

CITY OF ALBUQUERQUE



July 21, 2016

Levi J. Valdez, PE
George T Rodriguez-Development Consultant
12800 San Juan Rd. SE
Albuquerque, NM 87123

**Re: Residential Units
413 Harvard Dr. SE
Request Permanent C.O. - Accepted
Engineer's Stamp dated: 12-17-15 (K16D083)
Certification dated: 7-18-16**

Dear Mr. Valdez,

Based on the Certification received 7/20/2016, the site is acceptable for release of Certificate of Occupancy by Hydrology.

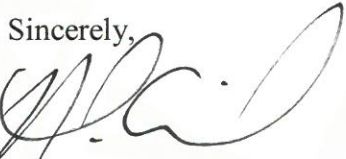
PO Box 1293

If you have any questions, you can contact me at 924-3986 or Totten Elliott at 924-3982.

Albuquerque

Sincerely,

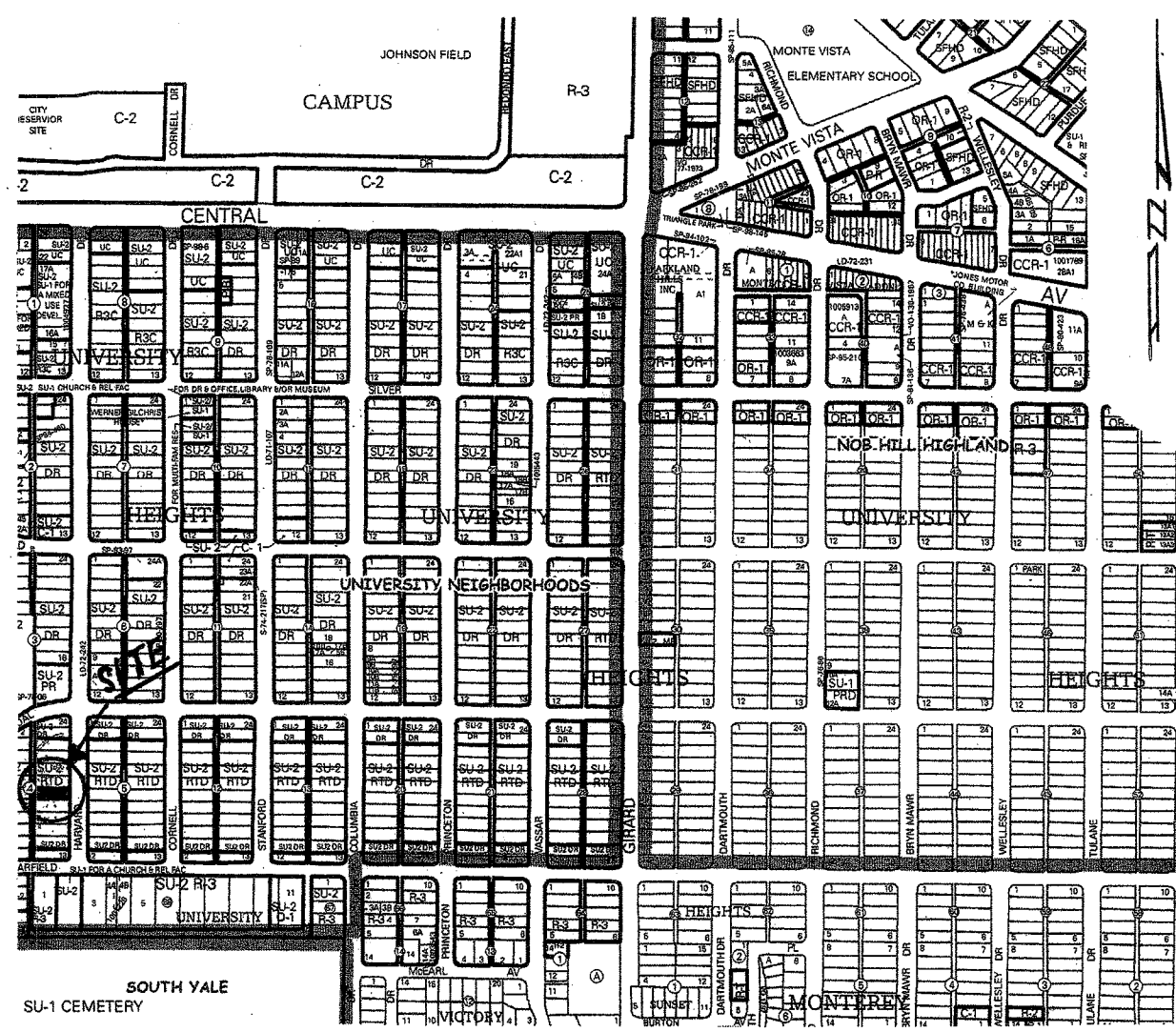
New Mexico 87103


Abiel Carrillo, P.E.
Principal Engineer, Planning Department
Development and Review Services

www.cabq.gov

TE/AC

C: email Cordova, Camille C.; Miranda, Rachel; Sandoval, Darlene M.; Blocker,
Lois



