Legend

- Site Boundary
- Flowline
- HEC-1 Subbasin
- Existing Contours

SITE

1221.2'

1218.2'

1229.8'

1231.9'

1228.9'

1256.3'

1

2

3

N

0 500 1,000 Feet

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

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TELEPHONE (602) 264-6831

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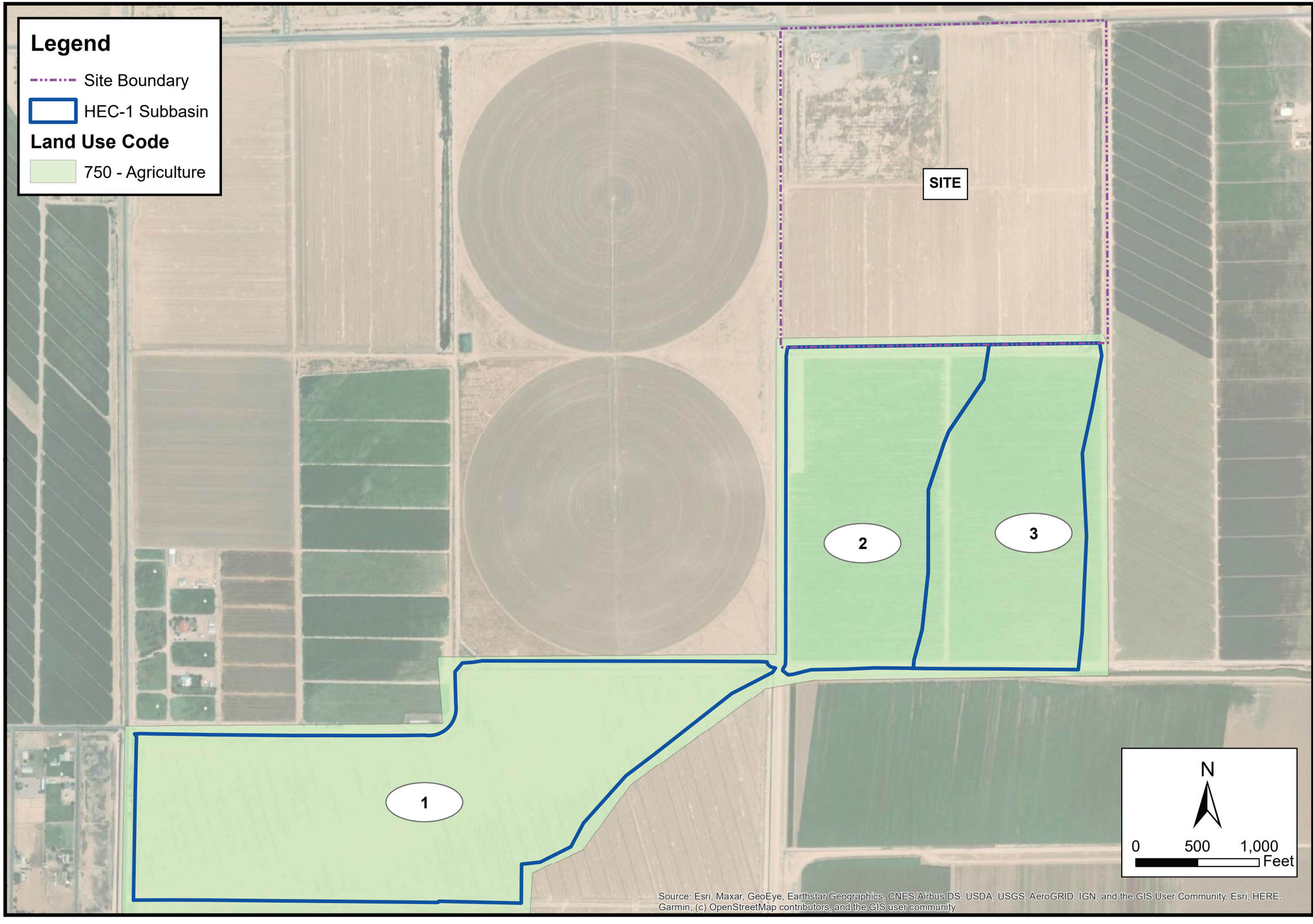
PRE-PROJECT HEC-1 SUBBASIN MAP

VENIDA

JOB NO.
01-0372301

EXHIBIT 2



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PRE-PROJECT HEC-1 LAND USE MAP

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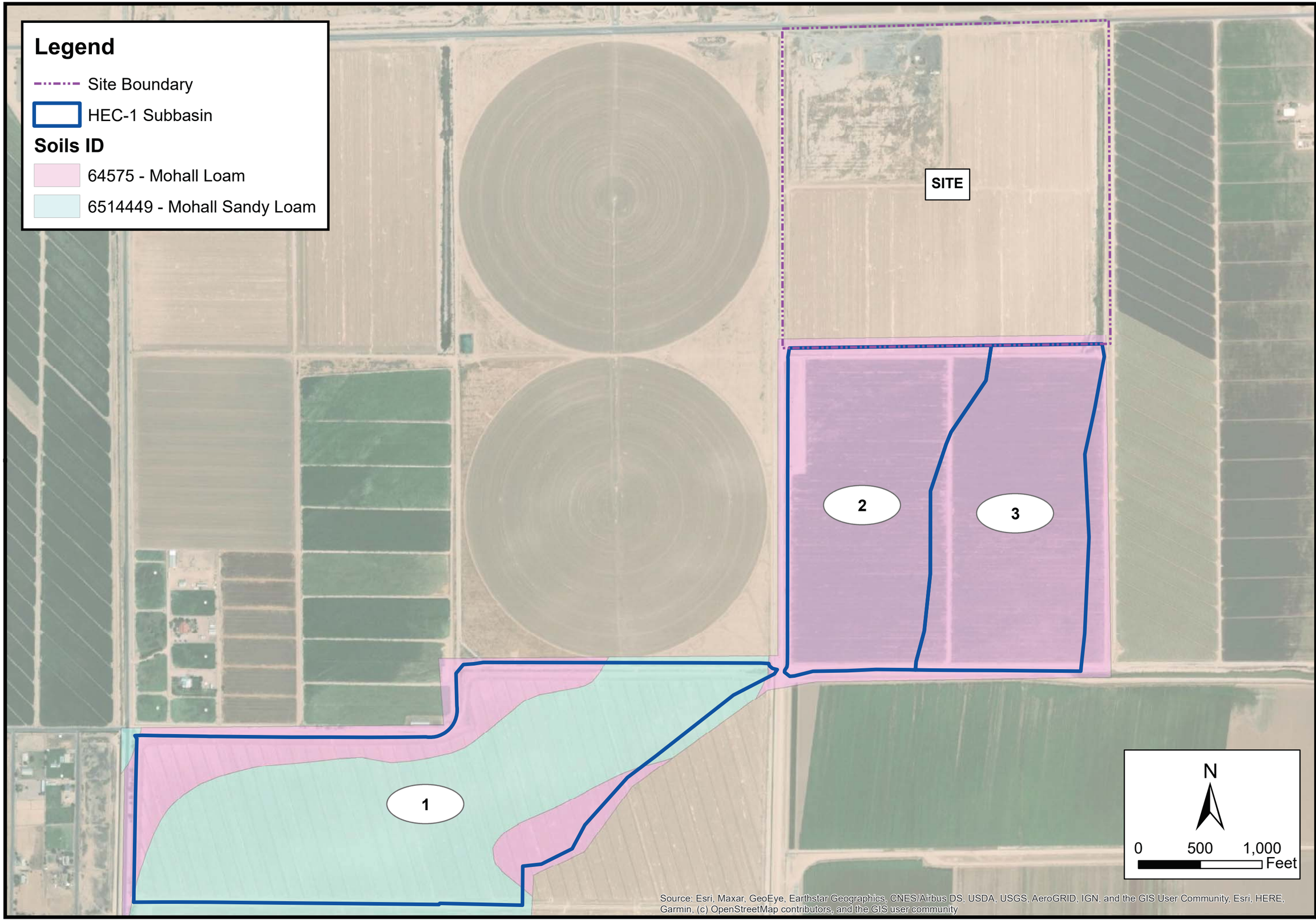
EXHIBIT 3



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SOILS MAP

VENIDA

JOB NO.
01-0372301

EXHIBIT 4

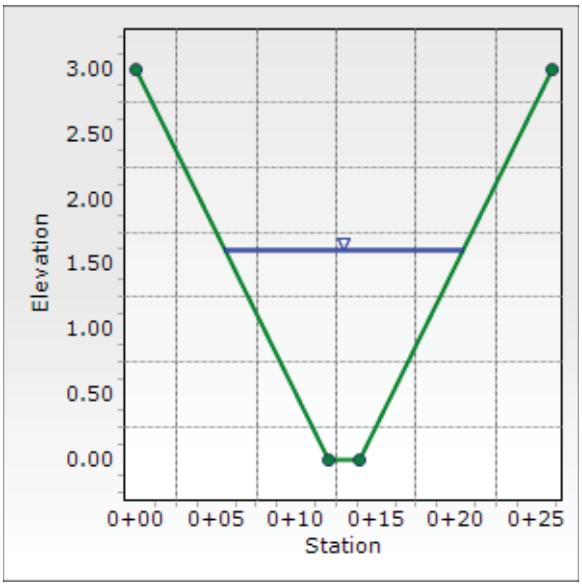
APPENDIX B

Off-Site Hydraulics: Channel Calculations

Cross Section for South Channel - West Third

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.00350 ft/ft
Normal Depth	1.6 ft
Discharge	42.00 cfs



Worksheet for South Channel - West Third

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.00350 ft/ft
Discharge	42.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	3.00
0+12.00	0.00
0+14.00	0.00
0+26.00	3.00

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 3.00)	(0+12.00, 0.00)	0.025
(0+12.00, 0.00)	(0+14.00, 0.00)	0.036
(0+14.00, 0.00)	(0+26.00, 3.00)	0.025

Options	
Current Roughness Weighted Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results	
Normal Depth	1.6 ft
Roughness Coefficient	0.026
Elevation	1.61 ft
Elevation Range	0.0 to 3.0 ft
Flow Area	13.7 ft²
Wetted Perimeter	15.3 ft
Hydraulic Radius	0.9 ft
Top Width	14.92 ft
Normal Depth	1.6 ft
Critical Depth	1.2 ft
Critical Slope	0.01175 ft/ft
Velocity	3.08 ft/s
Velocity Head	0.15 ft
Specific Energy	1.76 ft

Worksheet for South Channel - West Third

Results	
Froude Number	0.567
Flow Type	Subcritical

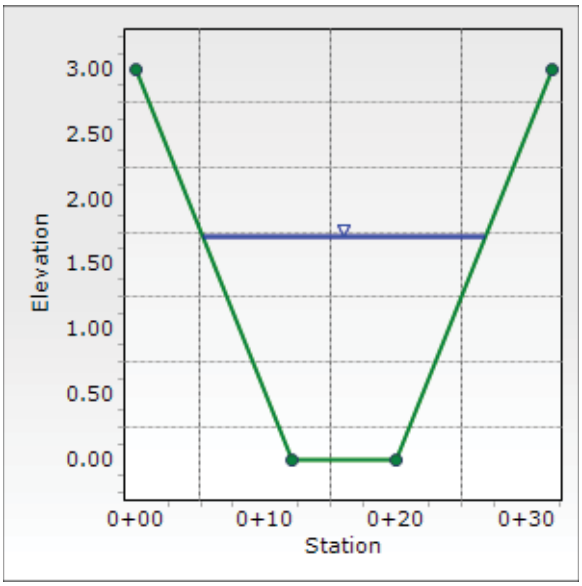
GVF Input Data	
Downstream Depth	0.0 ft
Length	0.0 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	1.6 ft
Critical Depth	1.2 ft
Channel Slope	0.00350 ft/ft
Critical Slope	0.01175 ft/ft

Cross Section for South Channel - Middle Third

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.00350 ft/ft
Normal Depth	1.7 ft
Discharge	84.00 cfs



Worksheet for South Channel - Middle Third

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.00350 ft/ft
Discharge	84.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	3.00
0+12.00	0.00
0+20.00	0.00
0+32.00	3.00

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 3.00)	(0+12.00, 0.00)	0.025
(0+12.00, 0.00)	(0+20.00, 0.00)	0.036
(0+20.00, 0.00)	(0+32.00, 3.00)	0.025

Options	
Current Roughness Weighted Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results	
Normal Depth	1.7 ft
Roughness Coefficient	0.029
Elevation	1.71 ft
Elevation Range	0.0 to 3.0 ft
Flow Area	25.4 ft²
Wetted Perimeter	22.1 ft
Hydraulic Radius	1.1 ft
Top Width	21.67 ft
Normal Depth	1.7 ft
Critical Depth	1.2 ft
Critical Slope	0.01314 ft/ft
Velocity	3.31 ft/s
Velocity Head	0.17 ft
Specific Energy	1.88 ft

Worksheet for South Channel - Middle Third

Results	
Froude Number	0.540
Flow Type	Subcritical

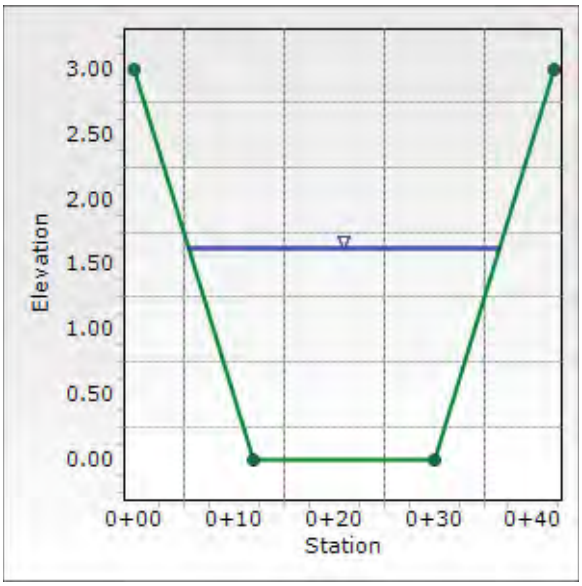
GVF Input Data	
Downstream Depth	0.0 ft
Length	0.0 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	1.7 ft
Critical Depth	1.2 ft
Channel Slope	0.00350 ft/ft
Critical Slope	0.01314 ft/ft

Cross Section for South Channel - East Third

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.00490 ft/ft
Normal Depth	1.6 ft
Discharge	155.00 cfs



Worksheet for South Channel - East Third

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.00490 ft/ft
Discharge	155.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	2.95
0+12.00	0.00
0+30.00	0.00
0+42.00	2.95

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 2.95)	(0+12.00, 0.00)	0.025
(0+12.00, 0.00)	(0+30.00, 0.00)	0.036
(0+30.00, 0.00)	(0+42.00, 2.95)	0.025

Options	
Current Roughness Weighted Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results	
Normal Depth	1.6 ft
Roughness Coefficient	0.031
Elevation	1.63 ft
Elevation Range	0.0 to 3.0 ft
Flow Area	40.0 ft²
Wetted Perimeter	31.6 ft
Hydraulic Radius	1.3 ft
Top Width	31.22 ft
Normal Depth	1.6 ft
Critical Depth	1.2 ft
Critical Slope	0.01462 ft/ft
Velocity	3.88 ft/s
Velocity Head	0.23 ft
Specific Energy	1.86 ft

Worksheet for South Channel - East Third

Results	
Froude Number	0.604
Flow Type	Subcritical

GVF Input Data	
Downstream Depth	0.0 ft
Length	0.0 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	1.6 ft
Critical Depth	1.2 ft
Channel Slope	0.00490 ft/ft
Critical Slope	0.01462 ft/ft

APPENDIX C

On-Site Hydrology: Rainfall Data, Retention,

and Culvert Crossing Calculations

NOAA Atlas 14, Volume 1, Version 5
Location name: Maricopa, Arizona, USA*
Latitude: 32.9818°, Longitude: -112.0609°
Elevation: 1217.36 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.201** (0.170-0.242)	**0.263** (0.223-0.318)	**0.358** (0.301-0.430)	**0.429** (0.359-0.512)	**0.523** (0.432-0.623)	**0.596** (0.486-0.706)	**0.668** (0.535-0.791)	**0.742** (0.585-0.877)	**0.838** (0.645-0.994)	**0.912** (0.687-1.09)
10-min	**0.306** (0.258-0.369)	**0.400** (0.340-0.484)	**0.545** (0.459-0.654)	**0.652** (0.546-0.780)	**0.797** (0.658-0.948)	**0.907** (0.740-1.07)	**1.02** (0.815-1.20)	**1.13** (0.890-1.34)	**1.27** (0.981-1.51)	**1.39** (1.05-1.65)
15-min	**0.380** (0.320-0.457)	**0.496** (0.421-0.599)	**0.675** (0.569-0.811)	**0.809** (0.677-0.967)	**0.988** (0.815-1.18)	**1.12** (0.917-1.33)	**1.26** (1.01-1.49)	**1.40** (1.10-1.66)	**1.58** (1.22-1.88)	**1.72** (1.30-2.05)
30-min	**0.511** (0.431-0.616)	**0.668** (0.567-0.807)	**0.909** (0.766-1.09)	**1.09** (0.911-1.30)	**1.33** (1.10-1.58)	**1.51** (1.24-1.79)	**1.70** (1.36-2.01)	**1.88** (1.49-2.23)	**2.13** (1.64-2.53)	**2.32** (1.75-2.76)
60-min	**0.633** (0.534-0.762)	**0.827** (0.702-0.999)	**1.13** (0.948-1.35)	**1.35** (1.13-1.61)	**1.65** (1.36-1.96)	**1.87** (1.53-2.22)	**2.10** (1.68-2.49)	**2.33** (1.84-2.76)	**2.63** (2.03-3.13)	**2.87** (2.16-3.42)
2-hr	**0.715** (0.612-0.844)	**0.928** (0.796-1.10)	**1.24** (1.06-1.47)	**1.48** (1.25-1.75)	**1.81** (1.51-2.12)	**2.06** (1.70-2.41)	**2.31** (1.88-2.71)	**2.57** (2.05-3.01)	**2.92** (2.27-3.43)	**3.19** (2.43-3.78)
3-hr	**0.765** (0.656-0.907)	**0.979** (0.844-1.17)	**1.29** (1.11-1.54)	**1.54** (1.31-1.82)	**1.89** (1.58-2.22)	**2.16** (1.78-2.53)	**2.45** (1.98-2.87)	**2.75** (2.18-3.23)	**3.16** (2.43-3.73)	**3.50** (2.62-4.14)
6-hr	**0.894** (0.782-1.04)	**1.14** (0.995-1.32)	**1.46** (1.27-1.69)	**1.72** (1.49-1.99)	**2.08** (1.77-2.38)	**2.36** (1.98-2.70)	**2.65** (2.19-3.04)	**2.96** (2.39-3.40)	**3.37** (2.65-3.88)	**3.70** (2.84-4.28)
12-hr	**0.990** (0.878-1.13)	**1.25** (1.11-1.43)	**1.60** (1.41-1.81)	**1.87** (1.64-2.11)	**2.24** (1.94-2.52)	**2.52** (2.16-2.84)	**2.81** (2.37-3.18)	**3.11** (2.58-3.52)	**3.52** (2.84-4.02)	**3.84** (3.03-4.42)
24-hr	**1.17** (1.05-1.30)	**1.48** (1.33-1.66)	**1.92** (1.72-2.15)	**2.27** (2.03-2.53)	**2.76** (2.44-3.06)	**3.14** (2.77-3.48)	**3.54** (3.09-3.92)	**3.96** (3.42-4.39)	**4.53** (3.86-5.04)	**4.98** (4.20-5.57)
2-day	**1.23** (1.11-1.37)	**1.58** (1.42-1.75)	**2.07** (1.86-2.30)	**2.46** (2.20-2.73)	**3.01** (2.67-3.33)	**3.44** (3.04-3.81)	**3.90** (3.42-4.32)	**4.37** (3.80-4.85)	**5.04** (4.31-5.61)	**5.57** (4.71-6.23)
3-day	**1.29** (1.16-1.42)	**1.65** (1.49-1.82)	**2.16** (1.95-2.39)	**2.58** (2.32-2.85)	**3.16** (2.83-3.48)	**3.63** (3.23-4.00)	**4.12** (3.64-4.55)	**4.64** (4.06-5.12)	**5.37** (4.63-5.94)	**5.95** (5.08-6.62)
4-day	**1.34** (1.22-1.48)	**1.72** (1.56-1.89)	**2.26** (2.05-2.48)	**2.69** (2.44-2.96)	**3.31** (2.98-3.63)	**3.81** (3.41-4.18)	**4.34** (3.86-4.77)	**4.90** (4.32-5.39)	**5.70** (4.95-6.28)	**6.34** (5.45-7.01)
7-day	**1.48** (1.35-1.64)	**1.89** (1.73-2.09)	**2.50** (2.27-2.74)	**2.98** (2.71-3.27)	**3.66** (3.30-4.01)	**4.21** (3.78-4.62)	**4.80** (4.28-5.26)	**5.41** (4.78-5.94)	**6.29** (5.48-6.91)	**6.99** (6.03-7.69)
10-day	**1.60** (1.46-1.76)	**2.05** (1.87-2.25)	**2.69** (2.46-2.95)	**3.21** (2.92-3.51)	**3.93** (3.56-4.30)	**4.51** (4.07-4.93)	**5.13** (4.58-5.60)	**5.77** (5.11-6.32)	**6.67** (5.85-7.32)	**7.39** (6.41-8.12)
20-day	**1.92** (1.75-2.10)	**2.47** (2.26-2.70)	**3.24** (2.96-3.54)	**3.83** (3.49-4.18)	**4.62** (4.20-5.04)	**5.23** (4.73-5.70)	**5.84** (5.26-6.38)	**6.46** (5.79-7.06)	**7.29** (6.47-7.99)	**7.93** (6.99-8.71)
30-day	**2.23** (2.05-2.43)	**2.87** (2.63-3.13)	**3.77** (3.45-4.10)	**4.45** (4.07-4.84)	**5.37** (4.89-5.83)	**6.07** (5.49-6.60)	**6.78** (6.11-7.37)	**7.50** (6.72-8.17)	**8.47** (7.52-9.24)	**9.21** (8.12-10.1)
45-day	**2.57** (2.34-2.80)	**3.30** (3.02-3.60)	**4.34** (3.96-4.72)	**5.10** (4.65-5.54)	**6.09** (5.54-6.61)	**6.84** (6.20-7.41)	**7.58** (6.85-8.22)	**8.32** (7.48-9.04)	**9.28** (8.30-10.1)	**9.99** (8.88-10.9)
60-day	**2.86** (2.61-3.12)	**3.69** (3.36-4.02)	**4.83** (4.40-5.26)	**5.67** (5.16-6.16)	**6.74** (6.12-7.32)	**7.54** (6.82-8.18)	**8.32** (7.51-9.05)	**9.09** (8.16-9.89)	**10.1** (9.00-11.0)	**10.8** (9.61-11.8)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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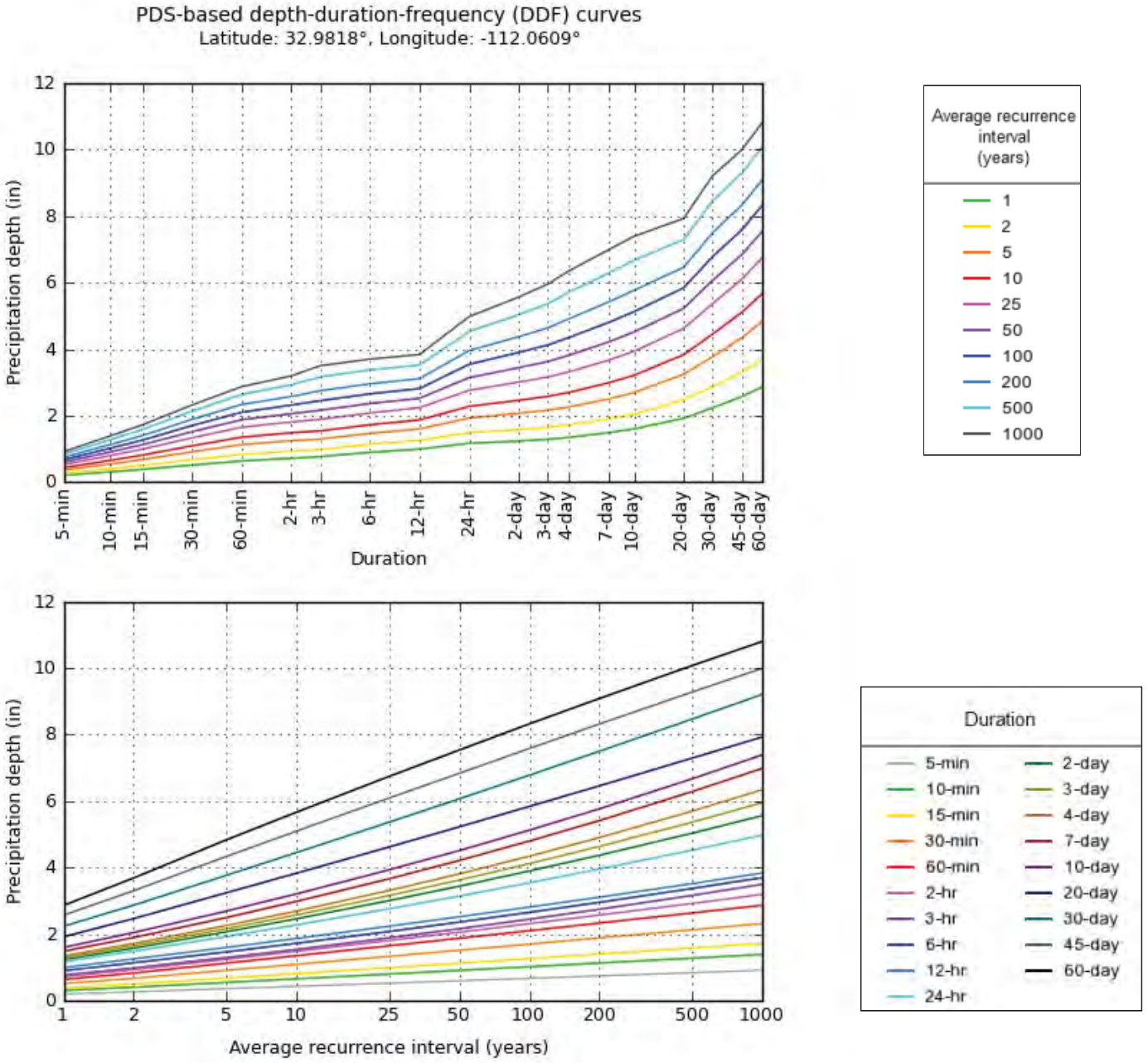
PF graphical



NOAA Atlas 14, Volume 1, Version 5

Created (GMT): Wed Sep 8 17:45:53 2021

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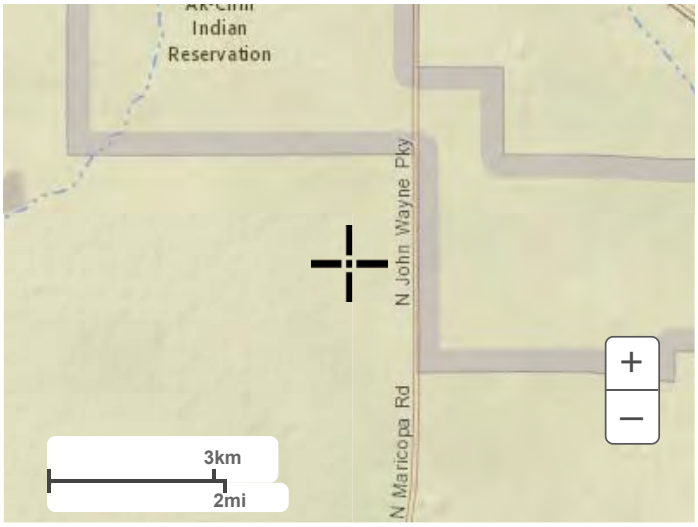
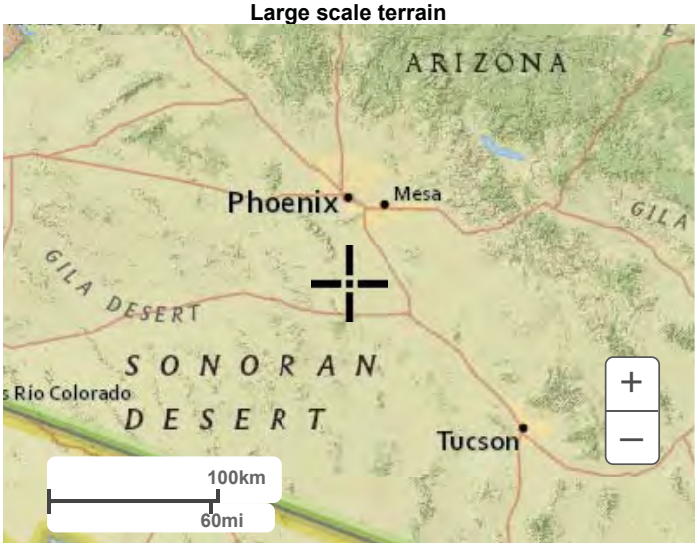
Maps & aerials

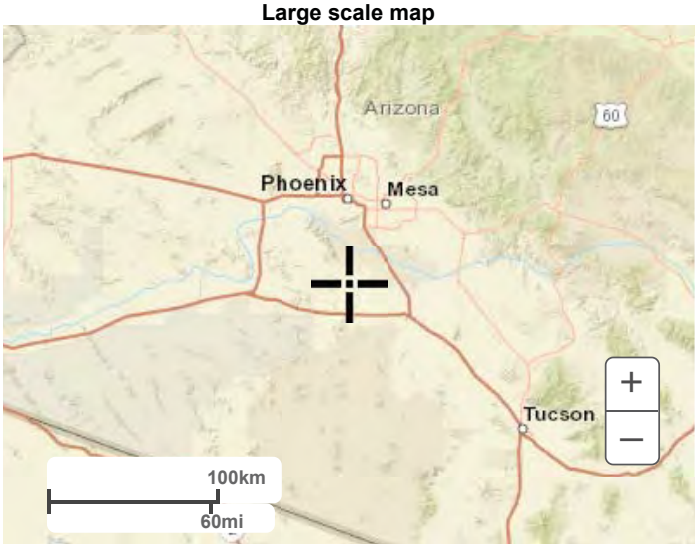
Small scale terrain



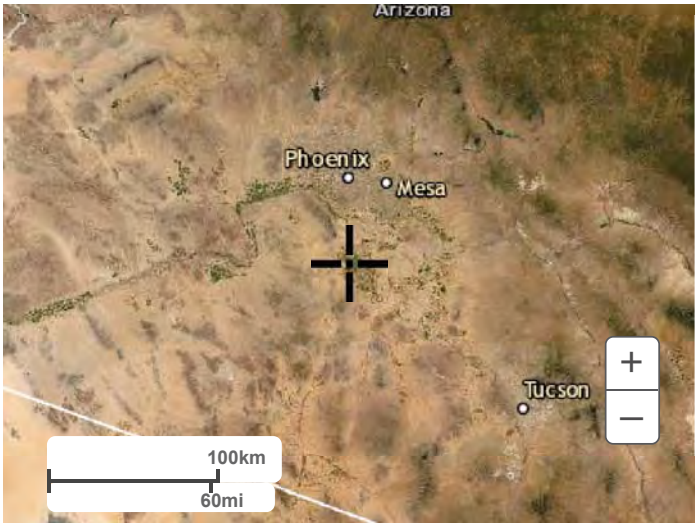
Large scale terrain



Large scale map



Large scale aerial



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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

Culvert Analysis Report
Culvert 1

Analysis Component			
Storm Event	Design	Discharge	155.00 cfs

Peak Discharge Method: User-Specified			
Design Discharge	155.00 cfs	Check Discharge	155.00 cfs

Tailwater Conditions: Constant Tailwater	
Tailwater Elevation	N/A ft

Name	Description	Discharge	HW Elev.	Velocity
Culvert-1	5-30 inch Circular	155.00 cfs	1,216.64 ft	7.75 ft/s
Weir	Not Considered	N/A	N/A	N/A

Culvert Analysis Report
Culvert 1

Component:Culvert-1

Culvert Summary					
Computed Headwater Elevation	1,216.64	ft	Discharge	155.00	cfs
Inlet Control HW Elev.	1,216.64	ft	Tailwater Elevation	N/A	ft
Outlet Control HW Elev.	1,216.64	ft	Control Type	Outlet Control	
Headwater Depth/Height	1.22				

Grades					
Upstream Invert	1,213.60	ft	Downstream Invert	1,213.20	ft
Length	83.00	ft	Constructed Slope	0.004819	ft/ft

Hydraulic Profile					
Profile	M2		Depth, Downstream	1.90	ft
Slope Type	Mild		Normal Depth	N/A	ft
Flow Regime	Subcritical		Critical Depth	1.90	ft
Velocity Downstream	7.75	ft/s	Critical Slope	0.006683	ft/ft

Section					
Section Shape	Circular		Mannings Coefficient	0.013	
Section Material	Concrete		Span	2.50	ft
Section Size	30 inch		Rise	2.50	ft
Number Sections	5				

Outlet Control Properties					
Outlet Control HW Elev.	1,216.64	ft	Upstream Velocity Head	0.73	ft
Ke	0.20		Entrance Loss	0.15	ft

