DRAINAGE REPORT

For

Twisters Wyoming and Holly Albuquerque, New Mexico

Prepared by

Rio Grande Engineering PO Box 67305 Albuquerque, New Mexico 87193

January 2011



David Soule P.E. No. 14522

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Site Grading and Drainage Plan

PURPOSE

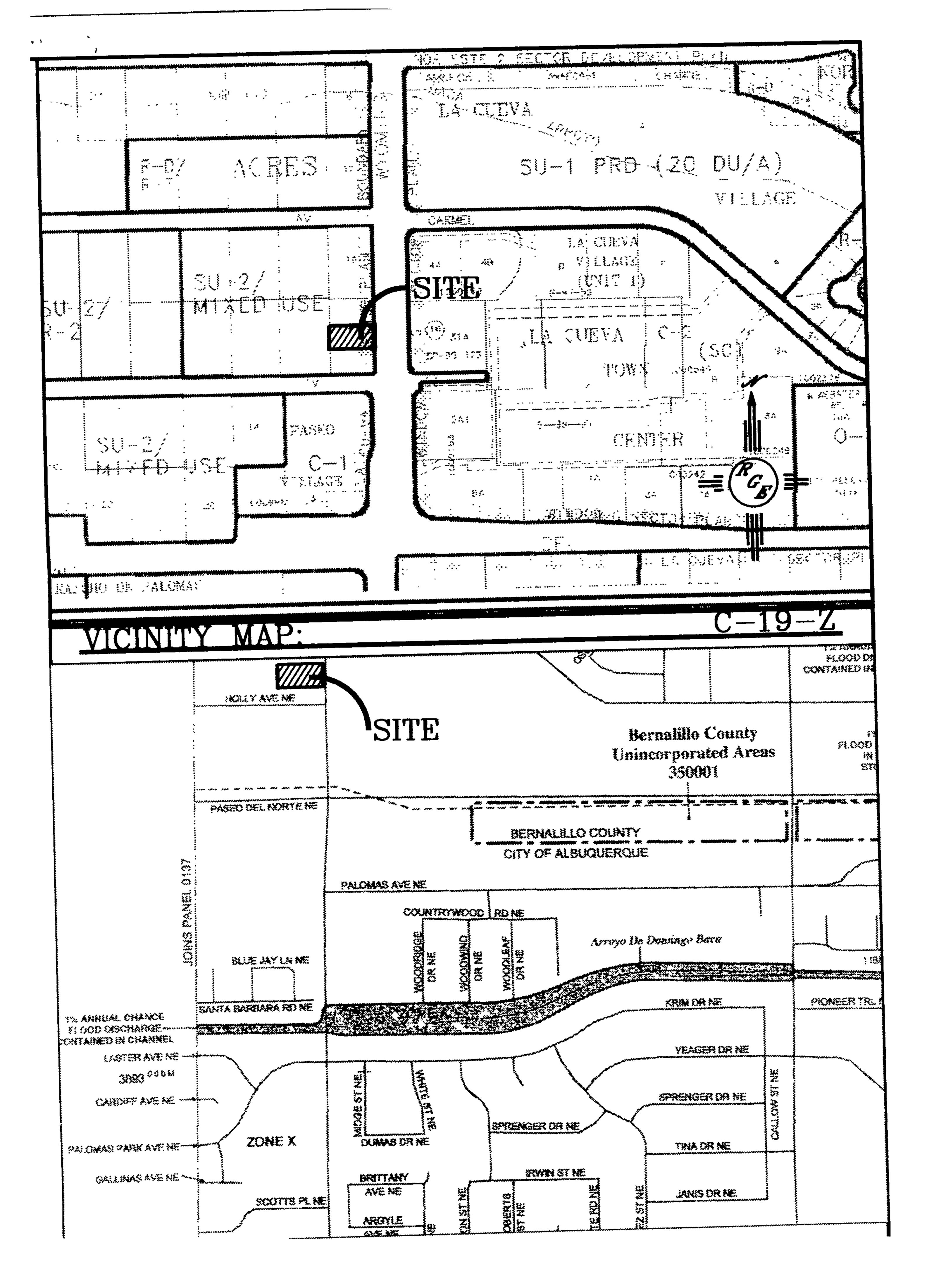
The purpose of this report is to provide the Drainage Management Plan for an approximately 2500 square foot drive thru restaurant the west side of Wyoming north of Holly. This plan was prepared in accordance with the City of Albuquerque design regulations, utilizing the City of Albuquerque's Development Process Manual drainage guidelines. This report will demonstrate that the grading does not adversely affect the surrounding properties, nor the upstream or downstream facilities.