VICINITY MAP

Zone Atlas Page:
K-16-Z

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:

- ADJACENT PROPERTY SHALL BE PROTECTED AT ALL TIMES BY CONSTRUCTION OF BERMS, DRESSES, SWALES, PONDS, AND OTHER TEMPORARY GRADING AS REQUIRED TO PREVENT STORM RUNOFF FROM LEAVING THE SUBJECT SITE AND ENTERING ADJACENT PROPERTIES.
- 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.
- THE CONTRACTOR SHALL IMMEDIATELY AND THOROUGHLY REMOVE ANY AND ALL SEDIMENT FROM PUBLIC STREETS THAT HAS BEEN BROOD FROM THE SUBJECT SITE AND DEPOSITED THEREON.

CONSTRUCTION NOTES:

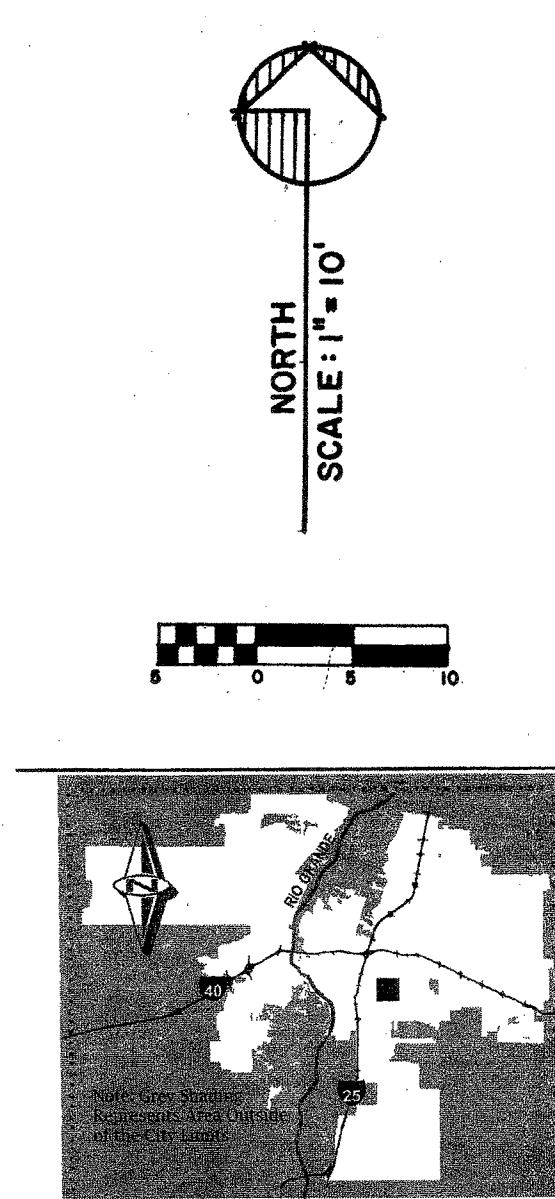
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE AT 260-1990 FOR THE ACTUAL FIELD LOCATION OF THE EXISTING SURFACE OF SUB-SURFACE UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION(S) OF ALL POTENTIAL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

GENERAL NOTES:

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

LEGEND:

TOP OF CURB ELEVATION = TC = G1.41
CURB FLOWLINE ELEVATION = LE = G0.82
EXISTING SPOT ELEVATION = S = G1.5
EXISTING CONTOUR ELEVATION = C = G2.0
PROPOSED SPOT ELEVATION = P = G2.50
PROPOSED CONTOUR ELEVATION = N/A
PROPOSED OR EXISTING CONCRETE SURFACE = [Symbol]
EXISTING FENCE LINE = [Symbol]



LEGAL DESCRIPTION: LOT EIGHTEEN (18), BLOCK FOUR (4), UNIVERSITY HEIGHTS ADDITION, ALBUQUERQUE, NEW MEXICO.

