bohannon, P.E.

Firm: Tierra West LLC

DEVELOPMENT REVIEW BOARD MEMBER APPROVALS

Transportation Dev. _____ Date _____

Utility Dev. _____ Date _____

Parks & GS. _____ Date _____

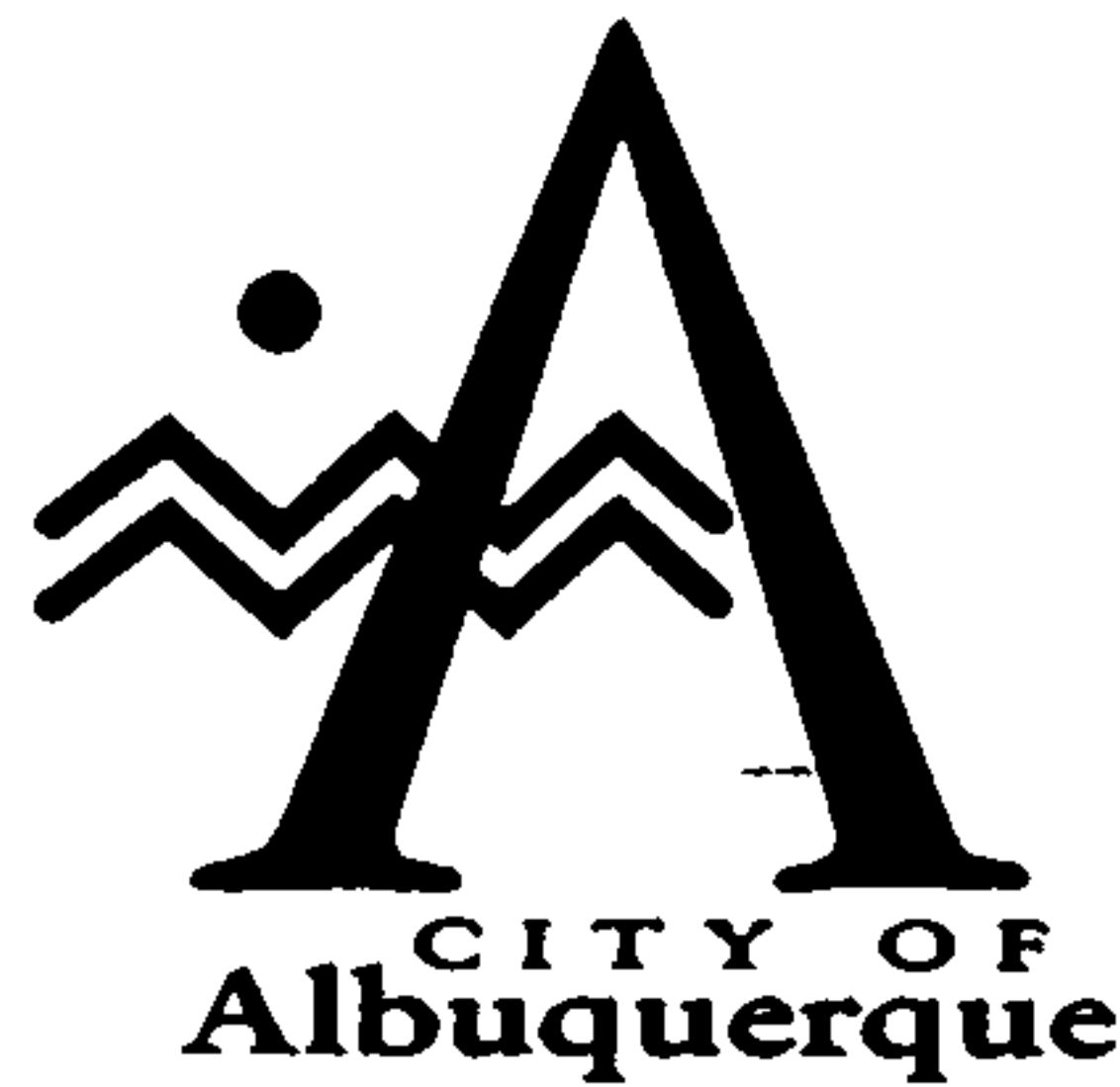
City Engineer _____ Date _____

AMAFCA _____ Date _____

DRB Chairman _____ Date _____

DRC REVISIONS

Revisions	Date	DRC Chair	User Department	Agent/Owner



June 26, 1998

Ron Bohannon, P.E.
Tierra West, LLC
4421 McLeod Road NE - Suite D
Albuquerque, NM 87109

Re: Grading and Drainage Plan for the Hearthside Hotel. Tierra West
Plan dated May 18, 1998 and report dated March 15, 1998. Drainage
File #M15/D33. Request for Preliminary Plat, Building Permit,
Grading Permit

Dear Mr. Bohannon:

Our consultant, Steve P. Kemna from Smith Engineering Company, has
reviewed the referenced submittal and has submitted the following
comments (see attached letter). In addition to these comments, AMAFCA's
concurrence will be required for any work within their R/W. Please
address these comments and resubmit for review.