INTRODUCTION

The subject of this report, as shown on the Exhibit A, is a .57-acre parcel of land located on the west side of Wyoming north of Holly in north east Albuquerque. The legal description of this site is the north half of lots 17 and 18, block2 unit 3, NAA. The site is in the process of being subdivided. The southerly half is being developed as a gas station. As shown on FIRM map35001C0137F, the entire property is located within Flood Zone X. This site is located upstream of the Kinney dam. An informal pre-design meeting was held with Curtis Cherne, PE. Based on the proximately of the Dam and the assumptions made with the grading of the adjacent gas station, the site will be allowed free discharge to the Holly, with a small portion draining to the north

EXISTING CONDITIONS

The site is currently undeveloped.. The site slopes from east to west. The site currently has a 4% general east to west grade. The site is not impacted by offsite flow due to the construction of Wyoming As shown in Appendix A, the site currently discharges 0.9 cfs onto the adjacent parcel to the west during a 100-year, 6-hour event. .



PROPOSED CONDITIONS

The proposed improvements consist of a 2,500 square foot restaurant. Due the location of the Kinney Dam, the site will free discharge. As shown the site discharges to the south across the Smiths gas station. The adjacent sites grading plan was utilized for this design. The site will drain across the drainage and access easement. The grades for both site match at the interface. The entire site will generate a peak flow rate of 2.38 cfs to Holly. Due to an existing road on the north a minor portion of this site will discharge .01 cfs to the north

SUMMARY AND RECOMMENDATIONS

This project is located upstream of the Kinney dam. The site is not impacted by upland flow. The free discharge design of this site conforms to the assumptions made on the adjacent parcel. The free discharge solution was discussed with the City Hydrologist prior to developing the plan.

The proposed site development does not adversely affect the upstream or downstream facilities. The site was designed in conformance to City of Albuquerque Drainage design policy utilizing the City of Albuquerque DPM criterion. Therefore, we request approval of the site-grading plan. Since this site encompasses less 1 acre, a NPDES permit might not be required prior to construction activity.

APPENDIX A SITE HYDROLOGY

Weighted E Method

Existing Basins

		<u></u>										100-Ye	ar
Basin	Area	Area	Treatme	ent A	Trea	tment B	Treat	ment C	Treat	ment D	Weighted E	Volume	Flow
	(sf)	(acres)	%	(acres)	%	(acres)	%	(acres)	%	(acres)	(ac-ft)	(ac-ft)	cfs
ONSITE	25202.00	0.579	100% 0	.5785583	0%	0.000	0%	0	0%	0.000	0.530	0.026	0.90

Proposed Developed Basins

									10	10-day				
Basin	Area	Area	Treatr	Treatment A		Treatment B		Treatment C		ment D	Weighted E	Volume	Flow	Volume
	(sf)	(acres)	%	(acres)	%	(acres)	%	(acres)	%	(acres)	(ac-ft) (ac	(ac-ft)	t) cfs	(ac-ft)
TO HOLLY	24929.00	0.572	0%	0	16%	0.092	10%	0.05723	74%	0.423	1.807	0.086	2.38	0.143
TO NORTH	273.00	0.006	100%	0.0062672	0%	0.000	0%	0	0%	0.000	0.530	0.000	0.01	0.000
Total	25202.00	0.579		0.0062672		0.092		0.05723		0.423		0.086	2.39	0.14

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

CITY OF ALBUQUERQUE



Planning Department Transportation Development Services Section

December 6, 2011

Peter Butterfield, Registered Architect Peter Butterfield Architect. 13013 Glenwood Hills Ct. NE Albuquerque, NM 87111

Re: Certification Submittal for a Permanent Building Certificate of Occupancy (C.O.)

for <u>Twisters</u>, [C-19 / D054A] 8111 Wyoming Blvd. NE

Architect's Stamp Dated 12/13/11

Dear Mr. Butterfield:

Based upon the information provided in your submittal received 12-14-11, Transportation Development has no objection to the issuance of a Permanent Certificate of Occupancy.

PO Box 1293

This letter serves as a "green tag" from Transportation Development for a Permanent Certificate of Occupancy to be issued by the Building and Safety Division.

Albuquerque

If you have any questions, please contact me at (505)924-3630.

NM 87103

www.cabq.gov

Nilo E Salgado-Fernandez, P.E.