Inlet Control Properties					
Inlet Control HW Elev.	1,216.64	ft	Flow Control	Transition	
Inlet Type	Beveled ring, 33.7° bevels		Area Full	24.5	ft²
K	0.00180		HDS 5 Chart	3	
M	2.50000		HDS 5 Scale	B	
C	0.02430		Equation Form	1	
Y	0.83000				

VENIDA

Retention Basin Volume Calculation

Drainage [1] Area ID	Area A (acres)	Runoff [2] Coefficient C	Rainfall [3] Depth P (inches)	Volume[4] Required V_{req} (acre-ft)	Volume Provided [5] Retention Basin ID	Depth D (ft)	Bottom Area A_{bot} (acres)	Top Area A_{top} (acres)	Total V_P (acre-ft)
1	7.50	0.82	2.31	1.18					
2	10.43	0.82	2.31	1.65					
11	2.71	0.82	2.31	0.43					
I8	2.55	0.95	2.31	0.47					
R-B2	0.74	0.50	2.31	0.07	**R-B2**[6]	3.0	0.14	0.35	0.74
R-B3	1.79	0.50	2.31	0.17	**R-B3**[6]	3.0	0.51	0.95	2.18
R-B25	1.41	0.50	2.31	0.14	**R-B25**[6]	3.0	0.41	0.46	1.29
SUB TOTAL	**27.13**			**4.10**					**4.21**
1-1	2.28	0.82	2.31	0.36					
R-B4	1.45	0.50	2.31	0.14	**R-B4**	3.0	0.46	0.77	1.84
SUB TOTAL	**3.72**			**0.50**					**1.84**
2-1	0.77	0.82	2.31	0.12					
3	5.39	0.82	2.31	0.85					
I5	3.41	0.95	2.31	0.62					
R-B5	1.56	0.50	2.31	0.15	**R-B5**	3.0	0.68	0.99	2.51
R-8	0.83	0.50	2.31	0.08	**R-B8**	3.0	0.12	0.37	0.73
SUB TOTAL	**11.96**			**1.83**					**3.24**
4	10.33	0.82	2.31	1.63					
6	8.15	0.82	2.31	1.29					
I6	1.32	0.95	2.31	0.24					
I7	1.36	0.95	2.31	0.25					
9A	0.94	0.50	2.31	0.09					
R-B7	5.26	0.50	2.31	0.51	**R-B7**[7]	3.0	1.33	1.97	4.94
R-B12	2.11	0.50	2.31	0.20	**R-B12**[7]	3.0	0.37	0.71	1.62
SUB TOTAL	**29.47**			**4.21**					**6.57**
5	8.59	0.82	2.31	1.36					
R-B10	1.02	0.50	2.31	0.10	**R-B10**	3.0	0.40	0.68	1.61
SUB TOTAL	**9.61**			**1.45**					**1.61**
7	3.40	0.82	2.31	0.54					
R-B14	2.74	0.50	2.31	0.26	**R-B14**	3.0	0.36	1.08	2.17
SUB TOTAL	**6.14**			**0.80**					**2.17**
8	10.22	0.82	2.31	1.61					
I4	3.90	0.95	2.31	0.71					
R-15	0.59	0.50	2.31	0.06	**R-B15**[8]	3.0	0.06	0.18	0.36
R-16	1.90	0.50	2.31	0.18	**R-B16**[8]	3.0	0.60	0.92	2.28
SUB TOTAL	**16.61**			**2.57**					**2.64**
9	14.70	0.82	2.31	2.32					
I3	0.88	0.95	2.31	0.16					
R-19	0.59	0.50	2.31	0.06	**R-B19**[9]	3.0	0.14	0.34	0.72
R-20	1.29	0.50	2.31	0.12	**R-B20**[9]	3.0	0.51	0.80	1.95
SUB TOTAL	**17.46**			**2.66**					**2.67**
10	1.92	0.82	2.31	0.30					
R-B18	0.78	0.50	2.31	0.08	**R-B18**	3.0	0.20	0.44	0.95
SUB TOTAL	**2.70**			**0.38**					**0.95**
12	3.48	0.82	2.31	0.55					
R-B21	0.65	0.50	2.31	0.06	**R-B21**	3.0	0.23	0.71	1.40
SUB TOTAL	**4.13**			**0.61**					**1.40**
13	12.22	0.82	2.31	1.93					
I2	0.65	0.95	2.31	0.12					
R-B22	0.67	0.50	2.31	0.06	**R-B22**[10]	3.0	0.10	0.23	0.49
R-B23	1.43	0.50	2.31	0.14	**R-B23**[10]	3.0	0.46	0.75	1.81
SUB TOTAL	**14.97**			**2.25**					**2.31**
I9	0.95	0.95	2.31	0.17					
R-B24	0.81	0.50	2.31	0.08	**R-B24**	3.0	0.06	0.20	0.39
SUB TOTAL	**1.75**			**0.25**					**0.39**
I1	1.66	0.95	2.31	0.30					
R-B1-1	0.71	0.50	2.31	0.07	**R-B1-1**	3.0	0.05	0.19	0.37
SUB TOTAL	**2.36**			**0.37**					**0.37**
1IA	4.76	0.95	2.31	0.87					
R-B1	1.11	0.50	2.31	0.11	**R-B1**	3.0	0.02	0.45	0.71
R-B26	1.05	0.50	2.31	0.10	**R-B26**	3.0	0.01	0.45	0.69
SUB TOTAL	**6.92**			**1.08**					**1.41**
R-B13	3.33	0.50	2.31	0.32	**R-B13**[11]	3.0	0.02	0.94	1.45
SUB TOTAL	**3.33**			**0.32**					**1.45**
Totals	**158.26**			**23.38**					**33.25**

Notes:

1. Drainage sub-basin delineated per Drainage Plan, Plate 1).
2. Assumed 100-year runoff coefficient for retention basins, C=0.50, single-family resident, C = 0.82, and collector street, C = 0.95.
3. Estimated precipitation depth in Pinal County, Arizona for **100-year, 2-hour storm** (N.W. Quarter Section 21, Township 5 South, Range 3 East).
4. V_{req} = A x C x (P/12) = volume required for retention in acre-ft.
5. $V_P = D \times (A_{bot} + A_{top})/2$ = retention volume provided in acre-ft.
6. Basins R-B2, R-B3, and R-B25 are equalized.
7. Basins R-B7 and R-B12 are equalized.
8. Basins R-B15 and R-B16 are equalized.
9. Basins R-B19 and R-B20 are equalized.
10. Basins R-B22 and R-B23 are equalized.
11. Basin R-B13 is self-retaining.

PLATE

LEGEND

- DA-# — DRAINAGE AREA ID
- R-# — RETENTION BASIN ID
- DRAINAGE AREA BOUNDARY
- ONSITE FLOW DIRECTION
- OFFSITE FLOW DIRECTION
- ULTIMATE OUTFALL OF SITE
- 1680 — EXISTING CONTOURS
- 1680 — PROPOSED CONTOURS

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DATE | REVISION | NO.

Coe & Van Loo Consultants, Inc.

DRAINAGE MAP

VENIDA
PINAL COUNTY, ARIZONA

PLATE 1

SHEET 1 OF 1

CVL Contact: NICHOLAS STAFFORD
CVL Project #: 01-03723-01
CVL File #:

PROJECT NO. 010372301

Call at least two full working days before you begin excavation.
ARIZONA 811 Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-4T (782-5348)
In Maricopa County: (602) 263-1100

Printed By: **BrandonB** Print Date: **September 29, 2021** Filename: N:\010372301\Hydro\MDR\CADD\Onsite\DrainageMap.dwg

PRELIMINARY WASTEWATER MASTER PLAN

September 27, 2021

Venida

Maricopa, Arizona

Preliminary Wastewater Master Plan

Prepared for:
LGI Homes – Arizona
9105 East Del Camino Drive, Suite 118
Scottsdale, Arizona 85258
Contact: Mr. Rick Tayrien

Prepared by:
Coe and Van Loo Consultants, Inc.
4550 N. 12th Street
Phoenix, AZ 85014
Contact: Cassandra Alejandro, PE
602.285.4763

Job # 1.01.0372301

CVL CONSULTANTS

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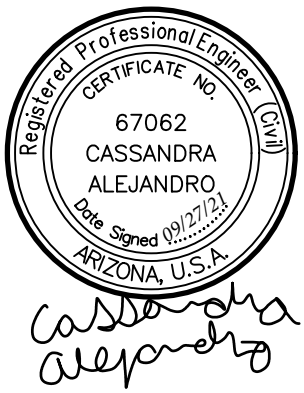


1.0 INTRODUCTION

1.1 Project Description

Venida is a 126.30 acre master planned community located in the City of Maricopa, Arizona (see Figure 1). Venida will have a total of 554 proposed single family residential units over 104.8 acres and 21.5 acres of open space.

The following preliminary wastewater report will present the proposed sewer system needed to serve Venida. The sewer system analysis will follow the Global Water Resources (GWR) *Design and Construction Standards for Potable Water, Recycled Water and Wastewater Infrastructure,* dated January 2017.

1.2 Project Location

Venida is bounded to the north by Papago Road and to the east is bounded by Green Road. The south and the west are bounded by agricultural land (See Figure 2). Venida is located in Section 21, Township 5 South, Range 3 East of the Gila and Salt River Base and Meridian; Pinal County, Arizona.

1.3 Land Use

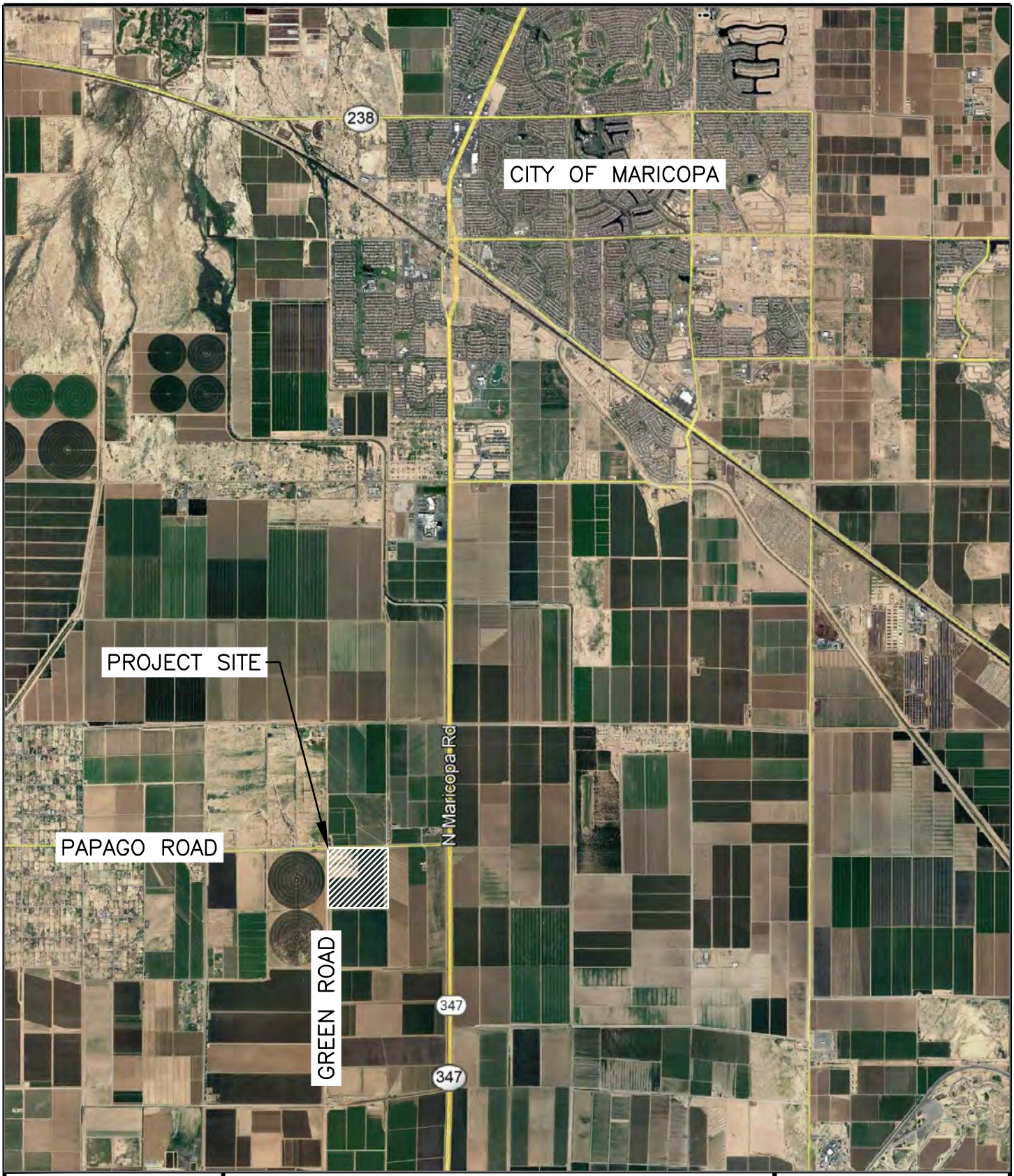
A summary of the land use and dwelling units within Venida are presented in Table 1. The proposed site layout is presented in Figure 2. All units in Venida have been classified as single-family residential (SFR) and open space. Water demands for Venida are based on gallons per dwelling units per day for residential land use and gallons per acre per day for open spaces.

Table 1 – Land Use

Land Use	Acres	DU's	Population
Parcel 1	16.65	88	282
Parcel 2	19.48	103	330
Parcel 3	13.43	71	227
Parcel 4	10.40	55	176
Parcel 5	10.59	56	179
Parcel 6	17.59	93	298
Parcel 7	16.65	88	282
Open Space	21.50	---	---
Total	**126.30**	**554.00**	**1,773**

1.4 Topographic Conditions

The site encompasses approximately 126.30 acres of agricultural land. The land decreases in elevation from the southwest corner to the northeast corner of the site. The total elevation change is approximately 11 feet, dropping from 1,221 feet above mean sea level (MSL) near the southwest corner of the development to about 1,210 feet MSL at the northeast corner of the development.



NOT TO SCALE

FIGURE 1

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VENIDA

VICINITY MAP

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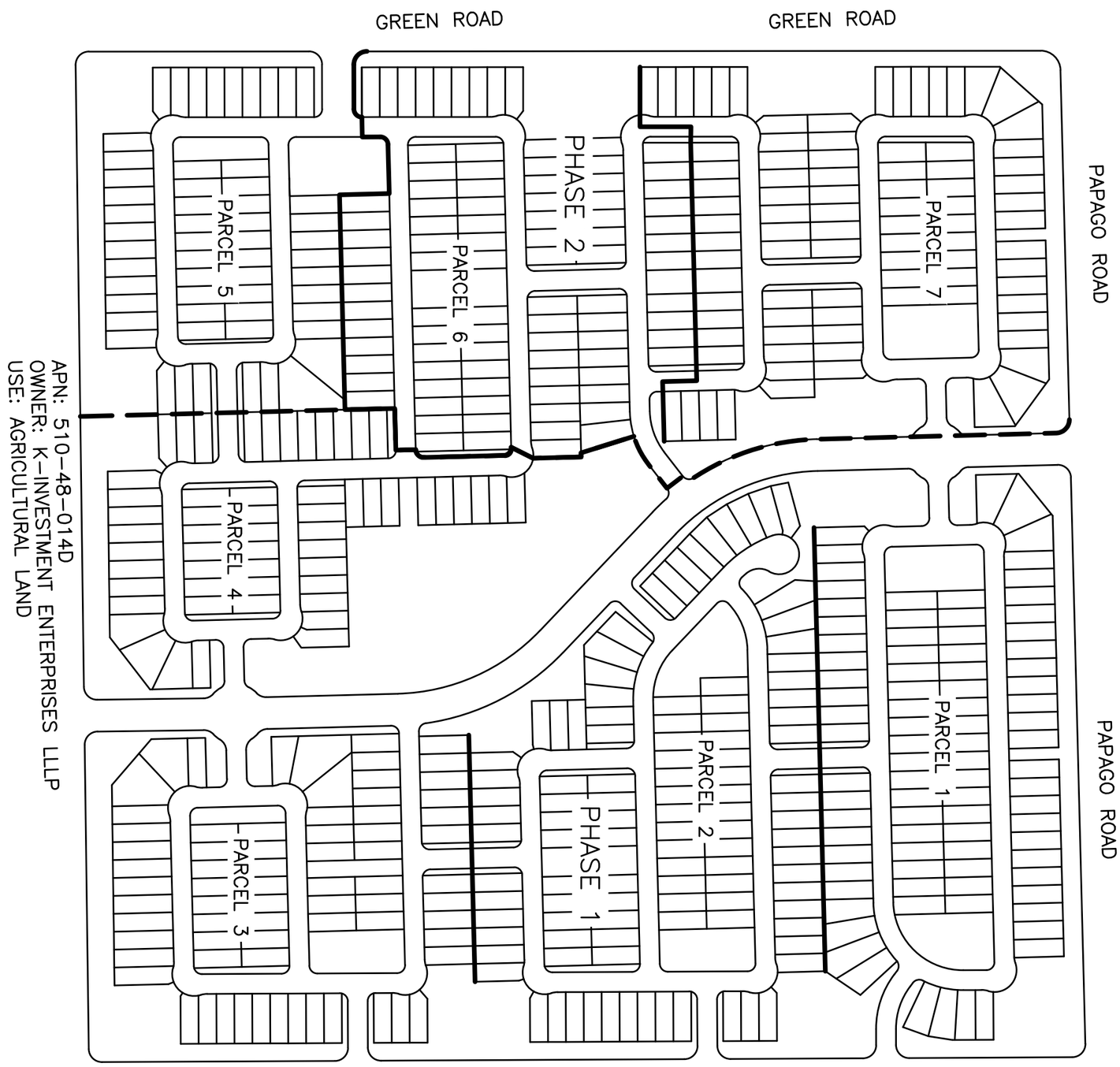

SCALE 1" = 300'

FIGURE 2

VENIDA

SITE LAYOUT

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2.0 WASTEWATER SYSTEM DESIGN CRITERIA

This sewer study is based on criteria from the Global Water Resources (GWR) *Design and Construction Standards for Potable Water, Recycled Water and Wastewater Infrastructure,* dated January 2017. Demand calculations were conducted using Microsoft Excel. The following criteria were used in developing this plan:

- Average Day Demand Factor
  - 234 gpd/DU for Residential
- Peaking Factor

Wastewater Flow Peaking Factor	
Upstream Population	Dry Weather Peaking Factor
100	3.62
200	3.14
300	2.90
400	2.74
500	2.64
600	2.56
700	2.5
800	2.46
900	2.42
1000	2.38
1,001 to 10,000	PF = (6.330 x p-0.231) + 1.094
10,001 to 100,000	PF = (6.177 x p-0.233) + 1.128
More than 100,000	PF = (4.500 x p-0.174) + 1.945
PF = Dry Weather Peaking Factor	p = Upstream Population

- Persons per Dwelling Unit
  - 3.2 persons/DU
- Minimum Slopes
  - 8-inch sewer = 0.0035 ft/ft
- Velocities
  - Minimum = 2.0 ft/s
  - Maximum = 8 ft/s
- Manning's Roughness Coefficient (n) = 0.013
- A minimum drop of 0.10 feet is needed for all manholes.
- Maximum Manhole Spacing
  - 12-inches in diameter and less = 500 feet
- Flow Depth, d/D = 0.75
- Minimum Cover = 6 ft

3.0 EXISTING AND PROPOSED INFRASTRUCTURE

3.1 Existing Infrastructure

There are no existing onsite sewer lines within the proposed development. There is adjacent existing off site infrastructure within Papago Road with a 30-inch sewer line and a 42-inch sewer line within Green Road.

3.2 Proposed Infrastructure

Within Venida, a system of 8-inch sewer line is proposed to direct sewer flows from the south of the project to the north (Papago Road). Within Papago Road, flows will continue west to Green Road then north in Green Road.

Table 2 contains the wastewater discharge calculations for the proposed development. The land use is residential and commercial for the entire development.

Table 2 – Wastewater Flow Generation

Land Use	Acres	DU's	Population	Unit Factor		Average Day Demand (gpd)	Average Day Demand (gpm)	Peak Hour Factor	Peak Hour Demand (gpd)	Peak Hour Demand (gpm)
Parcel 1	16.65	88	282	234	gpdu	20,592	14.30	2.94	41,184	28.60
Parcel 2	19.48	103	330	234	gpdu	24,102	16.74	2.85	48,204	33.48
Parcel 3	13.43	71	227	234	gpdu	16,614	11.54	3.07	33,228	23.08
Parcel 4	10.40	55	176	234	gpdu	12,870	8.94	3.26	25,740	17.88
Parcel 5	10.59	56	179	234	gpdu	13,104	9.10	3.24	26,208	18.20
Parcel 6	17.59	93	298	234	gpdu	21,762	15.11	2.91	43,524	30.23
Parcel 7	16.65	88	282	234	gpdu	20,592	14.30	2.94	41,184	28.60
Open Space	21.50	---	---	---	---	---	---	---	---	---
Total	**126.30**	**554**	**1,773**	**---**	**---**	**129,636**	**90.03**	**---**	**259,272**	**180.05**

The sewer mains will be sized according to the anticipated cumulative flows. The pipe size and minimum and maximum slope required will be determined based on the criteria established in Section 2.0.

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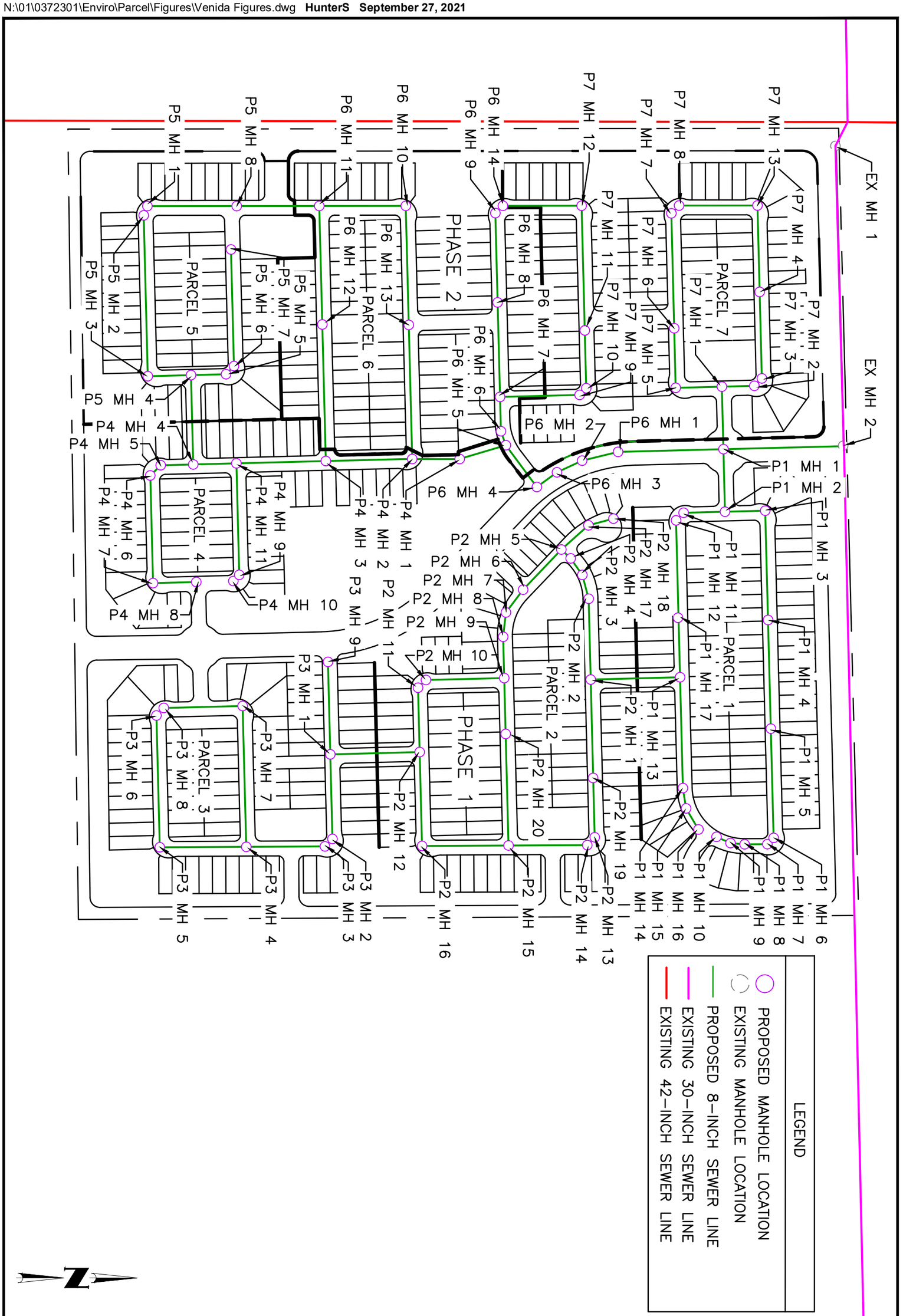

SCALE 1" = 300'

FIGURE 3

VENIDA

SEWER LAYOUT

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4.0 SUMMARY

This preliminary wastewater master plan presents the collection system design criteria and proposed wastewater infrastructure for Venida. The wastewater system for Venida will be owned and operated by Global Water Resources. The sewer infrastructure shall conform to Global Water Resources (GWR) *Design and Construction Standards for Potable Water, Recycled Water and Wastewater Infrastructure,* dated January 2017.

- The proposed onsite sewer system will flow by gravity into an existing 30-inch and 42-inch offsite sewer within Papago Road.
  - A sewer capacity analysis of this project was produced for this preliminary report and another analysis will be conducted in the final design phase of the project.
  - The average day flow of Venida is estimated to be 0.130 MGD.
  - The peak flow for Venida is estimated to be 0.259 MGD.
- Sanitary sewer lines are sized to accommodate design flow requirements for the project at build out. Line sizes of 8-inches are proposed for the development.

The wastewater systems have been designed according to the Global Water Resources' design standards for wastewater collection systems.

APPENDIX A

Venida Sewer Capacity Analysis

Venida Sewer Capacity Analysis

Upstream MH	Downstream MH	No. of Units	Average Day Unit Factor (gpd/du)	Population	Equivalent Dwelling Unit	Averge Daily Flow (gpd)	Cumlative Average Daily Flow	Cumulative Populatuion	Peak Factor	Sewer Lines Peak Flow (gpd)	Upstream Peak Flow (gpd)	Peak Flow (gpd)	Total Estimated Peak Flow (gpd)	Estimated Ground Elevation (feet)	Estimated Length (feet)	Line Diameter (inches)	Sewer Line Slope (ft/ft)	Estimated Upstream MH Depth (feet)	Estimated Upstream Invert Elevation (feet)	Drop Through Manhole (feet)	Estimated Downstream Invert Elevation (feet)	Sewer Line Capacity (gpd)	% Full (Q/Qf)	Velocity Flowing Full (fps)	Actual Peak Velocity (fps)	d/D
P5 MH 7	P5 MH 6	18	234.00	57.60	1	4,212.0	4,212.0	57.60	3.62	15247.44	0	15,247	15,247.44	**1220.00**	392	8	0.0035	10.96	1208.38	0.10	1207.01	461,979	3%	2.0	0.94	0.12
P5 MH 6	P5 MH 5	2	234.00	6.40	2	468.0	4,680.0	64.00	3.62	1694.16	15,247	16,942	16,941.60	**1220.00**	38	8	0.0035	12.43	1206.91	0.10	1206.77	461,979	4%	2.0	0.98	0.13
P5 MH 5	P5 MH 4	2	234.00	6.40	3	468.0	5,148.0	70.40	3.62	1694.16	16,942	18,636	18,635.76	**1220.00**	118	8	0.0035	12.66	1206.67	0.10	1206.26	461,979	4%	2.0	1.00	0.14
P5 MH 2	P5 MH 3	22	234.00	70.40	4	5,148.0	5,148.0	70.40	3.62	18635.76	0	18,636	18,635.76	**1221.00**	540	8	0.0035	10.58	1208.76	0.10	1206.87	461,979	4%	2.0	1.00	0.14
P5 MH 3	P5 MH 4	3	234.00	9.60	5	702.0	5,850.0	80.00	3.62	2541.24	18,636	21,177	21,177.00	**1220.00**	145	8	0.0035	12.57	1206.77	0.10	1206.26	461,979	5%	2.0	1.04	0.15
P5 MH 4	P4 MH 4	0	234.00	0.00	6	0.0	10,998.0	150.40	3.38	0.00	39,813	39,813	37,152.12	**1219.00**	300	8	0.0035	12.17	1206.16	0.10	1205.11	461,979	8%	2.0	1.23	0.19
P5 MH 1	P5 MH 8	8	234.00	25.60	7	1,872.0	1,872.0	25.60	3.62	6776.64	0	6,777	6,776.64	**1221.00**	300	8	0.0035	11.68	1208.65	0.10	1207.60	461,979	1%	2.0	0.74	0.08
P5 MH 8	P6 MH 11	3	234.00	9.60	8	702.0	2,574.0	35.20	3.62	2541.24	6,777	9,318	9,317.88	**1219.00**	277	8	0.0035	10.83	1207.50	0.10	1206.53	461,979	2%	2.0	0.81	0.10
P6 MH 11E	P6 MH 12	12	234.00	38.40	9	2,808.0	2,808.0	38.40	3.62	10164.96	0	10,165	10,164.96	**1220.00**	398	8	0.0035	12.88	1206.45	0.10	1205.06	461,979	2%	2.0	0.84	0.10
P6 MH 12	P4 MH 3	15	234.00	48.00	10	3,510.0	6,318.0	86.40	3.62	12706.20	10,165	22,871	22,871.16	**1220.00**	459	8	0.0035	14.38	1204.96	0.10	1203.35	461,979	5%	2.0	1.07	0.15
P6 MH 11	P6 MH 10	7	234.00	22.40	11	1,638.0	4,212.0	57.60	3.62	5929.56	9,318	15,247	15,247.44	**1220.00**	290	8	0.0035	12.90	1206.43	0.10	1205.41	461,979	3%	2.0	0.94	0.12
P6 MH 10	P6 MH 13	14	234.00	44.80	12	3,276.0	7,488.0	102.40	3.61	11821.38	15,247	27,069	27,020.30	**1219.00**	400	8	0.0035	13.02	1205.31	0.10	1203.91	461,979	6%	2.0	1.12	0.16
P6 MH 13	P4 MH 2	17	234.00	54.40	13	3,978.0	11,466.0	156.80	3.35	13315.80	27,069	40,385	38,380.83	**1219.00**	450	8	0.0035	14.52	1203.81	0.10	1202.24	461,979	8%	2.0	1.24	0.19
P4 MH 10	P4 MH 9	2	234.00	6.40	14	468.0	468.0	6.40	3.62	1694.16	0	1,694	1,694.16	**1219.00**	29	8	0.0035	12.32	1206.02	0.10	1205.91	461,979	0%	2.0	0.49	0.04
P4 MH 9	P4 MH 11	14	234.00	44.80	15	3,276.0	3,744.0	51.20	3.62	11859.12	1,694	13,553	13,553.28	**1219.00**	375	8	0.0035	12.52	1205.81	0.10	1204.50	461,979	3%	2.0	0.91	0.12
P4 MH 8	P4 MH 7	3	234.00	9.60	16	702.0	702.0	9.60	3.62	2541.24	0	2,541	2,541.24	**1219.00**	145	8	0.0035	10.59	1207.74	0.10	1207.23	461,979	1%	2.0	0.55	0.05
P4 MH 7	P4 MH 6	15	234.00	48.00	17	3,510.0	4,212.0	57.60	3.62	12706.20	2,541	15,247	15,247.44	**1219.00**	362	8	0.0035	11.20	1207.13	0.10	1205.87	461,979	3%	2.0	0.94	0.12
P4 MH 6	P4 MH 5	2	234.00	6.40	18	468.0	4,680.0	64.00	3.62	1694.16	15,247	16,942	16,941.60	**1218.00**	49	8	0.0035	11.57	1205.77	0.10	1205.59	461,979	4%	2.0	0.98	0.13
P4 MH 5	P4 MH 4	2	234.00	6.40	19	468.0	5,148.0	70.40	3.62	1694.16	16,942	18,636	18,635.76	**1218.00**	109	8	0.0035	11.84	1205.49	0.10	1205.11	461,979	4%	2.0	1.00	0.14

