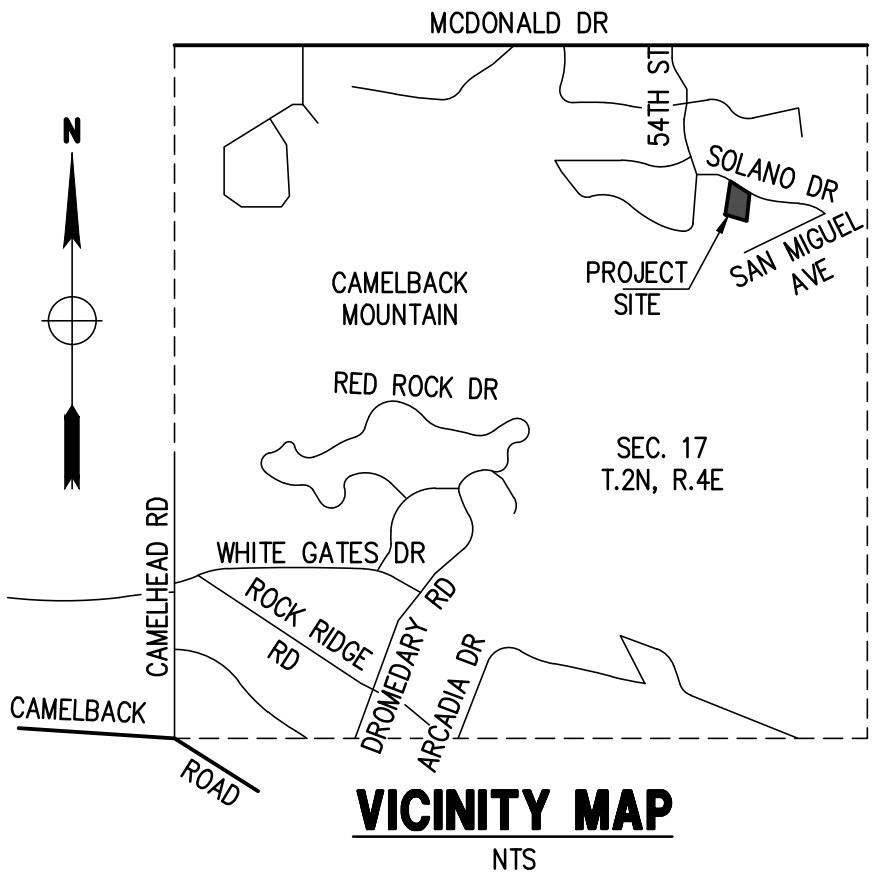
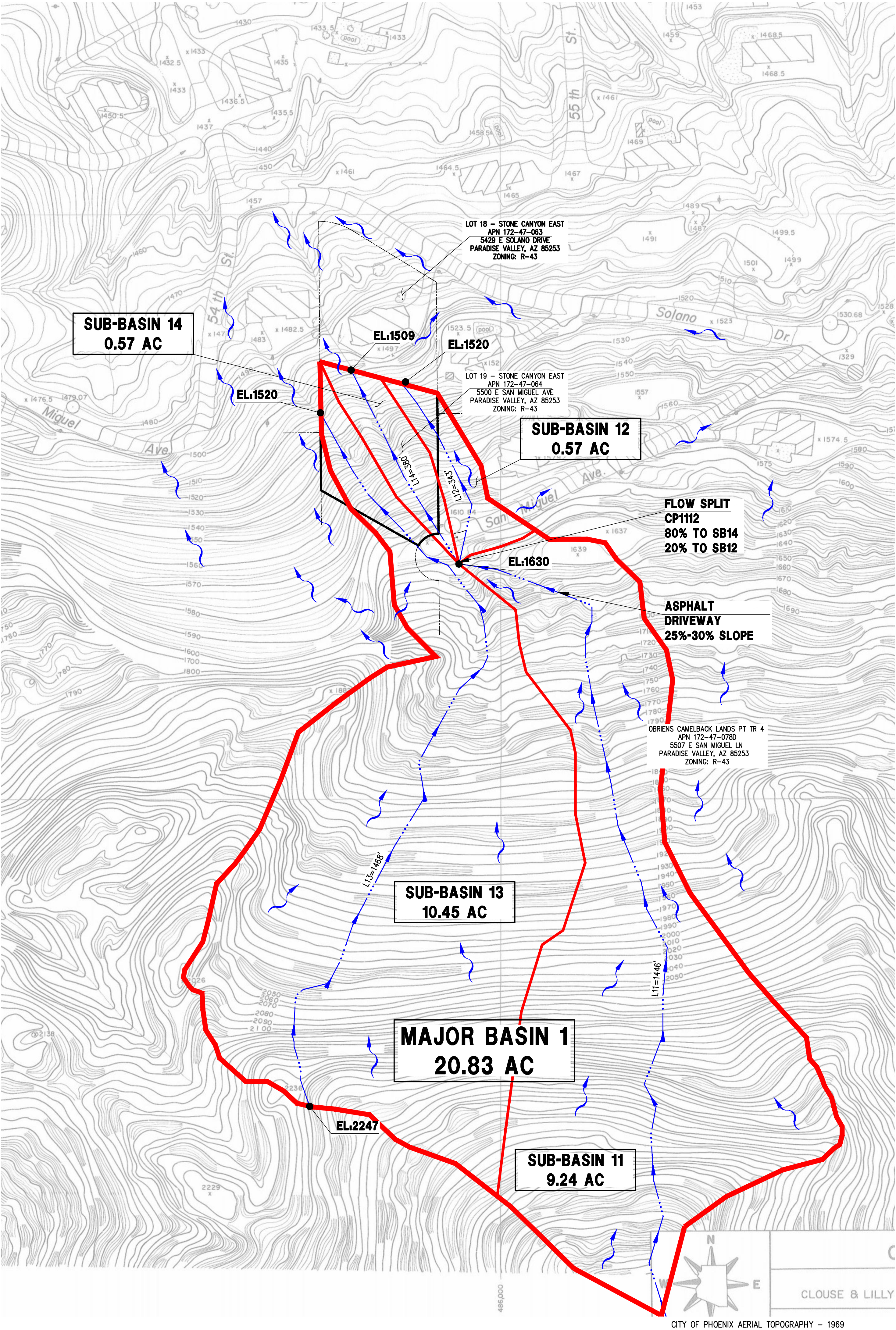


