City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 21, 2003

Ronald R. Bohannan, P.E.
Tierra West, LLC
8509 Jefferson NE
Albuquerque, New Mexico 87113

RE: RESIDENCE INN BY MARRIOTT (E-17/D65)
(4331 The Lane @ 25 NE)
ENGINEERS CERTIFICATION FOR CERTIFICATE OF OCCUPANCY
ENGINEERS STAMP DATED 10/4/2001
ENGINEERS CERTIFICATION DATED 1/17/2003

Dear Mr. Bohannan:

Based upon the information provided in your Engineers Certification submittal dated 1/17/2003, the above referenced site is approved for a Permanent Certificate of Occupancy.

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

Sincerely,

Teresa A. Martin
Hydrology Plan Checker
Development & Bldg. Ser. Division
BLD

C: Certificate of Occupancy Clerk, COA
drainage file
approval file

TIERRA WEST, LLC

8509 Jefferson NE
Albuquerque, NM 87113

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

twllc@tierrawestllc.com
1-800-245-3102

January 15, 2003

Mrs. Terri Martin
Public Works Department
City of Albuquerque
PO Box 1293
Albuquerque, NM 87103

RE: Final Certification of Transportation for Certificate of Occupancy
Residence Inn by Marriott
4331 The Lane @ 25 NE

Dear Terri:

We are requesting Final Certification of Transportation for Certificate of Occupancy. Enclosed please find one copy of the as-built Traffic Circulation Plan and Information Sheet for the Residence Inn by Marriott Hotel located in the @ 25 Development. S. T. Baggett Construction completed the on-site paving, curb and gutter, and sidewalks. Landscaping for the site is complete. The parking lot striping is complete. As-built information was field verified by our office. We are, therefore, requesting Final Certification of Transportation for Certificate of Occupancy.

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

Sincerely,

David Soule, PE

Enclosures

cc: ST Baggett

JN: 220021
DS/rw

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 22, 2001

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

Re: Residence Inn @25 Drainage Report
Engineer Stamp date 10-4-01 (E17/D65)

Dear Mr. Bohannan,

Based on information provided in your submittal dated 10-8-01, the above referenced plan is approved for Building Permit.

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

Also, 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

Bradley L. Bingham, PE
Sr. Engineer, Hydrology

C: file

DRAINAGE REPORT

for

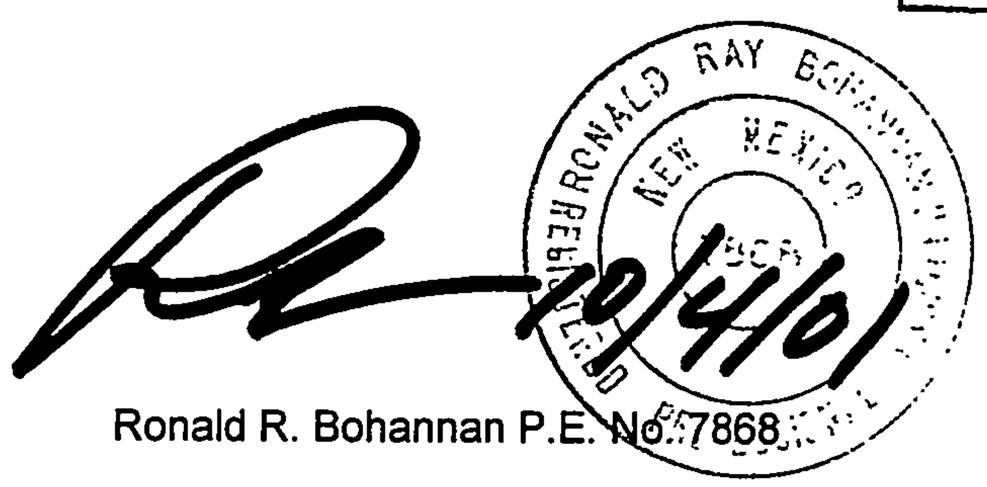
Residence Inn by Marriott
Albuquerque, New Mexico

Prepared by

Tierra West, LLC
8509 Jefferson NE
Albuquerque, New Mexico 87113

Prepared for
Browning & Associates
204 South Lulu
Wichita, KS 67211

October 2001



Ronald R. Bohannan P.E. No. 7868

PURPOSE

The purpose of this report is to provide the drainage management plan for the development of the Lot D-1, of The 25 Development. This plan will be utilized for the development of the subject 2.56-acre property, for the use as Residence Inn. This plan is in accordance with the DPM Chapter 22. This report will demonstrate that the proposed improvements do not adversely effect the surrounding properties nor the upstream or downstream facilities.