BENCH MARK REFERENCE: CITY OF ALBUQUERQUE STATION DATUM, ELEVATIONS SHOWN ARE REFERENCED TO NAVD 1988 VALUES; PROJECT T.B.M. AS SHOWN ON THE PLAN 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 07-18-16. 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 CERTIFICATE OF OCCUPANCY (PERMANENT).

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
LEVI J. VALDEZ, N.M.P.E. NO. 5693
07-18-16
DATE

SEAL



DRAINAGE COMMENTS:

AS SHOWN ON THE VICINITY MAP HEREON, THE SUBJECT SITE IS LOCATED ON THE WEST SIDE OF HARVARD DRIVE S.E. BETWEEN COAL AVENUE S.E. AND GARFIELD AVENUE S.E., ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO.

THE SUBJECT SITE IS PRESENTLY A VACANT PROPERTY; THE PROPOSED PLAN AS SHOWN HEREON IS TO CONSTRUCT NEW RESIDENTIAL UNITS AND ASSOCIATED IMPROVEMENTS THEREON.

THE SUBJECT SITE, 1.) DOES NOT LIE WITHIN A DESIGNATED FLOODPLAIN, (RE: F.E.M.A. FIRM PANEL 35001C0353H, EFFECTIVE AUGUST 16, 2012), 2.) DOES NOT ACCEPT OFFSITE FLOWS FROM ADJACENT PROPERTIES, 3.) DOES NOT CONTRIBUTE OFFSITE FLOWS TO ADJACENT PROPERTIES, 4.) WILL PROVIDE A RETENTION POND FOR THE "FIRST FLUSH" STORM VOLUME.

DRAINAGE CALCULATIONS ARE PER SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA FOR THE CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO.

NOTE: "1" FLUSH RETENTION POND VOLUME: (TOTAL REQUIRED)
0.34" (0.03') x 4,833.0 SQ. FT. = 145.0 CU. FT.

RETENTION PONDS PROVIDED:

POND # 1: (MEAN) 11.0' x 19.0' = 209.0 SQ. FT. x 0.50" DEPTH = 104.5 CU. FT.

POND # 2: (MEAN) 12.0' x 13.5' = 162.0 SQ. FT. x 0.50" DEPTH = 81.0 CU. FT.

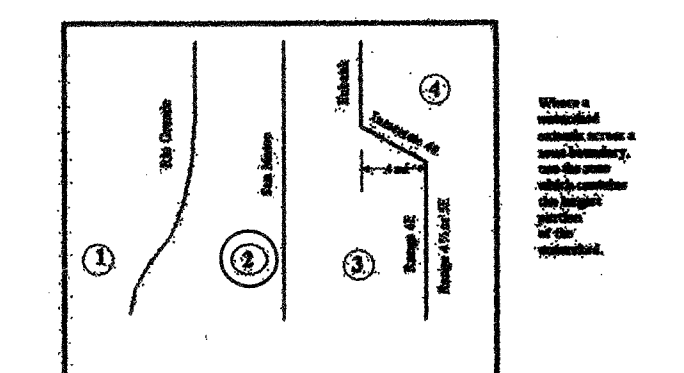
TOTAL VOLUME = 185.5 CU. FT.

A.1 PRECIPITATION ZONES:

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

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

Zone	Intensity	100-YR (2-YR, 10-YR)
1	4.70	(1.84, 3.14)
2	5.03	(2.04, 3.41)
3	3.38	(2.31, 3.65)
4	3.61	(2.34, 3.83)



Treatment	Land Conditions
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, groundwater and infiltration capacity. Chaparral. 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 uncompacted by human activity. Minimal vegetation. Unpaved parking, roads, trails. Most recent lots. Gravel or rock on plastic (desert landscaping). Irrigated lawns and patios 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.

Zone	Treatment				100-YR (2-YR, 10-YR)
	A	B	C	D	
1	1.29 (0.00, 0.24)	2.03 (0.33, 0.65)	2.87 (0.47, 1.49)	4.37 (1.69, 2.89)	
2	1.56 (0.00, 0.38)	2.28 (0.08, 0.95)	3.14 (0.60, 1.71)	4.70 (1.86, 3.14)	
3	1.87 (0.00, 0.58)	2.60 (0.21, 1.19)	3.45 (0.78, 2.00)	5.02 (2.04, 3.39)	
4	2.20 (0.05, 0.87)	2.92 (0.38, 1.45)	3.73 (1.00, 2.36)	5.25 (2.17, 3.57)	

SITE AREA = 0.16 ACRE ZONE: TWO (2)
PRECIPITATION: 360 = 2.35 in.
1440 = 2.75 in.
10day = 3.95 in.