P4 MH 4	P4 MH 11	2	234.00	6.40	20	468.0	16,614.0	227.20	3.07	1438.97	58,449	59,887	51,083.40	**1219.20**	145	8	0.0035	13.52	1205.01	0.10	1204.50	461,979	11%	2.0	1.35	0.22
P4 MH 11	P4 MH 3	9	234.00	28.80	21	2,106.0	22,464.0	307.20	2.89	6083.14	73,441	79,524	64,886.81	**1219.50**	300	8	0.0035	14.43	1204.40	0.10	1203.35	461,979	14%	2.0	1.45	0.25
P4 MH 3	P4 MH 2	6	234.00	19.20	22	1,404.0	30,186.0	412.80	2.73	3828.99	102,395	106,224	82,323.26	**1218.10**	290	8	0.0035	14.18	1203.25	0.10	1202.24	461,979	18%	2.0	1.55	0.29
P4 MH 2	P4 MH 1	0	234.00	0.00	23	0.0	41,652.0	569.60	2.58	0.00	146,609	146,609	107,642.10	**1217.60**	157	8	0.0035	14.80	1202.14	0.10	1201.59	461,979	23%	2.0	2.44	0.25
P4 MH 1	P6 MH 5	0	234.00	0.00	24	0.0	41,652.0	569.60	2.58	0.00	146,609	146,609	107,642.10	**1217.30**	164	8	0.0035	15.15	1201.49	0.10	1200.91	461,979	23%	2.0	1.67	0.33
P6 MH 9	P6 MH 8	13	234.00	41.60	25	3,042.0	3,042.0	41.60	3.62	11012.04	0	11,012	11,012.04	**1217.00**	300	8	0.0035	12.38	1203.95	0.10	1202.90	461,979	2%	2.0	0.86	0.11
P6 MH 8	P6 MH 7	10	234.00	32.00	26	2,340.0	5,382.0	73.60	3.62	8470.80	11,012	19,483	19,482.84	**1217.00**	317	8	0.0035	13.53	1202.80	0.10	1201.69	461,979	4%	2.0	1.02	0.14
P6 MH 7	P6 MH 6	3	234.00	9.60	27	702.0	14,274.0	195.20	3.16	2220.45	49,077	51,297	45,149.23	**1217.00**	115	8	0.0035	14.74	1201.59	0.10	1201.19	461,979	10%	2.0	1.30	0.21
P6 MH 6	P6 MH 5	0	234.00	0.00	28	0.0	14,274.0	195.20	3.16	0.00	51,297	51,297	45,149.23	**1215.00**	50	8	0.0035	11.25	1201.09	0.10	1200.91	461,979	10%	2.0	1.30	0.21
P6 MH 5	P6 MH 4	0	234.00	0.00	29	0.0	55,926.0	764.80	2.47	0.00	197,906	197,906	138,365.40	**1214.00**	175	8	0.0035	12.52	1200.81	0.10	1200.20	461,979	30%	2.0	1.79	0.37
P6 MH 4	P6 MH 3	0	234.00	0.00	30	0.0	55,926.0	764.80	2.47	0.00	197,906	197,906	138,365.40	**1213.00**	84	8	0.0035	12.23	1200.10	0.10	1199.81	461,979	30%	2.0	1.79	0.37
P6 MH 3	P6 MH 2	0	234.00	0.00	31	0.0	55,926.0	764.80	2.47	0.00	197,906	197,906	138,365.40	**1213.00**	93	8	0.0035	12.62	1199.71	0.10	1199.39	461,979	30%	2.0	1.79	0.37
P6 MH 2	P6 MH 1	0	234.00	0.00	32	0.0	55,926.0	764.80	2.47	0.00	197,906	197,906	138,365.40	**1213.00**	124	8	0.0035	13.05	1199.29	0.10	1198.85	461,979	30%	2.0	1.79	0.37
P6 MH 1	P1 MH 1	0	234.00	0.00	33	0.0	55,926.0	764.80	2.47	0.00	197,906	197,906	138,365.40	**1213.00**	354	8	0.0035	13.58	1198.75	0.10	1197.51	461,979	30%	2.0	1.79	0.37
P7 MH 14	P7 MH 12	6	234.00	19.20	34	1,404.0	1,404.0	19.20	3.62	5082.48	0	5,082	5,082.48	**1219.00**	264	8	0.0035	12.13	1206.21	0.10	1205.28	461,979	1%	2.0	0.68	0.07
P7 MH 12	P7 MH 11	15	234.00	48.00	35	3,510.0	4,914.0	67.20	3.62	12706.20	5,082	17,789	17,788.68	**1219.20**	419	8	0.0035	13.35	1205.18	0.10	1203.72	461,979	4%	2.0	0.99	0.13
P7 MH 11	P7 MH 10	9	234.00	28.80	36	2,106.0	7,020.0	96.00	3.62	7623.72	17,789	25,412	25,412.40	**1218.60**	194	8	0.0035	14.32	1203.62	0.10	1202.94	461,979	6%	2.0	1.10	0.16
P7 MH 10	P7 MH 9	1	234.00	3.20	37	234.0	7,254.0	99.20	3.62	847.08	25,412	26,259	26,259.48	**1218.00**	32	8	0.0035	14.50	1202.84	0.10	1202.73	461,979	6%	2.0	1.11	0.16
P7 MH 9	P6 MH 7	4	234.00	12.80	38	936.0	8,190.0	112.00	3.56	3334.41	26,259	29,594	29,176.06	**1219.00**	267	8	0.0035	15.71	1202.63	0.10	1201.69	461,979	6%	2.0	1.15	0.17
P7 MH 13	P7 MH 8	6	234.00	19.20	39	1,404.0	1,404.0	19.20	3.62	5082.48	0	5,082	5,082.48	**1216.00**	263	8	0.0035	12.94	1202.39	0.10	1201.47	461,979	1%	2.0	0.68	0.07
P7 MH 8	P7 MH 7	0	234.00	0.00	40	0.0	1,404.0	19.20	3.62	0.00	5,082	5,082	5,082.48	**1215.00**	37	8	0.0035	12.96	1201.37	0.10	1201.24	461,979	1%	2.0	0.68	0.07

P7 MH 7	P7 MH 6	16	234.00	51.20	41	3,744.0	5,148.0	70.40	3.62	13553.28	5,082	18,636	18,635.76	**1214.00**	386	8	0.0035	12.19	1201.14	0.10	1199.79	461,979	4%	2.0	1.00	0.14
P7 MH 6	P7 MH 5	6	234.00	19.20	42	1,404.0	6,552.0	89.60	3.62	5082.48	18,636	23,718	23,718.24	**1214.20**	200	8	0.0035	13.84	1199.69	0.10	1198.99	461,979	5%	2.0	1.08	0.15
P7 MH 5	P7 MH 1	0	234.00	0.00	43	0.0	6,552.0	89.60	3.62	0.00	23,718	23,718	23,718.24	**1212.00**	155	8	0.0035	12.44	1198.89	0.10	1198.35	461,979	5%	2.0	1.08	0.15
P7 MH 13	P7 MH 4	12	234.00	38.40	44	2,808.0	2,808.0	38.40	3.62	10164.96	0	10,165	10,164.96	**1216.00**	290	8	0.0035	14.15	1201.19	0.10	1200.17	461,979	2%	2.0	0.84	0.10
P7 MH 4	P7 MH 3	10	234.00	32.00	45	2,340.0	5,148.0	70.40	3.62	8470.80	10,165	18,636	18,635.76	**1216.00**	290	8	0.0035	15.26	1200.07	0.10	1199.05	461,979	4%	2.0	1.00	0.14
P7 MH 3	P7 MH 2	3	234.00	9.60	46	702.0	5,850.0	80.00	3.62	2541.24	18,636	21,177	21,177.00	**1215.00**	36	8	0.0035	15.38	1198.95	0.10	1198.83	461,979	5%	2.0	1.04	0.15
P7 MH 2	P7 MH 1	0	234.00	0.00	47	0.0	5,850.0	80.00	3.62	0.00	21,177	21,177	21,177.00	**1214.00**	109	8	0.0035	14.60	1198.73	0.10	1198.35	461,979	5%	2.0	1.04	0.15
P7 MH 1	P1 MH 1	0	234.00	0.00	48	0.0	12,402.0	169.60	3.29	0.00	44,895	44,895	40,751.98	**1212.00**	210	8	0.0035	13.09	1198.25	0.10	1197.51	461,979	9%	2.0	1.27	0.20
P3 MH 8	P3 MH 7	4	234.00	12.80	49	936.0	936.0	12.80	3.62	3388.32	0	3,388	3,388.32	**1221.80**	265	8	0.0035	6.15	1214.99	0.10	1214.06	461,979	1%	2.0	0.60	0.06
P3 MH 7	P3 MH 4	15	234.00	48.00	50	3,510.0	4,446.0	60.80	3.62	12706.20	3,388	16,095	16,094.52	**1220.00**	473	8	0.0035	5.37	1213.96	0.10	1212.30	461,979	3%	2.0	0.96	0.13
P3 MH 6	P3 MH 5	19	234.00	60.80	51	4,446.0	4,446.0	60.80	3.62	16094.52	0	16,095	16,094.52	**1220.00**	442	8	0.0035	4.37	1214.97	0.10	1213.42	461,979	3%	2.0	0.96	0.13
P3 MH 5	P3 MH 4	7	234.00	22.40	52	1,638.0	6,084.0	83.20	3.62	5929.56	16,095	22,024	22,024.08	**1220.00**	290	8	0.0035	6.01	1213.32	0.10	1212.30	461,979	5%	2.0	1.05	0.15
P3 MH 4	P3 MH 3	4	234.00	12.80	53	936.0	11,466.0	156.80	3.35	3133.13	38,119	41,252	38,380.83	**1219.00**	264	8	0.0035	6.13	1212.20	0.10	1211.28	461,979	8%	2.0	1.24	0.19
P3 MH 3	P3 MH 2	1	234.00	3.20	54	234.0	11,700.0	160.00	3.33	779.69	41,252	42,031	38,984.40	**1218.00**	36	8	0.0035	6.15	1211.18	0.10	1211.05	461,979	8%	2.0	1.25	0.20
P3 MH 2	P3 MH 1	8	234.00	25.60	55	1,872.0	13,572.0	185.60	3.21	6007.47	42,031	48,039	43,554.18	**1218.00**	284	8	0.0035	6.38	1210.95	0.10	1209.96	461,979	9%	2.0	1.29	0.21
P3 MH 9	P3 MH 1	13	234.00	41.60	56	3,042.0	3,042.0	41.60	3.62	11012.04	0	11,012	11,012.04	**1217.00**	310	8	0.0035	5.29	1211.05	0.10	1209.96	461,979	2%	2.0	0.86	0.11
P3 MH 1	P2 MH 12	0	234.00	0.00	57	0.0	16,614.0	227.20	3.07	0.00	59,051	59,051	51,083.40	**1217.00**	300	8	0.0035	6.47	1209.86	0.10	1208.81	461,979	11%	2.0	1.35	0.22
P2 MH 18	P2 MH 17	3	234.00	9.60	58	702.0	702.0	9.60	3.62	2541.24	0	2,541	2,541.24	**1216.00**	87	8	0.0035	10.12	1205.21	0.10	1204.91	461,979	1%	2.0	0.55	0.05
P2 MH 17	P2 MH 5	3	234.00	9.60	59	702.0	1,404.0	19.20	3.62	2541.24	2,541	5,082	5,082.48	**1216.00**	122	8	0.0035	10.53	1204.81	0.10	1204.38	461,979	1%	2.0	0.68	0.07
P2 MH 16	P2 MH 15	7	234.00	22.40	60	1,638.0	4,212.0	57.60	3.62	5929.56	9,318	15,247	15,247.44	**1216.00**	290	8	0.0035	8.66	1206.68	0.10	1205.66	461,979	3%	2.0	0.94	0.12
P2 MH 15	P2 MH 14	5	234.00	16.00	61	1,170.0	9,828.0	134.40	3.45	4042.21	31,342	35,384	33,954.56	**1215.00**	264	8	0.0035	8.77	1205.56	0.10	1204.64	461,979	7%	2.0	1.20	0.18

P2 MH 14	P2 MH 13	0	234.00	0.00	62	0.0	9,828.0	134.40	3.45	0.00	35,384	35,384	33,954.56	**1215.00**	36	8	0.0035	9.80	1204.54	0.10	1204.41	461,979	7%	2.0	1.20	0.18
P2 MH 13	P2 MH 19	7	234.00	22.40	63	1,638.0	11,466.0	156.80	3.35	5482.98	35,384	40,867	38,380.83	**1215.00**	199	8	0.0035	10.02	1204.31	0.10	1203.61	461,979	8%	2.0	1.24	0.19
P2 MH 19	P2 MH 1	13	234.00	41.60	64	3,042.0	14,508.0	198.40	3.15	9575.24	40,867	50,442	45,666.54	**1215.00**	331	8	0.0035	10.82	1203.51	0.10	1202.35	461,979	10%	2.0	1.31	0.21
P2 MH 12E	P2 MH 16	11	234.00	35.20	65	2,574.0	2,574.0	35.20	3.62	9317.88	0	9,318	9,317.88	**1216.00**	216	8	0.0035	7.80	1207.53	0.10	1206.78	461,979	2%	2.0	0.81	0.10
P2 MH 12	P2 MH 11	9	234.00	28.80	66	2,106.0	18,720.0	256.00	3.01	6329.79	59,051	65,381	56,264.83	**1216.00**	37	8	0.0035	6.62	1208.71	0.10	1208.58	461,979	12%	2.0	1.39	0.24
P2 MH 11	P2 MH 10	0	234.00	0.00	67	0.0	18,720.0	256.00	3.01	0.00	65,381	65,381	56,264.83	**1216.00**	263	8	0.0035	6.85	1208.48	0.10	1207.56	461,979	12%	2.0	1.39	0.24
P2 MH 10	P2 MH 9	3	234.00	9.60	68	702.0	19,422.0	265.60	2.98	2093.76	65,381	67,474	57,927.28	**1215.50**	263	8	0.0035	7.37	1207.46	0.10	1206.54	461,979	13%	2.0	1.40	0.24
P2 MH 9E	P2 MH 20	8	234.00	25.60	69	1,872.0	1,872.0	25.60	3.62	6776.64	0	6,777	6,776.64	**1215.00**	200	8	0.0035	6.60	1207.73	0.10	1207.03	461,979	1%	2.0	0.74	0.08
P2 MH 20	P2 MH 15	11	234.00	35.20	70	2,574.0	4,446.0	60.80	3.62	9317.88	6,777	16,095	16,094.52	**1214.50**	363	8	0.0035	6.90	1206.93	0.10	1205.66	461,979	3%	2.0	0.96	0.13
P2 MH 9	P2 MH 8	6	234.00	19.20	71	1,404.0	20,826.0	284.80	2.94	4122.82	67,474	71,597	61,155.13	**1214.00**	138	8	0.0035	6.89	1206.44	0.10	1205.96	461,979	13%	2.0	1.42	0.25
P2 MH 8	P2 MH 7	2	234.00	6.40	72	468.0	21,294.0	291.20	2.92	1367.08	71,597	72,964	62,202.33	**1214.00**	82	8	0.0035	7.48	1205.86	0.10	1205.57	461,979	13%	2.0	1.43	0.25
P2 MH 7	P2 MH 6	1	234.00	3.20	73	234.0	21,528.0	294.40	2.91	681.74	72,964	73,646	62,720.54	**1213.50**	96	8	0.0035	7.36	1205.47	0.10	1205.13	461,979	14%	2.0	1.43	0.25
P2 MH 6	P2 MH 5	3	234.00	9.60	74	702.0	22,230.0	304.00	2.89	2031.31	73,646	75,677	64,324.73	**1213.50**	186	8	0.0035	7.80	1205.03	0.10	1204.38	461,979	14%	2.0	1.44	0.25
P2 MH 5	P2 MH 4	0	234.00	0.00	75	0.0	23,634.0	323.20	2.86	0.00	80,760	80,760	67,661.31	**1213.00**	43	8	0.0035	8.05	1204.28	0.10	1204.13	461,979	15%	2.0	1.47	0.26
P2 MH 4	P2 MH 3	0	234.00	0.00	76	0.0	23,634.0	323.20	2.86	0.00	80,760	80,760	67,661.31	**1213.00**	68	8	0.0035	8.30	1204.03	0.10	1203.79	461,979	15%	2.0	1.47	0.26
P2 MH 3	P2 MH 2	3	234.00	9.60	77	702.0	24,336.0	332.80	2.85	1998.96	80,760	82,759	69,297.25	**1212.50**	83	8	0.0035	8.14	1203.69	0.10	1203.40	461,979	15%	2.0	1.48	0.26
P2 MH 2	P2 MH 1	8	234.00	25.60	78	1,872.0	26,208.0	358.40	2.81	5253.88	82,759	88,013	73,554.32	**1212.50**	271	8	0.0035	8.53	1203.30	0.10	1202.35	461,979	16%	2.0	1.50	0.27
P2 MH 1	P1 MH 13	0	234.00	0.00	79	0.0	40,716.0	556.80	2.59	0.00	138,455	138,455	105,640.10	**1213.00**	300	8	0.0035	10.08	1202.25	0.10	1201.20	461,979	23%	2.0	1.66	0.32
P1 MH 16	P1 MH 15	2	234.00	6.40	80	468.0	468.0	6.40	3.62	1694.16	0	1,694	1,694.16	**1214.00**	82	8	0.0035	10.10	1203.24	0.10	1202.95	461,979	0%	2.0	0.49	0.04
P1 MH 15	P1 MH 14	3	234.00	9.60	81	702.0	1,170.0	16.00	3.62	2541.24	1,694	4,235	4,235.40	**1213.50**	69	8	0.0035	9.98	1202.85	0.10	1202.61	461,979	1%	2.0	0.64	0.07

P1 MH 14	P1 MH 13	15	234.00	48.00	82	3,510.0	4,680.0	64.00	3.62	12706.20	4,235	16,942	16,941.60	**1213.50**	372	8	0.0035	10.33	1202.51	0.10	1201.20	461,979	4%	2.0	0.98	0.13
P1 MH 13	P1 MH 17	7	234.00	22.40	83	1,638.0	47,034.0	643.20	2.53	4150.82	155,397	159,548	119,187.92	**1213.00**	200	8	0.0035	11.23	1201.10	0.10	1200.40	461,979	26%	2.0	1.72	0.35
P1 MH 17	P1 MH 12	14	234.00	44.80	84	3,276.0	50,310.0	688.00	2.51	8213.59	159,548	167,761	126,137.23	**1213.00**	327	8	0.0035	12.03	1200.30	0.10	1199.16	461,979	27%	2.0	1.75	0.36
P1 MH 12	P1 MH 11	0	234.00	0.00	85	0.0	50,310.0	688.00	2.51	0.00	167,761	167,761	126,137.23	**1213.00**	36	8	0.0035	13.27	1199.06	0.10	1198.93	461,979	27%	2.0	1.75	0.36
P1 MH 11	P1 MH 2	0	234.00	0.00	86	0.0	50,310.0	688.00	2.51	0.00	167,761	167,761	126,137.23	**1212.00**	139	8	0.0035	12.50	1198.83	0.10	1198.35	461,979	27%	2.0	1.75	0.36
P1 MH 10	P1 MH 9	1	234.00	3.20	87	234.0	234.0	3.20	3.62	847.08	0	847	847.08	**1213.00**	51	8	0.0035	8.25	1204.08	0.10	1203.90	461,979	0%	2.0	0.39	0.03
P1 MH 9	P1 MH 8	1	234.00	3.20	88	234.0	468.0	6.40	3.62	847.08	847	1,694	1,694.16	**1212.50**	47	8	0.0035	8.03	1203.80	0.10	1203.64	461,979	0%	2.0	0.49	0.04
P1 MH 8	P1 MH 7	1	234.00	3.20	89	234.0	702.0	9.60	3.62	847.08	1,694	2,541	2,541.24	**1212.50**	77	8	0.0035	8.29	1203.54	0.10	1203.27	461,979	1%	2.0	0.55	0.05
P1 MH 7	P1 MH 6	1	234.00	3.20	90	234.0	936.0	12.80	3.62	847.08	2,541	3,388	3,388.32	**1212.50**	30	8	0.0035	8.66	1203.17	0.10	1203.07	461,979	1%	2.0	0.60	0.06
P1 MH 6	P1 MH 5	12	234.00	38.40	91	2,808.0	3,744.0	51.20	3.62	10164.96	3,388	13,553	13,553.28	**1212.00**	367	8	0.0035	8.37	1202.97	0.10	1201.68	461,979	3%	2.0	0.91	0.12
P1 MH 5	P1 MH 4	16	234.00	51.20	92	3,744.0	7,488.0	102.40	3.61	13510.15	13,553	27,063	27,020.30	**1212.00**	365	8	0.0035	9.75	1201.58	0.10	1200.30	461,979	6%	2.0	1.12	0.16
P1 MH 4	P1 MH 3	15	234.00	48.00	93	3,510.0	10,998.0	150.40	3.38	11857.06	27,063	38,920	37,152.12	**1212.00**	367	8	0.0035	11.13	1200.20	0.10	1198.92	461,979	8%	2.0	1.23	0.19
P1 MH 3	P1 MH 2	0	234.00	0.00	94	0.0	10,998.0	150.40	3.38	0.00	38,920	38,920	37,152.12	**1212.00**	135	8	0.0035	12.51	1198.82	0.10	1198.35	461,979	8%	2.0	1.23	0.19
P1 MH 2	P1 MH 1	0	234.00	0.00	95	0.0	61,308.0	838.40	2.44	0.00	206,682	206,682	149,875.99	**1212.00**	210	8	0.0035	13.09	1198.25	0.10	1197.51	461,979	32%	2.0	1.83	0.39
P1 MH 1	EX MH 2	0	234.00	0.00	96	0.0	129,636.0	1772.80	2.22	0.00	449,483	449,483	287,598.76	**1212.00**	402	8	0.0035	13.92	1197.41	0.10	1196.01	461,979	62%	2.0	2.16	0.57
EX MH 2	EX MH 1	0	234.00	0.00	97	0.0	129,636.0	1772.80	2.22	0.00	449,483	449,483	287,598.76	**1212.00**	1007	30	0.0035	13.59	1195.91	0.10	1192.38	15,680,962	2%	4.9	1.91	0.09

Existing
Parcel 1
Parcel 2
Parcel 3
Parcel 7
Parcel 6
Parcel 5
Parcel 4

PRELIMINARY WATER MASTER PLAN

September 27, 2021

Venida

Maricopa, Arizona

Preliminary Water Master Plan

Prepared for:
LGI Homes – Arizona
9105 East Del Camino Drive, Suite 118
Scottsdale, Arizona 85258
Contact: Mr. Rick Tayrien

Prepared by:
Coe and Van Loo Consultants, Inc.
4550 N. 12th Street
Phoenix, AZ 85014
Contact: Cassandra Alejandro, PE
602.285.4763

Job # 1.01.0372301

CVL CONSULTANTS

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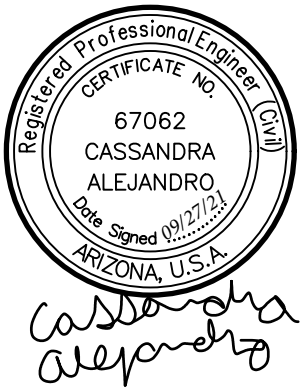


1.0 INTRODUCTION

1.1 Project Description

Venida is a 126.30 acre master planned community located in the City of Maricopa, Arizona (see Figure 1). Venida will have a total of 554 proposed single family residential units over 104.8 acres and 21.5 acres of open space.

The following preliminary water master plan will present the proposed water distribution system needed to serve Venida. The water system analysis will follow the Global Water Resources (GWR) *Design and Construction Standards for Potable Water, Recycled Water and Wastewater Infrastructure,* dated January 2017.

1.2 Project Location

Venida is bounded to the north by Papago Road and to the east is bounded by Green Road. The south and the west are bounded by agricultural land (See Figure 2). Venida is located in Section 21, Township 5 South, Range 3 East of the Gila and Salt River Base and Meridian; Pinal County, Arizona.

1.3 Land Use

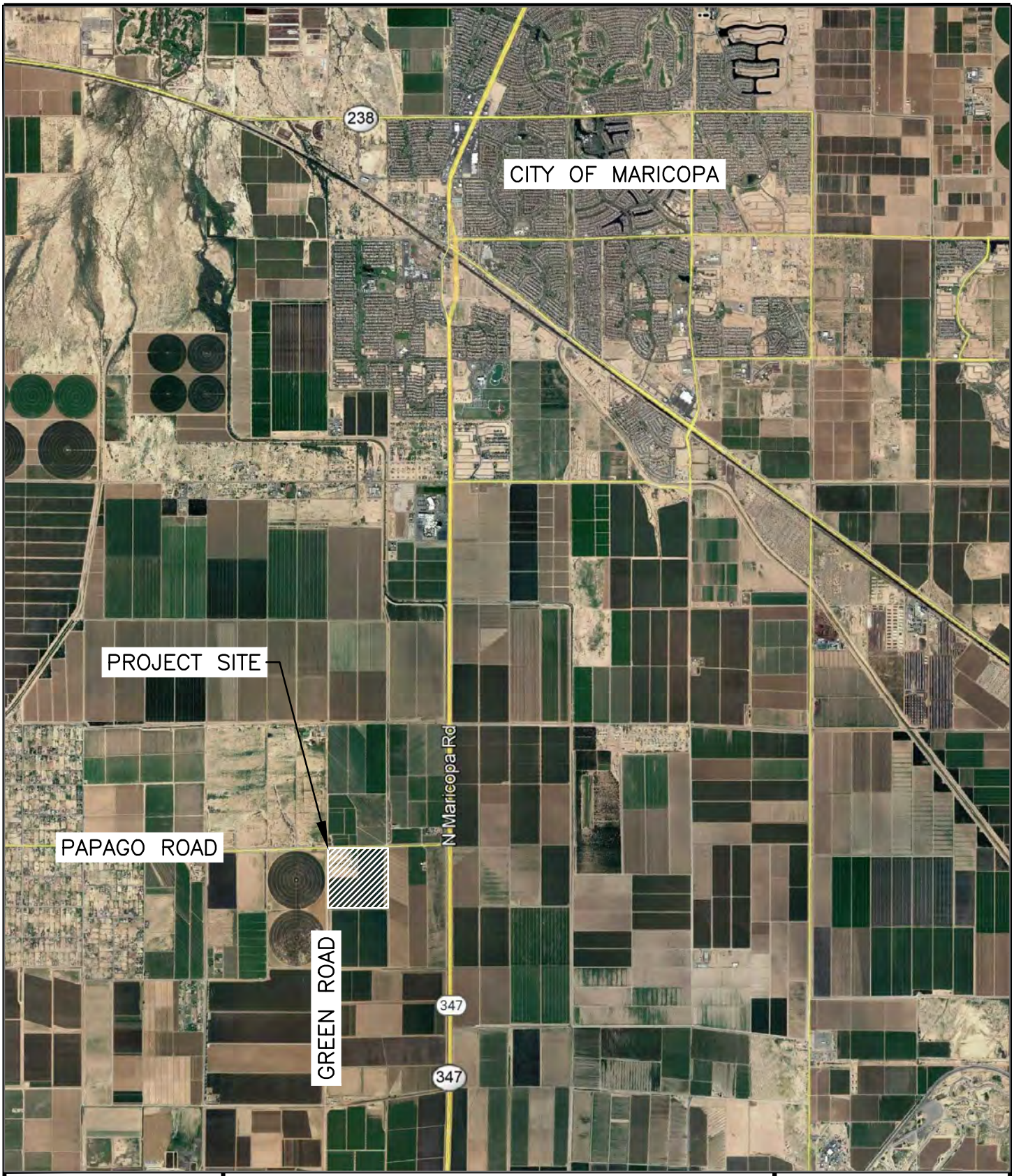
A summary of the land use and dwelling units within Venida are presented in Table 1. The proposed site layout is presented in Figure 2. All units in Venida have been classified as single-family residential (SFR) and open space. Water demands for Venida are based on gallons per dwelling units per day for residential land use and gallons per acre per day for open spaces.

Table 1 – Land Use

Land Use	Acres	DU's	Population
Parcel 1	16.65	88	282
Parcel 2	19.48	103	330
Parcel 3	13.43	71	227
Parcel 4	10.40	55	176
Parcel 5	10.59	56	179
Parcel 6	17.59	93	298
Parcel 7	16.65	88	282
Open Space	21.50	---	---
Total	**126.30**	**554.00**	**1,773**

1.4 Topographic Conditions

The site encompasses approximately 126.30 acres of agricultural land. The land decreases in elevation from the southwest corner to the northeast corner of the site. The total elevation change is approximately 11 feet, dropping from 1,221 feet above mean sea level (MSL) near the southwest corner of the development to about 1,210 feet MSL at the northeast corner of the development.



NOT TO SCALE

FIGURE 1

4550 North 12th Street
Phoenix, Arizona 85014
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VENIDA

VICINITY MAP

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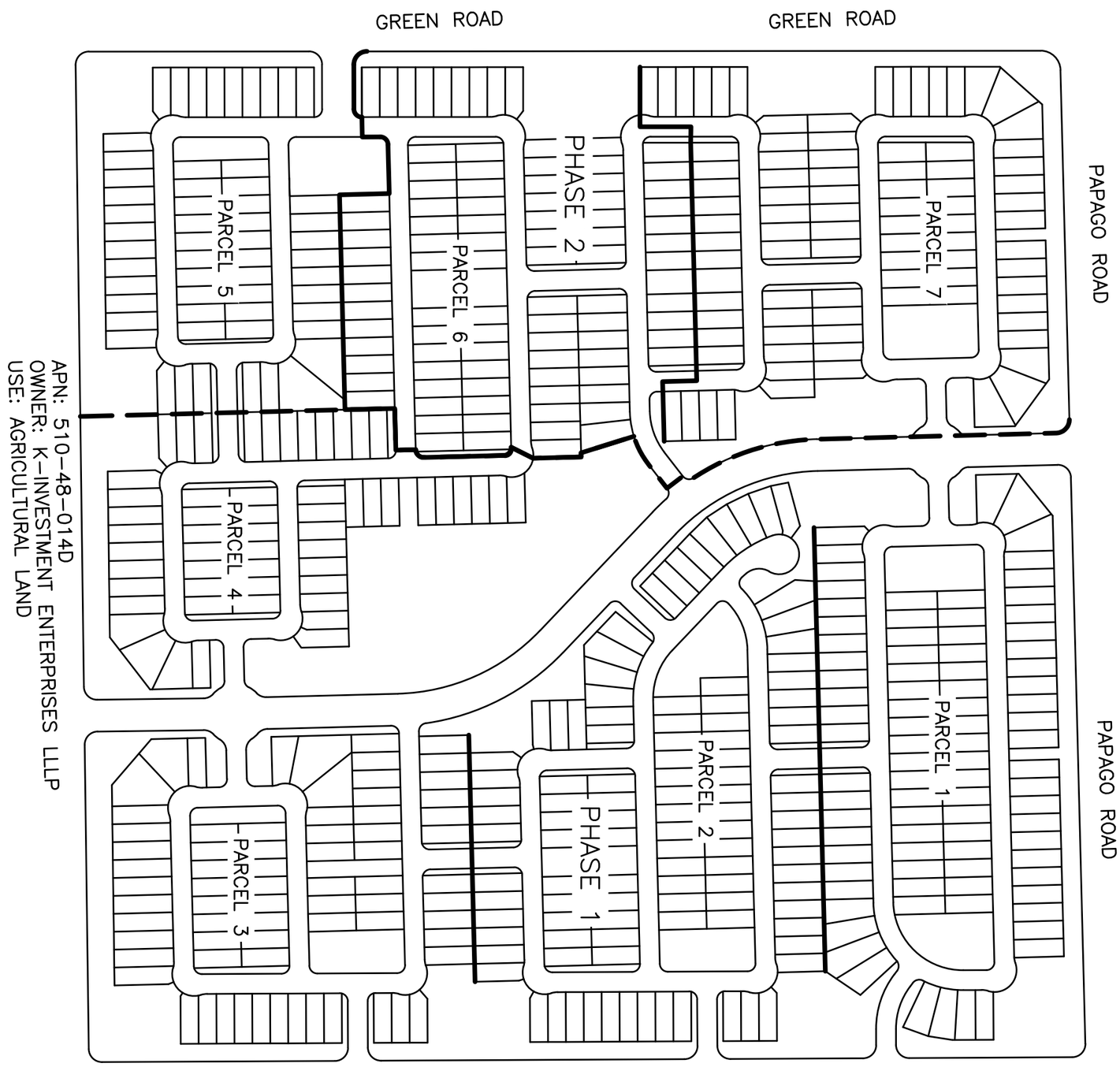
01.0372301

N:\01\0372301\Enviro\Parcel\Figures\Venida Figures.dwg **HunterS** **September 27, 2021**



SCALE 1" = 300'

FIGURE 2

VENIDA

SITE LAYOUT

4550 North 12th Street
Phoenix, Arizona 85014
Phone 602-264-6831
http://www.cvlci.com

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01.0372301

2.0 WATER SYSTEM DESIGN CRITERIA

This water study is based on criteria from the Global Water Resources (GWR) *Design and Construction Standards for Potable Water, Recycled Water and Wastewater Infrastructure,* dated January 2017 and the 2021 *International Fire Code* (IFC). Demand calculations were conducted using Microsoft Excel. The following criteria were used in developing this plan:

- Demand factors
  - Residential Average day demand = 250 gpd/DU
  - Parks and Landscaped Open Space = 1,800 gpad
  - Max day factor = 2.0 x Average Day Demand
  - Peak hour factor = 1.7 x Max Day Demand

- Pressure requirements
  - Minimum = 40 psi
  - Maximum = 80 psi
    - Individual PRV's on the service line are required when static pressures exceed 80 psi at the property boundary.
- Velocity
  - Maximum
    - 5 fps for maximum day demand
    - 6 fps for peak hour demand
    - 8 fps for maximum day demand plus fire flow

- Unit friction head loss
  - Maximum
    - 6ft/1,000 ft of pipe for maximum day demand
    - 8ft/1,000 ft of pipe for peak hour demand

- Hazen-Williams Coefficient = 130, Ductile Iron

- Fire Flows = 1,000 gpm for 1 hours per the IFC

- Minimum pressure of 20 psi for maximum day demand plus Fire Flow per the IFC

3.0 PROPOSED AND EXISTING INFRASTRUCTURE

3.1 Existing Infrastructure

There are no existing onsite waterlines within the proposed development. There is an adjacent existing offsite infrastructure with a 12-inch waterline within Papago Road. The 12-inch waterline will need to extend to the intersection at Green Road. The waterline will then need to extend the south within Green Road.

