

# CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



Richard J. Berry, Mayor

October 2, 2014

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

**RE: Hurt Residence, Lot 11, Block 5 Unser Cliffs  
Grading and Drainage Plan  
Engineer's Stamp Date 10-1-14 (File: E10D025)**

Dear Mr. Soule:

Development in SAD 227 is to comply with the **SAD 227, Unser Boulevard Middle Section Drainage Report** (Wilson & Co, 2003) which states: “an architectural review committee for the property owners association will control and monitor the lot development”. Therefore the **SAD 227 Development Guidelines** are enforced by the architectural review committee, and includes the Grading and Drainage guidelines. In general, the Guidelines allow for cross-lot drainage and the downstream properties are to carry the flow to the street. Cut and fill is to be kept to a minimum.

PO Box 1293

Grading and Drainage Plans and a formal review from hydrology will generally not be required for SAD 227 unless there is potential for upstream or downstream properties to be adversely affected. Nonetheless, the architectural review committee should be reviewing all lots for adherence to the guidelines.

Albuquerque

New Mexico 87103

Based upon the information provided in your submittal received 9-30-14, this lot discharges runoff to public ROW/easements and not into adjacent lots, and does not require a formal review from hydrology. Since a Grading and Drainage plan has been submitted, Hydrology has reviewed the submittal anyhow. Based upon our review, the above referenced plan is approved for Building Permit. Please attach a copy of this approved plan in the construction sets when submitting for a building permit.

www.cabq.gov

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

Sincerely,

Rita Harmon, P.E.  
Senior Engineer, Planning Dept.  
Development Review Services

Orig: Drainage file  
c.pdf: via Email: Recipient, Monica Ortiz



# City of Albuquerque

Planning Department

Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: \_\_\_\_\_ Building Permit #: \_\_\_\_\_ City Drainage #: \_\_\_\_\_

DRB#: \_\_\_\_\_ EPC#: \_\_\_\_\_ Work Order#: \_\_\_\_\_

Legal Description: \_\_\_\_\_

City Address: \_\_\_\_\_

**Engineering Firm:** \_\_\_\_\_ Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

**Owner:** \_\_\_\_\_ Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

**Architect:** \_\_\_\_\_ Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

**Surveyor:** \_\_\_\_\_ Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

**Contractor:** \_\_\_\_\_ Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

### TYPE OF SUBMITTAL:

- DRAINAGE REPORT
- DRAINAGE PLAN 1st SUBMITTAL
- DRAINAGE PLAN RESUBMITTAL
- CONCEPTUAL G & D PLAN
- GRADING PLAN
- EROSION & SEDIMENT CONTROL PLAN (ESC)
- ENGINEER'S CERT (HYDROLOGY)
- CLOMR/LOMR
- TRAFFIC CIRCULATION LAYOUT (TCL)
- ENGINEER'S CERT (TCL)
- ENGINEER'S CERT (DRB SITE PLAN)
- ENGINEER'S CERT (ESC)
- SO-19
- OTHER (SPECIFY)

### CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- SIA/FINANCIAL GUARANTEE RELEASE
- PRELIMINARY PLAT APPROVAL
- S. DEV. PLAN FOR SUB'D APPROVAL
- S. DEV. FOR BLDG. PERMIT APPROVAL
- SECTOR PLAN APPROVAL
- FINAL PLAT APPROVAL
- CERTIFICATE OF OCCUPANCY (PERM)
- CERTIFICATE OF OCCUPANCY (TCL TEMP)
- FOUNDATION PERMIT APPROVAL
- BUILDING PERMIT APPROVAL
- GRADING PERMIT APPROVAL
- PAVING PERMIT APPROVAL
- WORK ORDER APPROVAL
- GRADING CERTIFICATION
- SO-19 APPROVAL
- ESC PERMIT APPROVAL
- ESC CERT. ACCEPTANCE
- OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED: \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Copy Provided

DATE SUBMITTED: \_\_\_\_\_ By: \_\_\_\_\_

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, paving 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
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

RIO GRANDE ENGINEERING OF NEW MEXICO, LLC

September 30, 2014

Ms. Rita Harmon  
Hydrology Department  
Public Works Department  
City of Albuquerque

**RE: Drainage Resubmittal  
Hurt Residence Lot 11, block 5 Unser Cliffs  
E10-D025**

Dear Ms Harman:

The purpose of this letter is to accompany the revised plan. The plan has been revised to address your written comments dated July 30, 2014. The following is a summary of your comments and the corrections we have done to address.