If I can be of further assistance, please feel free to contact me at 924-
3980.

Sincerely,

Fred J. Aguirre, P.E.
City Hydrologist
Public Works Department

Attachments: Letter from Smith Engineering dated June 22, 1998

C: Andrew Garcia
Sara McCollam
File ✓

Good for You, Albuquerque!





Smith Engineering Company

A Full Service Engineering Company

June 22, 1998

Fred Aguirre
Hydrologist
City of Albuquerque
Public Works Department
P.O. Box 1293
Albuquerque, NM 87103

Re: Grading and Drainage Plan for The Hearthside Hotel
Tierra West
Plan dated May 18, 1998 *Report dated March 15, 1998*
Drainage File # M15/D33
Request for Preliminary Plat, Building Permit, Grading Permit
SEC Job # 198624.B6

Dear Mr. Aguirre:

Smith Engineering Company (SEC) is pleased to submit the review comments for the "Grading and Drainage Plan for the Hearthside Hotel". The review comments are as follows:

1. Does the owner, Home and Hearth Inc., own the lot to the south of the project site? (If not, then please move the "slope tie" on the south boundary of the project site so that it is within the property boundary).
2. Please indicate the COA Bench Mark that ties to the project Temporary Bench Mark. Indicate location, description, and elevation in COA datum.
3. The finished floor of the hotel is labeled at an elevation of 5,145.5 ft. This is likely a typographic error as it sets the finished floor 100 feet above existing grade.
4. The project site is bounded by a Zone AO (Depth 1 foot) floodplain. The finished floor of the hotel must be 2 feet above the flow line elevation at the intersection of Wheeler Avenue and Mulberry Street. The existing contours show the flow line at the intersection is at elevation 5,047 ft. +/- . Therefore, the finished floor of the hotel must be at elevation 5,049 ft.
5. All comments pertaining to the structures that discharge to the South Diversion Channel are deferred to AMAFCA.

Thank you for the opportunity to review this grading and drainage plan. If you have any questions please feel free to contact me at 884-0700.

Sincerely,

Smith Engineering Company


Stephen P. Kemna, P.E.

DRAINAGE INFORMATION SHEET

PROJECT TITLE: <u>The Hearthside Hotel</u>	ZONE ATLAS/DRNG. FILE #: <u>M-15/D33</u>
DRB #: _____	EPC #: _____
WORK ORDER #: _____	
LEGAL DESCRIPTION: <u>Kirkland Addition, Unit 1</u>	
CITY ADDRESS: <u>West of Mulberry Street and South of Gibson Blvd.</u>	
ENGINEERING FIRM: <u>TIERRA WEST, LLC</u>	CONTACT: <u>RONALD R. BOHANNAN</u>
ADDRESS: <u>4421 McLeod Rd. NE Suite D, 87109</u>	PHONE: <u>(505) 883-7592</u>
OWNER: <u>Home and Hearth, Inc.</u>	CONTACT: <u>Randy Alexander</u>
ADDRESS: <u>14643 Dallas Parkway Suite 675, Dallas, TX 75240</u>	PHONE: <u>(972)960-1922</u>
ARCHITECT: _____	CONTACT: _____
ADDRESS: _____	PHONE: _____
SURVEYOR: <u>Southwest Surveying Co. Inc.</u>	CONTACT: <u>Dan</u>
ADDRESS: <u>333 Lomas Blvd NE, Albuquerque, NM 87102</u>	PHONE: <u>(505)247-4444</u>
CONTRACTOR: _____	CONTACT: _____
ADDRESS: _____	PHONE: _____

TYPE OF SUBMITTAL:

<input checked="" type="checkbox"/>	DRAINAGE REPORT
<input type="checkbox"/>	DRAINAGE PLAN
<input type="checkbox"/>	CONCEPTUAL GRADING & DRAINAGE PLAN
<input checked="" type="checkbox"/>	GRADING PLAN
<input type="checkbox"/>	EROSION CONTROL PLAN
<input type="checkbox"/>	ENGINEER'S CERTIFICATION
<input type="checkbox"/>	OTHER

PRE-DESIGN MEETING:

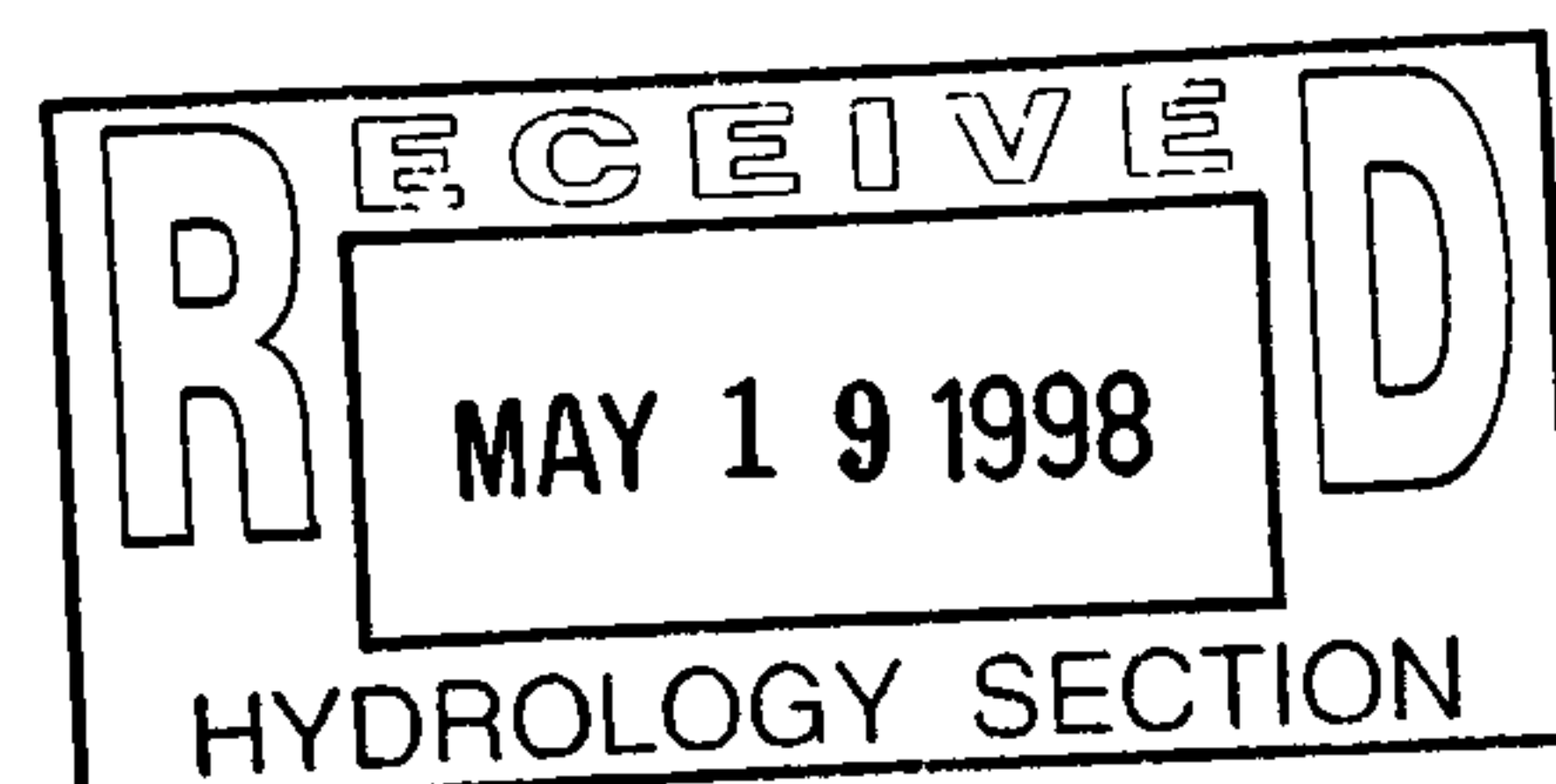
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<input type="checkbox"/>	COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

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<input checked="" type="checkbox"/>	PRELIMINARY PLAT APPROVAL
<input type="checkbox"/>	S. DEV. PLAN FOR SUB'D. APPROVAL
<input checked="" type="checkbox"/>	S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
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<input type="checkbox"/>	CERTIFICATE OF OCCUPANCY APPROVAL
<input checked="" type="checkbox"/>	GRADING PERMIT APPROVAL
<input type="checkbox"/>	PAVING PERMIT APPROVAL
<input type="checkbox"/>	S. A. D. DRAINAGE REPORT
<input type="checkbox"/>	DRAINAGE REQUIREMENTS
<input type="checkbox"/>	OTHER

DATE SUBMITTED: 05/18/98

BY: Ronald R. Bohannon





Tierra West, LLC

May 19, 1998

Mr. Fred Aguirre
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

Re: The Hearthside Hotel (M13-D33)

Dear Mr. Aguirre:

This is a letter in response to your comments regarding the Grading and Drainage Plan for the Hearthside Hotel site.

1. We are in the process of obtaining AMAFCA's approval for the project.
2. The dimensions for the drainage easement for the 66" storm drain have been shown on the grading plan.

If you have any questions regarding this matter, please do not hesitate to call me.

Sincerely,


Sara McCollam

Enclosures

cc: Randy Alexander
Manuel Lujan

JN: 970040
scm

970040 9740resubmittal ltr