DRAINAGE PLAN:

LEGAL DESCRIPTION: LOT 9C, LA VISTA AT DESERT RIDGE SUBDIVISION

SITE AREA: 0.24 ACRES

FLOOD HAZARD STATEMENT: F.E.M.A. FLOODWAY BOUNDARY AND FLOODWAY MAP DATED AUGUST 16, 2012 (PANEL NO. 35001C0133G & 35001C0141G) INDICATES A FLOOD HAZARD ZONE X WHICH IS AN AREA DETERMINED TO BE OUTSIDE THE 500-YEAR FLOODPLAIN. THE NORTH LA CUEVA CHANNEL AT THE SOUTHWEST CORNER HAS A FLOOD HAZARD ZONE A WITH A 1% ANNUAL CHANCE FLOOD DISCHARGE CONTAINED IN CHANNEL.

LOCATION AND DESCRIPTION: THE LOT IS LOCATED ON EAGLE ROCK AVENUE WEST OF WYOMING BOULEVARD. AT THE SOUTHWEST CORNER OF THE PROPERTY IS THE NORTH LA CUEVA CHANNEL.

EXISTING DRAINAGE CONDITIONS:

THE DRAINAGE ANALYSIS FOR THIS SITE IS IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL SECTION 22.2, HYDROLOGY. THE PROPERTY IS LOCATED IN ZONE 3. THE 100-YEAR, 6-HOUR STORM IS 2.60 INCHES.

THE SITE CURRENTLY DRAINS FROM EAST TO WEST TO THE NORTH LA CUEVA CHANNEL. CURRENTLY THERE ARE OFFSITE FLOWS FROM THE EAST AND NORTH.

DEVELOPED DRAINAGE CONDITIONS:

THERE IS ONE OFF-SITE BASINS DRAINING ONTO LOT 9C. THE OFF-SITE BASIN IS DIRECTLY EAST OF LOT 9C. RUNOFF FROM THE OFF-SITE BASIN WILL BE COLLECTED IN A SWALE ALONG THE LOT 9C EAST PROPERTY LINE AND WILL BE DIVERTED TO EAGLE ROCK AVENUE THROUGH THE DRIVEWAY FOR LOT 9C. THE PEAK FLOW OF 2.54 CFS WILL BE DISCHARGED TO EAGLE ROCK AVENUE THROUGH THE DRIVEWAY AND WILL EVENTUALLY DRAIN TO THE NORTH LA CUEVA CHANNEL.

RUNOFF FROM THE ON-SITE BASIN, WHICH INCLUDES ALL OF LOT 9C, WILL DRAIN TO A RETENTION POND ALONG THE WESTERN RETAINING WALL ADJACENT TO THE AMAFCA CHANNEL. RUNOFF FROM THE PROPOSED HOUSE WILL BE COLLECTED IN SWALES TO THE NORTH AND EAST, WHICH WILL DRAIN TO THE RETENTION POND. THE RETENTION POND WILL HOLD THE 100-YEAR, 10-DAY VOLUME OF 2,079 CUBIC FEET. THE RETENTION POND WILL HAVE A MAXIMUM DEPTH OF 1.5 FEET.

100-YEAR HYDROLOGIC CALCULATIONS

BASIN #	AREA (acre)	LAND TREATMENT A (%)	B (%)	C (%)	D (%)	WEIGHTED E (in)	100-YEAR PRECIPITATION V (6-hr) (acre-ft)	V (6-hr) (cu-ft)	V(10-day) (acre-ft)	V(10-day) (cu-ft)	Q (cfs)
EXISTING CONDITIONS											
OFF-SITE	1.3602	100.00	0.00	0.00	0.00	0.66	0.07	3,259	0.07	3,259	2.54
ON-SITE	0.2436	100.00	0.00	0.00	0.00	0.66	0.01	584	0.01	584	0.46
TOTAL RUNOFF	1.60						0.09	3,842	0.09	3,842	3.00
PROPOSED CONDITIONS											
ON-SITE	0.2436	0.00	48.30	14.90	36.80	1.51	0.03	1,331	0.05	2,079	0.88
TOTAL RUNOFF	0.24						0.03	1,331	0.05	2,079	0.88
EXCESS PRECIP.		0.66	0.92	1.29	2.36	E_i (in)					
PEAK DISCHARGE		1.87	2.6	3.45	5.02	Q_{PI} (cfs)					