INTRODUCTION

The subject of this report, as shown on the Exhibit A vicinity map, is a 2.56-acre parcel of land located on the northeast corner of The Lane at 25 and The 25 Way. The site is located on Zone Atlas page E-17. The site currently exists as a rough graded pad site within The 25 Development. The legal description of the property is Tract D-1 of The 25 Development. As shown on FIRM map 35001C0138D, the site lies within flood zone X.

This site was analyzed within the Master Drainage Report and Grading Plan for The 25 Development (F17-D46D) previously submitted by Tierra West, LLC, with the stamp date of 5/5/99. The City of Albuquerque Hydrology Section approved the Drainage Management Plan on 5/13/99. Based upon the approved Drainage Management Plan, this site is located entirely within Basin A of The 25 Development. The approved Master Drainage Plan indicates this parcel is allowed free discharge if the land treatments are equal to, or less than 85% D, and 15% B. Since our improvements are consistent with developed condition assumptions within The 25 Development Drainage Plan the site should be allowed free discharge.

Offsite flows enter the site from the east from the adjacent Tract D-2. These flows will enter desiltation ponds and flow through the site until the site to the east is developed, at which time the upland flows will be passed through the site via surface flow within the parking lot as indicated on the Master Drainage Study.

EXISTING CONDITIONS

The site slopes from east to west, with general grades between 3-4%. The site was Rough Graded with the construction of The 25 Development. The approved grading plan for The 25 Development is included in Map Pocket A. This site was analyzed within the Drainage Study for the entire 25 Development. This site is located entirely within Basin A, as described within the Master drainage study, and shown in Exhibit B. As discussed within The 25 Development's drainage report, Basin A flows from the east to the west, where the flows enter drop inlets in "The Lane at 25" and are conveyed to the Bear Canyon Arroyo. When the capacity of that system is full the flows will continue to Jefferson Street and enter an existing series of drop inlets at Singer Boulevard and Jefferson Street. This storm drain discharges directly into the Vineyard Channel. A cross lot drainage easement was provided for the benefit of all the lots within the center. According to The 25 Developments' Master Drainage Plan, the flows from Basin A and flows generated in Jefferson Boulevard are the contributing basins for this storm drain system.

As shown in Appendix A the upstream portion of Basin A discharges 2.47 CFS onto this site. This runoff enters the site along its eastern boundary and sheet flows across the site. Once the flow leaves the site it continues to sheet flow to The Lane at 25 and are captured by the previously mentioned drop inlets.

PROPOSED CONDITIONS

The proposed improvements consist of the construction of a 24,700 square foot hotel building and its associated parking lot. As shown in Exhibit B, the entire site lies within Basin A as described within The 25 Developments' Master Drainage Study. As shown in Appendix A, the proposed land treatments are consistent with the developed condition assumptions for this site within The 25 Developments' Drainage Management Plan. The offsite flows that currently enter the site from the east will continue to be accepted and passed through the site. Due to the adjacent sites' topography it is anticipated 1.96 cfs will enter the site through the north drive isle

and 4.03 cfs will enter the site from the south isle in its fully developed condition. Desilting ponds will be constructed at the ends of each drive isle to minimize the transport of sediment on to the site.

As shown on the Basin Map exhibit in Map Pocket A, the site consists of 7 onsite basins and 2 offsite basins. Basin A contains the entire roof of the structure and contains 52 equal sub-basins that discharge through down spouts. The proposed Grading Plan is included in Map Pocket B of this report. As shown on the Grading Plan and Basin Map, the east parking lot, the north and west half of the roof, rear landscape areas as well as the offsite basin E will be conveyed via surface flow to the northwest corner of the site. The peak flow leaving the site at the northwest corner is predicted to be 7.19 cfs during the 100-year, 6-hour storm event. As shown in Appendix B, the flow is able to pass through the three proposed sidewalk culverts.

