

EROSION CONTROL MEASURES:

THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR MANAGEMENT OF STORM RUNOFF DURING CONSTRUCTION. HE SHALL ENSURE THAT THE FOLLOWING MEASURES ARE TAKEN:

- 1) ADJACENT PROPERTY SHALL BE PROTECTED AT ALL TIMES BY CONSTRUCTION OF BERMS, DIKES, SWALES, PONDS, AND OTHER TEMPORARY GRADING AS REQUIRED TO PREVENT STORM RUNOFF FROM LEAVING THE SUBJECT SITE AND ENTERING ADJACENT PROPERTIES.
- 2) ADJACENT PUBLIC RIGHT-OF-WAYS SHALL BE PROTECTED AT ALL TIMES FROM STORM WATER RUNOFF FROM THE SUBJECT SITE. NO SEDIMENT BEARING WATER SHALL BE PERMITTED TO ENTER PUBLIC STREET RIGHT-OF-WAYS.
- 3) THE CONTRACTOR SHALL IMMEDIATELY AND THOROUGHLY REMOVE ANY AND ALL SEDIMENT FROM PUBLIC STREETS THAT HAS BEEN ERODED FROM THE SUBJECT SITE AND DEPOSITED THEREON.

CONSTRUCTION NOTES:

- 1) TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE AT 260-1990 FOR THE ACTUAL FIELD LOCATION OF THE EXISTING SURFACE OF SUB-SURFACE UTILITIES.
- 2) PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION(S) OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM OF DELAY.
- 3) ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- 4) ALL CONSTRUCTION WITHIN PUBLIC STREET RIGHT-OF-WAY(S) SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE/BERNALILLO COUNTY STANDARDS AND PROCEDURES.

LEGEND:

TOP OF CURB ELEVATION = $70^{\circ}32.67$
 CURB FLOWLINE ELEVATION = $R=32.15$
 EXISTING SPOT ELEVATION = 34.7
 EXISTING CONTOUR ELEVATION = 34.0
 PROPOSED SPOT ELEVATION = 34.5
 PROPOSED CONTOUR ELEVATION = 34.0
 PROPOSED OR EXISTING CONCRETE SURFACE = $---$
 EXISTING FENCE LINE = $---$
 "X-BUILT" ELEVATIONS = (33.42)

GENERAL NOTES:

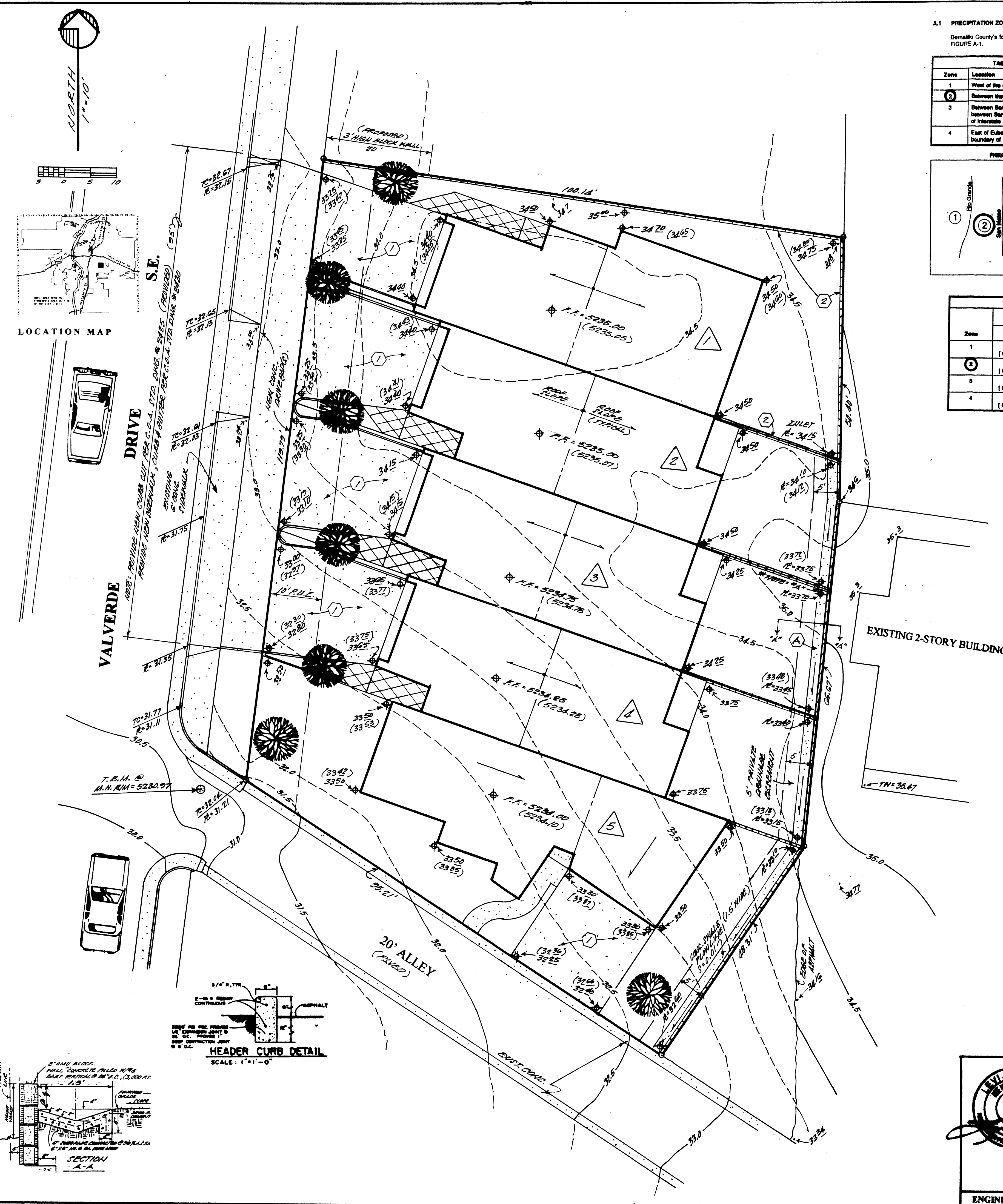
- 1) NO PERIMETER BOUNDARY CORNERS HAVE BEEN FIELD ESTABLISHED PER THIS SURVEY OF THE SUBJECT PROPERTY.
- 2) NO SEARCH HAS BEEN MADE FOR EASEMENTS OF RECORD OTHER THAN SHOWN HEREON.