Semor Traffic Engineer

Development and Building Services

Planning Department

C:

Sincere!

Engineer
Hydrology file
CO Clerk

(REV 12/2005)

PROJECT TITLE:TWISTERS _ RESTAUR DRB#. 1003632 EPC#: 1003	2ANT 532 WORK	ZONE MAP. CAL	9/D052
LEGAL DESCRIPTION: LOT ITA, PLAT CITY ADDRESS: SIII WYOMING BLUC	OFLOTS 17A, 17 NE	1B\$176 BLK9,UN	M3 N. ABQ ACRES
ENGINEERING FIRM: RIO GRANDE EN 'ADDRESS: POBOX 673050 CITY. STATE: ALBUQUERQUE	JGINEERING NM	CONTACT:	
OWNER TWISTERS INC ADDRESS: SUITE J 1311 CU CITY, STATE: ALBUCUERGUE	ESTA ABAJO NE NM	CONTACT: [ZAY UBIE] PHONE:	
ARCHITECT: Poter Butterfield AR ADDRESS: 13013 Glenwood Hills CITY. STATE: Albuqueque Ni	ct ne	CONTACT: 13-130 PHONE: 3329323 ZIP CODE: 87111	
SURVEYOR: SURVEY TEK, INC ADDRESS: 9384 VALLEY VIEW CITY, STATE: ALBUQUERQUE	DRIVE	CONTACT JOE ORLO PHONE: 897-33 ZIP CODF 87114	66
CONTRACTOR: SUNDANCE DEVELO ADDRESS: 8219 DESERT PLU CITY, STATL: ALBUQUERQUE	ME LANE NE	CONTACT HANS EC PHONE: 450-700 ZIP CODE: 87122	28
TYPE OF SUBMITTAL: DRAINAGE REPORT DRAINAGE PLAN IN SUBMITTAL CONCEPTUAL G & D PLAN GRADING PLAN EROSION CONTROL PLAN FNGINEER'S CERT (HYDROLOGY) CLOMR/LOMR TRAFFIC CIRCULATION LAYOUT ENGINEER'S CERT (DRB SITE PLAN) OTHER (SPECIFY)	PRELIMINARY S. DEV. PLAN I S. DEV. FOR BI SECTOR PLAN FINAL PLAT AI FOUNDATION BUILDING PER CERTIFICATE O GRADING TO	I. GUARANTEE RELEASE PLAT APPROVAL OR SUB'D APPROVAL DG. PERMIT APPROVAL APPROVAL PERMIT APPROVAL MIT APPROVAL OF OCCUPANCY (PERM) OF OCCUPANCY (PERM) APPROVAL	
WAS A PRE-DESIGN CONFERENCE ATTENDED YESNO COPY PROVIDED		HYDROLOGY SECTION	
DATE SUBMITTED. 12-13	3-11	134: Hann (S	<u> </u>

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

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

peter butterfield architect

• 505 332 9323 • fax 212 0901 • 13013 Glenwood Hills Ct NE • Albuquerque New Mexico 87111 •

TRAFFIC CERTIFICATION

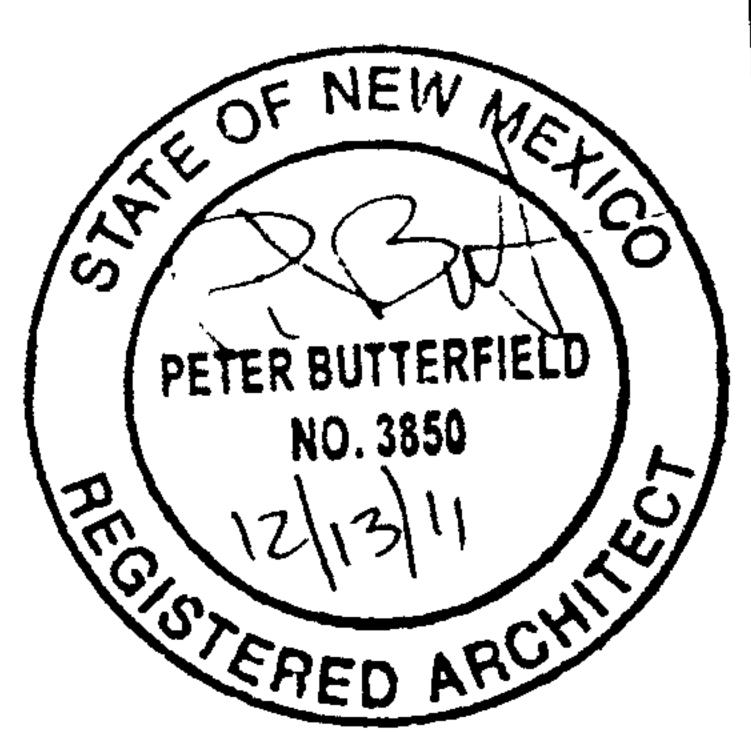
I. PETER BUTTERFIELD, NMRA 3850, OF THE FIRM PETER BUTTERFIELD ARCHITECT, HEREBY CERTIFY THAT THIS PROJECT IS IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED JANUARY 5, 2011. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON NOVEMBER 23, 2011 AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR A PERMANENT CERTIFICATE OF OCCUPANCY.

