CITY OF ALBUQUERQUE

September 13, 2012

David Soule, P.E. david@riograndeengineering.com
Rio Grande Engineering
P.O. Box 67305
Albuquerque, NM 87193

Re: Chelwood Park Apartments, 1409 Chelwood Park,
Request for Permanent C.O. –Accepted
Engineer's Stamp dated: 01-16-12, (J22/D001)
Certification dated: 09-10-12

Dear Mr. Soule,

Based upon the information provided in the Certification received 09-10-12, the above referenced Certification is acceptable for a release of a Permanent Certificate of Occupancy by Hydrology.

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: tsims@cabq.gov.

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

Sincerely,

Timothy E. Sims,
Plan Checker—Hydrology Section
Development and Building Services

C: CO Clerk—Katrina Sigala
File

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 01/28/2003rd)

PROJECT TITLE: *1409 Chellwood Park* ZONE MAP/DRG. FILE #: J22/D001

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

LEGAL DESCRIPTION: **lot 3 ASCIM additon**

CITY ADDRESS: **SEQ 10th and Candelaria**

ENGINEERING FIRM:	Rio Grande Engineering	CONTACT:	David Soule, PE
ADDRESS:	PO Box 67305	PHONE:	(505)321-9099
CITY, STATE:	Albuquerque, New Mexico	ZIP CODE:	87120
OWNER:	*Ahmed Tiryaki*	CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	87102
ARCHITECT:	Roger Cinelli	CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
SURVEYOR:	Geo surv co	CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
CONTRACTOR:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	

CHECK TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- ____ DRAINAGE PLAN 1st SUBMITTAL, ***REQUIRES TCL or equal***
- ____ DRAINAGE PLAN RESUBMITTAL
- ____ CONCEPTUAL GRADING & DRAINAGE PLAN
- ____ GRADING PLAN
- ____ EROSION CONTROL PLAN
- x ENGINEER'S CERTIFICATION (HYDROLOGY)
- ____ CLOMR/LOMR
- ____ TRAFFIC CIRCULATION LAYOUT (TCL)
- ____ ENGINEERS CERTIFICATION (TCL)
- ____ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
- ____ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ____ SIA / FINANACIAL GUARANTEE RELEASE
- ____ PRELIMINARY PLAT APPROVAL
- ____ S. DEV. PLAN FOR SUB'D. APPROVAL
- ____ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ____ SECTOR PLAN APPROVAL
- ____ FINAL PLAT APPROVAL
- ____ FOUNDATION PERMIT APPROVAL
- ____ BUILDING PERMIT APPROVAL
- x CERTIFICATE OF OCCUPANCY (PERM.)
- ____ CERTIFICATE OF OCCUPANCY (TEMP.)
- ____ GRADING PERMIT APPROVAL
- ____ PAVING PERMIT APPROVAL
- ____ WORK ORDER APPROVAL
- ____ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- x YES
- ____ NO
- ____ COPY PROVIDED

RECEIVED
SEP 10 2012
HYDROLOGY SECTION

DATE SUBMITTED: 9/10/2012 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 18, 2012

David Soule, P.E.
Rio Grande Engineering
P.O. Box 93924
Albuquerque, NM 87199

Re: Chelwood Park Apartments Grading and Drainage Plan
Engineer's Stamp date 01-16-12 (J22/D001)

Dear Mr. Soule,

Based upon the information provided in your submittal received 01-17-12, the above referenced plan is approved for Building and Grading Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

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 924-3695.

Sincerely,

Shahab Biazar, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: File
CJH\SB

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

RIO GRANDE ENGINEERING OF NEW MEXICO, LLC

January 13, 2012

Mr. Shahab Biazar, PE
Senior Engineer
Planning Department
City of Albuquerque

RE: Grading and Drainage Plan
Chelwood Park (J22/D001)

Dear Shahab:

The purpose of this letter is to accompany the enclosed grading plan for the referenced project. This plan has been modified to address your comments dated January 5, 2012. The following is a summary of your comments with the annotation as to how the plans were modified to address the comments.