An underground storm drain system is proposed to drain the south portion of the roof and front courtyard areas. This storm drainage system will discharge 1.69 cfs to the landscape area at the southwest corner of the site, discharging to The 25 Way loop road via a single sidewalk culvert. As shown in Appendix B, the underground drainage system and single sidewalk culvert has capacity to discharge the entire predicted 100-year, 6-hour storm event. The south parking fields as well as the flow entering the site from the offsite basin I will leave the site through both driveway entrances. As described within the Master Drainage Study for The 25 Development, the flows leaving this site will be conveyed via surface flow to a set of existing inlet, which discharge to the Vineyard Arroyo.

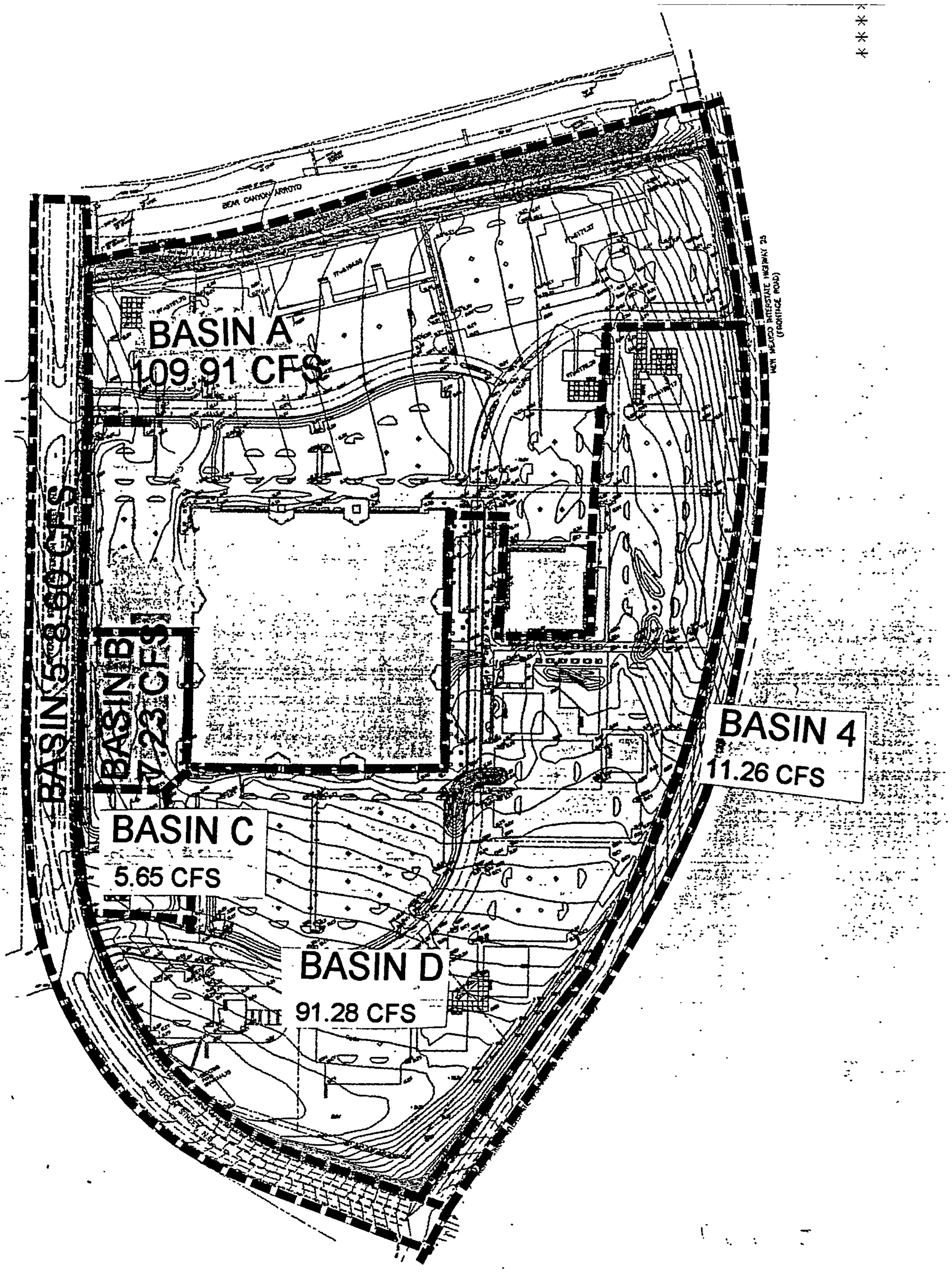


Exhibit B- The 25 Development Basin Map

SUMMARY AND RECOMMENDATIONS

This site is an existing pad within The 25 Development, which is an existing commercial center. The City of Albuquerque Hydrology Section approved the drainage management plan for the entire center. The 25 Development's Master Drainage Plan assumed fully developed conditions for our site. The proposed improvements are consistent with the land treatment types used for the developed condition for this site within The 25 Development's drainage plan. The development of this site is consistent with the DPM, Chapter 22, Hydrology section. Since this site encompasses less than 5 acres, a NPDES permit is not required prior to any construction activity.

There are no improvements required within City Right-of-Way; therefore an infrastructure list is not required. It is recommended this development be approved for rough grading, and Site Plan for Building Permit.

Weighted E Method

* * * *

Existing Basins

Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		100-Year			10-Year		
			%	(acres)	%	(acres)	%	(acres)	%	(acres)	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