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE TRAFFIC ASPECTS OF THIS PROJECT. THOSE RELYING ON THE RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

Signature of Engineer or Architect

ENGINEER'S OR ARCHITECT'S STAMP

12/13/11 Date

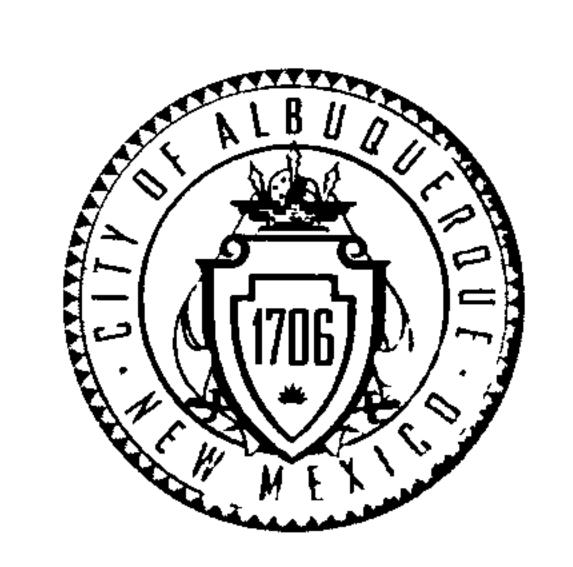


RECEIVED

DEC 1 4 2011

HYDROLOGY SECTION_

CITY OF ALBUQUERQUE



December 12, 2011

David Soule, P.E. **Rio Grande Engineering**P.O. Box 67305

Albuquerque, NM 87193

Re: Twisters, 8111 Wyoming Blvd NE,

Request for Permanent C.O. - Approved

Engineer's Stamp dated: 01-25-11 (C-19/D054A)

Certification dated: 12-09-11

Dear Mr. Soule,

Based upon the information provided in the Certification received 12-09-11, the above referenced Certification is approved for a release of a Permanent Certificate of Occupancy by Hydrology.

PO Box 1293

Hydrology is asking for an electronic copy, in .pdf format, of this certification for our records. This certification can be e-mailed to me at: <u>tsims@cabq.gov</u>.

If you have any questions, you can contact me at 924-3982.

Albuquerque

Sincerely

NM 87103

Timothy E. Sims,

Plan Checker—Hydrology Section
Development and Building Services

www.cabq.gov

C: CO Clerk—Katrina Sigala

File

d JUID DE FINGSPANDE ENGINEERING. COM

(REV. 01/28/2003rd)

PROJECT TITLE:	TWISTERS-WYOMING	ZONE MAP/DRG. FILE #: C19-D054a						
DRB #:	EPC #:	WORK ORD	WORK ORDER #:					
LEGAL DESCRIPTION:	Tract C-1-A, Lands of Grevey(formerly trac	ts C1 &C2)						
CITY ADDRESS:	Lomas west of Eubankd							
ENGINEERING FIRM:	Rio Grande Engineering	CONTACT						
ADDRESS:	PO BOX 67305	CONTACT:	David Soule, PE					
CITY, STATE:	Alb	PHONE:	(505)321-9099					
OILI, SIAIL.	AID	ZIP CODE:	87199					
<u>OWNER:</u>	Lomas Jack, IIc	CONTACT:						
ADDRESS:	PO Box 67305	PHONE:						
CITY, STATE:	alv	ZIP CODE:	87199					
4 D O L UTTT O T								
ARCHITECT:		CONTACT:						
ADDRESS:		PHONE:						
CITY, STATE:		ZIP CODE:						
SURVEYOR:	survteck	CONTACT:	ruse huga					
ADDRESS:		PHONE:	Tuss riugg					
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CONTRACTOR:		CONTACT:						
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DATE SUBMITTED	2/17/2010	BY.	David Soule					

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a dranage submittal. The particular nature, location and scope of the proposed development defines the degree of drainage detail.