EXHIBIT 1 DRAINAGE MAPS

DRAINAGE MAP HISTORIC CONDITIONS
LOT 18, OF STONE CANYON EAST

RECORDED IN BOOK 81 OF MAPS, PAGE 34, M.C.R.,
LOCATED IN A PORTION OF THE NW 1/4 OF THE SE 1/4 NE 1/4 OF SECTION 17,
T.2N, R.4E OF THE GILA & SALT RIVER BASE AND MERIDIAN,
MARICOPA COUNTY, ARIZONA



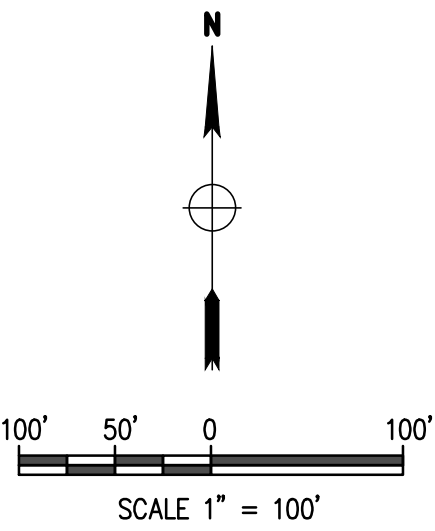
OWNER
SCOTT & TRACY TONN
4350 E. CAMELBACK RD.
PHOENIX, AZ. 85018

SITE DATA
APN: 172-47-063
ADDRESS: 5429 E SOLANO DRIVE
PARADISE VALLEY, AZ 85253
ZONING: R-43 (HILLSIDE)
LOT AREA: 44,542 S.F. (1.0225 AC.)

LEGAL DESCRIPTION
LOT 18, OF STONE CANYON EAST, ACCORDING TO THE PLAT OF
RECORD IN THE OFFICE OF THE COUNTY RECORDER OF
MARICOPA COUNTY, ARIZONA. RECORDED IN BOOK 81 OF
MAPS, PAGE 34.