Entire site	111513.60	2.560	80%	2.048	15%	0.384	0%	0	5%	0.128	0.647	0.138	4.67	0.213	0.045	1.54
E	19280.00	0.443	80%	0.354086	15%	0.066	0%	0	5%	0.022	0.647	0.024	0.81	0.213	0.008	0.27
I	39641.00	0.910	80%	0.728026	15%	0.137	0%	0	5%	0.046	0.647	0.049	1.66	0.213	0.016	0.55

Developed Basins

Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		100-Year			2-Year		
			%	(acres)	%	(acres)	%	(acres)	%	(acres)	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
A/52	475.00	0.011	100%	0.010904	0%	0.000	0%	0	0%	0.000	0.530	0.000	0.02	0.000	0.000	0.00
B	1869.00	0.043	0%	0	40%	0.017	30%	0.01287	30%	0.013	1.287	0.005	0.14	0.290	0.001	0.03
C	6100.00	0.140	0%	0	30%	0.042	30%	0.04201	40%	0.056	1.421	0.017	0.49	0.367	0.004	0.13
D	20163.00	0.463	0%	0	0%	0.000	20%	0.09258	80%	0.370	1.922	0.074	2.03	0.662	0.026	0.74
E	19280.00	0.443	0%	0	5%	0.022	10%	0.04426	85%	0.376	1.954	0.072	1.96	1.205	0.044	0.73
F	41819.00	0.960	0%	0	25%	0.240	70%	0.67202	5%	0.048	1.092	0.087	2.88	0.150	0.012	0.51
G	4263.00	0.098	0%	0	40%	0.039	30%	0.02936	30%	0.029	1.287	0.010	0.32	0.290	0.002	0.08
H	59451.00	1.365	0%	0	20%	0.273	30%	0.40944	50%	0.682	1.555	0.177	5.12	0.444	0.050	1.54
I	39641.00	0.910	0%	0	5%	0.046	10%	0.091	85%	0.774	1.954	0.148	4.03	0.688	0.052	1.50
Total	193061.00	4.432		0.010904		0.679		1.39355		2.349		0.591	16.98		0.192	5.26

Equations:

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

Volume = Weighted D * Total Area

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

Where for 100-year, 6-hour storm

Ea= 0.53	Qa= 1.56
Eb= 0.78	Qb= 2.28
Ec= 1.13	Qc= 3.14
Ed= 2.12	Qd= 4.7

Where for 2-year, 6-hour storm

Ea= 0	Qa= 0
Eb= 0.02	Qb= 0.08
Ec= 0.15	Qc= 0.6
Ed= 0.78	Qd= 1.86

MARRIOTT @ 25

Pipe	D	Slope	Area	R	Q Provided	Q Required	Velocity
	(in)	(%)	(ft^2)		(cfs)	(cfs)	(ft/s)
AP #1	12	0.6	0.79	0.25	2.77	0.95	1.21
AP #2	12	0.6	0.79	0.25	2.77	0.60	0.76
AP #3	12	0.6	0.79	0.25	2.77	1.69	2.15

Manning's Equation:

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

A = Area
R = D/4
S = Slope
n = 0.013

SIDEWALK CULVERT ANALYSIS

Weir Equation:

