INTRODUCTION

LOTS P-1, Q-1, AND R-1 IN BLOCK 4 OF PALISADES SUBDIVSION WILL BE REPLATTED INTO LOT P-1-A AND LOT R-1-A. REFER TO THE EXISTING AND PROPOSED BASIN MAP FOR THE EXISTING AND PROPOSED LOTS, RESPECTIVELY. THE REPLAT WILL VACATE THE DRAINAGE EASEMENTS ON LOTS P-1 AND LOT Q-1. NEW DRAIANGE EASEMENTS WILL BE REQUIRED TO CONVEY THE RUNOFF FROM LOTS L-1 AND K-1. THE PURPOSE OF THIS DRAINAGE REPORT IS TO 1) PROVIDE HYDROLOGIC AND HYDRAULIC ANALYIS, 2) SHOW THAT THE PROPOSED DRAINAGE EASMENTS ARE SUFFICIENT, AND 3) SEEK APPROVAL FROM THE DRAINAGE SECTION ON THE REPLAT OF LOTS P-1, Q-1, AND R-1.

METHODOLOGY

SECTION 22.2 OF THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL WAS FOLLOWED TO CALCULATE THE PEAK DISCHARGE AND VOLUMETRIC RUNOFF. THE TABLES AND FORMULAS IN PART A WERE FOLLOWED USING THE 100_{YEAR}/6_{HOUR}, 24_{HOUR} STORM EVENT FREQUENCIES. THE SITE IS LOCATED IN ZONE 1 AS DESIGNEATED IN FIGURE A-1 OF ALBUQUERQUE'S DPM. THE TOTAL VOLUMETRIC RUNOFF WAS COMPUTED AS PER SECTION A.5. PEAK DISCHARGES WERE COMPUTED AS PER SECTION A.6.

EXISTING CONDTION

(E1) DRAINAGE REPORT

LOTS P-1, Q-1, AND R-1 ARE VACANT. THE SITE APPEARS TO HAVE BEEN GRADED TO FOLLOW THE "MASTER GRADING PLAN FOR REPLAT OF LOTS JJ THRU VV, BLOCK 4, PALISADES SUBDIVSION", WHICH WAS SEALED BY SANTIAGO ROMERO, II ON FEBRUARY 17TH, 1986. THERE IS EVIDENCE OF OLD RETAINAGE WALLS ALONG THE ALIGNMENT AS SHOWN IN THE MASTER GRADING PLAN. HOWEVER, THE SITE HAS BEEN RE-GRADED AND DOES NOT FOLLOW THE ORGINAL GRADING INTENT AND THE OLD RETAINING WALLS HAVE BEEN COVERED. THE LOTS WERE REGRADED TO PROVIDE A RAMP SO CONSTRUCTION VECHICLES, SUCH AS A BULLDOZER, MAY ACCESS LOTS L-1 AND K-1 AT THE TIME THEY WERE BEING DEVELOPED. ALTHOUGH THERE ARE DRAINAGE EASEMENTS ON LOTS P-1 AND Q-1, OFFSITE RUNOFF FROM LOTS L-1 AND K-1 ARE NOT CONVEYED THROUGH THESE EASEMENTS AS INTENTED. THE VACANT LAND SLOPES SOUTH BETWEEN 2:1 TO 10:1 (H:V) AND HAS A VERTICAL DROP OF NEARLY 30 FEET. RUNOFF FROM THE SITE ENTERS LA BAJADA ROAD RIGHT-OF-WAY AND IS THEN CONVEYED EAST. LANDTREATMENT PERCENTAGES WERE TAKEN FROM 2012 AERIAL PHOTOGRAPHY. REFER TO TABLE 1 BELOW FOR THE HYDROLOGIC DATA AND RESULTS.