BENCHMARK
BRASS CAP IN HANDHOLE LOCATED AT THE INTERSECTION OF
MCDONALD DRIVE AND N. 56TH STREET SAID POINT ALSO BEING
THE N.E. CORNER SECTION 17, T. 2N., R. 4E., G.&S.R.B.&M.;
ELEVATION = 1417.53 TOWN OF PARADISE VALLEY (NGVD'88)
DATUM
T.B.M.: BRASS CAP FLUSH LOCATED AT A POINT OF TANGENCY
ALONG E. SOLANO DRIVE. CENTERLINE NORTH OF LOT 18 OF
STONE CANYON EAST, SHOWN HEREON.
ELEVATION = 1468.84

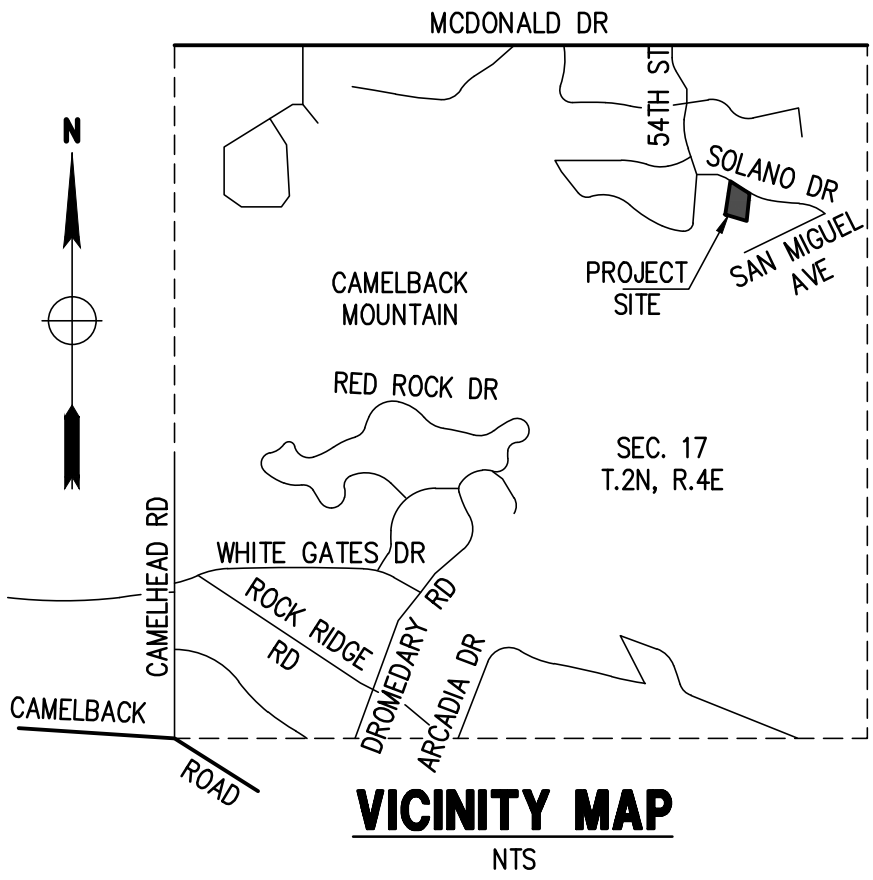
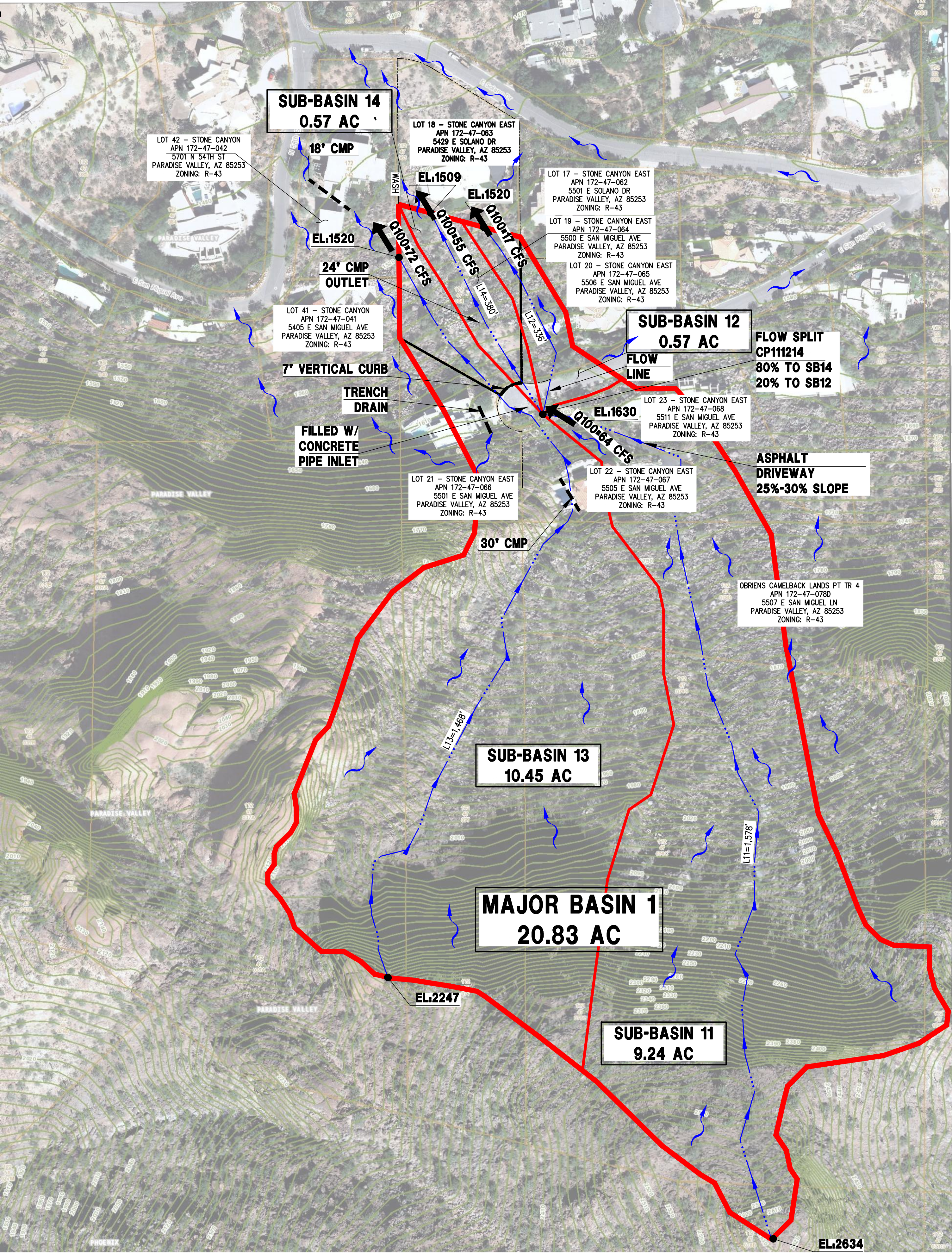
- LEGEND**
- DRAINAGE FLOW
 - SPOT ELEVATION
 - TRIBUTARY AREA BOUNDARY
 - FLOW LINE
 - STORM DRAIN PIPE



