

# GRADING AND DRAINAGE

## PLAN PROJECT DESCRIPTION

Pursuant to the Drainage Ordinance for the City of Albuquerque and the Development Process Manual, this Drainage Report outlines the drainage management criteria for controlling developed runoff from the project site. The project consists of the addition of a residence / studio to the existing site. Paving, landscaping, utility, grading, and drainage improvements will be provided to support the project.

## EXISTING CONDITIONS

The project site is approximately 0.163 acres in size and located on First Street and north of Lomas Ave. The site is presently described as Lots 5 & 6, Block 5, Tract A1, Northern Addition. The site is bounded on the north by an undeveloped property, on the east by First Street, on the south by an undeveloped property, and on the west by an alleyway. The property is presently developed with one small existing building that will remain. On-site topography slopes from west to east at approximately 0.25 percent. This does not allow the drainage to flow in any controlled method and often creates small shallow ponds on site. Some drainage does flow from the site into First Street.

As shown by FIRM panel 35001C0329D, First Street is located within a designated 100-year flood hazard zone.

## PROPOSED CONDITIONS

As shown on the Plan, one additional structure is planned for this development. Access will be taken from First Street which is a public street. Drainage flows will be managed on-site by grading and drainage improvements recommended by this plan. All flows will drain around and away from the proposed pad sites by drainage swales.

The site will be broken into two drainage basins. Basin B will be 0.12 acres on the west end of the property. This basin will drain into an area drain (see detail B). The area drain will drain to an existing manhole in First St. at an 18" storm drain. Basin A is 0.04 acres and is the east section of the site. This basin will continue to drain into First Street.

The flood plain located in First Street flows at a depth of one foot during the 100 year storm. To mitigate flooding on the site the building pad elevation will be placed two feet above the flowline of the street.

## CALCULATIONS

The calculations contained herein define the 100-year/6-hour and 10-day design storms falling within the project area under existing and developed conditions. The hydrology is per Chapter 22, Development Process Manual, Vol. 2, 1997 revision. Calculations are provided to demonstrate the capacity and function of all proposed storm drainage infrastructures.

## DRAINAGE PLAN NOTES

1. BLI recommends that the Owner obtain a Geotechnical Evaluation of the on-site soils prior to foundation/structural design.
2. This Plan recommends positive drainage away from all structures to prohibit ponding of runoff which may cause structural settlement. Future alteration of grades adjacent to the proposed structures is not recommended.
3. Irrigation within 10 feet of any proposed structure is not recommended. Introduction of irrigation water into subsurface soils adjacent to the structure could cause settlement.
4. This Plan is prepared to establish on-site drainage and grading criteria only. BLI assumes no responsibility for subsurface analysis, foundation/structural design, or utility design.
5. Local codes may require all footings to be placed in natural undisturbed soil. If the Contractor plans to place footings on engineered fill, a certification by a registered Professional Engineer will be required. If the contractor wishes BLI to prepare the Certification, we must be notified PRIOR to placement of the fill.
6. BLI recommends that the Owner obtain the services of a Geotechnical Engineer to test and inspect all earthwork aspects of the project.
7. The property boundary shown on this Plan is given for information only to describe the project limits. Property boundary information shown hereon does not constitute a boundary survey. A boundary survey performed by a licensed New Mexico Registered Professional Surveyor is recommended prior to construction.

PROJECT HYDROLOGY BAGLEY STUDIO									
ZONE:	2								
P HOUR	2.35								
P 10 DAY	3.95								
UNDEVELOPED									
BASIN	AREA (ac)	A (ac)	B (ac)	C (ac)	D (ac)	E	Q (cfs)	VOL (ac ft)	
SITE	0.16	0.16	0.00	0.00	0.00	0.53	0.25	0.007	
DEVELOPED (PROPOSED):									
BASIN	AREA (ac)	A (ac)	B (ac)	C (ac)	D (ac)	E	Q (cfs)	VOL (ac ft)	
A	0.04	0.00	0.00	0.02	0.03	1.76	0.21	0.006	
B	0.12	0.00	0.01	0.07	0.04	1.45	0.42	0.015	
SITE	0.16	0.00	0.01	0.02	0.14	1.95	0.71	0.026	

V10days = V360 + ((P10day - P360)/Ad)(12 in/ft)  
V10day = 0.015 + ((3.95-2.35)/0.0412)  
V10day = 0.015 + 0.005 = 0.020 ac. Ft  
V10day = 865 CF

## LEGEND

- EXISTING CONTOUR ELEVATION
- EXISTING SPOT ELEVATION
- PROPOSED CONTOUR ELEVATION
- PROPERTY LINE
- PROPOSED SPOT ELEVATION
- DIRECTION OF FLOW
- DRAINAGE SWALE
- DRAINAGE BASIN DIVIDE
- WATER BLOCK

## PROPERTY ADDRESS

1013 FIRST STREET NW

## LEGAL DESCRIPTION

Lot 5 & 6, Block 5, Tract A1  
Northern Addn.

## PROJECT BENCHMARK

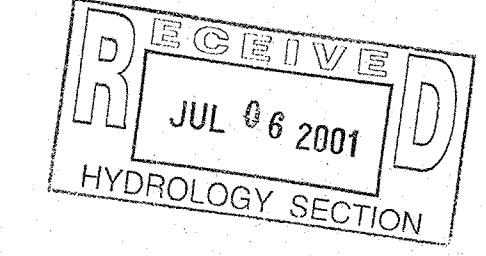
ACS Aluminum Disk  
"ACS BM, 20-J14"  
Elevation= 4954.75 ft

## SURVEY

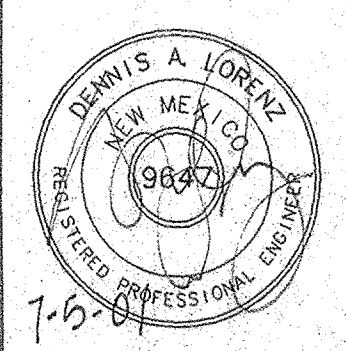
Topographic and Field Measurements by  
Garret Smith, LTD.  
Dated April, 2001

## KEYED NOTES

1. CONSTRUCT HEADER CURB PER DETAIL (A) THIS SHEET
2. INSTALL TIRE STOP
3. 4' FINE CRUSHED GRAVEL SIDEWALK
4. FINE CRUSHED GRAVEL PAVING
5. NEW GATE
6. CONSTRUCT AREA DRAIN PER DETAIL (B) THIS SHEET
7. CONSTRUCT 16" DRIVEPAD PER COA STD DWG 2425
8. ROOF DRAIN
9. EXISTING TREE
10. CONVERT EX. WATER SERVICE TO HEAVY DUTY FOR DRIVEPAD INSTALLATION
11. EXISTING SPEED LIMIT SIGN TO BE RELOCATED - SEE NOTE (12)
12. RELOCATED SPEED LIMIT SIGN COORDINATE LOCATION WITH COA TRAFFIC ENGINEERING
13. CONSTRUCT 8" PVC STORM DRAIN AT S = 1.0%
14. CONSTRUCT 8" CLEANOUT INV = 50.93
15. CONNECT NEW 8" SD TO EXISTING SD MANHOLE BY CORE TAP INV = 50.50
16. REMOVE & REPLACE ARTERIAL PAVEMENT PER COA STD DWG 2465



## BAGLEY STUDIO GRADING & DRAINAGE PLAN



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SHEET 1 OF 1