3.2 Water Demands

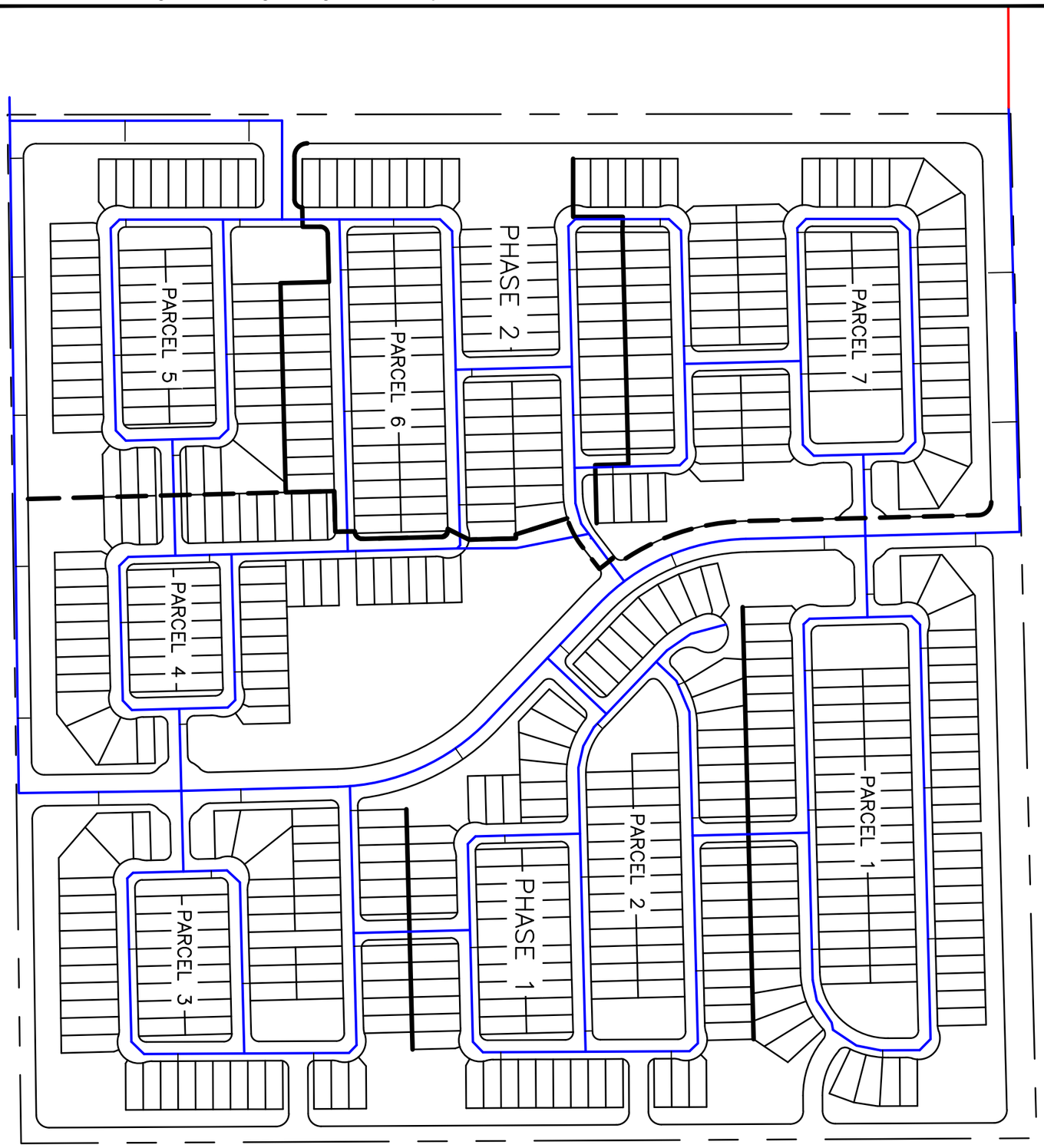
Venida average day demand, maximum day demand, and peak hour demands have been calculated in accordance with the information presented in Section 2.0. Table 2 presents a summary of average daily demand, maximum day demand and peak day demand for the Venida development's land use in gallons per day and gallons per minute.

Table 2 – Water Demand

Land Use	Acres	DU's	Population	Unit Factor		Average Day Demand (gpd)	Average Day Demand (gpm)	Maximum Day Demand (gpd)	Maximum Day Demand (gpm)	Peak Hour Demand (gpd)	Peak Hour Demand (gpm)
Parcel 1	16.65	88	282	250	gpdu	22,000	15.28	44,000	30.56	74,800	51.94
Parcel 2	19.48	103	330	250	gpdu	25,750	17.88	51,500	35.76	87,550	60.80
Parcel 3	13.43	71	227	250	gpdu	17,750	12.33	35,500	24.65	60,350	41.91
Parcel 4	10.40	55	176	250	gpdu	13,750	9.55	27,500	19.10	46,750	32.47
Parcel 5	10.59	56	179	250	gpdu	14,000	9.72	28,000	19.44	47,600	33.06
Parcel 6	17.59	93	298	250	gpdu	23,250	16.15	46,500	32.29	79,050	54.90
Parcel 7	16.65	88	282	250	gpdu	22,000	15.28	44,000	30.56	74,800	51.94
Open Space	21.50	---	---	1,800	gpad	38,700	26.88	77,400	53.75	131,580	91.38
Total	**126.30**	**554.00**	**1,772.80**	**---**	**---**	**177,200**	**123.06**	**354,400**	**246.11**	**602,480**	**418.39**

3.3 Proposed Infrastructure

Global Water will connect the proposed onsite system of 8-inch waterlines to the proposed waterline within Green Road and another connection will be made to the existing 12-inch waterline within Papago Road.



LEGEND

PROPOSED 8–INCH WATER LINE

EXISTING 12–INCH WATER LINE

SCALE 1" = 300'

FIGURE 3

VENIDA

WATER LAYOUT

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4.0 WATER SYSTEM MODELING

4.1 General Plan for Water System

Venida will be modeled as an extension to the existing waterline in Papago Road and Green Road. The model was produced using a hydraulic grade line to provide flow until the fire flow data is collected.

4.2 Network Analysis and Modeling Criteria

The computer network analysis for this project was accomplished using the WaterCAD modeling software. Demands were determined by land use and were allocated to each junction based on service area. The system model was analyzed for four scenarios; average day demand, maximum day demand, peak hour demand and maximum day demand plus residential fire flow.

The pipes were sized based on pressure and velocity requirements for average day demand, maximum day demand, peak hour demand and maximum day demand plus residential fire flow, as described above. This water analysis is based on criteria from the Global Water Resources (GWR) *Design and Construction Standards for Potable Water, Recycled Water and Wastewater Infrastructure,* dated January 2017 and the 2021 *International Fire Code* (IFC). Input parameters of the water distribution system modeling include:

- Pipe diameters (inches)
- Elevation of nodes/junctions (feet)
- System water demands (gpm)
- Residential fire flow (1,000 gpm)
- Hazen-Williams, C=130

Output parameters include but not limited to:

- Velocities (fps)
- Pressure (psi)
- Head Loss (feet)
- Flow Rates (gpm)

4.3 Modeling Results

The results of the analysis for Venida are presented in Appendix A, B and C. The model was created by assuming a Hydraulic Grade Line (1,342 feet above MSL) to provide a pressure of 45 PSI at the highest junction on the distribution system. No flow was available in the vicinity per Global Water. Tables 3, 4 and 5 show the minimum and maximum velocities for each scenario for Phase 1 and Phase 2 of the development and then both phases combined.

Table 3 – Venida for Phase 1 WaterCAD Analysis Results

Scenario	Demand (gpm)	Node	Min. Pressure (psi)	Node	Max. Pressure (psi)	Pipe	Max Velocity (fps)
Average Day	55.03	J-30	53.19	J-10	55.83	P-2	0.45
Max Day	110.07	J-30	52.57	J-10	55.26	P-2	0.9
Peak Hour	187.12	J-30	51.24	J-10	53.93	P-2	1.54
Max Day + Fire Flow	1,110.07	J-30	39.76	J-10	45.25	P-57	6.41

Table 4 – Venida for Phase 2 WaterCAD Analysis Results

Scenario	Demand (gpm)	Node	Min. Pressure (psi)	Node	Max. Pressure (psi)	Pipe	Max Velocity (fps)
Average Day	41.15	J-36	52.67	J-43	55.01	P-52	0.16
Max Day	82.29	J-36	52.09	J-43	54.44	P-52	0.32
Peak Hour	139.90	J-36	50.76	J-43	53.13	P-52	0.55
Max Day + Fire Flow	1,082.29	J-33	39.11	J-43	42.38	P-2	4.75

Table 5 – Venida for All Phases WaterCAD Analysis Results

Scenario	Demand (gpm)	Node	Min. Pressure (psi)	Node	Max. Pressure (psi)	Pipe	Max Velocity (fps)
Average Day	123.06	J-50	45.84	J-10	55.83	P-64	0.64
Max Day	246.11	J-50	45.84	J-10	55.26	P-64	1.29
Peak Hour	418.39	J-50	45.84	J-10	53.93	P-64	2.08
Max Day + Fire Flow	1,246.11	J-36	38.46	J-49	46.82	P-57	6.41

5.0 SUMMARY

This preliminary water master plan presents the proposed water system connection, and an overview of any existing infrastructure surrounding the project site. The following summarizes CVL's findings of the proposed water system to serve Venida.

- The water service connections will be made to the existing Global Water – Maricopa Water Company water system within Papago Road and Green Road.
- A preliminary hydraulic analysis of this project is shown in Appendix A for this preliminary report and a final hydraulic analysis will be conducted in the final design phase of the project.
- A proposed off site waterline will need to be constructed and connected from the intersection of Green Road and Papago Road to the onsite connection to serve Venida.
- The estimated average day demand for Venida is 106,900 gpd – 74.24 gpm.
- The estimated maximum day demand for Venida is 213,800 gpd – 148.47 gpm.
- The estimated peak hour demand for Venida is 363,460 gpd – 252.40 gpm
- The flow velocities of the proposed lines are less than the maximum of 5 fps for average day demand, maximum day and peak hour demand and 10 fps for maximum day plus fire flow demand for all scenarios in Venida.
- The proposed distribution system pressure range during average day demand, maximum day, and peak hour demand for Venida Phase 1 is between 51-56 psi.
- The proposed distribution system pressure for Venida Phase 1 is adequate during the maximum day demand plus fire flow event and met the 20 psi requirement.
- The proposed distribution system pressure range during average day demand, maximum day, and peak hour demand for Venida Phase 2 is between 51-55 psi.
- The proposed distribution system pressure for Venida Phase 2 is adequate during the maximum day demand plus fire flow event and met the 20 psi requirement.
- The proposed distribution system pressure range during average day demand, maximum day, and peak hour demand for both phases in Venida is between 45-56 psi.
- The proposed distribution system pressure for both phases in Venida is adequate during the maximum day demand plus fire flow event and met the 20 psi requirement.

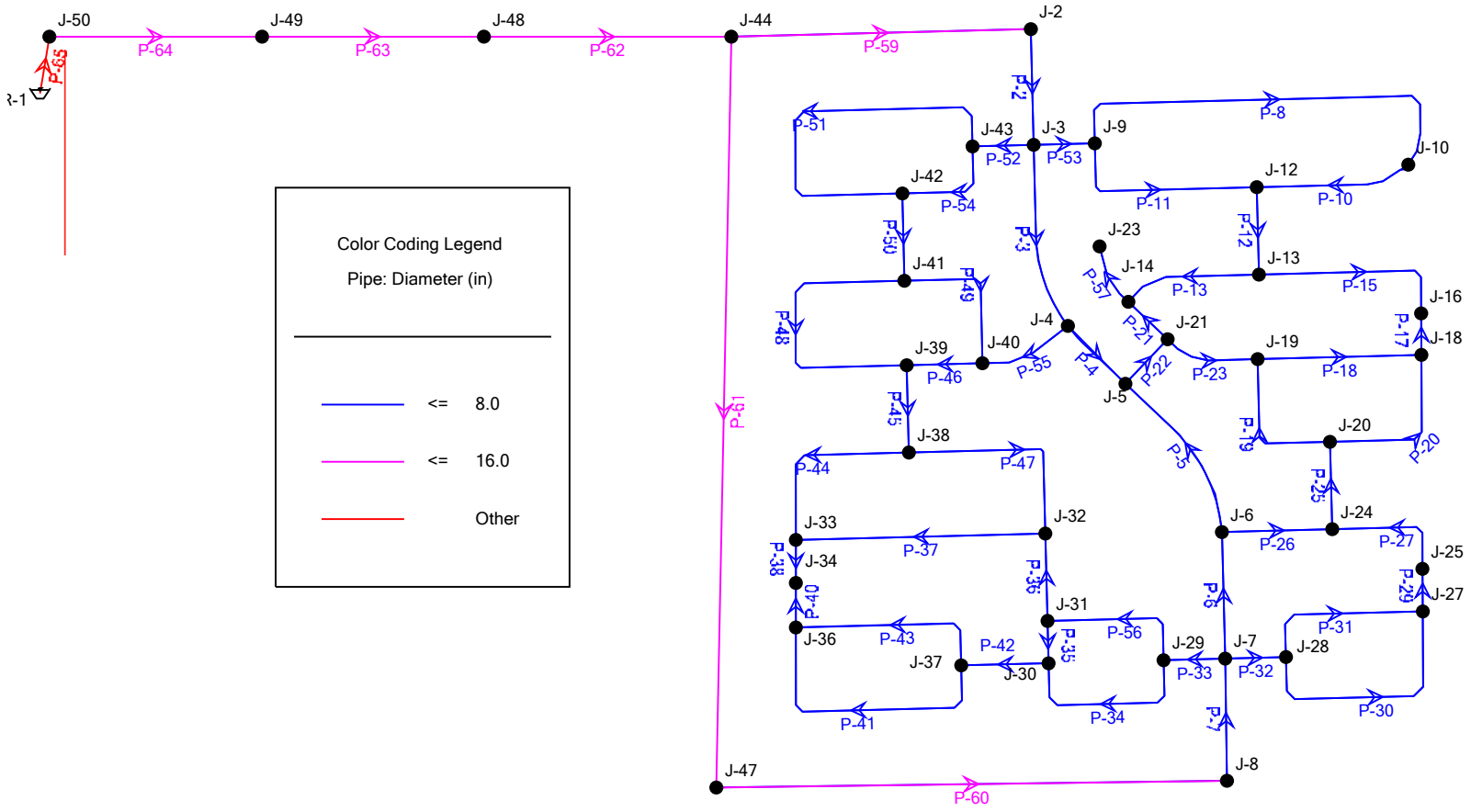
APPENDIX A

Venida Phase 1 Water Analysis

Venida

Average Day Demand Phase 1

Named View - 1



Pipe Table - Time: 0.00 hours

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-2	397.5	J-2	J-3	8.0	Ductile Iron	130.0	70.86	0.45	0.05
P-3	646.0	J-3	J-4	8.0	Ductile Iron	130.0	18.47	0.12	0.01
P-4	280.1	J-4	J-5	8.0	Ductile Iron	130.0	7.35	0.05	0.00
P-5	626.3	J-5	J-6	8.0	Ductile Iron	130.0	-4.32	0.03	0.00
P-6	434.4	J-6	J-7	8.0	Ductile Iron	130.0	-11.69	0.07	0.00
P-7	419.6	J-7	J-8	8.0	Ductile Iron	130.0	-52.18	0.33	0.03
P-8	1,473.0	J-9	J-10	8.0	Ductile Iron	130.0	7.32	0.05	0.00
P-10	538.1	J-10	J-12	8.0	Ductile Iron	130.0	3.41	0.02	0.00
P-11	708.0	J-12	J-9	8.0	Ductile Iron	130.0	-11.38	0.07	0.00
P-12	300.2	J-12	J-13	8.0	Ductile Iron	130.0	8.97	0.06	0.00
P-13	477.5	J-13	J-14	8.0	Ductile Iron	130.0	0.33	0.00	0.00
P-15	690.7	J-13	J-16	8.0	Ductile Iron	130.0	2.65	0.02	0.00
P-17	142.6	J-16	J-18	8.0	Ductile Iron	130.0	-2.65	0.02	0.00
P-18	562.3	J-18	J-19	8.0	Ductile Iron	130.0	-2.13	0.01	0.00
P-19	519.9	J-19	J-20	8.0	Ductile Iron	130.0	-1.42	0.01	0.00
P-20	590.6	J-20	J-18	8.0	Ductile Iron	130.0	2.52	0.02	0.00
P-21	186.0	J-14	J-21	8.0	Ductile Iron	130.0	-3.50	0.02	0.00
P-22	210.8	J-21	J-5	8.0	Ductile Iron	130.0	-11.67	0.07	0.00
P-23	331.4	J-21	J-19	8.0	Ductile Iron	130.0	3.22	0.02	0.00
P-25	299.8	J-20	J-24	8.0	Ductile Iron	130.0	-8.56	0.05	0.00
P-26	378.7	J-24	J-6	8.0	Ductile Iron	130.0	-7.37	0.05	0.00
P-27	441.6	J-24	J-25	8.0	Ductile Iron	130.0	-2.83	0.02	0.00
P-29	146.2	J-25	J-27	8.0	Ductile Iron	130.0	-7.44	0.05	0.00
P-30	868.2	J-27	J-28	8.0	Ductile Iron	130.0	-4.18	0.03	0.00
P-31	600.1	J-28	J-27	8.0	Ductile Iron	130.0	5.10	0.03	0.00
P-32	208.6	J-7	J-28	8.0	Ductile Iron	130.0	15.96	0.10	0.00
P-33	211.5	J-7	J-29	8.0	Ductile Iron	130.0	24.52	0.16	0.00
P-34	655.1	J-29	J-30	8.0	Ductile Iron	130.0	10.19	0.07	0.00
P-35	145.4	J-30	J-31	8.0	Ductile Iron	130.0	-3.19	0.02	0.00
P-36	300.0	J-31	J-32	8.0	Ductile Iron	130.0	5.06	0.03	0.00
P-53	209.9	J-3	J-9	8.0	Ductile Iron	130.0	27.13	0.17	0.00
P-56	527.9	J-31	J-29	8.0	Ductile Iron	130.0	-11.29	0.07	0.00
P-57	219.8	J-23	J-14	8.0	Ductile Iron	130.0	-2.00	0.01	0.00

Junction Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
96	J-30	1,218.60	4.78	1,341.44	53.15
98	J-31	1,218.30	3.04	1,341.44	53.28
43	J-8	1,218.50	0.00	1,341.48	53.21
94	J-29	1,218.00	3.04	1,341.44	53.41
100	J-32	1,217.60	3.56	1,341.44	53.58
41	J-7	1,217.60	0.00	1,341.45	53.58
90	J-28	1,217.30	6.69	1,341.44	53.71
39	J-6	1,216.50	0.00	1,341.44	54.06
84	J-25	1,215.80	4.61	1,341.44	54.36
81	J-24	1,215.70	1.65	1,341.44	54.40
37	J-5	1,215.60	0.00	1,341.44	54.45
35	J-4	1,215.50	0.00	1,341.44	54.49
70	J-21	1,215.10	4.95	1,341.44	54.66
88	J-27	1,215.00	1.83	1,341.44	54.71
67	J-20	1,214.90	4.61	1,341.44	54.75
55	J-14	1,214.80	1.83	1,341.44	54.79
65	J-19	1,214.70	2.52	1,341.44	54.84
79	J-23	1,214.50	2.00	1,341.44	54.92
33	J-3	1,214.51	0.00	1,341.45	54.92
63	J-18	1,214.00	2.00	1,341.44	55.14
53	J-13	1,214.00	5.99	1,341.44	55.14
45	J-9	1,214.00	8.43	1,341.45	55.14
59	J-16	1,213.80	5.30	1,341.44	55.22
50	J-12	1,213.50	5.82	1,341.44	55.35
31	J-2	1,213.00	0.00	1,341.50	55.60
46	J-10	1,212.40	3.91	1,341.44	55.83

Reservoir Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
134	R-1	1,341.95	227.21	1,341.95

Pipe Table - Time: 0.00 hours

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-2	397.5	J-2	J-3	8.0	Ductile Iron	130.0	141.75	0.90	0.19
P-3	646.0	J-3	J-4	8.0	Ductile Iron	130.0	36.96	0.24	0.03
P-4	280.1	J-4	J-5	8.0	Ductile Iron	130.0	14.70	0.09	0.00
P-5	626.3	J-5	J-6	8.0	Ductile Iron	130.0	-8.65	0.06	0.00
P-6	434.4	J-6	J-7	8.0	Ductile Iron	130.0	-23.39	0.15	0.01
P-7	419.6	J-7	J-8	8.0	Ductile Iron	130.0	-104.38	0.67	0.12
P-8	1,473.0	J-9	J-10	8.0	Ductile Iron	130.0	14.64	0.09	0.01
P-10	538.1	J-10	J-12	8.0	Ductile Iron	130.0	6.82	0.04	0.00
P-11	708.0	J-12	J-9	8.0	Ductile Iron	130.0	-22.77	0.15	0.01
P-12	300.2	J-12	J-13	8.0	Ductile Iron	130.0	17.96	0.11	0.00
P-13	477.5	J-13	J-14	8.0	Ductile Iron	130.0	0.66	0.00	0.00
P-15	690.7	J-13	J-16	8.0	Ductile Iron	130.0	5.30	0.03	0.00
P-17	142.6	J-16	J-18	8.0	Ductile Iron	130.0	-5.30	0.03	0.00
P-18	562.3	J-18	J-19	8.0	Ductile Iron	130.0	-4.25	0.03	0.00
P-19	519.9	J-19	J-20	8.0	Ductile Iron	130.0	-2.85	0.02	0.00
P-20	590.6	J-20	J-18	8.0	Ductile Iron	130.0	5.05	0.03	0.00
P-21	186.0	J-14	J-21	8.0	Ductile Iron	130.0	-7.00	0.04	0.00
P-22	210.8	J-21	J-5	8.0	Ductile Iron	130.0	-23.35	0.15	0.00
P-23	331.4	J-21	J-19	8.0	Ductile Iron	130.0	6.44	0.04	0.00
P-25	299.8	J-20	J-24	8.0	Ductile Iron	130.0	-17.11	0.11	0.00
P-26	378.7	J-24	J-6	8.0	Ductile Iron	130.0	-14.74	0.09	0.00
P-27	441.6	J-24	J-25	8.0	Ductile Iron	130.0	-5.68	0.04	0.00
P-29	146.2	J-25	J-27	8.0	Ductile Iron	130.0	-14.89	0.10	0.00
P-30	868.2	J-27	J-28	8.0	Ductile Iron	130.0	-8.35	0.05	0.00
P-31	600.1	J-28	J-27	8.0	Ductile Iron	130.0	10.20	0.07	0.00
P-32	208.6	J-7	J-28	8.0	Ductile Iron	130.0	31.93	0.20	0.01
P-33	211.5	J-7	J-29	8.0	Ductile Iron	130.0	49.07	0.31	0.01
P-34	655.1	J-29	J-30	8.0	Ductile Iron	130.0	20.39	0.13	0.01
P-35	145.4	J-30	J-31	8.0	Ductile Iron	130.0	-6.37	0.04	0.00
P-36	300.0	J-31	J-32	8.0	Ductile Iron	130.0	10.13	0.06	0.00
P-53	209.9	J-3	J-9	8.0	Ductile Iron	130.0	54.27	0.35	0.02
P-56	527.9	J-31	J-29	8.0	Ductile Iron	130.0	-22.59	0.14	0.01
P-57	219.8	J-23	J-14	8.0	Ductile Iron	130.0	-4.00	0.03	0.00

Junction Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
96	J-30	1,218.60	9.56	1,340.10	52.57
98	J-31	1,218.30	6.09	1,340.11	52.70
43	J-8	1,218.50	0.00	1,340.24	52.67
94	J-29	1,218.00	6.09	1,340.11	52.83
100	J-32	1,217.60	7.13	1,340.10	53.00
41	J-7	1,217.60	0.00	1,340.13	53.01
90	J-28	1,217.30	13.38	1,340.12	53.14
39	J-6	1,216.50	0.00	1,340.12	53.48
84	J-25	1,215.80	9.21	1,340.12	53.79
81	J-24	1,215.70	3.31	1,340.12	53.83
37	J-5	1,215.60	0.00	1,340.12	53.87
35	J-4	1,215.50	0.00	1,340.12	53.92
70	J-21	1,215.10	9.91	1,340.12	54.09
88	J-27	1,215.00	3.66	1,340.12	54.13
67	J-20	1,214.90	9.21	1,340.11	54.17
55	J-14	1,214.80	3.66	1,340.11	54.22
65	J-19	1,214.70	5.04	1,340.11	54.26
79	J-23	1,214.50	4.00	1,340.11	54.35
33	J-3	1,214.51	0.00	1,340.15	54.36
63	J-18	1,214.00	4.00	1,340.11	54.56
53	J-13	1,214.00	11.99	1,340.12	54.56
45	J-9	1,214.00	16.85	1,340.13	54.57
59	J-16	1,213.80	10.60	1,340.11	54.65
50	J-12	1,213.50	11.64	1,340.12	54.78
31	J-2	1,213.00	0.00	1,340.34	55.09
46	J-10	1,212.40	7.82	1,340.12	55.26

Reservoir Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
134	R-1	1,341.95	454.46	1,341.95

Pipe Table - Time: 0.00 hours

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-2	397.5	J-2	J-3	8.0	Ductile Iron	130.0	240.95	1.54	0.52
P-3	646.0	J-3	J-4	8.0	Ductile Iron	130.0	62.82	0.40	0.07
P-4	280.1	J-4	J-5	8.0	Ductile Iron	130.0	24.99	0.16	0.01
P-5	626.3	J-5	J-6	8.0	Ductile Iron	130.0	-14.70	0.09	0.00
P-6	434.4	J-6	J-7	8.0	Ductile Iron	130.0	-39.76	0.25	0.02
P-7	419.6	J-7	J-8	8.0	Ductile Iron	130.0	-177.43	1.13	0.31
P-8	1,473.0	J-9	J-10	8.0	Ductile Iron	130.0	24.89	0.16	0.03
P-10	538.1	J-10	J-12	8.0	Ductile Iron	130.0	11.59	0.07	0.00
P-11	708.0	J-12	J-9	8.0	Ductile Iron	130.0	-38.71	0.25	0.03
P-12	300.2	J-12	J-13	8.0	Ductile Iron	130.0	30.51	0.19	0.01
P-13	477.5	J-13	J-14	8.0	Ductile Iron	130.0	1.12	0.01	0.00
P-15	690.7	J-13	J-16	8.0	Ductile Iron	130.0	9.01	0.06	0.00
P-17	142.6	J-16	J-18	8.0	Ductile Iron	130.0	-9.01	0.06	0.00
P-18	562.3	J-18	J-19	8.0	Ductile Iron	130.0	-7.23	0.05	0.00
P-19	519.9	J-19	J-20	8.0	Ductile Iron	130.0	-4.85	0.03	0.00
P-20	590.6	J-20	J-18	8.0	Ductile Iron	130.0	8.58	0.05	0.00
P-21	186.0	J-14	J-21	8.0	Ductile Iron	130.0	-11.89	0.08	0.00
P-22	210.8	J-21	J-5	8.0	Ductile Iron	130.0	-39.69	0.25	0.01
P-23	331.4	J-21	J-19	8.0	Ductile Iron	130.0	10.95	0.07	0.00
P-25	299.8	J-20	J-24	8.0	Ductile Iron	130.0	-29.09	0.19	0.01
P-26	378.7	J-24	J-6	8.0	Ductile Iron	130.0	-25.06	0.16	0.01
P-27	441.6	J-24	J-25	8.0	Ductile Iron	130.0	-9.66	0.06	0.00
P-29	146.2	J-25	J-27	8.0	Ductile Iron	130.0	-25.32	0.16	0.00
P-30	868.2	J-27	J-28	8.0	Ductile Iron	130.0	-14.20	0.09	0.01
P-31	600.1	J-28	J-27	8.0	Ductile Iron	130.0	17.33	0.11	0.01
P-32	208.6	J-7	J-28	8.0	Ductile Iron	130.0	54.27	0.35	0.02
P-33	211.5	J-7	J-29	8.0	Ductile Iron	130.0	83.41	0.53	0.04
P-34	655.1	J-29	J-30	8.0	Ductile Iron	130.0	34.66	0.22	0.02
P-35	145.4	J-30	J-31	8.0	Ductile Iron	130.0	-10.83	0.07	0.00
P-36	300.0	J-31	J-32	8.0	Ductile Iron	130.0	17.21	0.11	0.00
P-53	209.9	J-3	J-9	8.0	Ductile Iron	130.0	92.25	0.59	0.05
P-56	527.9	J-31	J-29	8.0	Ductile Iron	130.0	-38.40	0.25	0.02
P-57	219.8	J-23	J-14	8.0	Ductile Iron	130.0	-6.80	0.04	0.00

Junction Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
96	J-30	1,218.60	16.25	1,337.02	51.24
98	J-31	1,218.30	10.35	1,337.02	51.37
43	J-8	1,218.50	0.00	1,337.40	51.44
94	J-29	1,218.00	10.35	1,337.05	51.51
100	J-32	1,217.60	12.12	1,337.02	51.67
41	J-7	1,217.60	0.00	1,337.08	51.70
90	J-28	1,217.30	22.74	1,337.07	51.82
39	J-6	1,216.50	0.00	1,337.06	52.16
84	J-25	1,215.80	15.66	1,337.06	52.46
81	J-24	1,215.70	5.62	1,337.06	52.51
37	J-5	1,215.60	0.00	1,337.06	52.55
35	J-4	1,215.50	0.00	1,337.06	52.60
70	J-21	1,215.10	16.84	1,337.05	52.76
88	J-27	1,215.00	6.21	1,337.06	52.81
67	J-20	1,214.90	15.66	1,337.05	52.85
55	J-14	1,214.80	6.21	1,337.05	52.89
65	J-19	1,214.70	8.58	1,337.05	52.93
79	J-23	1,214.50	6.80	1,337.05	53.02
33	J-3	1,214.51	0.00	1,337.13	53.05
63	J-18	1,214.00	6.80	1,337.05	53.24
53	J-13	1,214.00	20.38	1,337.05	53.24
45	J-9	1,214.00	28.65	1,337.09	53.25
59	J-16	1,213.80	18.02	1,337.05	53.32
50	J-12	1,213.50	19.79	1,337.06	53.46
31	J-2	1,213.00	0.00	1,337.66	53.93
46	J-10	1,212.40	13.30	1,337.06	53.93

Reservoir Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
134	R-1	1,341.95	772.55	1,341.95

Fire Flow Results Table - Time: 0.00 hours

Label	Demand (gpm)	Flow (Total Available) (gpm)	Flow (Total Needed) (gpm)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pipe w/ Maximum Velocity	Velocity of Maximum Pipe (ft/s)	Fire Flow (Total Upper Limit) (gpm)
J-2	0.00	1,001.00	1,000.00	41.63	45.25	P-64	4.13	1,001.00
J-3	0.00	1,001.00	1,000.00	41.03	43.08	P-2	4.81	1,001.00
J-4	0.00	1,001.00	1,000.00	40.79	42.12	P-2	4.65	1,001.00
J-5	0.00	1,001.00	1,000.00	40.82	41.97	P-2	4.57	1,001.00
J-6	0.00	1,001.00	1,000.00	40.76	41.49	P-2	4.48	1,001.00
J-7	0.00	1,001.00	1,000.00	40.66	41.44	P-2	4.34	1,001.00
J-8	0.00	1,001.00	1,000.00	40.55	41.53	P-64	4.13	1,001.00
J-9	16.85	1,017.85	1,016.85	40.98	42.46	P-2	4.75	1,017.85
J-10	7.82	1,008.82	1,007.82	40.97	41.31	P-2	4.72	1,008.82
J-12	11.64	1,012.64	1,011.64	40.96	42.24	P-2	4.70	1,012.64
J-13	11.99	1,012.99	1,011.99	40.91	42.15	P-2	4.64	1,012.99
J-14	3.66	1,004.66	1,003.66	40.87	41.64	P-2	4.59	1,004.66
J-16	10.60	1,011.60	1,010.60	40.87	41.71	P-2	4.57	1,011.60
J-18	4.00	1,005.00	1,004.00	40.86	41.87	P-2	4.56	1,005.00
J-19	5.04	1,006.04	1,005.04	40.85	41.80	P-2	4.56	1,006.04
J-20	9.21	1,010.21	1,009.21	40.84	41.75	P-2	4.54	1,010.21
J-21	9.91	1,010.91	1,009.91	40.85	41.96	P-2	4.58	1,010.91
J-23	4.00	1,005.00	1,004.00	40.87	40.01	P-57	6.41	1,005.00
J-24	3.31	1,004.31	1,003.31	40.78	41.68	P-2	4.50	1,004.31
J-25	9.21	1,010.21	1,009.21	40.72	41.06	P-2	4.42	1,010.21
J-27	3.66	1,004.66	1,003.66	40.71	41.48	P-2	4.40	1,004.66
J-28	13.38	1,014.38	1,013.38	40.69	40.80	P-32	4.45	1,014.38
J-29	6.09	1,007.09	1,006.09	40.01	40.52	P-33	4.58	1,007.09
J-30	9.56	1,010.56	1,009.56	39.53	39.76	P-2	4.49	1,010.56
J-31	6.09	1,007.09	1,006.09	39.63	39.98	P-2	4.49	1,007.09
J-32	7.13	1,008.13	1,007.13	39.61	39.98	P-2	4.51	1,008.13