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

Q= flow (cfs)
C = 2.75
H = Curb Height (ft)
L = width of opening

For each 24" culvert:

$$Q_{max} = 2.75(2)(.67)^{3/2} = 3.02 \text{ cfs}$$

For east culvert:

Q_{req}= 3.99 cfs
Therefore 2 sidewalk culverts are required
Q_{req}= 3.99 cfs < Q_{max} =6.04 cfs

For west culvert:

Q_{req}= 7.19 cfs
Therefore 3 sidewalk culverts are required
Q_{req}= 7.19cfs < Q_{max} =9.06 cfs

For south culvert:

Q_{req}= 1.96 cfs
Therefore 1 sidewalk culverts is required
Q_{req}= 1.96cfs < Q_{max} =3.02 cfs

MAP POCKET A

DRAINAGE BASIN MAP

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Planning Department
Transportation Development Services Section

January 21, 2003

David Soule, PE
8509 Jefferson NE
Albuquerque, NM 87113

Re: Certification Submittal for Final Building Certificate of Occupancy for
Residence Inn, [E17 / D65]
4331 The Lane @ 25 NE
Engineer's Stamp Dated 1-15-03

Dear Mr. Soule:

The TCL / Letter of Certification submitted on Jan. 17, 2003 is sufficient for acceptance by this office for final Certificate of Occupancy (C.O.). Notification has been made to the Building and Safety Section.

Sincerely,

Richard Dourte, PE
Development and Building Services
Planning Department

c: file
Hydrology file

TIERRA WEST, LLC

8509 Jefferson NE
Albuquerque, NM 87113

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

twllc@tierrawestllc.com
1-800-245-3102

January 15, 2003

Mrs. Terri Martin
Public Works Department
City of Albuquerque
PO Box 1293
Albuquerque, NM 87103

RE: Final Certification of Transportation for Certificate of Occupancy
Residence Inn by Marriott
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If you have any questions regarding this matter, please do not hesitate to call me.

Sincerely,

David Soule, PE

DAVID SOULE
NEW MEXICO
14522
LICENSED PROFESSIONAL ENGINEER

Enclosures

cc: ST Baggett

JN: 220021
DS/rw

210022 -Final CO Transportation.ltr

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Public Works Department
Transportation Development Services Section

February 27, 2002

Ronald R Bohannon, Reg. Professional Engineer,
Tierra West, LLC,
8509 Jefferson N.E.
Albuquerque, NM 87113

Re: Traffic Circulation Layout (TCL) Submittal for Building Permit Approval for Residence Inn by Marriott, [E17 / D065]
4331 The Lane @25 N.E.
Engineer's Stamp Dated 02/20/02

Dear Mr. Bohannon:

The TCL submittal, dated Feb. 27, 2002, is sufficient for acceptance by this office and is stamped and signed as such. Four copies were made as required: two were attached to the building permit plans, one for this office and one kept by the architect. One more copy may possibly be needed for your office, to be used for certification of the site for final C.O. for Hydrology/Transportation, unless the copy given to the architect is routed to your office.

When the superintendent of this project calls for a Temporary C.O. immediate issuance is no longer possible at that time. An exact copy of the approved TCL, marked up, showing incomplete work remaining, along with a letter of certification is required prior to issuance of Temporary C.O. If this project is one of multiple phases for this building permit, Barricading Plan is needed clearly illustrating how vehicles and pedestrians using this site will be separated from coming phases, not completed or yet begun.
When site is complete and a Final C.O. is needed, a Letter of Certification (specifically stating "Certification"), stating that the site was built in substantial compliance with the approved plan, needs to be included with your copy of the TCL. A second option would be to place a typed or stamped Statement of Certification on the approved TCL copy, with the designer's seal, signed and dated for that certification. All documentation must be submitted with a completed Drainage and Transportation Information Sheet (also used for the Grading and Drainage submittal) to Hydrology at the Development Services Center of Plaza Del Sol Building.

Once verification of certification is completed and approved, notification will be made to Building Safety to issue Final C.O. To confirm that the Final C.O. has been issued for this address call Building Safety at 924-3306.

Sincerely,

Mike Zamora, Commercial Plan Checker
Development and Building Services
Public Works Department

c: Architect
Hydrology file
Mike Zamora