TAE	BLE 1: EXISTING	G HYDROLC	GIC DATA, PE	AK DISCAHRO	SE, AND VO	LUMETRIC RUI	NOFF
BASIN	AREA	LAN	ID TREATMEN	Q _{100YR} -6HR	V _{100YR} -24HOUR		
DASIN	(ACRE)	Α	В	С	D	(CFS)	(AC-FT)
OS1	0.151	0	0	16	84	0.625	0.028
OS2	0.174	0	13	12	75	0.676	0.029
101	0.195	0	0	85	15	0.602	0.019
102	0.210	0	0	86	14	0.646	0.021
103	0.225	Λ	0	97	12	0.688	0.022

PROPOSED CONDTION

THE REPLAT VACATES THE EXISTING DRAINAGE EASEMENTS AND THE OFFSITE RUNOFF IS PROPOSED TO DRAIN TO NEW DRAINAGE EASEMENTS AS SHOWN IN THE ROUGH GRADING PLAN (SHEET 2 OF 2). THE DRAINAGE EASEMENTS ARE PROPOSED TO RUN ALONG THE PROPERTY LINES SO THE DEVELOPABLE AREA IS MAXIMIZED. THE PURPOSE OF THE ROUGH GRADING PLAN IS TO SHOW THAT 1) LOTS P-1-A AND R-1-A ARE DEVELOPABLE AND 2) THE DRAINAGE WIDTH IS SUFFIENCT TO CONVEY THE OFFSITE FLOWS. THE PURPOSE OF THIS DRAINAGE REPORT IS NOT TO PROVIDE RUNOFF RESTRICTION OR STATE IF FREE DISCHARGE IS ALLOWED. THE PROPOSED BUILDINGS ARE APPROXIMATELY 2,500 SQUARE FEET (SQ.FT) AND HAVE TWO FINISH FLOORS; HOWEVER, THE BUILDING FOOTPRINT IS JUST A CONCEPT LAYOUT. THESE LOTS WILL REQUIRE APPROVAL OF A DETAIL GRADING AND DRAINAGE PLAN WHEN SEEKING BUILDING PERMIT. PEAK DISCHARGE AND VOLUMETRIC RUNOFF FOR LOTS P-1-A AND R-1-A ARE NOT MEANT TO BE LIMITING DISCHARGE RATES. THEY ARE PROVIDED TO GIVE AN ESTIMATE OF THE RUNOFF EXITING THE SITE. REFER TO TABLE 2 FOR THE PEAK DISCHARGE RATE AND VOLUMETRIC RUNOFF UNDER THE PROPOSED CONDITION.

TA	BLE 1: EXISTING	S HYDROLO	GIC DATA, PE	AK DISCAHRO	E, AND VO	LUMETRIC RUI	NOFF
DACINI	AREA	LAN	E (%)	Q _{100YR} -6HR	V _{100YR} -24HOUR		
BASIN	(ACRE)	Α	В	С	D	(CFS)	(AC-FT)
201	0.320	0	0	60	40	1.108	0.042
202	0.310	0	0	60	40	1.077	0.040

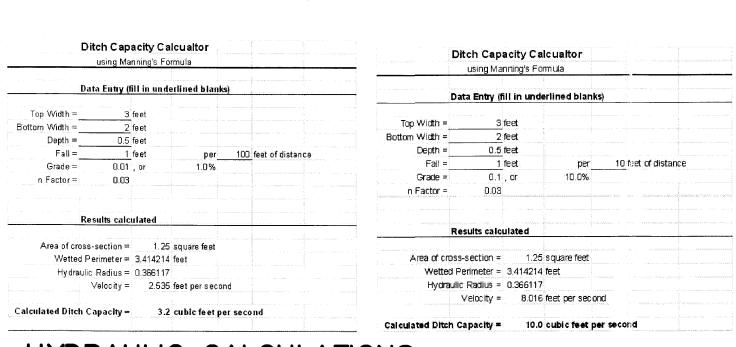
AS SHOWN IN THE ROUGH GRADING PLAN, LOTS L-1 WILL DRAIN TO LOT P-1-A. THE OFFSITE FLOW WILL BE CONVEYED EAST IN A DRAINAGE EASEMENT ALONG THE NORTH PROPERTY LINE, THEN INTO A DRAINAGE EASEMENT IN LOT R-1-A. LOT K-1 WILL ALSO DRAIN TO THE DRAINAGE EASEMENT IN LOT R-1-A. THE COMBINED OFFSITE RUNOFF IN THIS EASEMENT IS 1.30 CFS. THIS RUNOFF CAN BE CONTAINED IN A TRAPEZOID CHANNEL THAT HAS 2-FOOT BOTTOM, 3-FOOT TOP WIDTH, AND A DEPTH OF 0.5 CFS WITH VARYING SLOPES FROM 1% TO 10%. THIS SECTION HAS A CAPACITY OF 3.2 CFS AND 10.0 CFS AT A SLOPE OF 1% AND 10%, RESPECTIVELY.