1. Existing contours too light  
**We have darkened**
2. Indicate zone page  
**We have added**
3. provide existing and proposed drainage calcs  
**We have added**
4. Provide drainage narrative  
**We have added**
5. quantify offsite flows  
**We have added on the calculation chart**
6. indicate contributing area  
**We have attached the map, the limits based upon city 2' contours, but we were not able to print out that for format, so we drew on google earth print out.**
7. Show easements.  
**All easements are shown**
8. Turn blocks only on the northeast side. Prove rundown  
**We have added the turned blocks only on northeast side. We have added narrative regarding how offsite flow is handled. The total flow leaving the site is less than existing**
9. Consider draining to marigold  
**Due to roof height restrictions, We are not able to raise the finished floor enough to drain over the top of curb.**

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

Sincerely,

David Soule, PE  
Rio Grande Engineering  
PO Box 93924  
Albuquerque, New Mexico 87199  
505-321-9099

BENCHMARKS				
Point #	Elevation	Northing	Easting	Description
2069	5316.97	1512795.13	1498746.63	3/4INRB
2118	5318.88	1512627.96	1499059.86	E310
2120	5319.19	1512744.25	1498971.08	BC
2121	5318.69	1512764.36	1498959.90	RBCAP14733

COORDINATES SYSTEM IS NEW MEXICO STATE PLANE CENTRAL ZONE NAD 1983/NAVD 1988 AND ARE REFERENCED TO THE ALBUQUERQUE GEODETIC REFERENCE SYSTEM AS DETERMINED BY GPS OBSERVATIONS OBTAINED USING THE ALBUQUERQUE REAL TIME GNSS NETWORK (ARTGN). DISTANCES ARE GROUND. THESE VALUES WERE PROVIDED BY CONSTRUCTION SURVEY TECHNOLOGIES NMLP5 8911

WATER QUALITY POND  
 BOTTOM, 14.75  
 TOP 16.00  
 REQUIRED VOLUME (0.42"/5F) = 370 CF  
 PROVIDED VOLUME (0.42"/5F) = 608 CF

LOT 10  
 UNSER CLIFFS SUBDIVISION  
 BK. 2004C, PG. 238

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	93.29	1564.50	3.42	S54° 52' 43"E	93.28
C2	34.41	25.00	78.85	N9° 18' 30"E	31.75

**Weighted E Method**

Basin	Area (sq)	Area (acres)	Treatment				Weighted E (ac-ft)	Volume (ac-ft)	Flow (cfs)	Volume (ac-ft)
			A	B	C	D				
PROPOSED	13036.6	0.299	0%	30.0%	0.090	34.0%	0.102	1.207	0.030	0.92
UPLAND FLOW	6842	0.157	0%	30.0%	0.047	34.0%	0.053	0.397	0.113	0.37
EXISTING	13036.6	0.299	70%	0.209	0.0%	0.0%	0.000	0.000	0.000	0.00
ALLOWED PER DMP	13036.6	0.299	0%	30.0%	0.090	34.0%	0.11971	2.5%	0.075	1.090

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

Volume = Weighted E \* Total Area

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

Where for 100-year, 6-hour storm (zone 1)

$E_a = 0.44$        $Q_a = 1.29$   
 $E_b = 0.07$        $Q_b = 2.93$   
 $E_c = 0.99$        $Q_c = 2.87$   
 $E_d = 1.97$        $Q_d = 4.37$

FLOW SUMMARY  
 LEAVING SITE: 1.29 CFS  
 WATER HARVEST REQUIREMENT: 369.37 CUBIC FEET  
 PONDING PROVIDED: 710.00

TOTAL FLOW DISCHARGING TO RIGHT OF WAY IS: 1.29 CFS  
 TOTAL VOLUME GENERATED ON SITE: 1308.89  
 TOTAL VOLUME LEAVING SITE: 588.69  
 HISTORICAL VOLUME LEAVING SITE: 976.699

NOTE: SITE IS LOCATED WITHIN BASIN 11 OF THE DRAINAGE PLAN FOR THE SAD 227 (D-10) THE LOT IS LOCATED BELOW THE ROADWAY AND NOT ABLE TO GET TO DRAIN TO INLET DUE TO RIGHT RESTRICTIONS. THE SITE CURRENTLY HAS SIGNIFICANT ROCK OUT CROPPINGS AND THE INCREASE DISCHARGE IS DEMONSTRATED. THE TOTAL FLOW LEAVING IS LESS THAN HISTORICAL AND IN CONFORMANCE TO THE APPROVED GRADING PLAN.