WEIGHTED E (in) = $(E_A)(\%A) + (E_B)(\%B) + (E_C)(\%C) + (E_D)(\%D)$

$V_{6\text{-}HR}$ (acre-ft) = (WEIGHTED E)(AREA)/12

V_{10DAY} (acre-ft) = $V_{6\text{-}HR} + (A_D)(P_{10DAY} - P_{6\text{-}HR})/12$

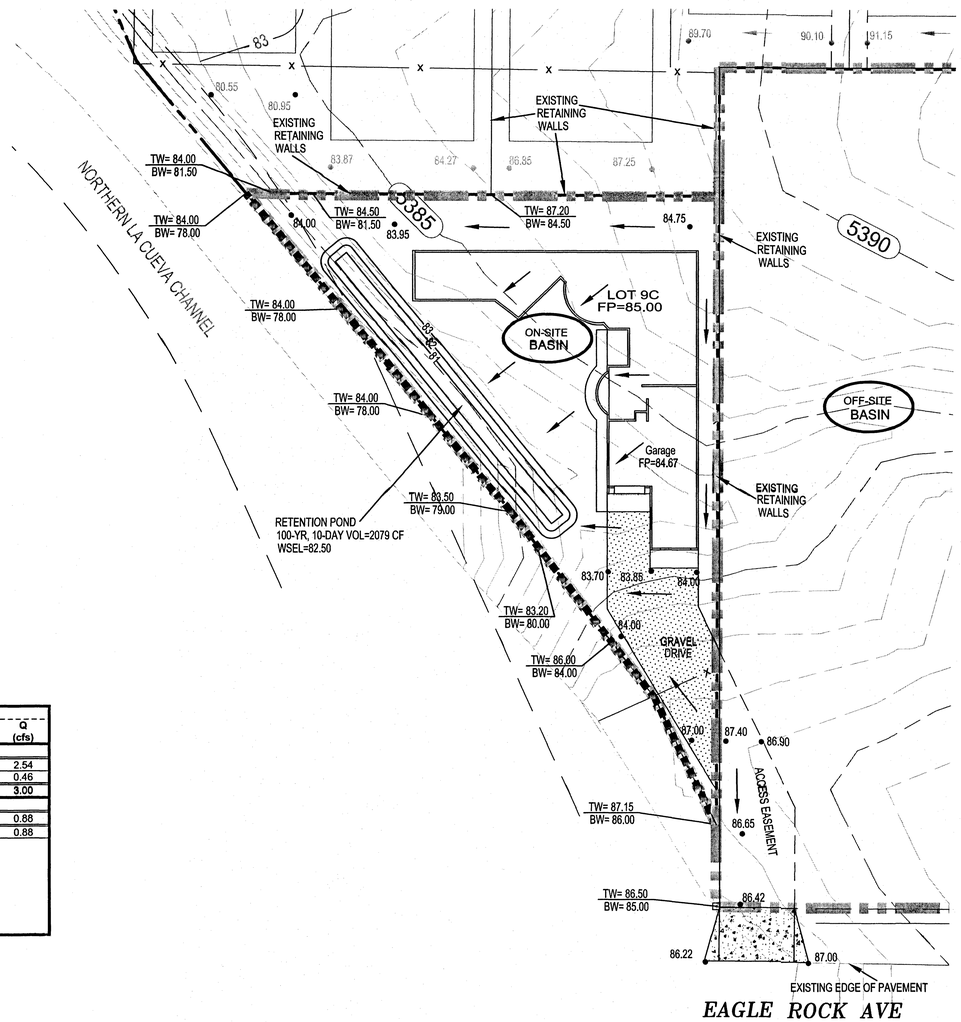
Q (cfs) = $(Q_{PA})(A_A) + (Q_{PB})(A_B) + (Q_{PC})(A_C) + (Q_{PD})(A_D)$

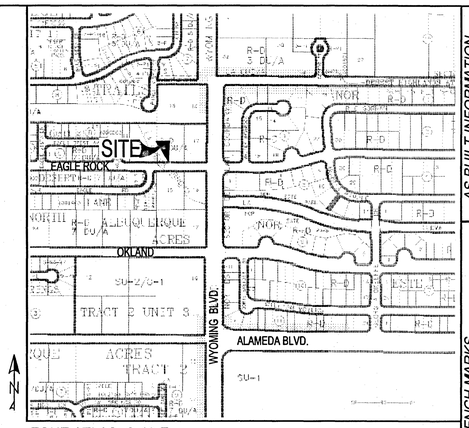
ZONE = 3

$P_{6\text{-}HR}$ (in.) = 2.60

$P_{24\text{-}HR}$ (in.) = 3.10

P_{10DAY} (in.) = 4.90





ZONE ATLAS: C-19-Z

LEGEND

FP=09.07	FINISHED PAD SITE ELEVATION
•60.23	PROPOSED SPOT ELEVATION
TW=12.51 / BW=11.84	TOP OF WALL / BOTTOM OF WALL
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	PROPOSED RETAINING WALL
	EXISTING CURB AND GUTTER
ON-SITE BASIN	PROPOSED BASIN NUMBER
	PROPOSED BASIN BOUNDARY

N

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

AS BUILT INFORMATION: CONTRACTOR | WORK STAKED BY | INSPECTOR'S ACCEPTANCE BY | FIELD VERIFICATION BY | DRAWINGS CORRECTED BY | MICRO-FILM INFORMATION: RECORDED BY | NO. | DATE

BENCH MARKS

SURVEY INFORMATION: FIELD NOTES: NO. | BY | DATE

ENGINEER'S SEAL: NEW MEXICO LICENSED PROFESSIONAL ENGINEER 9677

NO.	DATE	REMARKS	BY

DESIGN: DESIGNED BY DBT DATE 08-2016; DRAWN BY DEM DATE 08-2016; CHECKED BY DBT DATE 08-2016

Thompson Engineering Consultants, Inc.
tecnm@yahoo.com
P.O. BOX 65760 ALBUQUERQUE, NM 87193
PHONE: (505) 271-2199
FAX: (505) 830-9428

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
TRANSPORTATION DEVELOPMENT

LA VISTA AT DESERT RIDGE
LOT 9C
GRADING AND DRAINAGE PLAN

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.

City Project No.	Zone Map No.	Sheet	Of
XXXXXX	C-19-Z	1	1