DRAINAGE CERTIFICATION:

I, LEVI J. VALDEZ, N.M.P.E. NO. 5693, HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED APRIL 26, 2006. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY ME OR UNDER MY DIRECT SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR PERMIT CERTIFICATE OF ACCURACY AND VEA/FINANCIAL GUARANTEE RELEASE.

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

LEVI J. VALDEZ, N.M.P.E. NO. 5693
 05-22-06
 DATE



A.1 PRECIPITATION ZONES

Bernalillo County's four precipitation zones are indicated in TABLE A-1 and in FIGURE A-1.

TABLE A-1. PRECIPITATION ZONES	
Zone	Location
1	West of the Rio Grande
2	Between the Rio Grande and San Mateo
3	Between San Mateo and Eubank, North of Interstate 40; and between San Mateo and the East boundary of Range 4 East, South of Interstate 40
4	East of Eubank, North of Interstate 40; and East of the East boundary of Range 4 East, South of Interstate 40

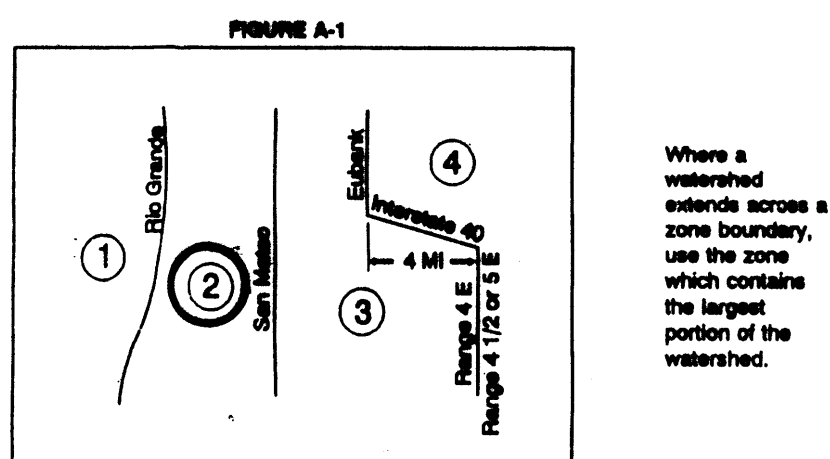


TABLE A-8. PEAK DISCHARGE (cfs)				
Zone	Treatment			
	A	B	C	D
1	1.28 [0.00, 0.34]	2.08 [0.00, 0.78]	2.87 [0.47, 1.48]	4.37 [1.00, 2.88]
2	1.88 [0.00, 0.58]	2.88 [0.00, 0.88]	3.14 [0.00, 1.71]	4.70 [1.00, 3.14]
3	1.87 [0.00, 0.58]	2.80 [0.21, 1.18]	3.45 [0.78, 2.88]	5.02 [2.04, 3.38]
4	2.30 [0.00, 0.87]	2.38 [0.00, 1.48]	3.78 [1.00, 2.38]	6.25 [2.17, 3.57]