1. Hydrology recommends rear yard ponds spill to the west.

   The plans changed so the ponds overflow to the west.

2. Emergency overflow on large west pond should spill to west

   The plans changed so the pond overflows to the west.

3. Allow flows on north to enter site without concentrating.

   The plans changed such that the wall has turned blocks at grade to allow flow to enter site.

4. The drive entrance shall include spot elevations.

   The site is the reconstruction of a burnt down home. The existing parking lot will not be altered the spots have been added but no improvements to parking lot to be done.

5. Are spots provided in the southern portion of the parking lot intended to match existing grade.

   The spots are existing grades the parking remains as is.

6. Provide additional spots in parking area

   The spots are existing grades the parking remains as is.

Should you have any questions regarding this resubmittal, please do not hesitate to call me.

Sincerely,

David Soule, PE

Enclosures

RECEIVED
JAN 17 2012
HYDROLOGY SECTION

Pond overflow

Weir Equation:

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

Q=1.03 cfs
C = 2.95
H = 0.35 ft
L = 7

=2.95X10X.35^3/2

=6.1 cfs

CITY OF ALBUQUERQUE

January 5, 2012

David Soule, P.E.
Rio Grande Engineering
P.O. Box 93924
Albuquerque, NM 87199

Re: Chelwood Park Apartments Grading and Drainage Plan
Engineer's Stamp date 12-28-11 (J22/D001)

Dear Mr. Soule,

Based upon the information provided in your submittal received 12-28-11, the above referenced plan cannot be approved for Building and Grading Permit until the following comments are addressed:

- Hydrology recommends that your rear yard ponds be graded to spill over towards the west into the larger pond once they have exceeded capacity.
- The emergency overflow in the larger western pond should then spill over towards the western property line.
- The proposed screen wall on the northern edge appears to redirect and concentrate existing flows at a point, is it possible to allow these flows to still penetrate the wall in a few locations?
- The drive entrance should include spot elevations along Chelwood Boulevard to ensure an adequate water block is provided.
- Are the spot elevations provided at the southern portion of the parking area intended to match existing grades?
- Provide additional spot elevations in the parking lot to ensure that the basins drain as intended.

If you have any questions, you can contact me at 924-3695.

Sincerely,

Shahab Biazar, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: File
CJH\SB

RECEIVED
JAN 17 2012
HYDROLOGY SECTION

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 01/28/2003rd)

PROJECT TITLE: ***1409 Chellwood Park*** ZONE MAP/DRG. FILE #: J22/D001

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

LEGAL DESCRIPTION: **lot 3 ASCIM additon**

CITY ADDRESS: **SEQ 10th and Candelaria**

ENGINEERING FIRM:	Rio Grande Engineering	CONTACT:	David Soule, PE
ADDRESS:	PO Box 67305	PHONE:	(505)321-9099
CITY, STATE:	Albuquerque, New Mexico	ZIP CODE:	87120
OWNER:	***Ahmed Tiryaki***	CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	87102
ARCHITECT:	Roger Cinelli	CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
SURVEYOR:	Geo surv co	CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
CONTRACTOR:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	

CHECK TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- ____ DRAINAGE PLAN 1st SUBMITTAL, ***REQUIRES TCL or equal***
- x ____ DRAINAGE PLAN RESUBMITTAL
- ____ CONCEPTUAL GRADING & DRAINAGE PLAN
- x ____ GRADING PLAN
- ____ EROSION CONTROL PLAN
- ____ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ____ CLOMR/LOMR
- ____ TRAFFIC CIRCULATION LAYOUT (TCL)
- ____ ENGINEERS CERTIFICATION (TCL)
- ____ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
- ____ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ____ SIA / FINANACIAL GUARANTEE RELEASE
- ____ PRELIMINARY PLAT APPROVAL
- ____ S. DEV. PLAN FOR SUB'D. APPROVAL
- ____ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ____ SECTOR PLAN APPROVAL
- ____ FINAL PLAT APPROVAL
- ____ FOUNDATION PERMIT APPROVAL
- x ____ BUILDING PERMIT APPROVAL
- ____ CERTIFICATE OF OCCUPANCY (PERM.)
- ____ CERTIFICATE OF OCCUPANCY (TEMP.)
- x ____ GRADING PERMIT APPROVAL
- ____ PAVING PERMIT APPROVAL
- ____ WORK ORDER APPROVAL
- ____ OTHER (SPECIFY)