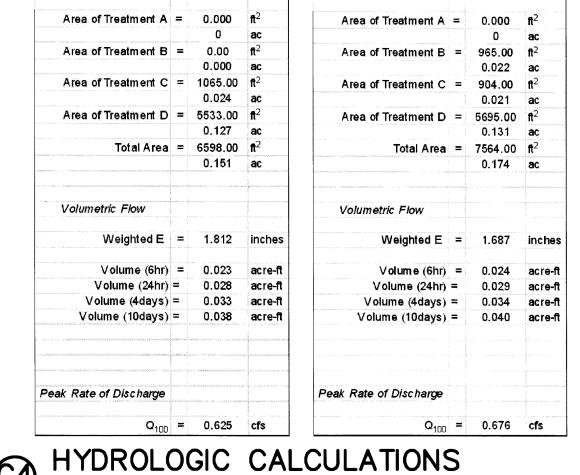
CONCLUSION

Q₁₀₀ = 0.688 cfs

THE ROUGH GRADING PLAN SHOWS THAT LOT P-1-A AND LOT R-1-A ARE DEVELOPABLE, MORE SO THEN THE EXISTING LOT LAYOUT. THE OFFSITE FLOWS HAVE BEEN ADDRESSED IN THIS DRAINAGE REPORT AND ROUGH GRADING PLAN. THE PROPOSED EASEMENTS ARE ADEQUATE TO ALLOW DRAINAGE INFRASTURE TO CONVEY THE OFFISTE FLOW WITHIN ITS LIMITS. THIS DRAINAGE REPORT SEEKS APPROVAL FROM ALBUQUERQUE'S DRAINAGE SECTION FOR THE REPLAT OF LOTS P-1, Q-1, AND R-1.

Basin OS1 - Existing Basin OF2 - Existing







									,			B
sasin 101 - Existing				Basin 102 - Existing				Basin 103 - Existing		1	AND CONTRACT	Basin 201 - PR
Area of Treatment A	=	0.000	ft ²	Area of Treatment A	=	0.000	ft²	Area of Treatment A	=	0.000	ft²	Area of Tr
		0	ac			0	ac	156233.2566000666000666000666003564###### - +557 * +77 58# 1####		.0	ac	
Area of Treatment B	=	0.00	ft2	Area of Treatment B	=	0.00	ft ²	Area of Treatment B	=	0.00	ft ²	Area of Tr
		0.000	ac			0.000	ac	· · · · · · · · · · · · · · · · · · ·		0.000	ac	Octobro Colobra Decent Assess the Asses Colobra Colobr
Area of Treatment C	= 1	7249.00	ft ²	Area of Treatment C	=	7916.00	ft. ²	Area of Treatment C	=	8559.00	ft ²	Area of Tr
		0.166	ac			0.182	ac	accessace to a first correction of the control of t		0.196	ac	
Area of Treatment D	=	1238.00	ft ²	Area of Treatment D	= :	1244.00	ft ²	Area of Treatment D	=	1236.00	ft ²	Area of Tr
		0.028	ac			0.029	ac			0.028	ac	
Total Area	= 1	8487.00	ft ²	Total Area	= .	9160.00	ft ²	Total Area	=	9795.00	ft ²	A finished. A first of the second of the sec
CATO ATTENDED CONTROL CANONICA CONTROL CONTROL CANONICA C		0.195	ac			0.210	ac	**************************************		0.225	ac	antigina en 16 % (a) : - espais ad a plantad de períod y contrata de la composición del la composición de
Volumetric Flow		***************************************		Volumetric Flow		Appropriate the Test Children	100000000000000000000000000000000000000	Volumetric Flow		(4.0m; 2.4400000000000000000000000000000000000		Volumetric
Weighted E	=	1.133	inches	Weighted E	=	1.123	inches	Weighted E	=	1.114	inches	
Volume (6hr)	=	0.018	acre-ft	Volume (6hr)	= 1	0.020	acre-ft	Volume (6hr)	Ξ	0.021	acre-ft	
Volume (24hr)	=	0.019	acre-ft	Volume (24hr)	= -	0.021	acre-ft	Volume (24hr)	=	0.022	acre-ft	Voli
Volume (4days)		0.021	acre-ft	Volume (4days)	=	0.022	acre-ft	Volume (4days)	=	0.023	acre-ft	Volun
Volume (10days)	=	0.022	acre-ft	Volume (10days)	=	0.023	acre-ft	Volume (10days)	=	0.024	acre-ft	Volum
												830307.00030304.0793 025 04300000000000000000000000000000000000
Peak Rate of Discharge				Peak Rate of Discharge			enjaresensennennen	Peak Rate of Discharge				Peak Rate of