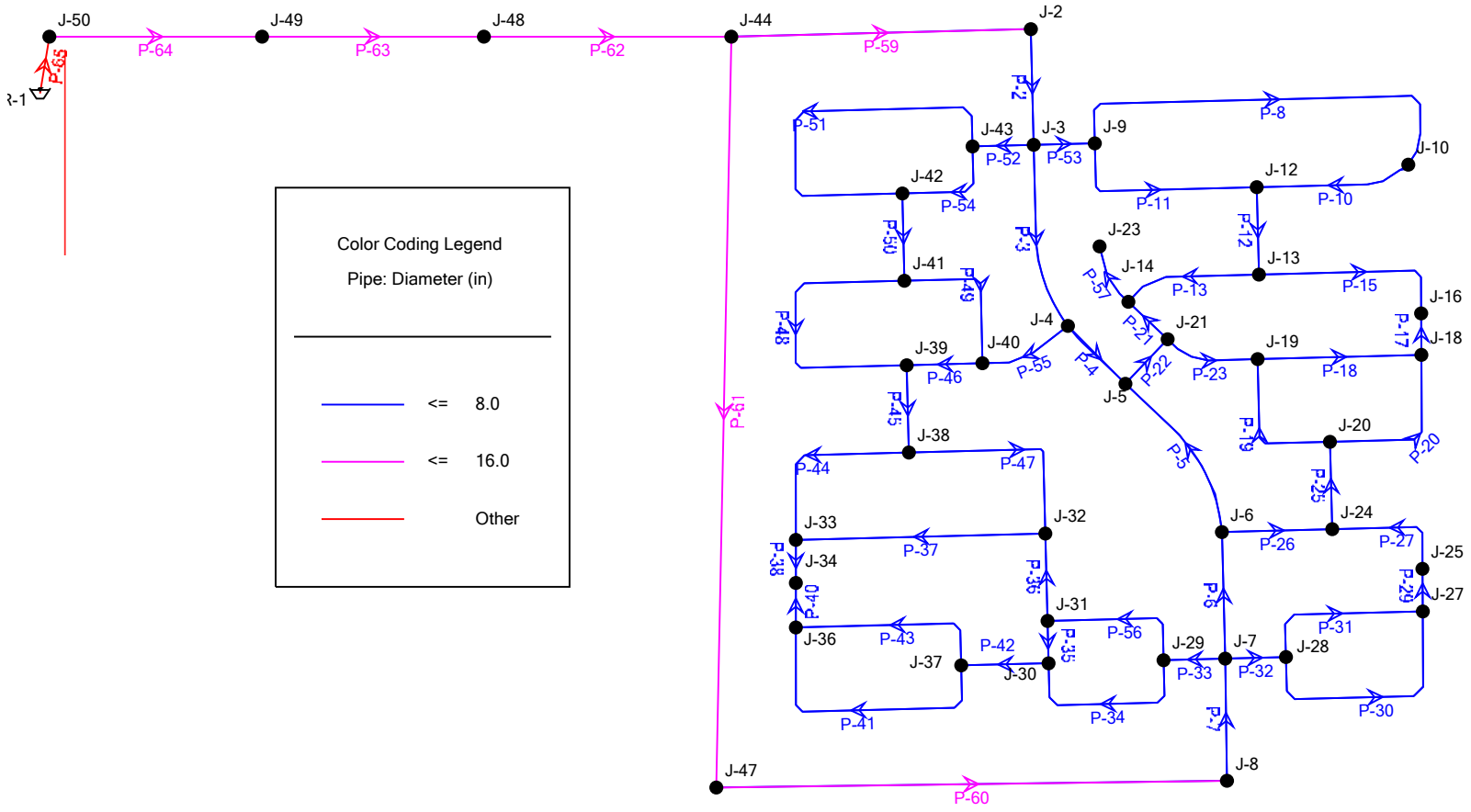
APPENDIX B

Venida Phase 2 Water Analysis

Venida

Average Day Demand Phase 2

Named View - 1



Pipe Table - Time: 0.00 hours

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-37	856.6	J-32	J-33	8.0	Ductile Iron	130.0	4.18	0.03	0.00
P-38	147.7	J-33	J-34	8.0	Ductile Iron	130.0	2.69	0.02	0.00
P-40	152.9	J-34	J-36	8.0	Ductile Iron	130.0	-2.26	0.01	0.00
P-41	976.7	J-36	J-37	8.0	Ductile Iron	130.0	-1.03	0.01	0.00
P-42	299.9	J-37	J-30	8.0	Ductile Iron	130.0	-8.60	0.05	0.00
P-43	694.8	J-37	J-36	8.0	Ductile Iron	130.0	1.23	0.01	0.00
P-44	661.1	J-33	J-38	8.0	Ductile Iron	130.0	-5.72	0.04	0.00
P-45	299.5	J-38	J-39	8.0	Ductile Iron	130.0	-13.70	0.09	0.00
P-46	259.9	J-39	J-40	8.0	Ductile Iron	130.0	-10.81	0.07	0.00
P-47	746.3	J-38	J-32	8.0	Ductile Iron	130.0	2.68	0.02	0.00
P-48	1,017.2	J-39	J-41	8.0	Ductile Iron	130.0	-6.28	0.04	0.00
P-49	539.8	J-41	J-40	8.0	Ductile Iron	130.0	4.63	0.03	0.00
P-50	299.7	J-41	J-42	8.0	Ductile Iron	130.0	-13.26	0.08	0.00
P-51	1,348.3	J-42	J-43	8.0	Ductile Iron	130.0	-6.54	0.04	0.00
P-52	210.0	J-43	J-3	8.0	Ductile Iron	130.0	-25.25	0.16	0.00
P-54	383.3	J-43	J-42	8.0	Ductile Iron	130.0	12.90	0.08	0.00
P-55	331.4	J-40	J-4	8.0	Ductile Iron	130.0	-11.12	0.07	0.00

Junction Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
108	J-36	1,219.70	0.00	1,341.44	52.67
104	J-34	1,219.50	4.95	1,341.44	52.76
110	J-37	1,219.20	6.34	1,341.44	52.89
102	J-33	1,219.00	7.21	1,341.44	52.97
114	J-38	1,217.40	5.30	1,341.44	53.67
116	J-39	1,216.50	3.39	1,341.44	54.06
121	J-41	1,216.20	2.35	1,341.44	54.19
118	J-40	1,215.90	4.95	1,341.44	54.32
124	J-42	1,215.50	6.17	1,341.44	54.49
126	J-43	1,214.30	5.82	1,341.45	55.01

Reservoir Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
134	R-1	1,341.95	227.21	1,341.95

Pipe Table - Time: 0.00 hours

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-37	856.6	J-32	J-33	8.0	Ductile Iron	130.0	8.36	0.05	0.00
P-38	147.7	J-33	J-34	8.0	Ductile Iron	130.0	5.39	0.03	0.00
P-40	152.9	J-34	J-36	8.0	Ductile Iron	130.0	-4.52	0.03	0.00
P-41	976.7	J-36	J-37	8.0	Ductile Iron	130.0	-2.05	0.01	0.00
P-42	299.9	J-37	J-30	8.0	Ductile Iron	130.0	-17.20	0.11	0.00
P-43	694.8	J-37	J-36	8.0	Ductile Iron	130.0	2.47	0.02	0.00
P-44	661.1	J-33	J-38	8.0	Ductile Iron	130.0	-11.45	0.07	0.00
P-45	299.5	J-38	J-39	8.0	Ductile Iron	130.0	-27.41	0.17	0.01
P-46	259.9	J-39	J-40	8.0	Ductile Iron	130.0	-21.62	0.14	0.00
P-47	746.3	J-38	J-32	8.0	Ductile Iron	130.0	5.36	0.03	0.00
P-48	1,017.2	J-39	J-41	8.0	Ductile Iron	130.0	-12.57	0.08	0.01
P-49	539.8	J-41	J-40	8.0	Ductile Iron	130.0	9.27	0.06	0.00
P-50	299.7	J-41	J-42	8.0	Ductile Iron	130.0	-26.54	0.17	0.01
P-51	1,348.3	J-42	J-43	8.0	Ductile Iron	130.0	-13.08	0.08	0.01
P-52	210.0	J-43	J-3	8.0	Ductile Iron	130.0	-50.52	0.32	0.02
P-54	383.3	J-43	J-42	8.0	Ductile Iron	130.0	25.80	0.16	0.01
P-55	331.4	J-40	J-4	8.0	Ductile Iron	130.0	-22.26	0.14	0.01

Junction Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
108	J-36	1,219.70	0.00	1,340.10	52.09
104	J-34	1,219.50	9.91	1,340.10	52.18
110	J-37	1,219.20	12.68	1,340.10	52.31
102	J-33	1,219.00	14.42	1,340.10	52.40
114	J-38	1,217.40	10.60	1,340.10	53.09
116	J-39	1,216.50	6.78	1,340.11	53.48
121	J-41	1,216.20	4.70	1,340.12	53.61
118	J-40	1,215.90	9.91	1,340.12	53.74
124	J-42	1,215.50	12.34	1,340.12	53.92
126	J-43	1,214.30	11.64	1,340.13	54.44

Reservoir Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
134	R-1	1,341.95	454.46	1,341.95

Pipe Table - Time: 0.00 hours

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-37	856.6	J-32	J-33	8.0	Ductile Iron	130.0	14.21	0.09	0.01
P-38	147.7	J-33	J-34	8.0	Ductile Iron	130.0	9.16	0.06	0.00
P-40	152.9	J-34	J-36	8.0	Ductile Iron	130.0	-7.68	0.05	0.00
P-41	976.7	J-36	J-37	8.0	Ductile Iron	130.0	-3.51	0.02	0.00
P-42	299.9	J-37	J-30	8.0	Ductile Iron	130.0	-29.24	0.19	0.01
P-43	694.8	J-37	J-36	8.0	Ductile Iron	130.0	4.18	0.03	0.00
P-44	661.1	J-33	J-38	8.0	Ductile Iron	130.0	-19.46	0.12	0.01
P-45	299.5	J-38	J-39	8.0	Ductile Iron	130.0	-46.59	0.30	0.02
P-46	259.9	J-39	J-40	8.0	Ductile Iron	130.0	-36.76	0.23	0.01
P-47	746.3	J-38	J-32	8.0	Ductile Iron	130.0	9.11	0.06	0.00
P-48	1,017.2	J-39	J-41	8.0	Ductile Iron	130.0	-21.37	0.14	0.02
P-49	539.8	J-41	J-40	8.0	Ductile Iron	130.0	15.76	0.10	0.00
P-50	299.7	J-41	J-42	8.0	Ductile Iron	130.0	-45.12	0.29	0.02
P-51	1,348.3	J-42	J-43	8.0	Ductile Iron	130.0	-22.23	0.14	0.02
P-52	210.0	J-43	J-3	8.0	Ductile Iron	130.0	-85.88	0.55	0.04
P-54	383.3	J-43	J-42	8.0	Ductile Iron	130.0	43.85	0.28	0.02
P-55	331.4	J-40	J-4	8.0	Ductile Iron	130.0	-37.84	0.24	0.01

Junction Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
108	J-36	1,219.70	0.00	1,337.01	50.76
104	J-34	1,219.50	16.84	1,337.01	50.84
110	J-37	1,219.20	21.56	1,337.01	50.97
102	J-33	1,219.00	24.51	1,337.01	51.06
114	J-38	1,217.40	18.02	1,337.02	51.75
116	J-39	1,216.50	11.53	1,337.04	52.15
121	J-41	1,216.20	7.99	1,337.05	52.29
118	J-40	1,215.90	16.84	1,337.05	52.42
124	J-42	1,215.50	20.97	1,337.07	52.60
126	J-43	1,214.30	19.79	1,337.09	53.13

Reservoir Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
134	R-1	1,341.95	772.55	1,341.95

Fire Flow Results Table - Time: 0.00 hours

Label	Demand (gpm)	Flow (Total Available) (gpm)	Flow (Total Needed) (gpm)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pipe w/ Maximum Velocity	Velocity of Maximum Pipe (ft/s)	Fire Flow (Total Upper Limit) (gpm)
J-33	14.42	1,015.42	1,014.42	39.07	39.11	P-2	4.51	1,015.42
J-34	9.91	1,010.91	1,009.91	38.82	38.65	P-2	4.51	1,010.91
J-36	0.00	1,001.00	1,000.00	38.92	38.46	P-2	4.50	1,001.00
J-37	12.68	1,013.68	1,012.68	38.93	38.78	P-2	4.50	1,013.68
J-38	10.60	1,011.60	1,010.60	39.78	40.34	P-2	4.53	1,011.60
J-39	6.78	1,007.78	1,006.78	40.30	41.17	P-2	4.59	1,007.78
J-40	9.91	1,010.91	1,009.91	40.55	41.65	P-2	4.63	1,010.91
J-41	4.70	1,005.70	1,004.70	40.64	41.29	P-2	4.67	1,005.70
J-42	12.34	1,013.34	1,012.34	40.80	41.57	P-2	4.73	1,013.34
J-43	11.64	1,012.64	1,011.64	40.89	42.38	P-2	4.75	1,012.64

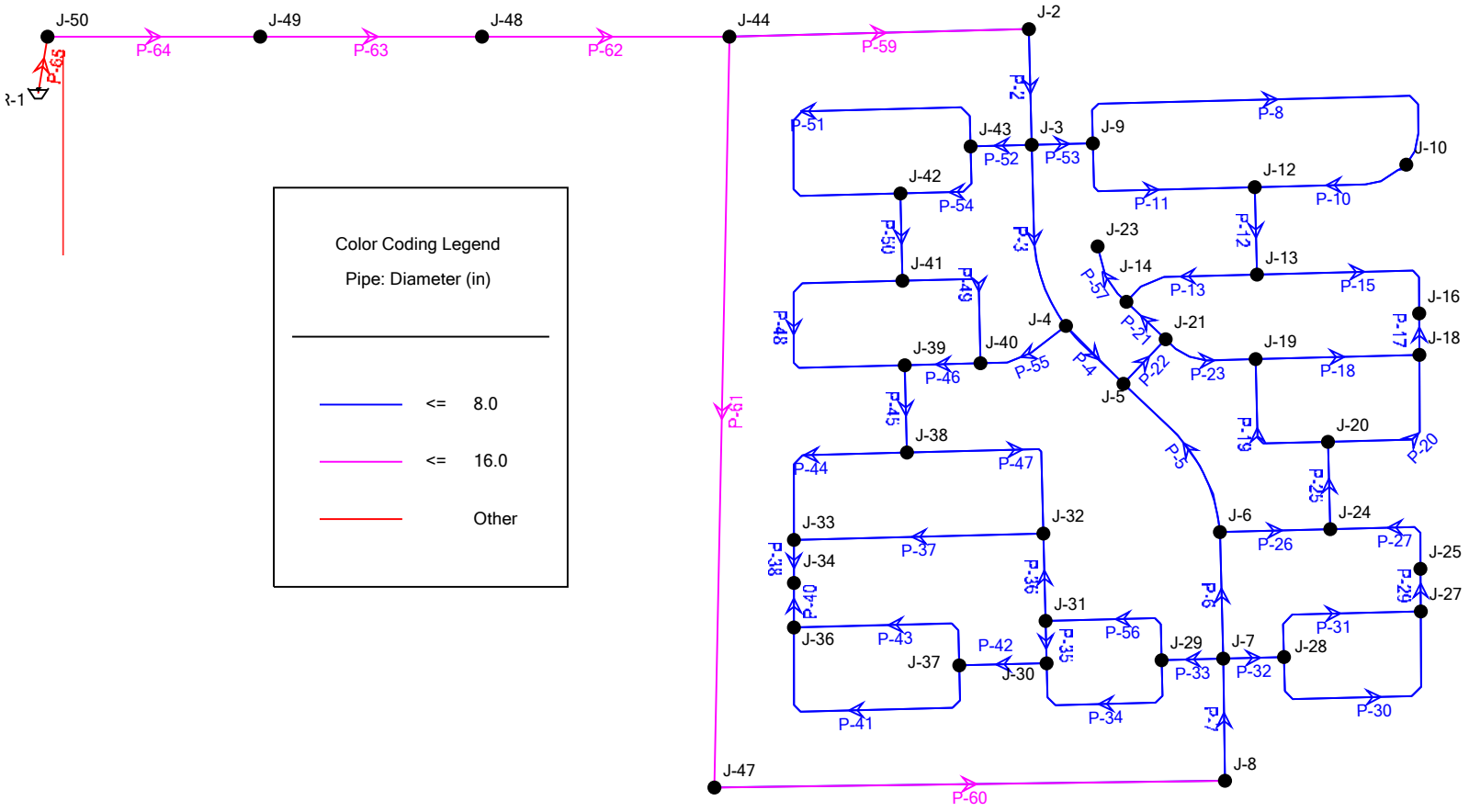
APPENDIX C

Venida Water Analysis for All Phases

Venida

Average Day Demand for All Phases

Named View - 1



Pipe Table - Time: 0.00 hours

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-2	397.5	J-2	J-3	8.0	Ductile Iron	130.0	70.86	0.45	0.05
P-3	646.0	J-3	J-4	8.0	Ductile Iron	130.0	18.47	0.12	0.01
P-4	280.1	J-4	J-5	8.0	Ductile Iron	130.0	7.35	0.05	0.00
P-5	626.3	J-5	J-6	8.0	Ductile Iron	130.0	-4.32	0.03	0.00
P-6	434.4	J-6	J-7	8.0	Ductile Iron	130.0	-11.69	0.07	0.00
P-7	419.6	J-7	J-8	8.0	Ductile Iron	130.0	-52.18	0.33	0.03
P-8	1,473.0	J-9	J-10	8.0	Ductile Iron	130.0	7.32	0.05	0.00
P-10	538.1	J-10	J-12	8.0	Ductile Iron	130.0	3.41	0.02	0.00
P-11	708.0	J-12	J-9	8.0	Ductile Iron	130.0	-11.38	0.07	0.00
P-12	300.2	J-12	J-13	8.0	Ductile Iron	130.0	8.97	0.06	0.00
P-13	477.5	J-13	J-14	8.0	Ductile Iron	130.0	0.33	0.00	0.00
P-15	690.7	J-13	J-16	8.0	Ductile Iron	130.0	2.65	0.02	0.00
P-17	142.6	J-16	J-18	8.0	Ductile Iron	130.0	-2.65	0.02	0.00
P-18	562.3	J-18	J-19	8.0	Ductile Iron	130.0	-2.13	0.01	0.00
P-19	519.9	J-19	J-20	8.0	Ductile Iron	130.0	-1.42	0.01	0.00
P-20	590.6	J-20	J-18	8.0	Ductile Iron	130.0	2.52	0.02	0.00
P-21	186.0	J-14	J-21	8.0	Ductile Iron	130.0	-3.50	0.02	0.00
P-22	210.8	J-21	J-5	8.0	Ductile Iron	130.0	-11.67	0.07	0.00
P-23	331.4	J-21	J-19	8.0	Ductile Iron	130.0	3.22	0.02	0.00
P-25	299.8	J-20	J-24	8.0	Ductile Iron	130.0	-8.56	0.05	0.00
P-26	378.7	J-24	J-6	8.0	Ductile Iron	130.0	-7.37	0.05	0.00
P-27	441.6	J-24	J-25	8.0	Ductile Iron	130.0	-2.83	0.02	0.00
P-29	146.2	J-25	J-27	8.0	Ductile Iron	130.0	-7.44	0.05	0.00
P-30	868.2	J-27	J-28	8.0	Ductile Iron	130.0	-4.18	0.03	0.00
P-31	600.1	J-28	J-27	8.0	Ductile Iron	130.0	5.10	0.03	0.00
P-32	208.6	J-7	J-28	8.0	Ductile Iron	130.0	15.96	0.10	0.00
P-33	211.5	J-7	J-29	8.0	Ductile Iron	130.0	24.52	0.16	0.00
P-34	655.1	J-29	J-30	8.0	Ductile Iron	130.0	10.19	0.07	0.00
P-35	145.4	J-30	J-31	8.0	Ductile Iron	130.0	-3.19	0.02	0.00
P-36	300.0	J-31	J-32	8.0	Ductile Iron	130.0	5.06	0.03	0.00
P-37	856.6	J-32	J-33	8.0	Ductile Iron	130.0	4.18	0.03	0.00
P-38	147.7	J-33	J-34	8.0	Ductile Iron	130.0	2.69	0.02	0.00
P-40	152.9	J-34	J-36	8.0	Ductile Iron	130.0	-2.26	0.01	0.00
P-41	976.7	J-36	J-37	8.0	Ductile Iron	130.0	-1.03	0.01	0.00
P-42	299.9	J-37	J-30	8.0	Ductile Iron	130.0	-8.60	0.05	0.00
P-43	694.8	J-37	J-36	8.0	Ductile Iron	130.0	1.23	0.01	0.00
P-44	661.1	J-33	J-38	8.0	Ductile Iron	130.0	-5.72	0.04	0.00
P-45	299.5	J-38	J-39	8.0	Ductile Iron	130.0	-13.70	0.09	0.00
P-46	259.9	J-39	J-40	8.0	Ductile Iron	130.0	-10.81	0.07	0.00
P-47	746.3	J-38	J-32	8.0	Ductile Iron	130.0	2.68	0.02	0.00
P-48	1,017.2	J-39	J-41	8.0	Ductile Iron	130.0	-6.28	0.04	0.00
P-49	539.8	J-41	J-40	8.0	Ductile Iron	130.0	4.63	0.03	0.00
P-50	299.7	J-41	J-42	8.0	Ductile Iron	130.0	-13.26	0.08	0.00
P-51	1,348.3	J-42	J-43	8.0	Ductile Iron	130.0	-6.54	0.04	0.00
P-52	210.0	J-43	J-3	8.0	Ductile Iron	130.0	-25.25	0.16	0.00
P-53	209.9	J-3	J-9	8.0	Ductile Iron	130.0	27.13	0.17	0.00

Pipe Table - Time: 0.00 hours

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-54	383.3	J-43	J-42	8.0	Ductile Iron	130.0	12.90	0.08	0.00
P-55	331.4	J-40	J-4	8.0	Ductile Iron	130.0	-11.12	0.07	0.00
P-56	527.9	J-31	J-29	8.0	Ductile Iron	130.0	-11.29	0.07	0.00
P-57	219.8	J-23	J-14	8.0	Ductile Iron	130.0	-2.00	0.01	0.00
P-59	1,028.4	J-44	J-2	12.0	Ductile Iron	130.0	70.86	0.20	0.02
P-60	1,752.9	J-8	J-47	12.0	Ductile Iron	130.0	-52.18	0.15	0.02
P-61	2,578.0	J-47	J-44	12.0	Ductile Iron	130.0	-52.18	0.15	0.03
P-62	1,348.5	J-44	J-48	12.0	Ductile Iron	130.0	-123.04	0.35	0.07
P-63	2,660.2	J-48	J-49	12.0	Ductile Iron	130.0	-123.04	0.35	0.14
P-64	1,326.6	J-49	J-50	12.0	Ductile Iron	130.0	-227.21	0.64	0.22
P-65	5.0	R-1	J-50	99.0	Ductile Iron	130.0	227.21	0.01	0.00

Junction Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
150	J-50	1,236.00	0.00	1,341.95	45.84
148	J-49	1,227.00	104.17	1,341.73	49.64
143	J-47	1,223.00	0.00	1,341.50	51.27
108	J-36	1,219.70	0.00	1,341.44	52.67
104	J-34	1,219.50	4.95	1,341.44	52.76
110	J-37	1,219.20	6.34	1,341.44	52.89
102	J-33	1,219.00	7.21	1,341.44	52.97
96	J-30	1,218.60	4.78	1,341.44	53.15
98	J-31	1,218.30	3.04	1,341.44	53.28
43	J-8	1,218.50	0.00	1,341.48	53.21
94	J-29	1,218.00	3.04	1,341.44	53.41
100	J-32	1,217.60	3.56	1,341.44	53.58
41	J-7	1,217.60	0.00	1,341.45	53.58
114	J-38	1,217.40	5.30	1,341.44	53.67
90	J-28	1,217.30	6.69	1,341.44	53.71
146	J-48	1,218.00	0.00	1,341.59	53.47
116	J-39	1,216.50	3.39	1,341.44	54.06
39	J-6	1,216.50	0.00	1,341.44	54.06
138	J-44	1,217.00	0.00	1,341.52	53.88
121	J-41	1,216.20	2.35	1,341.44	54.19
118	J-40	1,215.90	4.95	1,341.44	54.32
84	J-25	1,215.80	4.61	1,341.44	54.36
81	J-24	1,215.70	1.65	1,341.44	54.40
37	J-5	1,215.60	0.00	1,341.44	54.45
35	J-4	1,215.50	0.00	1,341.44	54.49
124	J-42	1,215.50	6.17	1,341.44	54.49
70	J-21	1,215.10	4.95	1,341.44	54.66
88	J-27	1,215.00	1.83	1,341.44	54.71
67	J-20	1,214.90	4.61	1,341.44	54.75
55	J-14	1,214.80	1.83	1,341.44	54.79
65	J-19	1,214.70	2.52	1,341.44	54.84
79	J-23	1,214.50	2.00	1,341.44	54.92
33	J-3	1,214.51	0.00	1,341.45	54.92
126	J-43	1,214.30	5.82	1,341.45	55.01
63	J-18	1,214.00	2.00	1,341.44	55.14
53	J-13	1,214.00	5.99	1,341.44	55.14
45	J-9	1,214.00	8.43	1,341.45	55.14
59	J-16	1,213.80	5.30	1,341.44	55.22
50	J-12	1,213.50	5.82	1,341.44	55.35
31	J-2	1,213.00	0.00	1,341.50	55.60
46	J-10	1,212.40	3.91	1,341.44	55.83

Reservoir Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
134	R-1	1,341.95	227.21	1,341.95

Pipe Table - Time: 0.00 hours

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-2	397.5	J-2	J-3	8.0	Ductile Iron	130.0	141.75	0.90	0.19
P-3	646.0	J-3	J-4	8.0	Ductile Iron	130.0	36.96	0.24	0.03
P-4	280.1	J-4	J-5	8.0	Ductile Iron	130.0	14.70	0.09	0.00
P-5	626.3	J-5	J-6	8.0	Ductile Iron	130.0	-8.65	0.06	0.00
P-6	434.4	J-6	J-7	8.0	Ductile Iron	130.0	-23.39	0.15	0.01
P-7	419.6	J-7	J-8	8.0	Ductile Iron	130.0	-104.38	0.67	0.12
P-8	1,473.0	J-9	J-10	8.0	Ductile Iron	130.0	14.64	0.09	0.01
P-10	538.1	J-10	J-12	8.0	Ductile Iron	130.0	6.82	0.04	0.00
P-11	708.0	J-12	J-9	8.0	Ductile Iron	130.0	-22.77	0.15	0.01
P-12	300.2	J-12	J-13	8.0	Ductile Iron	130.0	17.96	0.11	0.00
P-13	477.5	J-13	J-14	8.0	Ductile Iron	130.0	0.66	0.00	0.00
P-15	690.7	J-13	J-16	8.0	Ductile Iron	130.0	5.30	0.03	0.00
P-17	142.6	J-16	J-18	8.0	Ductile Iron	130.0	-5.30	0.03	0.00
P-18	562.3	J-18	J-19	8.0	Ductile Iron	130.0	-4.25	0.03	0.00
P-19	519.9	J-19	J-20	8.0	Ductile Iron	130.0	-2.85	0.02	0.00
P-20	590.6	J-20	J-18	8.0	Ductile Iron	130.0	5.05	0.03	0.00
P-21	186.0	J-14	J-21	8.0	Ductile Iron	130.0	-7.00	0.04	0.00
P-22	210.8	J-21	J-5	8.0	Ductile Iron	130.0	-23.35	0.15	0.00
P-23	331.4	J-21	J-19	8.0	Ductile Iron	130.0	6.44	0.04	0.00
P-25	299.8	J-20	J-24	8.0	Ductile Iron	130.0	-17.11	0.11	0.00
P-26	378.7	J-24	J-6	8.0	Ductile Iron	130.0	-14.74	0.09	0.00
P-27	441.6	J-24	J-25	8.0	Ductile Iron	130.0	-5.68	0.04	0.00
P-29	146.2	J-25	J-27	8.0	Ductile Iron	130.0	-14.89	0.10	0.00
P-30	868.2	J-27	J-28	8.0	Ductile Iron	130.0	-8.35	0.05	0.00
P-31	600.1	J-28	J-27	8.0	Ductile Iron	130.0	10.20	0.07	0.00
P-32	208.6	J-7	J-28	8.0	Ductile Iron	130.0	31.93	0.20	0.01
P-33	211.5	J-7	J-29	8.0	Ductile Iron	130.0	49.07	0.31	0.01
P-34	655.1	J-29	J-30	8.0	Ductile Iron	130.0	20.39	0.13	0.01
P-35	145.4	J-30	J-31	8.0	Ductile Iron	130.0	-6.37	0.04	0.00
P-36	300.0	J-31	J-32	8.0	Ductile Iron	130.0	10.13	0.06	0.00
P-37	856.6	J-32	J-33	8.0	Ductile Iron	130.0	8.36	0.05	0.00
P-38	147.7	J-33	J-34	8.0	Ductile Iron	130.0	5.39	0.03	0.00
P-40	152.9	J-34	J-36	8.0	Ductile Iron	130.0	-4.52	0.03	0.00
P-41	976.7	J-36	J-37	8.0	Ductile Iron	130.0	-2.05	0.01	0.00
P-42	299.9	J-37	J-30	8.0	Ductile Iron	130.0	-17.20	0.11	0.00
P-43	694.8	J-37	J-36	8.0	Ductile Iron	130.0	2.47	0.02	0.00
P-44	661.1	J-33	J-38	8.0	Ductile Iron	130.0	-11.45	0.07	0.00
P-45	299.5	J-38	J-39	8.0	Ductile Iron	130.0	-27.41	0.17	0.01
P-46	259.9	J-39	J-40	8.0	Ductile Iron	130.0	-21.62	0.14	0.00
P-47	746.3	J-38	J-32	8.0	Ductile Iron	130.0	5.36	0.03	0.00
P-48	1,017.2	J-39	J-41	8.0	Ductile Iron	130.0	-12.57	0.08	0.01
P-49	539.8	J-41	J-40	8.0	Ductile Iron	130.0	9.27	0.06	0.00
P-50	299.7	J-41	J-42	8.0	Ductile Iron	130.0	-26.54	0.17	0.01
P-51	1,348.3	J-42	J-43	8.0	Ductile Iron	130.0	-13.08	0.08	0.01
P-52	210.0	J-43	J-3	8.0	Ductile Iron	130.0	-50.52	0.32	0.02
P-53	209.9	J-3	J-9	8.0	Ductile Iron	130.0	54.27	0.35	0.02

Pipe Table - Time: 0.00 hours

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-54	383.3	J-43	J-42	8.0	Ductile Iron	130.0	25.80	0.16	0.01
P-55	331.4	J-40	J-4	8.0	Ductile Iron	130.0	-22.26	0.14	0.01
P-56	527.9	J-31	J-29	8.0	Ductile Iron	130.0	-22.59	0.14	0.01
P-57	219.8	J-23	J-14	8.0	Ductile Iron	130.0	-4.00	0.03	0.00
P-59	1,028.4	J-44	J-2	12.0	Ductile Iron	130.0	141.75	0.40	0.07
P-60	1,752.9	J-8	J-47	12.0	Ductile Iron	130.0	-104.38	0.30	0.07
P-61	2,578.0	J-47	J-44	12.0	Ductile Iron	130.0	-104.38	0.30	0.10
P-62	1,348.5	J-44	J-48	12.0	Ductile Iron	130.0	-246.13	0.70	0.25
P-63	2,660.2	J-48	J-49	12.0	Ductile Iron	130.0	-246.13	0.70	0.50
P-64	1,326.6	J-49	J-50	12.0	Ductile Iron	130.0	-454.46	1.29	0.78
P-65	5.0	R-1	J-50	99.0	Ductile Iron	130.0	454.46	0.02	0.00

Junction Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
150	J-50	1,236.00	0.00	1,341.95	45.84
148	J-49	1,227.00	208.33	1,341.17	49.40
143	J-47	1,223.00	0.00	1,340.31	50.76
108	J-36	1,219.70	0.00	1,340.10	52.09
104	J-34	1,219.50	9.91	1,340.10	52.18
110	J-37	1,219.20	12.68	1,340.10	52.31
102	J-33	1,219.00	14.42	1,340.10	52.40
96	J-30	1,218.60	9.56	1,340.10	52.57
98	J-31	1,218.30	6.09	1,340.11	52.70
43	J-8	1,218.50	0.00	1,340.24	52.67
94	J-29	1,218.00	6.09	1,340.11	52.83
100	J-32	1,217.60	7.13	1,340.10	53.00
41	J-7	1,217.60	0.00	1,340.13	53.01
114	J-38	1,217.40	10.60	1,340.10	53.09
90	J-28	1,217.30	13.38	1,340.12	53.14
146	J-48	1,218.00	0.00	1,340.67	53.07
116	J-39	1,216.50	6.78	1,340.11	53.48
39	J-6	1,216.50	0.00	1,340.12	53.48
138	J-44	1,217.00	0.00	1,340.41	53.39
121	J-41	1,216.20	4.70	1,340.12	53.61
118	J-40	1,215.90	9.91	1,340.12	53.74
84	J-25	1,215.80	9.21	1,340.12	53.79
81	J-24	1,215.70	3.31	1,340.12	53.83
37	J-5	1,215.60	0.00	1,340.12	53.87
35	J-4	1,215.50	0.00	1,340.12	53.92
124	J-42	1,215.50	12.34	1,340.12	53.92
70	J-21	1,215.10	9.91	1,340.12	54.09
88	J-27	1,215.00	3.66	1,340.12	54.13
67	J-20	1,214.90	9.21	1,340.11	54.17
55	J-14	1,214.80	3.66	1,340.11	54.22
65	J-19	1,214.70	5.04	1,340.11	54.26
79	J-23	1,214.50	4.00	1,340.11	54.35
33	J-3	1,214.51	0.00	1,340.15	54.36
126	J-43	1,214.30	11.64	1,340.13	54.44
63	J-18	1,214.00	4.00	1,340.11	54.56
53	J-13	1,214.00	11.99	1,340.12	54.56
45	J-9	1,214.00	16.85	1,340.13	54.57
59	J-16	1,213.80	10.60	1,340.11	54.65
50	J-12	1,213.50	11.64	1,340.12	54.78
31	J-2	1,213.00	0.00	1,340.34	55.09
46	J-10	1,212.40	7.82	1,340.12	55.26