RECEIVED

JAN 17 2012

HYDROLOGY SECTION

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- x ____ YES
- ____ NO
- ____ COPY PROVIDED

DATE SUBMITTED: 1/13/2012 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 5, 2012

David Soule, P.E.
Rio Grande Engineering
P.O. Box 93924
Albuquerque, NM 87199

Re: Chelwood Park Apartments Grading and Drainage Plan
Engineer's Stamp date 12-28-11 (J22/D001)

Dear Mr. Soule,

Based upon the information provided in your submittal received 12-28-11, the above referenced plan cannot be approved for Building and Grading Permit until the following comments are addressed:

- Hydrology recommends that your rear yard ponds be graded to spill over towards the west into the larger pond once they have exceeded capacity.
- The emergency overflow in the larger western pond should then spill over towards the western property line.
- The proposed screen wall on the northern edge appears to redirect and concentrate existing flows at a point, is it possible to allow these flows to still penetrate the wall in a few locations?
- The drive entrance should include spot elevations along Chelwood Boulevard to ensure an adequate water block is provided.
- Are the spot elevations provided at the southern portion of the parking area intended to match existing grades?
- Provide additional spot elevations in the parking lot to ensure that the basins drain as intended.

If you have any questions, you can contact me at 924-3695.

Sincerely,

Shahab Biazar, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: File
CJH\SB

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 01/28/2003rd)

PROJECT TITLE: ***1409 Chellwood Park*** ZONE MAP/DRG. FILE #: J22 / D501

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

LEGAL DESCRIPTION: **lot 3 ASCIM additon**

CITY ADDRESS: **SEQ 10th and Candelaria**

ENGINEERING FIRM:	Rio Grande Engineering	CONTACT:	David Soule, PE
ADDRESS:	PO Box 67305	PHONE:	(505)321-9099
CITY, STATE:	Albuquerque, New Mexico	ZIP CODE:	87120
OWNER:	***Ahmed Tiryaki***	CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	87102
ARCHITECT:	Roger Cinelli	CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
SURVEYOR:	Geo surv co	CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
CONTRACTOR:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	

CHECK TYPE OF SUBMITTAL:

- x DRAINAGE REPORT
- _____ DRAINAGE PLAN 1st SUBMITTAL, ***REQUIRES TCL or equal***
- _____ DRAINAGE PLAN RESUBMITTAL
- _____ CONCEPTUAL GRADING & DRAINAGE PLAN
- x GRADING PLAN
- _____ EROSION CONTROL PLAN
- _____ ENGINEER'S CERTIFICATION (HYDROLOGY)
- _____ CLOMR/LOMR
- _____ TRAFFIC CIRCULATION LAYOUT (TCL)
- _____ ENGINEERS CERTIFICATION (TCL)
- _____ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
- _____ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- _____ SIA / FINANACIAL GUARANTEE RELEASE
- _____ PRELIMINARY PLAT APPROVAL
- _____ S. DEV. PLAN FOR SUB'D. APPROVAL
- _____ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- _____ SECTOR PLAN APPROVAL
- _____ FINAL PLAT APPROVAL
- _____ FOUNDATION PERMIT APPROVAL
- x BUILDING PERMIT APPROVAL
- _____ CERTIFICATE OF OCCUPANCY (PERM.)
- _____ CERTIFICATE OF OCCUPANCY (TEMP.)
- x GRADING PERMIT APPROVAL
- _____ PAVING PERMIT APPROVAL
- _____ WORK ORDER APPROVAL
- _____ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- x YES
- _____ NO
- _____ COPY PROVIDED

$50.00

RECEIVED
DEC 28 2011
HYDROLOGY SECTION

DATE SUBMITTED: 12/28/2011 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.