REVISIONS:	DATE:	SCALE: 1"=100'	DATE: 05/27/16
	DESIGNED BY: NP	JOB: 151217	
	DRAWN BY: DW	VERSION: 1.1	
	CHECKED BY: JJ		PLOT DATE: 05/27/16
THIS DRAWING IS AN INSTRUMENT OF SERVICE AND AS SUCH SHALL REMAIN THE PROPERTY OF LAND DEVELOPMENT GROUP, LLC. ANY REUSE, REPRODUCTION, OR PUBLICATION OF ANY METHOD OR MANNER OF IN PART WITHOUT THE WRITTEN PERMISSION OF LAND DEVELOPMENT GROUP, LLC IS PROHIBITED. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR THE CORRECTNESS OF THE INFORMATION AND DATA PROVIDED TO THE ORIGINAL SITE FOR WHICH IT WAS PREPARED.			
DRAINAGE MAP HISTORIC CONDITIONS			
TOWN RESIDENCE LOT 18-STONE CANYON EAST 5429 E SOLANO DRIVE PARADISE VALLEY, AZ 85253			
P. 602.889.1984 F. 602.445.9482 8808 N CENTRAL AVE., SUITE 288 PHOENIX, AZ 85020 phoenix@ddgeng.com			
DM 1 OF 2			

DRAINAGE MAP CURRENT CONDITIONS
LOT 18, OF STONE CANYON EAST

RECORDED IN BOOK 81 OF MAPS, PAGE 34, M.C.R.,
LOCATED IN A PORTION OF THE NW 1/4 OF THE SE 1/4 NE 1/4 OF SECTION 17,
T.2N, R.4E OF THE GILA & SALT RIVER BASE AND MERIDIAN,
MARICOPA COUNTY, ARIZONA



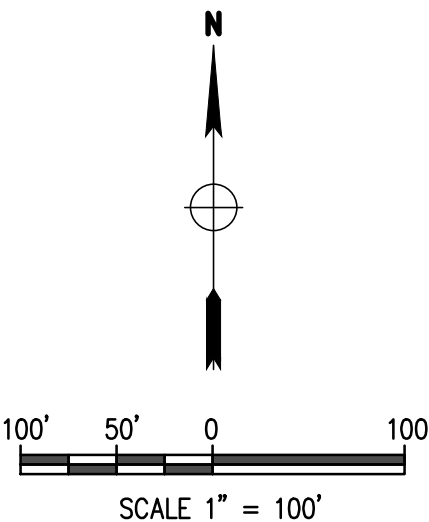
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ELEVATION = 1468.84