Reservoir Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
134	R-1	1,341.95	454.46	1,341.95

Pipe Table - Time: 0.00 hours

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-2	397.5	J-2	J-3	8.0	Ductile Iron	130.0	240.95	1.54	0.52
P-3	646.0	J-3	J-4	8.0	Ductile Iron	130.0	62.82	0.40	0.07
P-4	280.1	J-4	J-5	8.0	Ductile Iron	130.0	24.99	0.16	0.01
P-5	626.3	J-5	J-6	8.0	Ductile Iron	130.0	-14.70	0.09	0.00
P-6	434.4	J-6	J-7	8.0	Ductile Iron	130.0	-39.76	0.25	0.02
P-7	419.6	J-7	J-8	8.0	Ductile Iron	130.0	-177.43	1.13	0.31
P-8	1,473.0	J-9	J-10	8.0	Ductile Iron	130.0	24.89	0.16	0.03
P-10	538.1	J-10	J-12	8.0	Ductile Iron	130.0	11.59	0.07	0.00
P-11	708.0	J-12	J-9	8.0	Ductile Iron	130.0	-38.71	0.25	0.03
P-12	300.2	J-12	J-13	8.0	Ductile Iron	130.0	30.51	0.19	0.01
P-13	477.5	J-13	J-14	8.0	Ductile Iron	130.0	1.12	0.01	0.00
P-15	690.7	J-13	J-16	8.0	Ductile Iron	130.0	9.01	0.06	0.00
P-17	142.6	J-16	J-18	8.0	Ductile Iron	130.0	-9.01	0.06	0.00
P-18	562.3	J-18	J-19	8.0	Ductile Iron	130.0	-7.23	0.05	0.00
P-19	519.9	J-19	J-20	8.0	Ductile Iron	130.0	-4.85	0.03	0.00
P-20	590.6	J-20	J-18	8.0	Ductile Iron	130.0	8.58	0.05	0.00
P-21	186.0	J-14	J-21	8.0	Ductile Iron	130.0	-11.89	0.08	0.00
P-22	210.8	J-21	J-5	8.0	Ductile Iron	130.0	-39.69	0.25	0.01
P-23	331.4	J-21	J-19	8.0	Ductile Iron	130.0	10.95	0.07	0.00
P-25	299.8	J-20	J-24	8.0	Ductile Iron	130.0	-29.09	0.19	0.01
P-26	378.7	J-24	J-6	8.0	Ductile Iron	130.0	-25.06	0.16	0.01
P-27	441.6	J-24	J-25	8.0	Ductile Iron	130.0	-9.66	0.06	0.00
P-29	146.2	J-25	J-27	8.0	Ductile Iron	130.0	-25.32	0.16	0.00
P-30	868.2	J-27	J-28	8.0	Ductile Iron	130.0	-14.20	0.09	0.01
P-31	600.1	J-28	J-27	8.0	Ductile Iron	130.0	17.33	0.11	0.01
P-32	208.6	J-7	J-28	8.0	Ductile Iron	130.0	54.27	0.35	0.02
P-33	211.5	J-7	J-29	8.0	Ductile Iron	130.0	83.41	0.53	0.04
P-34	655.1	J-29	J-30	8.0	Ductile Iron	130.0	34.66	0.22	0.02
P-35	145.4	J-30	J-31	8.0	Ductile Iron	130.0	-10.83	0.07	0.00
P-36	300.0	J-31	J-32	8.0	Ductile Iron	130.0	17.21	0.11	0.00
P-37	856.6	J-32	J-33	8.0	Ductile Iron	130.0	14.21	0.09	0.01
P-38	147.7	J-33	J-34	8.0	Ductile Iron	130.0	9.16	0.06	0.00
P-40	152.9	J-34	J-36	8.0	Ductile Iron	130.0	-7.68	0.05	0.00
P-41	976.7	J-36	J-37	8.0	Ductile Iron	130.0	-3.51	0.02	0.00
P-42	299.9	J-37	J-30	8.0	Ductile Iron	130.0	-29.24	0.19	0.01
P-43	694.8	J-37	J-36	8.0	Ductile Iron	130.0	4.18	0.03	0.00
P-44	661.1	J-33	J-38	8.0	Ductile Iron	130.0	-19.46	0.12	0.01
P-45	299.5	J-38	J-39	8.0	Ductile Iron	130.0	-46.59	0.30	0.02
P-46	259.9	J-39	J-40	8.0	Ductile Iron	130.0	-36.76	0.23	0.01
P-47	746.3	J-38	J-32	8.0	Ductile Iron	130.0	9.11	0.06	0.00
P-48	1,017.2	J-39	J-41	8.0	Ductile Iron	130.0	-21.37	0.14	0.02
P-49	539.8	J-41	J-40	8.0	Ductile Iron	130.0	15.76	0.10	0.00
P-50	299.7	J-41	J-42	8.0	Ductile Iron	130.0	-45.12	0.29	0.02
P-51	1,348.3	J-42	J-43	8.0	Ductile Iron	130.0	-22.23	0.14	0.02
P-52	210.0	J-43	J-3	8.0	Ductile Iron	130.0	-85.88	0.55	0.04
P-53	209.9	J-3	J-9	8.0	Ductile Iron	130.0	92.25	0.59	0.05

Pipe Table - Time: 0.00 hours

Label	Length (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-54	383.3	J-43	J-42	8.0	Ductile Iron	130.0	43.85	0.28	0.02
P-55	331.4	J-40	J-4	8.0	Ductile Iron	130.0	-37.84	0.24	0.01
P-56	527.9	J-31	J-29	8.0	Ductile Iron	130.0	-38.40	0.25	0.02
P-57	219.8	J-23	J-14	8.0	Ductile Iron	130.0	-6.80	0.04	0.00
P-59	1,028.4	J-44	J-2	12.0	Ductile Iron	130.0	240.95	0.68	0.19
P-60	1,752.9	J-8	J-47	12.0	Ductile Iron	130.0	-177.43	0.50	0.18
P-61	2,578.0	J-47	J-44	12.0	Ductile Iron	130.0	-177.43	0.50	0.27
P-62	1,348.5	J-44	J-48	12.0	Ductile Iron	130.0	-418.38	1.19	0.68
P-63	2,660.2	J-48	J-49	12.0	Ductile Iron	130.0	-418.38	1.19	1.34
P-64	1,326.6	J-49	J-50	12.0	Ductile Iron	130.0	-772.55	2.19	2.08
P-65	5.0	R-1	J-50	99.0	Ductile Iron	130.0	772.55	0.03	0.00

Junction Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
150	J-50	1,236.00	0.00	1,341.95	45.84
148	J-49	1,227.00	354.17	1,339.87	48.83
143	J-47	1,223.00	0.00	1,337.58	49.57
108	J-36	1,219.70	0.00	1,337.01	50.76
104	J-34	1,219.50	16.84	1,337.01	50.84
110	J-37	1,219.20	21.56	1,337.01	50.97
102	J-33	1,219.00	24.51	1,337.01	51.06
96	J-30	1,218.60	16.25	1,337.02	51.24
98	J-31	1,218.30	10.35	1,337.02	51.37
43	J-8	1,218.50	0.00	1,337.40	51.44
94	J-29	1,218.00	10.35	1,337.05	51.51
100	J-32	1,217.60	12.12	1,337.02	51.67
41	J-7	1,217.60	0.00	1,337.08	51.70
114	J-38	1,217.40	18.02	1,337.02	51.75
90	J-28	1,217.30	22.74	1,337.07	51.82
146	J-48	1,218.00	0.00	1,338.52	52.14
116	J-39	1,216.50	11.53	1,337.04	52.15
39	J-6	1,216.50	0.00	1,337.06	52.16
138	J-44	1,217.00	0.00	1,337.84	52.28
121	J-41	1,216.20	7.99	1,337.05	52.29
118	J-40	1,215.90	16.84	1,337.05	52.42
84	J-25	1,215.80	15.66	1,337.06	52.46
81	J-24	1,215.70	5.62	1,337.06	52.51
37	J-5	1,215.60	0.00	1,337.06	52.55
35	J-4	1,215.50	0.00	1,337.06	52.60
124	J-42	1,215.50	20.97	1,337.07	52.60
70	J-21	1,215.10	16.84	1,337.05	52.76
88	J-27	1,215.00	6.21	1,337.06	52.81
67	J-20	1,214.90	15.66	1,337.05	52.85
55	J-14	1,214.80	6.21	1,337.05	52.89
65	J-19	1,214.70	8.58	1,337.05	52.93
79	J-23	1,214.50	6.80	1,337.05	53.02
33	J-3	1,214.51	0.00	1,337.13	53.05
126	J-43	1,214.30	19.79	1,337.09	53.13
63	J-18	1,214.00	6.80	1,337.05	53.24
53	J-13	1,214.00	20.38	1,337.05	53.24
45	J-9	1,214.00	28.65	1,337.09	53.25
59	J-16	1,213.80	18.02	1,337.05	53.32
50	J-12	1,213.50	19.79	1,337.06	53.46
31	J-2	1,213.00	0.00	1,337.66	53.93
46	J-10	1,212.40	13.30	1,337.06	53.93

Reservoir Table - Time: 0.00 hours

ID	Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
134	R-1	1,341.95	772.55	1,341.95

Venida

Maximum Day Demand + Fire Flow for All Phases

Fire Flow Results Table - Time: 0.00 hours

Label	Demand (gpm)	Flow (Total Available) (gpm)	Flow (Total Needed) (gpm)	Pressure (Calculated Zone Lower Limit @ Total Flow Needed) (psi)	Pressure (Calculated Residual) (psi)	Pipe w/ Maximum Velocity	Velocity of Maximum Pipe (ft/s)	Fire Flow (Total Upper Limit) (gpm)
J-2	0.00	1,001.00	1,000.00	41.63	45.25	P-64	4.13	1,001.00
J-3	0.00	1,001.00	1,000.00	41.03	43.08	P-2	4.81	1,001.00
J-4	0.00	1,001.00	1,000.00	40.79	42.12	P-2	4.65	1,001.00
J-5	0.00	1,001.00	1,000.00	40.82	41.97	P-2	4.57	1,001.00
J-6	0.00	1,001.00	1,000.00	40.76	41.49	P-2	4.48	1,001.00
J-7	0.00	1,001.00	1,000.00	40.66	41.44	P-2	4.34	1,001.00
J-8	0.00	1,001.00	1,000.00	40.55	41.53	P-64	4.13	1,001.00
J-9	16.85	1,017.85	1,016.85	40.98	42.46	P-2	4.75	1,017.85
J-10	7.82	1,008.82	1,007.82	40.97	41.31	P-2	4.72	1,008.82
J-12	11.64	1,012.64	1,011.64	40.96	42.24	P-2	4.70	1,012.64
J-13	11.99	1,012.99	1,011.99	40.91	42.15	P-2	4.64	1,012.99
J-14	3.66	1,004.66	1,003.66	40.87	41.64	P-2	4.59	1,004.66
J-16	10.60	1,011.60	1,010.60	40.87	41.71	P-2	4.57	1,011.60
J-18	4.00	1,005.00	1,004.00	40.86	41.87	P-2	4.56	1,005.00
J-19	5.04	1,006.04	1,005.04	40.85	41.80	P-2	4.56	1,006.04
J-20	9.21	1,010.21	1,009.21	40.84	41.75	P-2	4.54	1,010.21
J-21	9.91	1,010.91	1,009.91	40.85	41.96	P-2	4.58	1,010.91
J-23	4.00	1,005.00	1,004.00	40.87	40.01	P-57	6.41	1,005.00
J-24	3.31	1,004.31	1,003.31	40.78	41.68	P-2	4.50	1,004.31
J-25	9.21	1,010.21	1,009.21	40.72	41.06	P-2	4.42	1,010.21
J-27	3.66	1,004.66	1,003.66	40.71	41.48	P-2	4.40	1,004.66
J-28	13.38	1,014.38	1,013.38	40.69	40.80	P-32	4.45	1,014.38
J-29	6.09	1,007.09	1,006.09	40.01	40.52	P-33	4.58	1,007.09
J-30	9.56	1,010.56	1,009.56	39.53	39.76	P-2	4.49	1,010.56
J-31	6.09	1,007.09	1,006.09	39.63	39.98	P-2	4.49	1,007.09
J-32	7.13	1,008.13	1,007.13	39.61	39.98	P-2	4.51	1,008.13
J-33	14.42	1,015.42	1,014.42	39.07	39.11	P-2	4.51	1,015.42
J-34	9.91	1,010.91	1,009.91	38.82	38.65	P-2	4.51	1,010.91
J-36	0.00	1,001.00	1,000.00	38.92	38.46	P-2	4.50	1,001.00
J-37	12.68	1,013.68	1,012.68	38.93	38.78	P-2	4.50	1,013.68
J-38	10.60	1,011.60	1,010.60	39.78	40.34	P-2	4.53	1,011.60
J-39	6.78	1,007.78	1,006.78	40.30	41.17	P-2	4.59	1,007.78
J-40	9.91	1,010.91	1,009.91	40.55	41.65	P-2	4.63	1,010.91
J-41	4.70	1,005.70	1,004.70	40.64	41.29	P-2	4.67	1,005.70
J-42	12.34	1,013.34	1,012.34	40.80	41.57	P-2	4.73	1,013.34
J-43	11.64	1,012.64	1,011.64	40.89	42.38	P-2	4.75	1,012.64
J-44	0.00	1,001.00	1,000.00	41.90	44.53	P-64	4.13	1,001.00
J-47	0.00	1,001.00	1,000.00	42.00	40.18	P-64	4.13	1,001.00
J-48	0.00	1,001.00	1,000.00	44.01	46.32	P-64	4.13	1,001.00
J-49	208.33	1,209.33	1,208.33	45.84	46.82	P-64	4.13	1,209.33
J-50	0.00	1,001.00	1,000.00	49.40	45.84	P-64	1.29	1,001.00

TRAFFIC IMPACT ANALYSIS

Venida Single Family Residential Development
SEC of Papago Road and Green Road
Pinal County, Arizona

PREPARED FOR
CVL Consultants
4550 North 12th Street
Phoenix, Arizona 85014

PREPARED BY

UCG
United Civil Group

APPROVED BY:

PINAL COUNTY ENGINEER — DATE
PINAL COUNTY DEPAERTMENT OF PUBLIC WORKS

APPROVAL EXPIRES: — DATE

County Case Number: PZ-042021
1st Review by John Kraft 12/14/21

TRAFFIC IMPACT ANALYSIS

Venida Single Family Residential Development

SEC of Papago Road and Green Road
Pinal County, Arizona

October 5, 2021
Revision #1: April 15, 2022

County Case Number: PZ-042021
1st Review by John Kraft 12/14/21

UCG Project Number: TR21096

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I. INTRODUCTION AND SUMMARY

A. Purpose of the Report

United Civil Group was retained by CVL Consultants to perform this Traffic Impact Analysis (TIA) for the proposed Venida single family residential development. Venida is located south of Papago Road, north of Val Vista Road, west of SR347 and east of Green Road in Pinal County, Arizona. The development is planned to include 554 single family homes on 158.25 acres of agricultural land.

United Civil Group performed this TIA in general accordance with the requirements as specified in the Pinal County *Traffic Impact Assessment Guidelines & Procedures* dated January 2007, Arizona Department of Transportation Traffic Engineering Guidelines and Processes Section 240 Traffic Impact Analyses, locally accepted standards, and industry practice.

B. Study Objectives

This study is intended to investigate the existing and future traffic conditions and identify any potential roadway improvements necessary to serve the Venida development. Major study objectives of this traffic report are as follows:

- Determine the existing morning and evening peak hour traffic volumes at the study area intersections of Amarillo Valley Road/Papago Road, Green Road/Papago Road, Green Road/Val Vista Road and Papago Road/SR347.

- Analyze the existing study area intersections as well as the planned site access intersections for the development.

- Where applicable, recommend safety, intersection and/or roadway improvements sufficient to meet the needs of the development and adjacent roadway network due to the additional site generated traffic volumes.

C. Conclusions and Recommendations

The proposed Venida development is a single-family residential community. Venida will include 554 single family homes on 158.25 acres of agricultural land. The Venida development is planned to be constructed in two phases. Phase 1 includes 302 single family homes on 102 acres of land and Phase 2 is planned to include 242 homes on 56 acres of land.

Phase 1 of the development will be constructed and occupied by 2025 and Phase 2 by 2030. For this development, five-years after full buildout (2035) was analyzed based on Pinal County Traffic Impact Analysis Guidelines & Procedures to identify any foreseen traffic impacts five years after the site is fully constructed and occupied.

The proposed Venida development will have one main access on Papago Road Access A. Two accesses are proposed on the North-South Collector Road, Accesses B and D. One access is planned on the East-West Collector Road, Access E. Two accesses are planned on Green Road, Access F and G. All the site accesses are proposed as full movement accesses. The site access locations meet the Pinal County requirements for driveway spacing.

On a typical weekday, after full build-out, the development of 554 single family dwelling units on 158.25 acres of land is forecasted to generate 5,130 total daily trips, with 380 trips in the morning peak hour and 511 trips in the evening peak hour.

Half street improvements are planned along the boundary off site roadways. The half street cross sections include Papago Road and Green Road as minor arterial roadways with 55 feet of right of way. The North-South and East-West Collector Roadway cross sections should be designed as major collector roadways with 40 feet of right of way.

A traffic signal is warranted at the intersection of Papago Road/North-South Collector Road in 2030 using projected traffic volumes. Once the Venida development is built out, warrants should be completed using actual traffic counts to determine the need for a traffic signal in the future. When warranted using actual traffic data, the traffic signal should be installed. The development should be responsible for a portion of the cost of the signal, 25%.

Due to surrounding developments, traffic signals are required at some of the study area intersections. The Venida development is responsible for their proportionate share of 9.2% of the signal cost at the intersection of SR347/Papago Road. In addition, the development is responsible for 25% of the signal at the intersection of Green Road/Papago Road.

By year 2035, all of study area intersections and site accesses within Pinal County are anticipated to operate at an LOS or better, except for Papago Road/Access A which operates with delay in the morning and evening peak periods. Through and left-turning movements on stop-controlled minor roads and driveways that intersect with major streets typically experience greater delay for short periods of time in the peak hours due to the wait for acceptable gaps on the major street, while the free-flowing major streets experience minimal delay. Gaps in traffic provided by the signalized intersections of Papago Road/Green Road and Papago Road/Collector Road 1 are not accounted for in Vistro. These gaps will assist motorists in making a left turn from the minor roadway onto the major roadway.

During the evening by 2035, the intersection of SR347/Papago Road produces unacceptable delay as traffic volumes increase through the horizon years.

Proper intersection sight distance and sight triangles shall be provided and maintained at all site access driveways of the proposed development to give drivers exiting the site a clear view of oncoming traffic. The landscape and hardscape (monument signs) within the sight triangles must not obstruct the driver's view of the adjacent travel lanes.

Based on this TIA, the following roadway and intersection improvements are proposed.

PHASE 1 – 2025
By Venida

- Construct half street improvements along Papago Road at the site's northern boundary from Green Road east to the proposed ½ mile collector road. This improvement should provide 55 feet of right of way.
- Construct half street improvements on the North-South Collector Road from Papago Road south to East West Collector Road. This improvement should provide 40 feet of right of way.
- Construct half street improvements on the East-West Collector Road from the North-South Collector Road 1 to the Phase 2 boundary of the project. This improvement should provide 40 feet of right of way.
- Install dedicated right and exclusive left turn lanes at site accesses and study area intersections as recommended in Tables 10 and 11.
- Consider installing two-way-left-turn lanes on the North-South Collector Road and East-West Collector Road to accommodate vehicles turning left into the Venida Development.

By Others

- Widen the eastbound leg of the SR 347/Papago Road intersection to accommodate right and left turning vehicles.
- Construct a signal at the intersection of SR 347/Papago Road. Development to contribute 9.2% of the cost of the signal.
- Construct a signal at the intersection of Papago Road/Green Road. Development to contribute proportionate share 25% of the cost of the signal.

PHASE 2 – 2030
By Venida

- Construct half street improvements along Papago Road at the site's northern boundary from Access A west to Green Road. This improvement should provide 55 feet of right of way.
- Construct half street improvements along Green Road at the site's western boundary from Papago Road to the East-West Collector Road. This improvement should provide 75 feet of right of way.

- Construct half street improvements on the East-West Collector Road from the Phase 2 boundary of the project to Green Road. This improvement should provide 40 feet of right of way.
- Install dedicated right and exclusive left turn lanes at site accesses and study area intersections as recommended in Tables 10 and 11 and shown on the Recommendations Figure.

By Others

- Construct a traffic signal at the intersection of Papago Road/North-South Collector Road 1. Development to contribute proportionate share of signal cost of 25%.

II. PROPOSED DEVELOPMENT

A. Site Location

The Venida single family residential development is planned for the undeveloped parcel of land located south of Papago Road, north of Val Vista Road, west of SR 347 and east of Green Road in Pinal County, Arizona. **Figures 1 and 2** present the location of the proposed Venida development within the context of the immediate area and its location within Pinal County.

B. Land Use

The approximate 158-acre development is currently agricultural land. In the future, Venida is planned as a residential single-family development with a total of 554 single family homes. **Figure 3** presents the site plan for the Venida Development.

C. Phasing and Timing

The Venida development is planned to be constructed in two phases. Phase 1 includes 317 single family homes to be constructed by 2025. Phase 2 is planned to include 237 homes by 2030. Five years after opening was also included in this TIA for analysis, year 2035.

D. Site Accessibility

The Venida development is planned to have six accesses as follows:

- **Access A** will be constructed as a minor collector road and the main access into the Venida single-family residential community. Access A is located on Papago Road approximately 0.2 mile east of Green Road. Access A/Papago Road is planned as a full movement intersection to be built with Phase 1 of the development.
- **Access B** will be constructed as a full access into the ½ mile north-south collector roadway. Access B is proposed 390 feet south of Papago Road. Access B/North-South Collector Road is planned as a full movement intersection to be built with Phase 1 of the development.
- **Access D** will be constructed as a full access into the ½ mile North-South Collector Roadway. Access D is proposed 1510 feet south of Access B and 780 feet north of the ½ mile East-West Collector Road. Access D/North-South Collector Road is planned as a full movement intersection to be built with Phase 1 of the development.
- **Access E** will be constructed as a minor collector roadway that ties to Access A. Access E is located 900 feet west of the North-South Collector Roadway and 1,735 feet east of Green Road. Access E/ East-West Collector Roadway is planned as a full movement intersection to be built with Phase 1 of development.
- **Access F** will be constructed as a full access into Venida and is located on Green Road approximately 710 feet north of East-West Collector Roadway. Access F/Green Road is planned as a full movement intersection to be built with Phase 2 of the development.

- Access G will be constructed as a partial access and is located on Green Road approximately 550 feet south of Papago Road. Access G/Green Road is planned as a right in/right out movement intersection to be built with Phase 2 of the development. In the future, this intersection should be restricted to right in/right out by the construction of a raised median on Green Road.

Figure 3 illustrates the site accesses for the Venida Development.

All site access points should be designed per Pinal County Subdivision & Infrastructure Design Manual. Per the Pinal County Access Management Manual Final Report dated February 2017, driveway spacing criteria per Table 1 (Access Management Manual) is met for all accesses proposed. Figure 3 illustrates the layout of the proposed Venida development in relation to the location of the site access points. In addition, Figure 12 shows the driveway spacing dimensions from approximate centerline to centerline of the driveways or roadways.

ArcGIS - 2022

Figure 1: Vicinity Map

United Civil Group

Permission for commercial use granted by Google Earth

Figure 2: Aerial View

UCG
United Civil Group

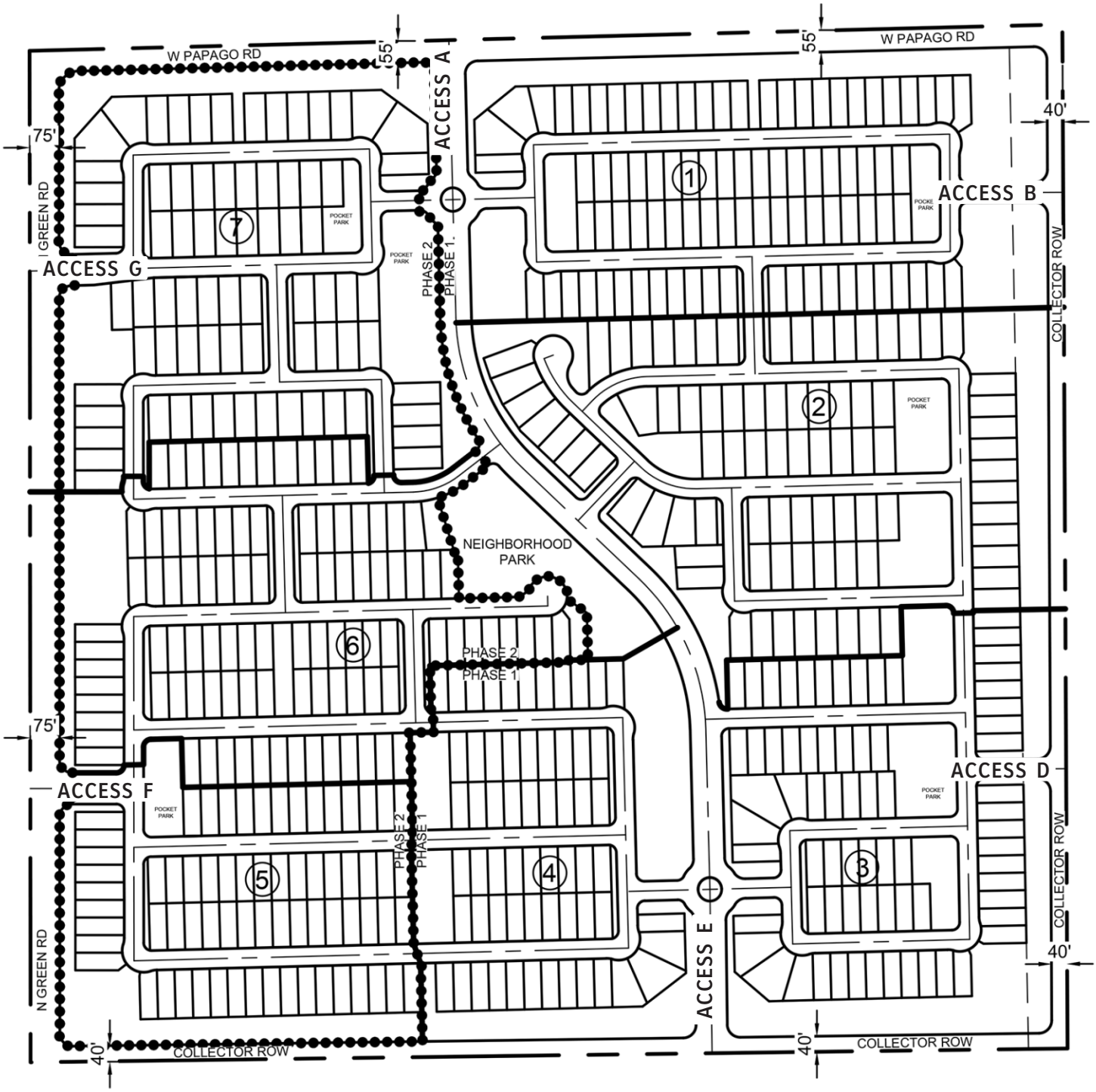


Figure 3: Site Plan

III. STUDY AREA CONDITIONS

A. Study Area

Based on the forecasted trip generation of the Venida development, the proposed development falls under a Category IIA – Moderate Development per the County's *Traffic Impact Assessment Guidelines & Procedures, January 2007*. According to these guidelines and through discussions with the Pinal County staff, the study area includes all state highways, signalized intersections and major unsignalized intersections within 1 mile of the site boundary. Therefore, the intersections of:

- SR347/Papago Road
- Papago Road/Green Road
- Papago Road/Amarillo Valley Road
- Green Road/Val Vista Road and
- All site access intersections are included in the study area.

B. Study Area Land Use

The following describes the existing land uses near the subject site.
SUBJECT SITE: Undeveloped vacant land
NORTH: Papago Road followed by agricultural land
SOUTH: Agricultural land
EAST: Agricultural land
WEST: Green Road followed by proposed single family homes

C. Anticipated Future Development and Planned Improvements

Four new residential developments are planned within the vicinity of the Venida Development.

Palomino Ranch is located north of Papago Road, south of the Ak-Chin Indian Community, west of Amarillo Valley Road and east of White Road in Pinal County, Arizona. The development is planned to include 2,102 single family homes, an approximate 12-acre elementary school site with 600 students, and an approximate 14-acre junior high school site with 600 students.

Amarillo Creek is located north of Papago Road, south of the Peters and Nall Road alignment, east of Amarillo Valley Road and west of Green Road in Pinal County, Arizona. The development is planned to include 2,149 single family homes, an approximate 12-acre elementary school site with 600 students, and an approximate 14-acre junior high school site with 600 students.

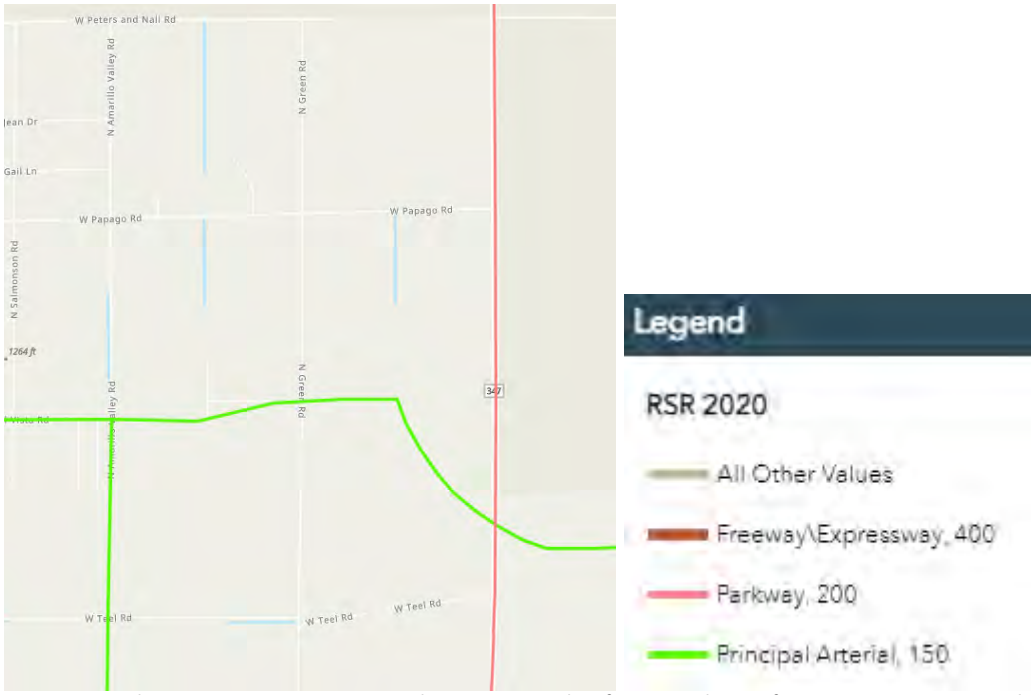
Tresana is located north of Val Vista Road, south of Papago Road, east of the Liebre Road alignment and west of Green Road in Pinal County, Arizona. The development is planned to include 1,140 single family homes and an approximate 7-acre school site with 600 students.

Pecan Woods is located on the southeast corner of Papago Road and Amarillo Valley Road in Pinal County, Arizona. The development is planned to include 581 single-family detached homes.

Trip generation and recommendations from these four developments are included in the background traffic for this Venida development TIA.

IV. EXISTING ROADWAY CONDITIONS

A. PHYSICAL CHARACTERISTICS



Source: Pinal County Community Development Roads of Regional Significance, 2020, accessed April 14, 2022.

Papago Road, on the mile section, is classified as an east-west principal arterial in accordance with Pinal County's Small Area Transportation Study 2006. In the Regionally Significant Routes Report for Safety and Mobility, Papago Road is shown as an "other roadway". Adjacent to the subject site Papago Road is constructed as a four-lane section with two lanes in the westbound direction and one lane in the eastbound direction, separated by a two way left turn lane. Half street improvements have been completed on the north side of Papago Road with a bike lane, curb, gutter, and sidewalk. The posted speed limit on Papago Road is 45 mph.