DRAINAGE REPORT

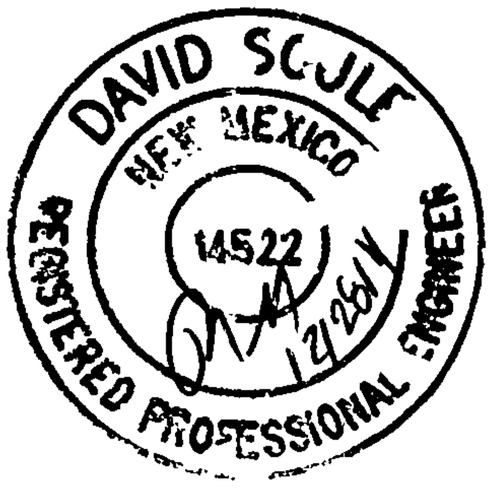
For

1409 Chelwood Park NE
LOT 3 ASCIM Addition
Albuquerque, New Mexico

Prepared by

Rio Grande Engineering
PO Box 67305
Albuquerque, New Mexico 87193

December 2011



David Soule P.E. No. 14522

TABLE OF CONTENTS

PURPOSE

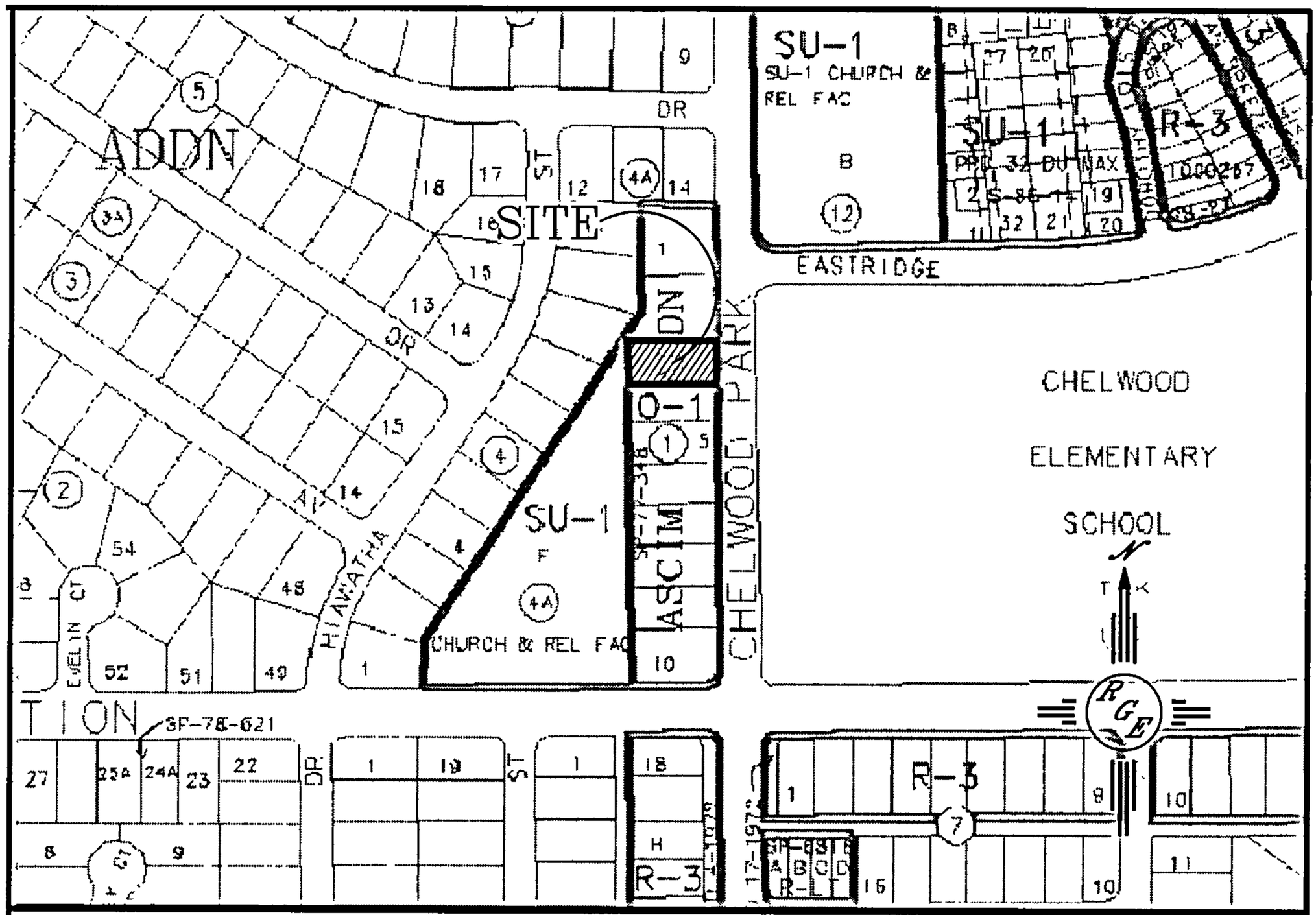
The purpose of this report is to provide the Drainage Management Plan for a 3,600 square foot apartment building located on the west side of Chelwood Park north of Constitution. This plan was prepared in accordance with the City of Albuquerque design regulations, utilizing the City of Albuquerque's Development Process Manual drainage guidelines. This report will demonstrate that the grading does not adversely affect the surrounding properties, nor the upstream or downstream facilities.