- LEGEND**
- DRAINAGE FLOW
 - SPOT ELEVATION
 - TRIBUTARY AREA BOUNDARY
 - FLOW LINE
 - STORM DRAIN PIPE



DATE: 05/27/16	DESIGNED BY: NP	CHECKED BY: JF
JOB: 151217	DRAWN BY: DW	DATE: 05/27/16
VERSION: 1.1		
REVISIONS:		

**DRAINAGE MAP
CURRENT CONDITIONS**

**TOWN RESIDENCE
LOT 18-STONE CANYON EAST
5429 E SOLANO DRIVE
PARADISE VALLEY, AZ 85253**

P. 602.889.1984 | F. 602.445.9482
8808 N CENTRAL AVE., SUITE 288
PHOENIX, AZ 85020
phoenix@dgeng.com

**land
development group**

REGISTERED PROFESSIONAL ENGINEER
41005
NICKOLA
J. PRODANOV
S.E. 151217
ARIZONA U.S.A.
Expires 06/30/2019

**DM
2 OF 2**

EXHIBIT 2 AERIAL MAPS

1961 Aerial
Pre-disturbed
Conditions

PROJECT SITE

1964 Aerial
Disturbed
Conditions

PROJECT SITE

20-40
8-21-64



PROJECT
SITE

PROJECT
SITE

PROJECT
SITE





PROJECT
SITE

EXHIBIT 3 DRAINAGE CALCULATIONS

Flood Control District of Maricopa County
Drainage Design Management System

MAJOR BASINS

Project Reference: 1512117

Page 1

8/8/2016

Major Basin	Area (acres)	Description
01	20.83	Major Basin 01

Flood Control District of Maricopa County
Drainage Design Management System
RAINFALL DATA
Project Reference: 1512117

Page 1

8/8/2016

ID	Method	Duration	2 Yr	5 Yr	10 Yr	25 Yr	50 Yr	100 Yr
DEFAULT	NOAA14	5 MIN	0.243	0.330	0.398	0.487	0.557	0.627
	NOAA14	10 MIN	0.370	0.503	0.605	0.742	0.847	0.955
	NOAA14	15 MIN	0.458	0.623	0.750	0.920	1.050	1.184
	NOAA14	30 MIN	0.617	0.840	1.009	1.238	1.414	1.594
	NOAA14	1 HOUR	0.764	1.039	1.249	1.532	1.750	1.972
	NOAA14	2 HOUR	0.875	1.174	1.398	1.707	1.943	2.188
	NOAA14	3 HOUR	0.945	1.243	1.477	1.807	2.069	2.342
	NOAA14	6 HOUR	1.125	1.444	1.696	2.041	2.312	2.594
	NOAA14	12 HOUR	1.264	1.602	1.867	2.225	2.499	2.783
	NOAA14	24 HOUR	1.526	1.979	2.336	2.833	3.226	3.636

Flood Control District of Maricopa County
Drainage Design Management System
LAND USE
Project Reference: 1512117

Page 1

8/8/2016

Sub Basin	Land Use Code	Area (acres)	Area (%)	Kb	Runoff Coefficient C						Description
					2 Year	5 Year	10 Year	25 Year	50 Year	100 Year	
Major Basin ID: 01											
11	730	9.24	100.0	0.171	0.55	0.80*	0.90*	0.90*	0.95*	0.95*	Passive Open Space (Includes mountain preserves and washes)
		9.240	100.0								
12	730	0.57	100.0	0.207	0.55	0.80*	0.90*	0.90*	0.95*	0.95*	Passive Open Space (Includes mountain preserves and washes)
		0.570	100.0								
13	730	10.45	100.0	0.169	0.55	0.80*	0.90*	0.90*	0.95*	0.95*	Passive Open Space (Includes mountain preserves and washes)
		10.450	100.0								
14	730	0.57	100.0	0.207	0.55	0.80*	0.90*	0.90*	0.95*	0.95*	Passive Open Space (Includes mountain preserves and washes)
		0.570	100.0								

* Non default value

(stLuDatRat.rpt)

Flood Control District of Maricopa County
Drainage Design Management System
RATIONAL METHOD FLOW SUMMARY - ALL
Project Reference: 1512117