Green Road, located on the mile section, is classified as a north-south principal arterial in accordance with Pinal County's Small Area Transportation Study 2006. In the Regionally Significant Routes Report for Safety and Mobility, Green Road is shown as an "other roadway". Adjacent to the subject site, Green Road is unpaved with one-lane in each direction. Therefore, Green Road is noted as a minor arterial.

Amarillo Valley Road, located on the mile section, is classified as a north-south principal arterial in accordance with Pinal County's Small Area Transportation Study 2006. In the Regionally Significant Routes Report for Safety and Mobility, Amarillo Valley Road is shown as a "principal arterial" south of Val Vista Road. Amarillo Valley Road is paved for a third of a mile north of Papago Road with one lane in each direction.

Val Vista Road, located on the mile section, is classified as a regionally significant parkway according to the Regionally Significant Routes for Safety and Mobility Final Report dated December 2008. Val Vista Road is unpaved with one-lane in each direction. The insert above illustrates Val Vista Road as a principal arterial within the vicinity of the site.

The intersection of **SR347/Papago Road** operates as an unsignalized intersection with the stop condition on the eastbound approach. The northbound approach consists of an exclusive left turn lane (165 feet of storage and a 180-foot taper) and two through lanes. The southbound approach consists of two through lanes and a dedicated right turn lane (175 feet of storage and a 200-foot taper). The eastbound approach consists of one shared left-through-right lane as is constructed as a box culvert over existing irrigation. Arizona Department of Transportation (ADOT) controls and maintains the intersection of SR347/Papago Road because it is under their jurisdiction.

The intersection of **Papago Road/Green Road** operates as two way stop controlled on the north- and southbound approaches. The north and southbound approaches are dirt roadways that currently service the agricultural land. The east and westbound approaches consist of one shared left, through, right lane. Pinal County controls and maintains the intersection of Papago Road/Green Road.

The intersection of **Papago Road/Amarillo Valley Road** operates as two-way stop controlled on the north- and southbound approaches. The northbound approach consists of a shared left-through-right lane. The southbound lane consists of a left turn lane and a shared through-right lane. The east- and westbound lanes of a shared left-through-right lane. Pinal County controls and maintains the intersection of Papago Road/Amarillo Valley Road.

The intersection of **Val Vista Avenue/Green Avenue** consists of dirt agricultural roadways that service the surrounding farmland.

B. Existing Traffic Volumes

On June 2, 2021, data was gathered at the study area intersections of SR347/Papago Road, Papago Road/Green Road, Papago Road/Amarillo Valley Road and Green Road/Val Vista Road during the morning peak period (7:00AM – 9:00AM) and evening peak period (4:00PM – 6:00PM). Data was collected at the intersection of Ralston Road/Papago Road on September 8, 2021.

The resulting morning and evening peak hour traffic volumes at the study area intersections along with the existing intersection geometrics are presented in **Figure 4**. Complete traffic volume data can be found in *Appendix A: Traffic Counts*.

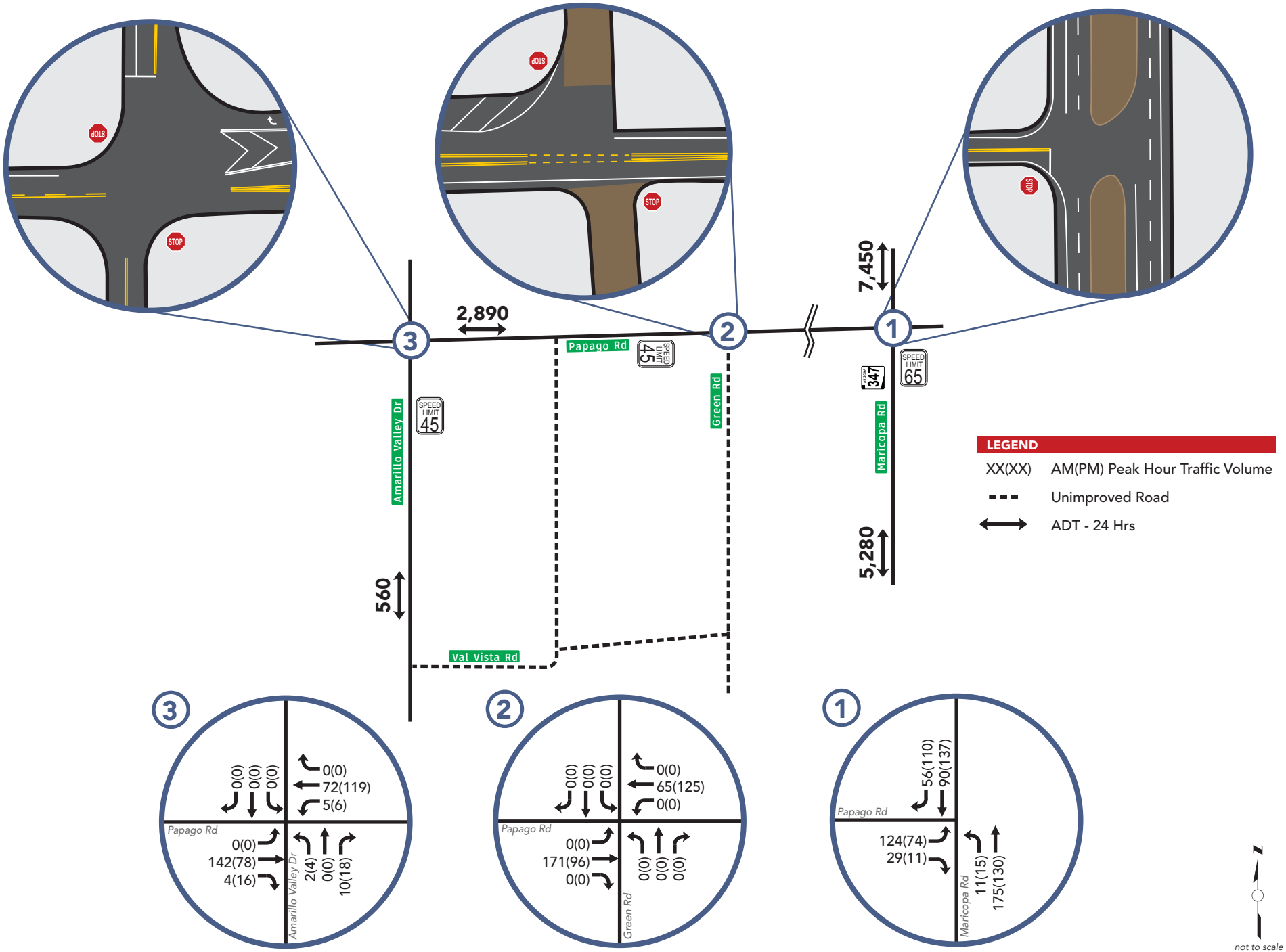


Figure 4: Existing Conditions - Year 2021

United Civil Group

C. Existing Traffic Observations and Issues

Traffic conditions and operations were observed during the study's morning and evening peak periods and no traffic issues were noted.

D. Crash Data

Five years of crash data (January 2016 – December 2020) were obtained from the Arizona Department of Transportation (ADOT) Arizona Crash Information System (ACIS). The data was queried for the intersections of:

- SR347/Papago Road
- Green Road/Papago Road
- Amarillo Valley Road/Papago Road

An offset of 350 feet was used on all legs of each intersection. A total of 10 crashes were recorded at the intersection SR347/Papago Road and 0 crashes were recorded at the intersection of Green/Papago Road during the 5-year analysis period. No fatalities were reported at intersections of SR347/Papago Road and Papago Road/Amarillo Valley Road. The crash data are summarized in **Tables 1 and 2** for the intersection of SR347/Papago Road and Papago Road/Amarillo Valley Road.

Table 1: Injury Severity

Year	Fatal	Suspected Serious Injury	Suspected Minor Injury	Possible Injury	No Injury	Total
SR347/Papago Road						
2016			2		1	**3**
2017			1			**1**
2018		1		1	1	**3**
2019			1			**1**
2020					1	**1**
Total	**0**	**1**	**4**	**1**	**3**	**9**
Papago Road/Amarillo Valley Road						
2020					**1**	**1**
Total	**0**	**0**	**0**	**0**	**1**	**1**

TABLE 2: COLLISION MANNER

Year	Single Vehicle	Angle	Left Turn	Rear End	Head On	Sideswipe Same Direction	Sideswipe Opposite Direction	Rear to Side	Unknown /Other	Total
SR347/Papago Road										
2016		1	1			1				3
2017	1									1
2018		1							2	3
2019	1									1
2020							1			1
Total	**2**	**2**	**1**	**0**	**0**	**1**	**1**	**0**	**2**	**9**
Papago Road/Amarillo Valley Road										
2020		**1**								**1**
Total	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**

Based on the data provided in ACIS, it is difficult to determine if crash patterns exist at the study area intersection due to the variability in the data. To determine if crash patterns exist, individual crash records would be required.

E. Intersection Level of Service Analyses

E.1 HCM Capacity Analyses and Levels of Service

Intersection capacity analysis is a principal tool used in traffic engineering. Operation is characterized according to the amount of delay at an intersection approach and quantified into a level of service (LOS). The intersection LOS was determined using the methodologies presented in the Transportation Research Board's Highway Capacity Manual (HCM). The LOS grades quantify and categorize a driver's discomfort, frustration, fuel consumption, and travel times experienced because of intersection control and the resulting traffic queuing. Per the HCM, the signalized and unsignalized (all-way stop controlled or two-way stop-controlled intersection) delay and associated LOS is presented in **Table 3**. Pinal County strives to obtain a level of service C or better for both signalized and unsignalized intersection overall operations. Intersections having a LOS D, E, or F may warrant improvements or traffic reductions.

Table 3: Intersection Levels of Service and Delay

Level of Service	Description	Signalized Delay (Sec/Veh)	Unsignalized Delay (Sec/Veh)
A	Minimal control delay, traffic operates at primary free flow conditions, unimpeded movement within traffic stream	≤ 10	≤ 10
B	Minor control delay at signalized intersections, traffic operates at a fairly unimpeded level with slightly restricted movement within traffic stream	> 10 and ≤ 20	> 10 and ≤ 15
C	Moderate control delay, movement within traffic stream more restricted than LOS B, formation of queues contributes to lower average travel speeds	> 20 and ≤ 35	> 15 and ≤ 25
D	Considerable control delay that may be substantially increased by small increases in flow, average travel speeds continue to decrease.	> 35 and ≤ 55	> 25 and ≤ 35
E	High control delay, average travel speed no more than 22 percent of free flow speed	> 55 and ≤ 80	> 35 and ≤ 50
F	Extremely high control	> 80	> 50

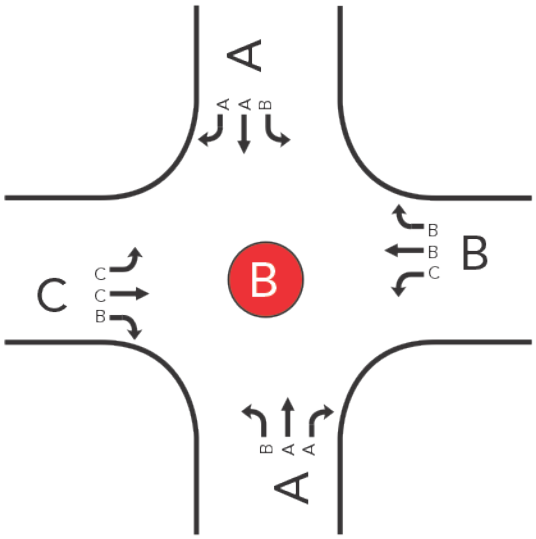
Source: Highway Capacity Manual 2010

For signalized and all-way stop controlled intersections, LOS is calculated for a movement (e.g., left, through, right), for the approach (e.g., northbound, southbound, eastbound, westbound) and for the overall intersection.

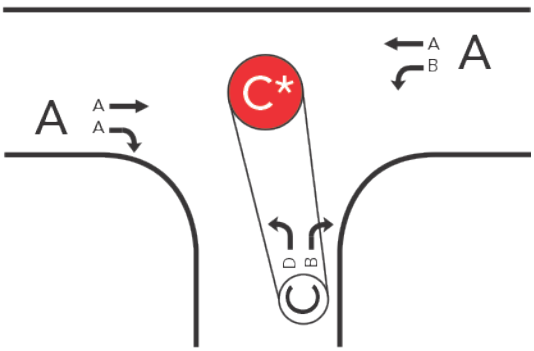
For two-way stop-controlled intersections, LOS is calculated for a movement and for the approach. However, for the overall intersection, LOS is reported as the lowest approach within the intersection. This is because most drivers are on the major roadway and do not experience delay traversing through the intersection. The example below illustrates the various LOS calculations completed for intersections.

EXAMPLE:

Signalized & All-Way Stop Controlled



Two-Way Stop Controlled



*Reported as approach LOS

Source: United Civil Group, 2021

E.2 EXISTING INTERSECTION LEVEL OF SERVICE

The level of service (LOS) and average delay at the existing study area intersections were evaluated using the 2021 intersection volumes, lane geometry, and existing traffic control as presented in Figure 4. PTV Vistro traffic modeling software, employing the methodologies as presented in the Highway Capacity Manual (HCM), was utilized for the capacity analyses to obtain the existing conditions levels of service. Summaries of the Vistro output calculations are included in *Appendix B: Capacity Analyses*.

The results of the existing levels of service analysis are presented in **Table 4**.

TABLE 4: 2021 EXISTING CONDITIONS INTERSECTION LEVELS OF SERVICE

Intersection Location	NB LOS				SB LOS				EB LOS				WB LOS				Overall Intersection
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	AvgDelay/ LOS*
SR347/Papago Road – One Way Stop Controlled																	
AM Peak Hour	A	A	-	A	-	A	A	A	B	-	B	B	-	-	-	-	11.14 B*
PM Peak Hour	A	A	-	A	-	A	A	A	B	-	A	B	-	-	-	-	10.70 B*
Green Road/Papago Road – Two Way Stop Controlled																	
AM Peak Hour	-	-	-	-	-	-	-	-	-	A	-	A	-	A	-	A	0.00 A*
PM Peak Hour	-	-	-	-	-	-	-	-	-	A	-	A	-	A	-	A	0.00 A*
Amarillo Valley Road/Papago Road – Two Way Stop Controlled																	
AM Peak Hour	B	-	A	A	-	-	-	-	-	A	A	A	A	A	-	A	9.30 A*
PM Peak Hour	B	-	A	A	-	-	-	-	-	A	A	A	A	A	-	A	9.08 A*

*The overall LOS letter grade for two-way stop-controlled intersections is shown as the worst approach.

As shown in Table 4 above, the study area intersections currently operate at acceptable levels of service, LOS B, in the morning and evening peak hours.

V. PROJECTED TRAFFIC

A. TRIP GENERATION

Estimates of the traffic volumes that will be generated by the development were determined from transportation planning data taken from the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition, 2017*. The ITE rates are based on studies that measure trip generation characteristics for various types of land uses. The rates are expressed in terms of trips per unit of land use type.

The ITE land use codes utilized for the Venida development were ITE Land Use Codes as follows:

Single-family Detached Housing (210) - includes all single-family detached homes on individual lots. A typical site surveyed is a suburban subdivision.

Table 5 presents the estimated daily and peak hour vehicle trips generated by the Venida development for a typical weekday after full build out of each phase.

TABLE 5: PROPOSED DEVELOPMENT TRIP GENERATION

Land Use	ITE Code	Units	Total Size	Daily	AM Peak			PM Peak		
					Total	In	Out	Total	In	Out
PHASE 1										
Single-Family Detached Housing	210	Dwelling Units	302	2,848	211	55	156	284	179	105
PHASE 2										
Single-Family Detached Housing	210	Dwelling Units	242	2,282	169	44	125	227	143	84
FULL BUILD OUT TOTAL				**5,130**	**380**	**99**	**281**	**511**	**322**	**189**

Single-Family Detached Housing – ITE LUC 210

Daily	T = 9.44 x (DU)	50% entering, 50% exiting
AM Peak Hour	T = 0.74 x (DU)	25% entering, 75% exiting
PM Peak Hour	T = 0.99 x (DU)	63% entering, 37% exiting

On a typical weekday, after full build-out, the development is forecasted to generate 5,130 total daily trips, with 380 trips in the morning peak hour and 511 trips in the evening peak hour.

B. Trip Distribution

The trip distribution procedure determines the general pattern of travel for vehicles entering and leaving the subject site and the study area. The assumed trip distribution percentages for the development are shown in **Table 6**. For a development of this type, these percentages are mainly based on the type of land uses of the development, the location of the site within Pinal County, and the connectivity of the site to the region.

For the residential development, distribution of the home-to-work trips is generally based on the roadway connectivity and employment centers within 15 miles of the development. Pinal County's Small Area Study was utilized to determine future employment and residential areas surrounding the Venida development. Trips generated from the single-family residential development were routed to and from future surrounding employment areas.

According to the City of Maricopa Future Land Use Map as presented in *Appendix C*, low density residential, industrial/manufacturing, and open space is planned west of the development. Therefore, it is assumed that 10 percent of future residential trips will travel west to employment and shopping areas both north and south of the site. By full buildout of the site in 2035, it is assumed that more development will be built south of the site on SR347 and west of the site on Papago Road evening out the distribution of trips generated by the development.

Table 6: Trip Distribution Percentages

Direction	Trip Distribution Percentage	
	Arriving From	Departing To
Phase 1		
Single Family Residential		
SR347 north of Papago Road	70%	70%
SR347 south of Papago Road	20%	20%
Papago Road west of Amarillo Valley Road	10%	10%
Phase 2		
Single Family Residential		
SR347 north of Papago Road	25%	25%
SR347 south of Papago Road	25%	25%
Papago Road west of Amarillo Valley Road	15%	15%
Amarillo Valley Road south of Papago Road	25%	25%
Green Road south of Papago Road	10%	10%

Figures 5 through 8 present the assigned site generated traffic to and from Palomino Ranch for each phase of the proposed development.

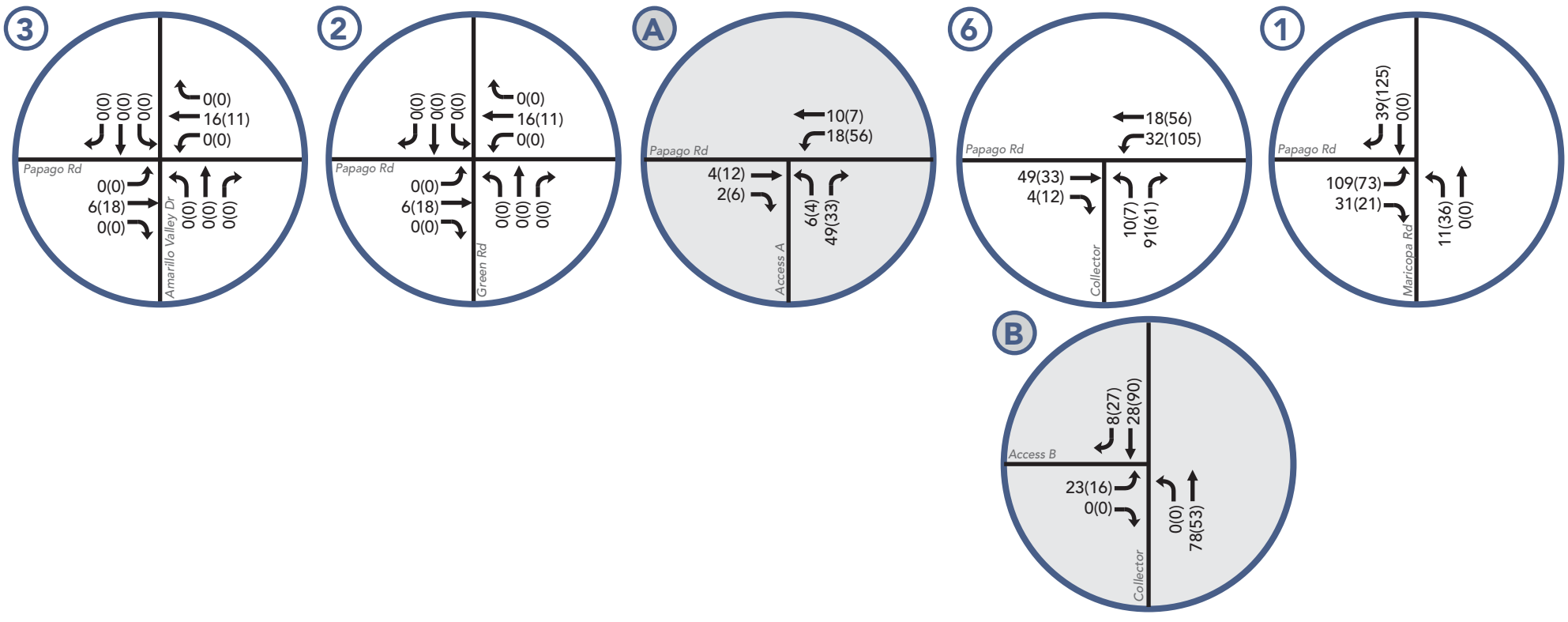


Figure 5: Site Generated Traffic and Trip Distribution - Phase 1

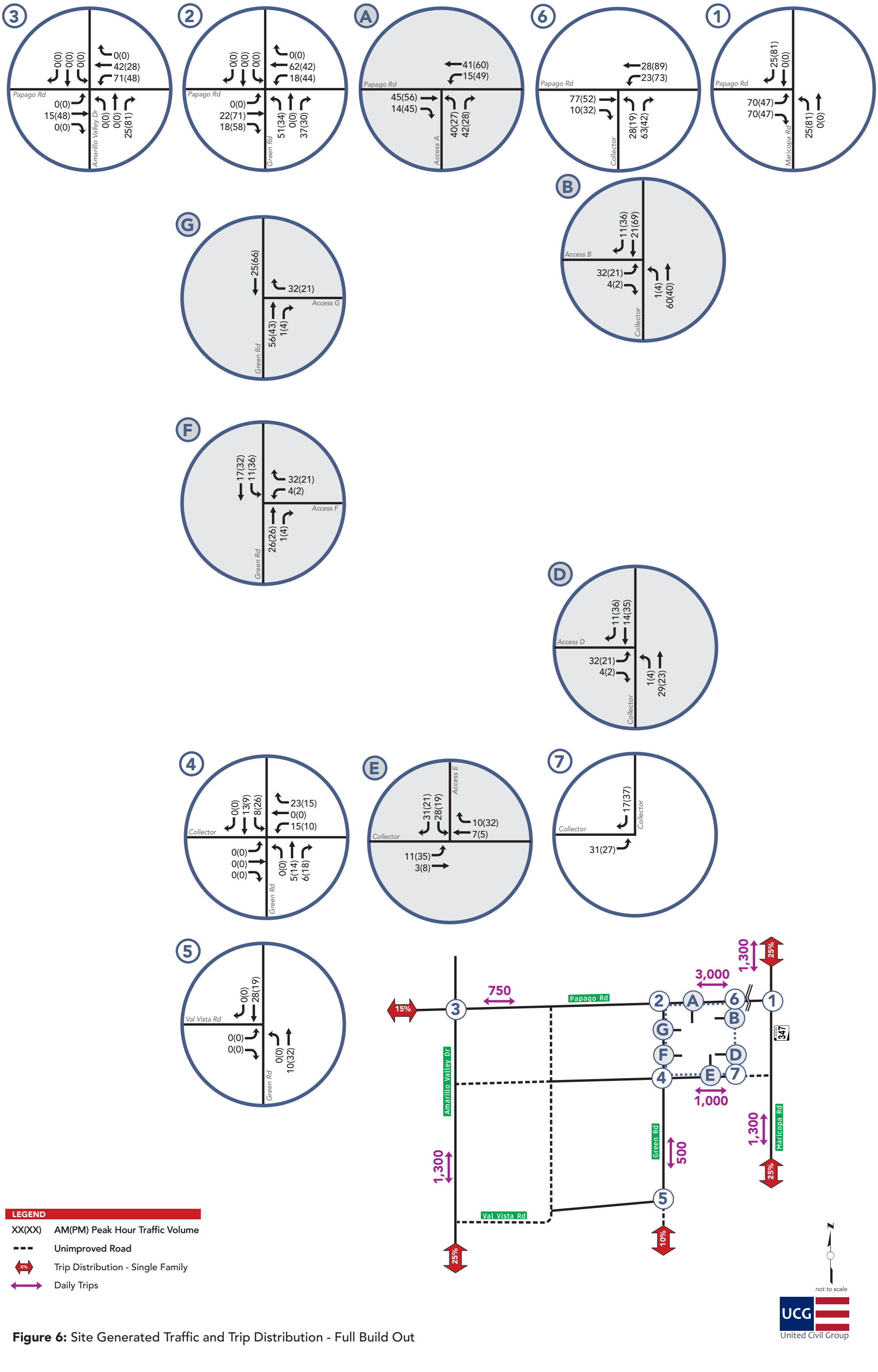


Figure 6: Site Generated Traffic and Trip Distribution - Full Build Out

C. Projected Background Traffic

Non-site or background traffic volumes representing the amount of traffic estimated to be on the area roadway network without the proposed development within the study area were projected for the horizon years of the development, year 2025 (Phase 1), year 2030 (Phase 2 – full buildout), and year 2035 (5 years after full build-out). A yearly ambient growth rate for the area of two percent was assumed through each horizon year.

In addition to the yearly ambient growth rate, the assumed trip generation for the Tresana, Amarillo Creek, Pecan Woods, and Palomino developments located within the vicinity of the site have been included within the background traffic analyses. The estimated site generated trips for the other developments are included in *Appendix D: Other Surrounding Developments*.

Capacity analyses at the existing study area intersections were performed for the forecasted background traffic for the horizon years of the study, as presented in Figures 7 through 9. These traffic volumes do not include site generated traffic. Tables 7 through 9 below present the background levels of service at the study area intersection without the proposed Venida development. Complete capacity analyses are provided in *Appendix B: Capacity Analyses*.

By 2025, the intersections of SR347/Papago Road, Amarillo Valley Road/Papago Road and Green Road/Papago Road were signalized due to the forecasted traffic that will be generated by proposed development within the area and other recommendations within other reports.

TABLE 7: 2025 BACKGROUND CONDITIONS INTERSECTION LEVELS OF SERVICE

Intersection Location	NB LOS				SB LOS				EB LOS				WB LOS				Overall Intersection
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	AvgDelay/ LOS*
SR347/Papago Road – Signalized																	
AM Peak Hour	D	D	-	D	-	D	E	E	D	-	A	C	-	-	-	-	36.78 D
PM Peak Hour	B	B	-	B	-	B	F	F	F	-	C	F	-	-	-	-	99.07 F
Green Road/Papago Road – Signalized																	
AM Peak Hour	D	-	D	D	-	-	-	-	-	A	A	A	A	A	-	A	5.74 A
PM Peak Hour	D	-	D	D	-	-	-	-	-	A	A	A	A	A	-	A	3.47 A
Amarillo Valley Road/Papago Road – Signalized																	
AM Peak Hour	C	A	D	D	D	A	C	D	A	A	A	A	A	A	A	A	16.58 B
PM Peak Hour	C	A	D	D	D	A	C	D	A	A	A	A	A	A	A	A	12.11 B
Green Road/Adjacent Driveway – Two-Way Stop Controlled																	
AM Peak Hour	-	A	-	A	-	A	A	A	A	-	-	A	-	-	-	-	9.48 A*
PM Peak Hour	-	A	-	A	-	A	A	A	A	-	-	A	-	-	-	-	9.59 A*
Green Road/Val Vista Road – One-Way Stop Controlled																	
AM Peak Hour	-	-	-	-	-	-	A	A	A	-	-	A	-	-	-	-	8.56 A*
PM Peak Hour	-	-	-	-	-	-	A	A	A	-	-	A	-	-	-	-	8.55 A*

*The overall LOS letter grade for two-way stop-controlled intersections is shown as the worst approach.

As shown in Table 7, the existing study area intersections are projected to operate at acceptable levels of service, LOS C or better, during the morning and evening peak hours of the 2025 background condition year, except for the intersection of SR347/Papago Road. During the evening peak hour, traffic may experience delay as shown by the overall LOS F.

TABLE 8: 2030 BACKGROUND CONDITIONS INTERSECTION LEVELS OF SERVICE

Intersection Location	NB LOS				SB LOS				EB LOS				WB LOS				Overall Intersection
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	AvgDelay/ LOS*
SR347/Papago Road – Signalized																	
AM Peak Hour	C	C	-	C	-	D	E	E	C	-	B	C	-	-	-	-	29.19 C
PM Peak Hour	B	A	-	B	-	A	F	F	F	-	D	F	-	-	-	-	236.15 F
Green Road/Papago Road – Signalized																	
AM Peak Hour	D	-	D	D	-	-	-	-	-	B	A	B	C	A	-	A	16.85 B
PM Peak Hour	D	-	D	D	-	-	-	-	-	A	A	A	C	A	-	A	10.85 B
Amarillo Valley Road/Papago Road – Signalized																	
AM Peak Hour	B	D	D	D	C	C	C	C	A	B	B	B	A	B	B	B	19.99 B
PM Peak Hour	C	D	D	D	D	C	C	D	A	B	B	B	A	B	D	C	26.80 C
Green Road/Adjacent Driveway – Two-Way Stop Controlled																	
AM Peak Hour	-	A	-	A	-	A	A	A	B	-	-	B	-	-	-	-	13.00 B*
PM Peak Hour	-	A	-	A	-	A	A	A	B	-	-	B	-	-	-	-	13.96 B*
Green Road/Val Vista Road – One-Way Stop Controlled																	
AM Peak Hour	-	-	-	-	-	-	A	A	A	-	-	A	-	-	-	-	9.22 A*
PM Peak Hour	-	-	-	-	-	-	A	A	A	-	-	A	-	-	-	-	9.33 A*

*The overall LOS letter grade for two-way stop-controlled intersections is shown as the worst approach.

By year 2030, the evening peak hour at the intersection of SR347/Papago Road produces unacceptable delay in the evening peak hour as shown by the LOS F. This is due to the high volume of southbound right turn movements returning to the residential development. In addition, the high volume of left turns in the eastbound approach at the intersection show delay.

TABLE 9: 2035 BACKGROUND CONDITIONS INTERSECTION LEVELS OF SERVICE

Intersection Location	NB LOS				SB LOS				EB LOS				WB LOS				Overall Intersection
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	AvgDelay/ LOS*
SR347/Papago Road – Signalized																	
AM Peak Hour	E	C	-	D	-	C	D	D	C	-	C	C	-	-	-	-	31.32 C
PM Peak Hour	F	A	-	F	-	B	F	F	F	-	F	F	-	-	-	-	252.78 F
Green Road/Papago Road – Signalized																	
AM Peak Hour	C	D	D	D	C	D	D	C	A	C	A	C	C	A	A	B	23.68 C
PM Peak Hour	D	C	D	D	C	D	D	C	A	C	B	B	C	F	A	D	33.68 C
Amarillo Valley Road/Papago Road – Signalized																	
AM Peak Hour	B	D	D	C	D	C	C	D	B	B	B	B	B	B	B	B	24.76 C
PM Peak Hour	C	D	D	D	D	C	C	D	B	B	B	B	B	B	B	B	23.35 C
Green Road/Adjacent Driveway – Two-Way Stop Controlled																	
AM Peak Hour	-	A	-	A	-	A	A	A	B	-	-	B	-	-	-	-	13.00 B*
PM Peak Hour	-	A	-	A	-	A	A	A	B	-	-	B	-	-	-	-	13.96 B*
Green Road/Val Vista Road – One-Way Stop Controlled																	
AM Peak Hour	-	-	-	-	-	-	A	A	A	-	-	A	-	-	-	-	9.22 A*
PM Peak Hour	-	-	-	-	-	-	A	A	A	-	-	A	-	-	-	-	9.33 A*

*The overall LOS letter grade for two-way stop-controlled intersections is shown as the worst approach.

By year 2035, the evening peak hour at the intersection of SR347/Papago Road continues to operate at unacceptable delay in the evening peak hour as shown by the LOS F. This is due to the high volume of southbound right turn movements returning to the residential development. In addition, the high volume of left turns in the eastbound approach at the intersection show delay.

The study area intersections controlled by Pinal County operate at acceptable LOS C or better using background traffic in the horizon years.