EXCESS PRECIPITATION: PEAK DISCHARGE:

TREATMENT A 0.53 in. 1.56 cfs/ac.
TREATMENT B 0.78 in. 2.28 cfs/ac.
TREATMENT C 1.13 in. 3.14 cfs/ac.
TREATMENT D 2.12 in. 4.70 cfs/ac.

EXISTING CONDITIONS: PROPOSED CONDITIONS:

AREA	AREA
TREATMENT A 0.00 ac.	0.00 ac.
TREATMENT B 0.00 ac.	0.00 ac.
TREATMENT C 0.16 ac.	0.05 ac.
TREATMENT D 0.00 ac.	0.11 ac.

EXISTING EXCESS PRECIPITATION:

Weighted E= (0.53)x(0.00)+(0.78)x(0.00)+(1.13)x(0.16)+(2.12)x(0.00)0.16
= 1.13 in.
V100-360= (1.13)x(0.16)/ 12 = 0.01507 ac-ft = 656.4 cf

EXISTING PEAK DISCHARGE:

Q100= (1.56)x(0.00)+(2.28)x(0.00)+(3.14)x(0.16)+(4.70)x(0.00) = 0.50 cfs

PROPOSED EXCESS PRECIPITATION:

Weighted E= (0.53)x(0.00)+(0.78)x(0.00)+(1.13)x(0.05)+(2.12)x(0.11)0.16
= 1.81 in
V100-360= (1.81)x(0.16)/ 12.0 = 0.02413 ac-ft = 1,051.2 cf

V100-1440= (0.02)+(0.11)x(2.75 - 2.35)/12 = 0.023667 ac-ft = 1,030.9 cf

V100-10day= (0.02)+(0.11)x(3.95 - 2.35)/12 = 0.034667 ac-ft = 1,510.1 cf

PROPOSED PEAK DISCHARGE:

Q100= (1.56)x(0.00)+(2.28)x(0.00)+(3.14)x(0.05)+(4.70)x(0.11) = 0.67 cfs

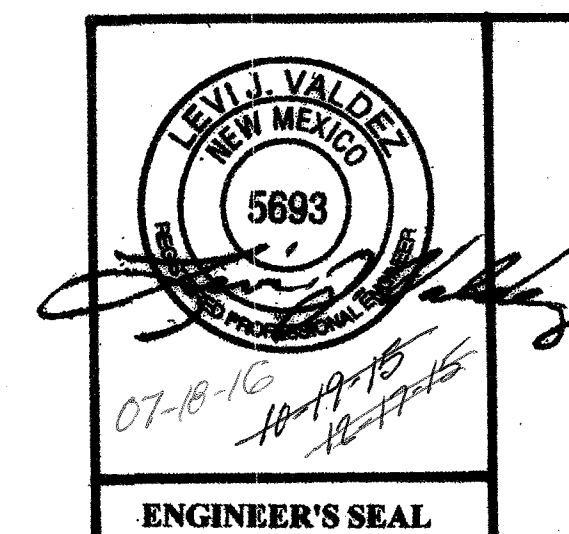
INCREASE: Q100 = 0.17 CFS V100-360 = 394.8 CU. FT.

NOTE: "HISTORICAL" SITE FLOWS ARE WESTERLY TOWARDS THE UNDEVELOPED 16.0' PUBLIC ALLEY AND TO THE SOUTHWEST PROPERTY CORNER; THE SUBJECT SITE PRESENTLY HAS A DEPRESSED GRADED AREA WHERE THE ORIGINAL RESIDENTIAL STRUCTURE WAS. MINIMAL NEW DEVELOPED OFFSITE FLOWS SHOWN ON THE PLAN HEREON ARE TO BE DISCHARGED TO THE UNDEVELOPED 16.0' PUBLIC ALLEY AND HARVARD DRIVE S.E. AND WILL HAVE NO ADVERSE AFFECT TO DOWNSTREAM PROPERTIES.

(ENGINEER'S CERTIFICATION)

07-18-16

A PROPOSED
GRADING AND DRAINAGE PLAN
FOR RESIDENTIAL UNITS AT
413 HARVARD DRIVE S.E.
ALBUQUERQUE, NEW MEXICO
OCTOBER, 2015



* NOTE: ITEM(S) OUTLINED IN "RED" ARE EXISTING CONDITIONS.