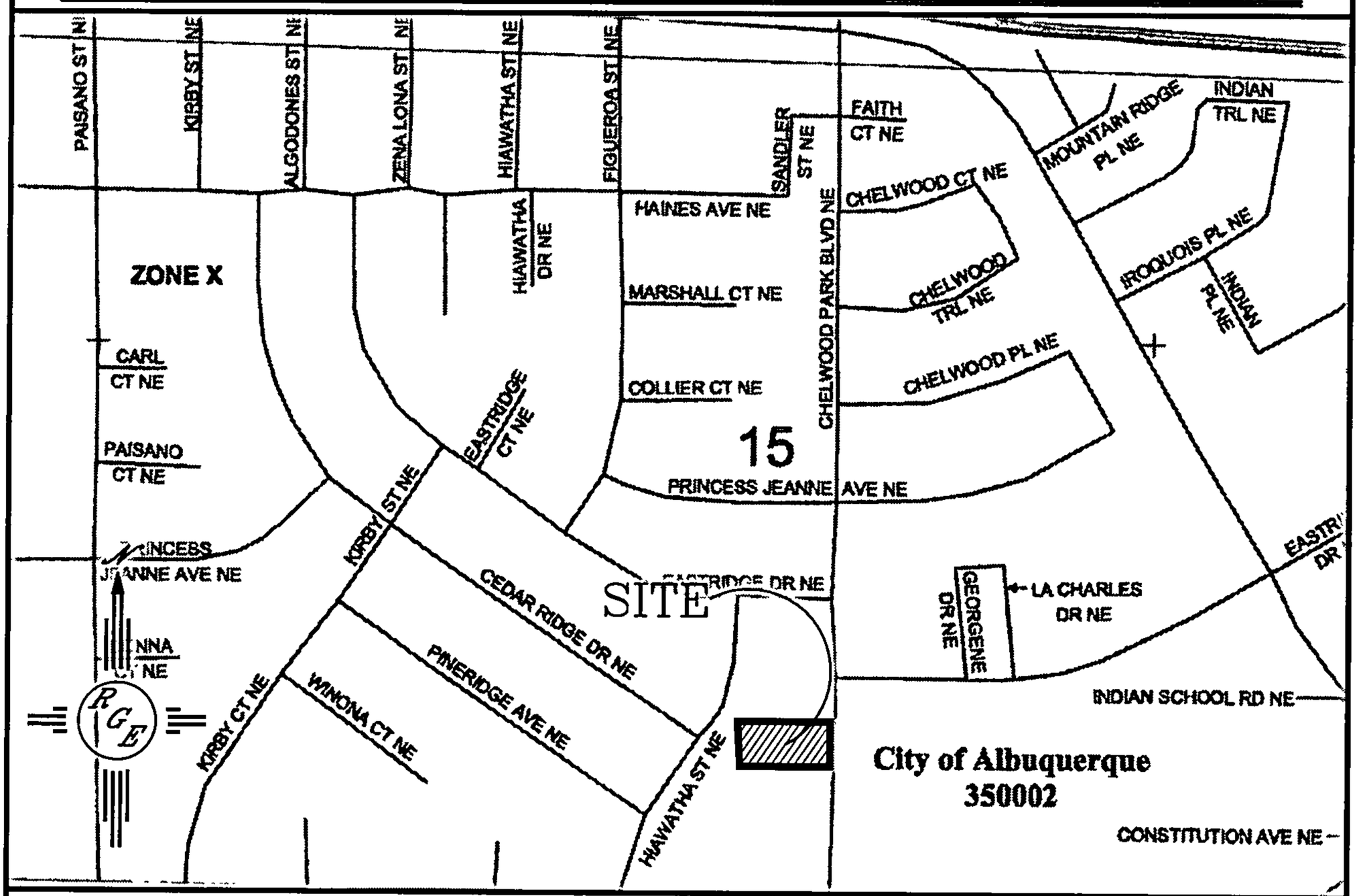
INTRODUCTION

The subject of this report, as shown on the Exhibit A, is an existing parcel containing an area of .23 acres of land. The legal description of this site is lot 3, ASCIM Addition. As shown on FIRM map35013C0357E, the entire property is located within Flood Zone X. This site is surrounded by fully developed parcels. This site was recently a 3600 square foot apartment that recently burned down. Based on the site location and the fact this project is rebuilding of existing structure, the existing drainage characteristics will be followed and improved to mitigate existing free discharge of site and match existing conditions as closely as possible.

EXISTING CONDITIONS

The site is currently a concrete slab with a parking lot and fully developed conditions undeveloped. The site was an existing apartment that was demolished due to fire damage. The northern portion of the site drains to the west and the southern portion drains to the south. The site is not impacted by any measurable offsite flows, and is surrounded by developed properties with walls and fences. As shown in Appendix A, the existing site discharges at a peak rate of 1.03 cfs in a 100-year, 6-hour event. The discharge leaves the site mainly as sheet flow directly to adjacent parcels to the south and west.





LEGAL DESCRIPTION:

LOT 3, ASCIM ADDITION

NOTES

.09 x 4 = .36 cfs

PROPOSED CONDITIONS

1.04
.36
0.68

The proposed improvements consist of the reconstruction of a 3,600 square foot apartment buildings, utilizing the existing parking. As shown in appendix A, the site will be graded to contain four rear yard basins. Each of these Basin discharges 0.09 cfs, the basin will retain the entire 100-year, 6-hour event in 1' deep harvest ponds. The Parking sub basin will continue to discharge .14 cfs to the adjacent parcel to the south. The northern sub basin will continue to discharge .47 cfs to the adjacent parcel to the west. To mitigate the existing drainage impact on the adjacent parcel, this basin will retain the net increase in volume compared to native conditions in the 100-year, 6-hour event. Therefore the entire site discharges .61 cfs, which is less than the existing discharge of 1.04 cfs. The onsite harvest ponds are shallow and will drain within 24-hours. Due to the infill nature of the site, we feel this offsite discharge is historic conditions and the impact is negligible and should be acceptable to City Hydrology.

how is this accomplished?