DPM SECTION 22.2 - HYDROLOGY
 January, 1993 Page A-4

TABLE A-4. LAND TREATMENTS	
Treatment	Land Condition
A	Soil uncompacted by human activity with 0 to 10 percent slopes. Native grasses, weeds and shrubs in typical densities with minimal disturbance to existing groundcover and infiltration capacity. Creosote, Unimproved arroyos.
B	Irrigated lawns, parks and golf courses with 0 to 10 percent slopes. Native grasses, weeds and shrubs, and soil uncompacted by human activity with slopes greater than 10 percent and less than 20 percent.
C	Soil compacted by human activity. Minimal vegetation. Unimproved parking, roads, trails. Most vacant lots. Gravel or rock on plastic (desert landscaping). Irrigated lawns and parks with slopes greater than 10 percent. Native grasses, weeds and shrubs, and soil uncompacted by human activity with slopes at 20 percent or greater. Native grass, weed and shrub areas with clay or clay loam soils and other soils of very low permeability as classified by SCS Hydrologic Soil Group D.
D	Impervious areas, pavement and roofs.

TABLE A-10. PEAK INTENSITY (IN/Hr. at $t_c = 0.2$ hour)		
Zone	Intensity	100-YR
1	1.70 [1.81, 3.14]	
2	5.05 [2.04, 3.41]	
3	5.38 [2.21, 3.85]	
4	5.61 [2.34, 3.85]	

Drainage Comments:

As shown on the Vicinity Map hereon, the subject site is located on Valverde Drive S.E. approximately 1/2 block north of Zuni Avenue S.E. in the city of Albuquerque, Bernalillo County, New Mexico, ("K-17-Z").

The subject site is an vacant in-fill property that is to have five (5) residential townhouses constructed thereon.

The subject site, 1.) is not located within a designated floodplain; however, there is an existing downstream flooding condition at the intersection of Valverde Drive S.E. and Zuni Avenue S.E. (RE: F.E.M.A. Flood Panel 353 of 825), 2.) in it's developed stage will have no adverse impact to said downstream conditions, 3.) does not contribute to the off-site flows of adjacent properties, 4.) is not located adjacent to a natural or artificial water course.

Calculations:

Per Section 22.2, Hydrology of the Development Process Manual, Volume 2., Design Criteria for the City of Albuquerque, New Mexico.

Site Area: 0.34 acre
 Precipitation Zone: Two (2)

Peak Intensity: In./Hr. at T_c = Twelve (12) minutes, 100-Yr. - 6 Hr. = 5.05

Land Treatment Method for Calculation of "Q_p", Tables A-8 & A-9.

Land Treatment Factors, Table A-4.

Treatment	Area/Acres	Factor	Cfs
C	0.29	X 3.14	= 0.91
D	0.05	X 4.70	= 0.24

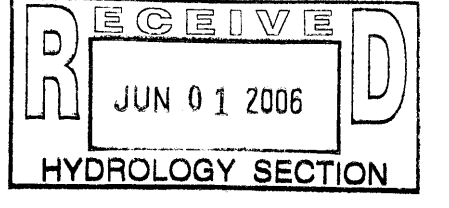
"Q_p" = 1.15 cfs

Treatment	Area/Acres	Factor	Cfs
C	0.10	X 3.14	= 0.31
D	0.24	X 4.70	= 1.13

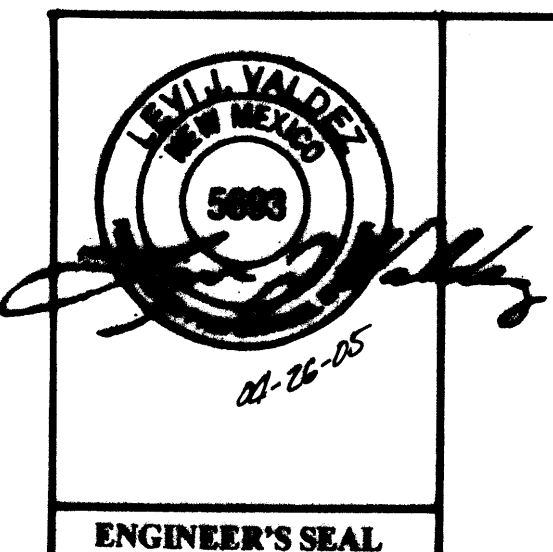
"Q_p" = 1.44 cfs *** Increase = 0.29 cfs (Total site)

Legal Description: Lot 1, 2, 3, 4, & 5, Zuni Townhomes, being a replat of Lots 6, 7, 12, and 13, Block 15, Mesa Grande Addition, Albuquerque, Bernalillo County, New Mexico.