Q₁₀₀ = 0.646 cfs

Basin 201 - PROPOSED				Basin 202 - PROPOSED	2		
Area of Treatment A	=	0.000	ft²	Area of Treatment A	=	0.000	ft ²
		٥	ac			0	ac
Area of Treatment B	=	0.00	ft ²	Area of Treatment B	=	0.00	ft ²
the control of the co		0.000	ac	The second secon		0.000	ac
Area of Treatment C	=	8382.00	ft²	Area of Treatment C	=	8120.00	ft ²
		0.192	ac	M2019-001-001-001-001-001-001-001-001-001-		0.186	ac
Area of Treatment D	=	5539.00	ft²	Area of Treatment D	=	5398.00	ft²
		0.127	ac	Associate to the general action advanced as a supplied about Association (1997) and (199		0.124	aç
Total Area	=	13921.00	ft ²	Total Area	=	13518.00	ft ²
		0.320	ac			0.310	ac
Volumetric Flow				Volumetric Flow		The second consequence of the	
Weighted E	=	1.380	inches	Weighted E	=	1,381	inches
Volume (6hr)		0.037	acre-ft	Volume (6hr)	=	0.036	acre-ft
Volume (24hr)	=	0.042	acre-ft	Volume (24hr)	=	0.040	acre-ft
Volume (4days)	=	0.046	acre-ft	Volume (4days)	=	0.045	acre-ft
Volume (10days)	=	0.052	acre-ft	Volume (10days)	=	0.051	acre-ft
	<u></u>			1 5 - 100 H 2000 M 2			a success views
Peak Rate of Discharge			age out a common site of	Peak Rate of Discharge			
. Q ₁₀₆	=	1.108	cfs	Q ₁₀₀	=	1.077	cfs

NOTE:

PLAN.

HYDROLOGIC CALCULATIONS CONT.

 $Q_{100} = 0.602$ cfs

PROPOSED BASIN MAP

LA BAJADA RD NW

(60' PUBLIC ROW)

EASEMEN $Q_{100YR-6HR} = 0.646 CFS$ $Q_{100YR-6HR} = 0.688 CFS$ ED EXISTING BASIN MAP S \bigcirc LOT J-1 LOT K-1 LOT L-1 BASIN OS2 AREA = 0.174 AC BASIN OS1 AREA = 0.151 AC Q100YR-6HR = 0.625 CFS $Q_{100YR-6HR} = 0.676 CFS$ $V_{100YR-24HR} = 0.028 \text{ AC-FT}$ $V_{100YR-24HR} = 0.029 AC-FT$ DOWNSPOUT #2 8" ORIFICE DOWNSPOUT #1 8" ORIFICE DRAINAGE EASEMENT 4' DRAINAGE EASEMENT BASIN 202 AREA = 0.320 AC BASIN 203 AREA = 0.310 AC **PROJECT NO:** 1310000500 REFER TO SHEET 2-2 Q100YR-6HR = XXX CFSQ100YR-6HR = XXX CFS**DESIGNED BY** $V_{100YR-24HR} = XXX AC-FT$ FOR ROUGH GRADING PLAN AND DRAINAGE $V_{100YR-24HR} = XXX AC-FT$ OR **RJF CHECKED BY: SEPT 2013**

SHEET TITLE

SHEET NO:

DRAINAGE REPORT &

BASIN MAP