SUMMARY AND RECOMMENDATIONS

This project is a redevelopment project of an demolished building. The site development will maintain existing parking field and building finish floor elevation,(fire damaged slab replaced). The existing drainage patterns will remain. The site will be contoured to retain on site significant portions of the developed storm water. The site will discharge less that the existing condition. Since this site encompasses less than ¼ acre, a NPDES permit should not be required prior to any construction activity.

APPENDIX A

SITE HYDROLOGY

North side subbasin

Discharges 0.47 cfs to west

4'-0" 20'-6" 4'-0" 20'-6" 4'-0" 9'-9" 4'-0" 20'-0" L. RAMP 1 TO 12 SLOPE 4'-0" 7'-0"

S 89°38'20" E 150.0'

8'-0" ROLL OUT BINS (2)

ROLL OUT BINS (2)

2'-0" 1'-0"

8'-4" 4'-0" 3'-0" 3'-6" 15'-4" 4'-6"

FLUSH CURB 4'-0" 4'-0"

18'-0"

66.5' S 00°21'40" W

66.5' N 00°21'40" E

15'-0"

14'-8"

4'-0" GAS METERS (4)

24'-9"

18'-0"

6' BLOCK WALL

N 89°38'4220" E 150.0'

CHELWOOD PARK BLVD. NE. (60' R.O.W.)

LEGEND

◀ BUILDING ENTRY

4'-0" SW 7'-0" 3 PARKING SP. @ 8'-6" = 25'-6"

36'-6"

Backyard subbasins

To retain entire storm event (not basins/ponds)

Parking lot subbasin

Discharges 0.14 cfs to southern lot

Weighted E Method

Existing Developed Basins

											100-Year, 6-hr.			10-day
Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Volume (ac-ft)
			%	(acres)	%	(acres)	%	(acres)	%	(acres)				
total	9969.00	0.229	0%	0	18.0%	0.041	19.0%	0.04348	63%	0.144	2.135	0.041	1.04	0.060
back yard subbasin	855.00	0.020	0%	0	20.0%	0.004	20.0%	0.00393	60%	0.012	2.092	0.003	0.09	0.005
parking subbasin	1360.00	0.031	0%	0	25.0%	0.008	15.0%	0.00468	60%	0.019	2.073	0.005	0.14	0.008
north subbasin	5189.00	0.119	5%	0.005956152	21.0%	0.025	24.0%	0.02859	45%	0.054	1.805	0.018	0.47	0.025
north basin native	5189.00	0.119	100%	0.119123049	0.0%	0.000	0.0%	0	0%	0.000	0.800	0.008	0.26	0.008
Existing	9969.00	0.229	0%	0	20.0%	0.046	20.0%	0.04577	60%	0.137	2.092	0.040	1.03	0.058
native	9969.00	0.229	100%	0.229	0.0%	0.000	0.0%	0	0%	0.000	0.800	0.015	0.50	0.015

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= 0.8
Eb= 1.08
Ec= 1.46
Ed= 2.64

Qa= 2.2
Qb= 2.92
Qc= 3.73
Qd= 5.25

total pond volume	0.02	AC-FT	1072.913 CF	
each back yard	0.003	ac	149.055 cf	total 100-year 6 hour developed
parking lot to free discharge as historic	0.14	cfs		existing condition
north lot	0.01	ac	434.6652	increase from native for 100-uear, 6-hour
net discharge	0.61	cfs		
net decreas from existing	0.41	cfs		

VOLUME CALCULATIONS

ACTUAL ELEV.	DEPTH (FT)	CONTOUR AREA	VOLUME cf	VOLUME AC-FT
	(above outlet)			
75	0		0	
7.50	0.00	28.00	0.0000	0.0000
8.00	0.00	99.00	63.5000	0.0015
8.50	0.67	186.00	142.5000	0.0033