Page 1

8/8/2016

Type	Conveyance			Combine	Return Period (Years)					
ID	Length (ft)	Velocity (ft/sec)	Tpipe (min)		2	5	10	25	50	100
Maior Basin ID: 01										
Sub Basin	-	-	-	-	Q (cfs)	-	-	-	-	63.9
11					CA (ac)	5.08	7.39	8.32	8.32	8.78
					Tc (min)	8.5	7.4	6.8	6.2	5.9
					i (in/hr)	2.41	3.48	4.33	5.47	6.36
Divert	-	-	-	-	Q (cfs)	-	-	-	-	12.8
1112					CA (ac)	-	-	-	-	1.76
					Tc (min)	-	-	-	-	5.6
					i (in/hr)	-	-	-	-	-
Retrieve Diversion	-	-	-	-	Q (cfs)	-	-	-	-	12.8
1112					CA (ac)	-	-	-	-	1.76
					Tc (min)	-	-	-	-	5.6
					i (in/hr)	-	-	-	-	-
Sub Basin	-	-	-	-	Q (cfs)	-	-	-	-	4.1
12					CA (ac)	0.31	0.46	0.51	0.51	0.54
					Tc (min)	5.0	5.0	5.0	5.0	5.0
					i (in/hr)	2.92	3.96	4.78	5.84	6.68
Combine	-	-	-	2	Q (cfs)	-	-	-	-	16.4
12					CA (ac)	-	-	-	-	2.30
					Tc (min)	-	-	-	-	-
					i (in/hr)	-	-	-	-	-

* First Pipe

(stRatNaIAll.rpt)

Flood Control District of Maricopa County
Drainage Design Management System
SUB BASINS
Project Reference: 1512117

Page 1

8/8/2016

ID	Sub Basin Data						Sub Basin Hydrology Summary						
	Area (acres)	Length (ft)	USGE	DSGE	Slope (ft/mi)	Kb		2 Year	5 Year	10 Year	25 Year	50 Year	100 Year
Major Basin ID: 01													
11	9.2	1,578	2,634.00	1,630.00	3,359.4	0.171	Q (cfs)	12.2	25.7	36.0	45.5	55.8	63.9
							C	0.55	0.80	0.90	0.90	0.95	0.95
							CA (ac)	5.08	7.39	8.32	8.32	8.78	8.78
							Tc (min)	9	7	7	6	6	6
							i (in/hr)	2.41	3.48	4.33	5.47	6.36	7.28
12	0.6	336	1,630.00	1,520.00	1,728.6	0.207	Q (cfs)	0.9	1.8	2.4	3.0	3.6	4.1
							C	0.55	0.80	0.90	0.90	0.95	0.95
							CA (ac)	0.31	0.46	0.51	0.51	0.54	0.54
							Tc (min)	5	5	5	5	5	5
							i (in/hr)	2.92	3.96	4.78	5.84	6.68	7.52
13	10.5	1,468	2,247.00	1,520.00	2,614.8	0.169	Q (cfs)	13.6	28.6	40.1	50.7	62.5	71.5
							C	0.55	0.80	0.90	0.90	0.95	0.95
							CA (ac)	5.75	8.36	9.41	9.41	9.93	9.93
							Tc (min)	9	8	7	7	6	6
							i (in/hr)	2.36	3.42	4.26	5.39	6.29	7.20
14	0.6	380	1,630.00	1,509.00	1,681.3	0.207	Q (cfs)	0.9	1.8	2.4	3.0	3.6	4.1
							C	0.55	0.80	0.90	0.90	0.95	0.95
							CA (ac)	0.31	0.46	0.51	0.51	0.54	0.54
							Tc (min)	5	5	5	5	5	5
							i (in/hr)	2.87	3.96	4.78	5.84	6.68	7.52

* Non default value

(stSubBasRat.rpt)

Channel Report

Capacity of Wash

Triangular

Side Slopes (z:1) = 3.00, 3.00
Total Depth (ft) = 2.00

Invert Elev (ft) = 1487.00
Slope (%) = 16.00
N-Value = 0.035

Calculations

Compute by: Q vs Depth
No. Increments = 10

Highlighted

Depth (ft) = 2.00
Q (cfs) = 196.76
Area (sqft) = 12.00
Velocity (ft/s) = 16.40
Wetted Perim (ft) = 12.65
Crit Depth, Yc (ft) = 2.00
Top Width (ft) = 12.00
EGL (ft) = 6.18