FLOW LEAVES THE SITE AS SHEET FLOW. FLOW CONTINUES PARTIALLY WITHIN A POORLY DEFINED EARTHEN SWALE AND PARTIALLY AS SHEET FLOW TO THE NORTH EAST. FLOW DRAINS TO RETAIN WALL ADJACENT TO UNDER ROADWAY AND SPILLS OVER WALL. SPACE BETWEEN WALL AND ROADWAY CONTAINS RIPRAP. FLOW CONTINUES DOWN UNSER AND IS COLLECTED BY DOWNSTREAM INLETS.

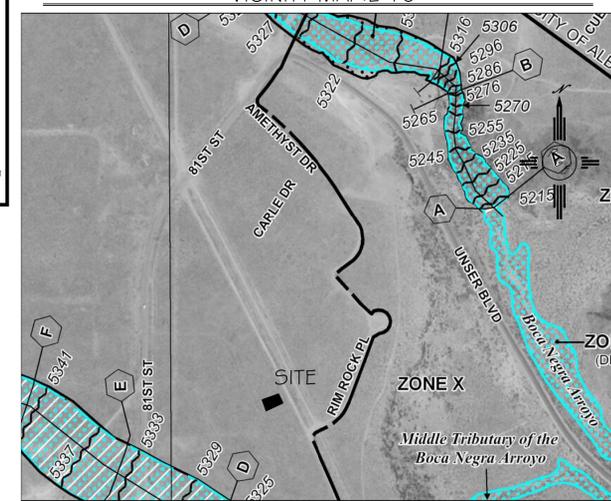
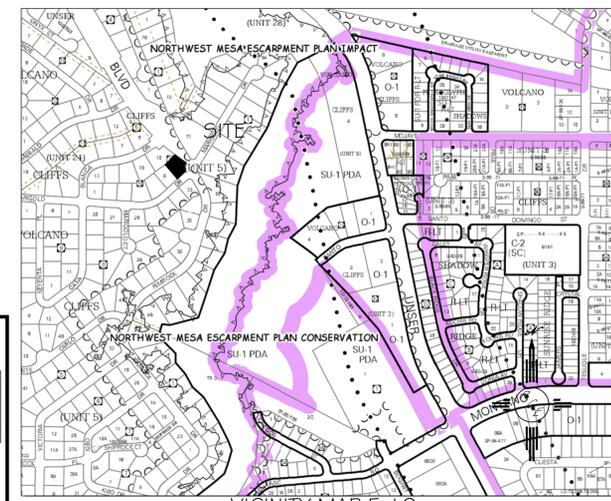
TURN 1 BLOCK EVERY 10' AT 5315.00-NE WALL ONLY

TURN BLOCK AT GRADE EVERY 12' TO ALLOW FOR CROSS LOT DRAINAGE FROM ADJACENT LOT

HARVEST POND  
 TOP=16.75  
 BOTTOM=15.75  
 VOLUME=102 CF

REMOVE EXISTING CURB AND GUTTER. CONSTRUCT NEW DRIVEPAD PER COA STD DWG#2425

OPEN SPACE CALCULATION  
 GROSS LOT AREA = 12994 SF  
 REQUIRED OPENSACE = 3894 SF  
 OPEN SPACE PROVIDED = 4098 SF



- NOTES:**
- ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.
  - TOPOGRAPHIC SURVEY INFORMATION SHOWN ON THIS PLAN WAS OBTAINED BY CONSTRUCTION SURVEY TECHNOLOGIES, DAVID VIGIL NMLP5#8911 ON JUNE 25, 2014
  - ALL SPOT ELEVATIONS ARE FLOW-LINE UNLESS OTHERWISE NOTED

**LEGAL DESCRIPTION:**  
 LOT 11, BLOCK 5, UNSER CLIFFS

- LEGEND**
- EXISTING STORM DRAIN
  - ==== EXISTING CURB & GUTTER
  - PROPOSED EDGE OF PAVING
  - 5411----- EXISTING CONTOUR
  - 5410----- EXISTING INDEX CONTOUR
  - 5411----- PROPOSED CONTOUR
  - 5410----- PROPOSED INDEX CONTOUR
  - LOT LINES



ENGINEER'S SEAL <b>DAVID SOULE</b> NEW MEXICO REGISTERED PROFESSIONAL ENGINEER #14522	LOT 11, BLOCK 5 UNSER CLIFFS SUBDIVISION	DRAWN BY JDC
	GRADING AND DRAINAGE PLAN	DATE 07-06-2014
	<i>Rio Grande Engineering</i> 1606 CENTRAL AVENUE SE SUITE 201 ALBUQUERQUE, NM 87106 (505) 872-0999	SHEET # 1 OF 1
10/01/14 DAVID SOULE P.E. #14522		JOB #