Bench Mark Reference: ACS Station "8-K-17", T.B.M. as shown on the plan hereon.



ENGINEER'S CERTIFICATION
 (MAY, 2006)



A PROPOSED
GRADING AND DRAINAGE PLAN
 FOR
TOWNEHOUSES
AT ZUNI & VALVERDE S.E.
ALBUQUERQUE, NEW MEXICO
APRIL, 2005

precipitation zones are indicated in TABLE A-1 and on

TABLE A-1. PRECIPITATION ZONES

Rio Grande

Rio Grande and San Mateo

Mateo and Eubank, North of Interstate 40; and Mateo and the East boundary of Range 4 East, South of Interstate 40

Range 4 East, North of Interstate 40; and East of the East boundary of Range 4 East, South of Interstate 40

TABLE A-1

Where a watershed extends across a zone boundary, use the zone which contains the largest portion of the watershed.

Interstate 40

4 MI

Range 4 East

Zone 3

Zone 4

DPM SECTION 22.2 - HYDROLOGY
 January, 1993
 Page A-4

TABLE A-4. LAND TREATMENTS	
Treatment	Land Condition
A	Soil uncompacted by human activity with 0 to 10 percent slopes. Native grasses, weeds and shrubs in typical densities with minimal disturbance to grading, groundcover and infiltration capacity. Croplands. Unlined arroyos.
B	Irrigated lawns, parks and golf courses with 0 to 10 percent slopes. Native grasses, weeds and shrubs, and soil uncompacted by human activity with slopes greater than 10 percent and less than 20 percent.
C	Soil compacted by human activity. Minimal vegetation. Unpaved parking, roads, trails. Most vacant lots. Gravel or rock on plastic (desert landscaping). Irrigated lawns and parks with slopes greater than 10 percent. Native grasses, weeds and shrubs, and soil uncompacted by human activity with slopes of 20 percent or greater. Native grass, weed and shrub areas with clay or clay loam soils and other soils of very low permeability as classified by SCS Hydrologic Soil Group D.
D	Impervious areas, pavement and roofs.

Most watersheds contain a mix of land treatments. To determine proportional treatments, measure respective subareas. In lieu of specific measurement for treatment D, the area percentages in TABLE A-5 may be employed.

TABLE A-6. PEAK DISCHARGE (cfs/acre)				
Treatment		100-YR [2-YR, 10-YR]		
A	B	C	D	
1.29 [0.0, 0.24]	2.03 [0.05, 0.76]	2.87 [0.47, 1.49]	4.37 [1.69, 2.89]	
1.56 [0.0, 0.38]	2.28 [0.08, 0.95]	3.14 [0.60, 1.71]	4.70 [1.86, 3.14]	
1.87 [0.0, 0.58]	2.60 [0.21, 1.19]	3.45 [0.78, 2.00]	5.02 [2.04, 3.39]	
2.20 [0.5, 0.87]	2.92 [0.38, 1.45]	3.73 [1.00, 2.26]	5.25 [2.17, 3.57]	

TABLE A-10. PEAK INTENSITY (IN/HR at t _c = 0.2 hour)		
Zone	Intensity	100 YR [2-YR, 10-YR]
1	4.70 [1.84, 3.14]	
2	5.05 [2.04, 3.41]	
3	5.38 [2.21, 3.65]	
4	5.61 [2.34, 3.83]	

Drainage Comments:

As shown on the Vicinity Map hereon, the subject site is located on Valverde Drive S.E. approximately 1/2 block north of Zuni Avenue S.E. in the city of Albuquerque, Bernalillo County, New Mexico, ("K-17-Z").

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Calculations:

Per Section 22.2, Hydrology of the Development Process Manual, Volume 2., Design Criteria for the City of Albuquerque, New Mexico.

Site Area: 0.34 acre

Precipitation Zone: Two (2)

Peak Intensity: In./Hr. at T_c = Twelve (12) minutes, 100-Yr.- 6 Hr. = 5.05

Land Treatment Method for Calculation of " Q_p ", Tables A-8 & A-9.

Land Treatment Factors, Table A-4.

Existing Conditions:

Treatment	Area/Acres	Factor	Cfs	
C	0.29	X	3.14	= 0.91
D	0.05	X	4.70	= 0.24

" Q_p " = 1.15 cfs

Developed Conditions:

Treatment	Area/Acres	Factor	Cfs	
C	0.10	X	3.14	= 0.31
D	0.24	X	4.70	= 1.13

" Q_p " = 1.44 cfs *** Increase = 0.29 cfs (Total site)

Legal Description: Lot 1, 2, 3, 4, & 5, Zuni Townhomes, being a replat of Lots 6, 7, 12, and 13, Block 15, Mesa Grande Addition, Albuquerque, Bernalillo County, New Mexico.

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