One or more of the following levels of sumbittal may be required based on the following:

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

CITY OF ALBUQUERQUE



January 27, 2011

David Soule, P.E. Rio Grande Engineering P.O. Box 67305 Rio Rancho, NM 87193

Re: Twisters – Wyoming, Grading and Drainage Plan Engineer's Stamp date 1-25-11 (C19/D054A)

Dear Mr. Soule,

Based upon the information provided in your submittal received 1-25-11, 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.

PO Box 1293

Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

Albuquerque

Sincerely,

NM 87103

Curtis A. Cherne, P.E.

Senior Engineer, Planning Dept.

Development and Building Services

www.cabq.gov

C: file

(REV. 01/28/2003rd)

PROJECT TITLE: DRB #:	Twisters-Wyoming EPC #:	ZONE MAP/DRG. FILE #: C19/D054H- WORK ORDER #:					
LEGAL DESCRIPTION: CITY ADDRESS:	Northly portion of LT 17&18 BLK 9 NORTH ALBUMY	QUERQUE ACRES UNIT 3	TRACT 2				
ENGINEERING FIRM: ADDRESS: CITY, STATE: ADDRESS: CITY, STATE:	Rio Grande Engineering PO BOX 67305 Alb V-mod IIc 12904 CAI	CONTACT: PHONE: ZIP CODE: PHONE: PHONE: ZIP CODE:	David Soule, PE (505)321-9099 87193				
ARCHITECT: ADDRESS: CITY, STATE:	Peter Butterfield	CONTACT: PHONE: ZIP CODE:	Peter				
SURVEYOR: ADDRESS: CITY, STATE:	Geo surv CO	CONTACT: PHONE: ZIP CODE:	David Vigil				
CONTRACTOR: ADDRESS: CITY, STATE:		CONTACT: PHONE: ZIP CODE:					
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DATE SUBMITTED:	1/25/2011	BY:	David Soule				

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David Soule, P.E. Rio Grande Engineering P.O. Box 67305 Albuquerque, NM 87193

Re: Twisters, Wyoming and Holly, Grading and Drainage Plan Engineer's Stamp date 1-18-11 (C19/D054A)

Dear Mr. Soule,

Based upon the information provided in your submittal received 1-18-11, the above referenced plan cannot be approve for Building Permit until the following comments are addressed:

- It does not appear that the drainage from the northern section of the site will drain south, but instead will continue west then north. It also appears that the Finished Floor of the building is too high. The building to the south is at 85.7 and the building to the north is at 87.5.
 - o If the Finished Floor of the proposed building was lowered to 87.0 it would be easier for drainage to flow to the south. A rock or concrete channel could be built from upstream of the dumpster enclosure to the drive west of the building.
 - o An elevation of 87.0 would also blend the buildings.

Sincerely,

Curtis A. Cherne, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: file

(REV. 01/28/2003rd)

PROJECT TITLE: DRB #:	Twisters EPC #:		ZONE MAP/DRG. FILE #: C19 D054A WORK ORDER #:					
LEGAL DESCRIPTION: CITY ADDRESS:	Northern half of lots 17&18, tract 2, unit 3, N. Wyoming and Holly	AA						
ENGINEERING FIRM: ADDRESS: CITY, STATE: ADDRESS: CITY, STATE: ARCHITECT: ADDRESS: CITY, STATE: SURVEYOR: ADDRESS:	PO BOX 67305 Alb V-mod, IIc 12904 CALLE DE SANDIAS NE alb Peter Butterfield Geosury Co	CONTACT: PHONE: ZIP CODE: CONTACT: PHONE: ZIP CODE: CONTACT: PHONE: ZIP CODE:	David Soule, PE (505)321-9099 87193 87111 John Gallegos 917-8921					
CITY, STATE: CONTRACTOR: ADDRESS: CITY, STATE: CHECK TYPE OF SUBMIT	ΤΔΙ ·	ZIP CODE: CONTACT: PHONE: ZIP CODE: CHECK TYPE OF AF						
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WAS A PRE-DESIGN CON X YES NO COPY PROVIDE DATE SUBMITTED:	\$ 50-	BY:	JAN 18 2011 HYDROLOGY SECTION David Soule					

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