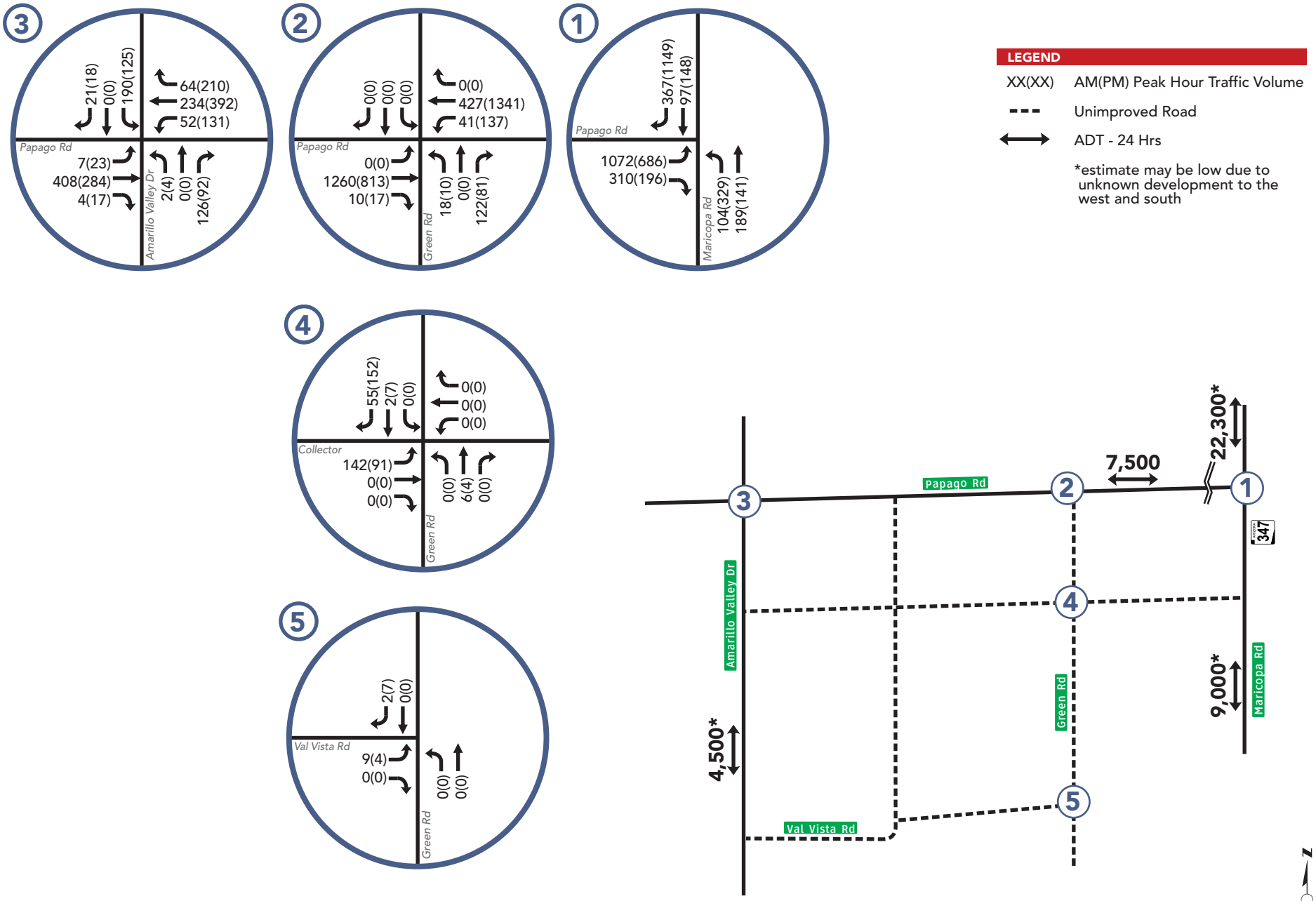


Figure 7: Background Traffic - Year 2025

United Civil Group

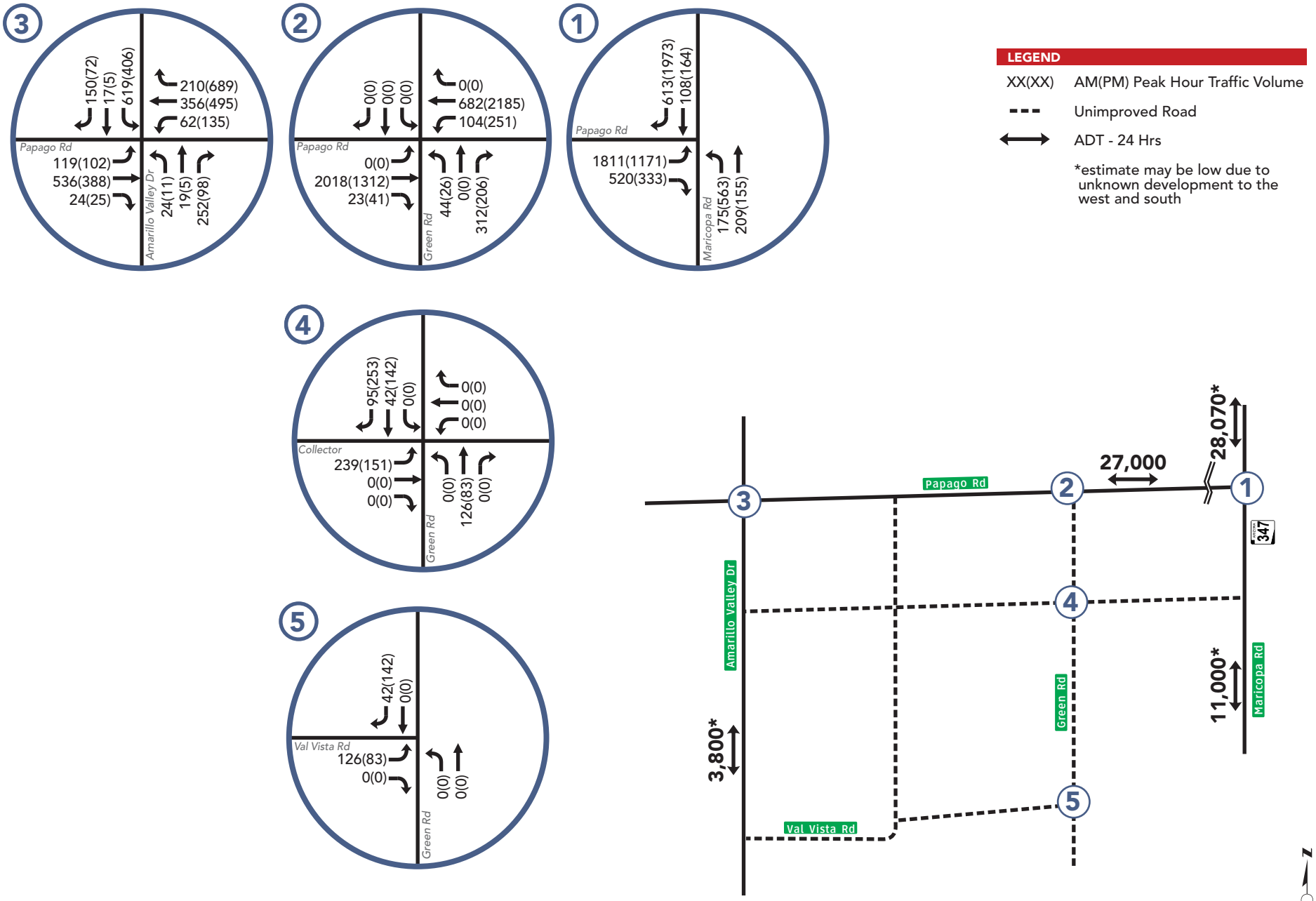


Figure 8: Background Traffic - Year 2030

United Civil Group

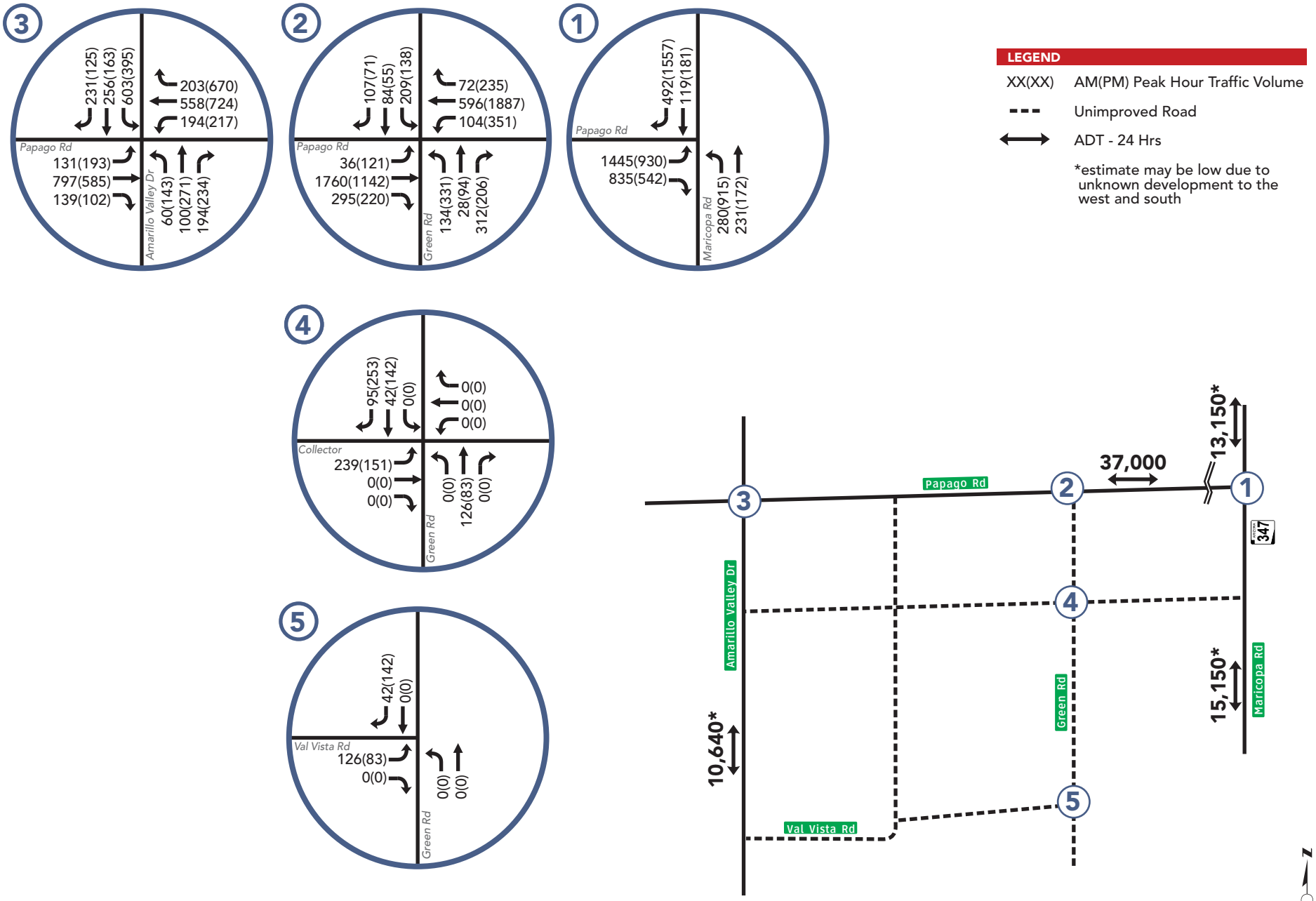


Figure 9: Background Traffic - Year 2035

VI. TRAFFIC AND IMPROVEMENT ANALYSIS

The purpose of this section is to show the relations between traffic operations and roadway geometrics; identify needs pertaining to progressive traffic flow and safety; and identify alternatives for further consideration, where applicable.

Based on the findings within this report, **Figure 13** presents an illustration of the recommendations.

A. ACCESSIBILITY TO VENIDA

Access to the Venida single family residential homes is provided via Papago Road, Green Road and two proposed ½ mile collector roadways.

- **Access A** will be constructed as a minor collector road and the main access into the Venida single-family residential community. Access A is located on Papago Road approximately 0.2 mile east of Green Road. Access A/Papago Road is planned as a full movement intersection to be built with Phase 1 of the development.

- **Access B** will be constructed as a full access into the ½ mile north-south collector roadway. Access B is proposed 390 feet south of Papago Road. Access B/North-South Collector Road is planned as a full movement intersection to be built with Phase 1 of the development.

- **Access D** will be constructed as a full access into the ½ mile North-South Collector Roadway. Access D is proposed 1510 feet south of Access B and 780 feet north of the ½ mile East-West Collector Road. Access D/North-South Collector Road is planned as a full movement intersection to be built with Phase 1 of the development.

- **Access E** will be constructed as a minor collector roadway that ties to Access A. Access E is located 900 feet west of the North-South Collector Roadway and 1,735 feet east of Green Road. Access E/ East-West Collector Roadway is planned as a full movement intersection to be built with Phase 1 of development.

- **Access F** will be constructed as a full access into Venida and is located on Green Road approximately 710 feet north of East-West Collector Roadway. Access F/Green Road is planned as a full movement intersection to be built with Phase 2 of the development.

- Access G will be constructed as a partial access and is located on Green Road approximately 550 feet south of Papago Road. Access G/Green Road is planned as a right in/right out movement intersection to be built with Phase 2 of the development. In the future, this intersection will be restricted to right in/right out by the construction of a raised median on Green Road.

Figure 12 presents the access spacing for the development. All site access points should be designed per Pinal County Subdivision & Infrastructure Design Manual. Per the Pinal County Access Management Manual Final Report dated February 2017, driveway spacing criteria per Table 1 (Access Management Manual) is met for all accesses proposed.

B. Roadway and Intersection Geometric Improvements

Half-street sections along Papago Road, and Green Road adjacent to the Venida property should be constructed as part of the development. Papago Road is noted as a minor arterial roadway. Per the Pinal County Subdivision and Infrastructure Design Manual, Papago Road should provide 110 feet of right-of-way. Green Road is shown as a minor arterial roadway. However, per a stipulation, Green Road should also be designed with 75 feet of right of way, measured centerline to right of way line. At a minimum, the roadway cross sections for a major arterial, minor arterial and collector roadway sections should be followed from Pinal County's Subdivision and Infrastructure Design Manual.

With the construction of all new accesses, sight triangles shall be provided and maintained at all site accesses per the most current edition of the American Association of State Highway and Transportation Officials, A Policy on Geometric Design of Highways and Streets and the Pinal County TIA Guidelines.

Roadway and intersection geometric improvements are proposed as follows:

PHASE 1 – 2025
By Venida

- Construct half street improvements along Papago Road at the site's northern boundary from Green Road east to the proposed ½ mile collector road. This improvement should provide 55 feet of right of way.
- Construct half street improvements on the North-South Collector Road from Papago Road south to East West Collector Road. This improvement should provide 40 feet of right of way.
- Construct half street improvements on the East-West Collector Road from the North-South Collector Road to the Phase 2 boundary of the project. This improvement should provide 40 feet of right of way.
- Install dedicated right and exclusive left turn lanes at site accesses and study area intersections as recommended in Tables 10 and 11.

- Consider installing two way left turn lanes on the North-South Collector Road and East-West Collector Road to accommodate vehicles turning left into the Venida Development.

By Others

- Widen the eastbound leg of the SR 347/Papago Road intersection to accommodate right and left turning vehicles.
- Construct a signal at the intersection of SR 347/Papago Road. Development to contribute 9.2% of the cost of the signal.
- Construct a signal at the intersection of Papago Road/Green Road. Development to contribute proportionate share 25% of the cost of the signal.

PHASE 2 – 2030

By Venida

- Construct half street improvements along Papago Road at the site's northern boundary from Access A west to Green Road. This improvement should provide 55 feet of right of way.
- Construct half street improvements along Green Road at the site's western boundary from Papago Road to the East-West Collector Road 2. This improvement should provide 75 feet of right of way.
- Construct half street improvements on the East-West Collector Road 2 from the Phase 2 boundary of the project to Green Road. This improvement should provide 40 feet of right of way.
- Install dedicated right and exclusive left turn lanes at site accesses and study area intersections as recommended in Tables 10 and 11.

By Others

- Construct a traffic signal at the intersection of Papago Road/North-South Collector Road. Development to contribute proportionate share of signal cost of 25%.

C. Auxiliary Lane Analyses

C.1. Right Turn Lane Warrants

Per Pinal County Traffic Impact Assessment Guidelines & Procedures dated January 2007, right-turn lanes are warranted based on the right lane warrant chart which incorporates the right turn volume, the design hourly volume of the roadway and the posted speed.

Utilizing 2035 total traffic volumes, exclusive right turn lanes are recommended at the following locations:

EB Papago Road at Access A

EB Papago Road at Collector Road 1
SB Collector Road 1 at Collector Road 2
WB Collector Road 2 at Green Road
NB Green Road at Papago Road

Based on volume, a right turn deceleration lanes is not warranted on Green Road at Accesses F and G. However, because Green Road is an arterial within the area, right turn lanes are recommended due to the growth projections and designated land uses south of the residential developments.

Because ADOT controls and maintains the intersections of SR347/Papago Road, *ADOT Traffic Guidelines and Processes Section 245 – Turn Lane Warrants* were used to determine the need for a right turn lane on eastbound Papago Road at SR347. Per the Right Turn Lane Warrants Table on Page 245-1, a right turn lane is warranted on eastbound Papago Road at SR347. A southbound right turn lane with 165 feet of storage currently exists on SR347 at Papago Road.

C.2. RIGHT LANE QUEUE AND STORAGE LENGTH ANALYSIS
Per *Section 5.12 Queuing Analysis* of the Pinal County Traffic Impact Assessment Guidelines & Procedures dated January 2007, desirable minimum storage lengths for right turn lanes on arterials and major collectors were calculated per Pinal County requirements. The queuing analysis was conducted for all turn lanes under stop or signal control using the methodology presented by the County.

Per *ADOT Traffic Engineering Guidelines and Processes Section 430 Turn Lane Design* the desirable minimum storage lengths for the eastbound right turn lane on Papago Road at SR347 and the southbound right turn lane on SR347 at Papago Road were calculated.

Table 10 presents the calculated minimum queue lengths and recommended storage lane lengths for the right turn deceleration lanes at the study intersections and site accesses.

TABLE 10: RIGHT TURN LANE ANALYSIS

Location		Turn Volume	Existing Storage (feet)	Calculated Storage (feet)	Min Braking Distance (feet)	Recommended Storage (feet)	Taper (feet)
On	At						
Pinal County Methodology - Section 5.12 Queuing Analysis (Based on 2035 Volumes)							
Papago Road	Access A	EB Right: 49	-	41	-	100	120
Papago Road	N-S Collector Road	EB Right: 52	-	12*	-	100	120
N-S Collector Road	E-W Collector Road	SB Right: 42	-	35	-	100	120
W-E Collector Road	Green Road	WB Right: 25	-	21	-	100	120
Green Road	Access F	NB Right: 4	-	3	-	100	120
Green Road	Access G	NB Right: 4	-	3	-	100	120
Green Road	Papago Road	NB Right: 333	-	153*	-	200	120

		ADOT Methodology - Section 430 Turn Lane Design (Based on 2045 volumes from Palomino TIA)					
Papago Road	SR 347	EB Right: 462	-	433	50	500**	90
SR 347	Papago Road	SB Right: 1,085	165	334	265	600**	140

*Storage calculated based on signalization with C = 90 sec with less g/C on the minor leg
**Storage calculated based on signalization with C = 120 sec with 0.25 g/C on the minor leg

Right turn lane storage at the intersection of SR347/Papago Road is projected to be 500 feet or greater by year 2045. However, future roadways and the projected Interstate 11 within the study area will greatly impact future traffic patterns. Therefore, turn lane lengths should be evaluated as development occurs to maintain adequate storage within the study area without excessive turn lane lengths. The volumes for the intersection of Papago Road/SR 347 were determined for 2045 based on projected volumes from the TIA for the Palomino Development.

C.3. Left Turn Lane Warrants

Per Pinal County Traffic Impact Assessment Guidelines & Procedures dated January 2007, left-turn lanes are warranted based on the left lane warrant chart which incorporates the left turn volume, the design hourly volume of the roadway and the posted speed.

Utilizing 2035 total traffic volumes, left turn lanes are recommended in the following locations:

WB Papago Road at N-S Collector Road
WB Papago Road at Access A
WB Papago Road at Green Road
SB Green Road at Access F
SB Green Road at E-W Collector Road
EB E-W Collector Road at Access E
EB E-W Collector Road at N-S Collector Road
NB N-S Collector Road at Access B
NB N-S Collector Road at Access D
NB N-S Collector Road at Papago Road

C.4. Left Lane Queue and Storage Length Analysis

Per *Section 5.12 Queuing Analysis* of the Pinal County Traffic Impact Assessment Guidelines & Procedures dated January 2007, desirable minimum storage lengths for left turn lanes on arterials and major collectors were calculated per AASHTO requirements. The queuing analysis was conducted for all turn lanes under stop or signal control using the methodology presented by the County.

Per *ADOT Traffic Engineering Guidelines and Processes Section 430 Turn Lane Design* the desirable minimum storage lengths for the eastbound left turn lane on Papago Road at the SR347 and the northbound left turn lane on SR347 at the Papago Road intersection were calculated.

Table 11 presents the calculated minimum queue lengths and recommended storage lane lengths for the right turn deceleration lanes at the study intersections and site accesses.

TABLE 11: LEFT TURN LANE ANALYSIS

Location		Turn Volume	Existing Storage (feet)	Calculated Storage (feet)	Min Braking Distance (feet)	Recommended Storage (feet)	Opening (feet)
On	At						
Pinal County - AASHTO Methodology for Unsignalized Left Turns (Based on 2035 Volumes)							
Papago Road	N-S Collector Road	WB Left: 100	-	94*	-	100	90
Papago Road	Access A	WB Left: 52	-	93	-	100	90
Papago Road	Green Road	WB Left: 377	-	353*	-	350	90
Green Road	Access F	SB Left: 39	-	16	-	100	90
Green Road	E-W Collector Road	SB Left: 28	-	11	-	100	90
E-W Collector Road	Access E	EB Left:38	-	0	-	100	90
E- W Collector Road	N-S Collector Road	EB Left:35	-	19	-	100	90
N-S Collector Road	Access B	NB Left:4	-	0	-	100	90
N-S Collector Road	Access D	NB Left:4	-	0	-	100	90
N-S Collector Road	Papago Road	NB Left:46	-	43*	-	100	90

ADOT Methodology - Section 430 Turn Lane Design (Based on 2045 volumes from Palomino TIA)							
Papago Road	SR 347	EB Left: 948	-	1,185	50	600** [1]	90
SR 347	Papago Road	NB Left: 511	165	639	265	900** [2]	140

*Storage for signalized intersections calculated based on signalization C = 90 sec. For the left turn, it is assumed that braking begins 2/3 into the gap.
**Storage for signalized intersections calculated based on signalization C = 120 sec. For the left turn, it is assumed that braking begins 2/3 into the gap.
[1] The recommended storage is ½ of the calculated value because the intersection of Papago/SR347 is a "T" with no known plans to extend Papago Road east of SR347. Therefore, all left turn movements can be accommodated during the green. Dual lefts are recommended to accommodate traffic volumes.
[2] Dual lefts are recommended by 2035

Left turn lane storage at the intersection of SR347/Papago Road is projected to be 600 feet or greater by year 2045. However, future roadways and the projected Interstate 11 within the study area will greatly impact future traffic patterns. Therefore, turn lane lengths should be evaluated as development occurs to maintain adequate storage within the study area.

In addition, as growth occurs along SR347, the speed limit will more than likely be reduced, which shortens the braking distance required. The volumes for the intersection of Papago Road/SR 347 were determined for 2045 based on projected volumes from the TIA for the Palomino Development.

For the N-S and E-W Collector Roadways, two-way-left-turn lanes should be considered to provide adequate left turn storage at the site accesses.

The turning lane storage length calculations are presented in *Appendix F: Turn Lane Storage.*

D. Traffic Signal Warrant Analysis

The 2009 *Manual on Uniform Traffic Control Devices* (MUTCD) was used as the primary tool to determine if a traffic signal is warranted at the intersection of Papago Road/Collector Road 1.

There are nine specific signal warrants in the MUTCD; however, not all warrants are applicable to this study. The warrants used in this analysis include:

Warrant 1 – Eight-Hour Vehicular Volume
Warrant 2 – Four-Hour Vehicular Volume

Appendix E: Signal Warrant Analysis presents the results of the signal warrant analyses.

Warrant 1 – Eight-Hour Vehicular Volume

The Minimum Vehicular Volume, Condition A, is intended for application where the volume of intersecting traffic from a side street or driveway is the principal reason for considering installation of a traffic signal. In this condition, the warrant would be satisfied when, for each of any eight hours of an average day, the traffic volumes on the major and minor approach are equal to or exceeds specified limits located on *Table 4C-1 Warrant 1 Eight-Hour Vehicular Volume* in the *MUTCD 2009*.

The Interruption of Continuous Traffic, Condition B, is intended for application where the traffic volume on a major street is so heavy that the traffic on a minor intersection street or driveway has excessive delay or hazard in entering or crossing the major street. This warrant is met when, for each of any eight hours of an average day, the traffic volumes on the major and minor approach is equal to or exceeds specified limits located on *Table 4C-1 Warrant 1, Eight-Hour Vehicular Volume* in the *MUTCD 2009*.

Volume projections for the eight highest hours on an average day were determined by applying hourly adjustment factors calculated from the available peak hour turning movement count data.

Warrant 1 Results:

Papago Road/Collector Road 1 – Warrant 1 is met for both Condition A and Condition B by opening of Phase 1, 2025.

Warrant 2 – Four-Hour Vehicular Volume

The four-hour vehicular volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. This warrant is satisfied when, for each of any four hours of an average day, plotted points representing vehicles per hour on the major street (total

of both approaches) and the vehicles per hour on the minor street approach (one direction only) all fall above the appropriate curve located on *Figure 4C-2 Warrant 2, Four-Hour Vehicular Volume* in the *MUTCD 2009*.

Warrant 2 Results:
Papago Road/Collector Road 2 – Warrant 2 is met by opening of Phase 1, 2025.

Signal Warrant Summary
By year 2025 a traffic signal should be considered at the intersection of Papago Road/Collector Road 1.

The traffic signal warrant analyses within this TIA are based on forecasted traffic volumes and conceptual land plans, site access, and assumed land uses. Further traffic signal warrant analysis is recommended as part of future studies once actual development is realized to confirm traffic signal needs at the intersection. Table 12 presents the recommended signals and the developer's contribution.

TABLE 12: SIGNAL NEEDS

Intersection	Year	Developer Contribution
SR347/ Papago Road	2025	Constructed by others – Contribution of 9.2% based on developments within the area
Papago Road/Green Road	2025	Constructed by others – 25% contribution toward signal
Papago Road/N-S Collector Road	2030	Constructed by others – 25% contribution toward signal

Based on a cost share allocation, developed by the acres of homes being built along Papago Road, Pinal County provided a traffic signal participation estimate. The detailed breakdown is provided in Appendix E. Based on the analysis, the Venida Development is responsible for 9.2% of the signal design and construction cost at the intersection of SR347/Papago Road.

Other developments are planned in the area such as Amarillo Creek, Tresana, and Pecan Woods. These developments will also contribute toward signal needs in the area. The 25% signal contributions at the intersections of Papago Road/Green Road and Papago Road/N-S Collector Road are based on quadrant of the intersection.

E. Intersection Sight Distance

Proper intersection sight distance and sight triangles shall be provided and maintained at all site access driveways of the proposed development to give drivers exiting the site a clear view of oncoming traffic. The landscape and hardscape within the sight triangles must not obstruct the driver's view of the adjacent travel lanes. To ensure adequate sight distances and sight distance triangles are provided at the site access driveways per the most current edition of the American Association of State Highway and Transportation Officials, A Policy on Geometric Design of Highways and Streets and the Pinal County TIA Guidelines.

F. Total Traffic

Total traffic projections for the horizon years were determined by adding the proposed development's site generated traffic to the forecasted background traffic volumes for the corresponding phase. **Figures 10 through 12** present the total traffic volumes during the morning and evening peak hours, which includes the site generated traffic.

Capacity analyses at the study area intersections and site access intersections were performed using the recommended geometric infrastructure and forecasted total traffic for each horizon year of the study.

Tables 13 through 15 on the following pages present the total levels of service utilizing the recommended improvements. Complete capacity analyses are provided in *Appendix B: Capacity Analyses*.

TABLE 13: 2025 TOTAL TRAFFIC CONDITIONS INTERSECTION LEVELS OF SERVICE

Intersection Location	NB LOS				SB LOS				EB LOS				WB LOS				Overall Intersection
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	AvgDelay/ LOS*
SR347/Papago Road – Signalized																	
AM Peak Hour	D	D	-	D	-	D	F	F	F	-	A	D	-	-	-	-	50.72 D
PM Peak Hour	B	B	-	B	-	B	F	F	F	-	C	F	-	-	-	-	137.83 F
Green Road/Papago Road – Signalized																	
AM Peak Hour	D	-	D	D	-	-	-	-	-	A	A	A	A	A	-	A	5.71 A
PM Peak Hour	D	-	D	D	-	-	-	-	-	A	A	A	A	A	-	A	3.48 A
Amarillo Valley Road/Papago Road – Signalized																	
AM Peak Hour	C	A	D	D	D	A	C	D	A	A	A	A	A	A	A	A	16.40 B
PM Peak Hour	C	A	D	D	D	A	C	D	A	A	A	A	A	A	A	A	12.01 B
Green Road/Adjacent Driveway/E-W Collector Road – Two-Way Stop Controlled																	
AM Peak Hour	-	A	-	A	-	A	A	A	A	-	-	A	-	-	-	-	9.48 A*
PM Peak Hour	-	A	-	A	-	A	A	A	A	-	-	A	-	-	-	-	9.59 A*
Green Road/Val Vista Road – One-Way Stop Controlled																	
AM Peak Hour	-	-	-	-	-	-	A	A	A	-	-	A	-	-	-	-	8.56 A*
PM Peak Hour	-	-	-	-	-	-	A	A	A	-	-	A	-	-	-	-	8.55 A*
Papago Road/Access A – One-Way Stop Controlled																	
AM Peak Hour	D	-	C	C	-	-	-	-	-	A	A	A	B	A	-	A	18.40 C*
PM Peak Hour	C	-	B	B	-	-	-	-	-	A	A	A	B	A	-	A	13.34 B*
Papago Road/N-S Collector Road – One-Way Stop Controlled																	
AM Peak Hour	D	-	C	C	-	-	-	-	-	A	A	A	B	A	-	A	21.77 C*
PM Peak Hour	D	-	B	B	-	-	-	-	-	A	A	A	B	A	-	A	14.61 B*
N-S Collector Road/Access B – One-Way Stop Controlled																	
AM Peak Hour	-	A	-	A	-	A	A	A	A	-	-	A	-	-	-	-	9.25 A*
PM Peak Hour	-	A	-	A	-	A	A	A	A	-	-	A	-	-	-	-	9.51 A*
N-S Collector Road/Access D – One-Way Stop Controlled																	
AM Peak Hour	-	A	-	A	-	A	A	A	A	-	-	A	-	-	-	-	8.86 A*
PM Peak Hour	-	A	-	A	-	A	A	A	A	-	-	A	-	-	-	-	8.97 A*
E-W Collector Road/Access E – One-Way Stop Controlled																	
AM Peak Hour	-	-	-	-	A	-	-	A	-	-	-	-	-	-	A	A	8.67 A*
PM Peak Hour	-	-	-	-	A	-	-	A	-	-	-	-	-	-	A	A	8.70 A*

*The overall LOS letter grade for two-way stop-controlled intersections is shown as the worst approach.

Using the projected total traffic volumes for 2025 and the improvements proposed for year 2025, all the study intersections will operate at an acceptable LOS C or better after the first phase of the Venida development is constructed and operational. The exception to this is the intersection of Papago Road/SR347 that operates at an unacceptable level of service in the evening peak hour due to the volume of traffic returning to the residential developments in the evening.

Mitigation measures used for 2030 Total Traffic:

- Signalized control was used for the intersection of Papago Road/N-S Collector Road

TABLE 14: 2030 TOTAL TRAFFIC CONDITIONS INTERSECTION LEVELS OF SERVICE

Intersection Location	NB LOS				SB LOS				EB LOS				WB LOS				Overall Intersection
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	AvgDelay/ LOS*
SR347/Papago Road – Signalized																	
AM Peak Hour	D	C	-	C	-	D	F	E	C	-	B	C	-	-	-	-	31.44 C
PM Peak Hour	B	A	-	B	-	A	F	F	F	-	D	F	-	-	-	-	254.35 F
Green Road/Papago Road – Signalized																	
AM Peak Hour	D	-	D	D	-	-	-	-	-	C	A	C	C	A	-	A	19.45 B
PM Peak Hour	D	-	D	D	-	-	-	-	-	B	A	B	C	A	-	B	14.67 B
Amarillo Valley Road/Papago Road – Signalized																	
AM Peak Hour	B	D	D	D	D	C	C	C	B	C	B	B	B	B	B	B	25.04 C
PM Peak Hour	C	D	D	D	D	C	C	D	A	B	B	B	A	B	B	B	19.74 B
Green Road/Adjacent Driveway/Collector Road 2 – Two-Way Stop Controlled																	
AM Peak Hour	-	A	A	A	A	A	A	A	B	-	-	B	B	-	A	A	13.48 B*
PM Peak Hour	-	A	A	A	A	A	A	A	B	-	-	B	B	-	A	B	13.66 B*
Green Road/Val Vista Road – One-Way Stop Controlled																	
AM Peak Hour	-	A	-	A	-	A	A	A	A	-	-	A	-	-	-	-	9.34 A*
PM Peak Hour	-	A	-	A	-	A	A	A	A	-	-	A	-	-	-	-	9.19 A*
Papago Road/Access A – One-Way Stop Controlled																	
AM Peak Hour	F	-	E	F	-	-	-	-	-	A	A	A	D	A	-	A	172.99 F*
PM Peak Hour	F	-	C	E	-	-	-	-	-	A	A	A	C	A	-	A	41.47 E*
Papago Road/Collector Road 1 – Signalized																	
AM Peak Hour	D	-	D	D	-	-	-	-	-	C	A	C	C	A	-	A	16.32 B
PM Peak Hour	D	-	D	D	-	-	-	-	-	A	A	A	A	B	-	B	10.37 B
Collector Road 1/Access B – One-Way Stop Controlled																	
AM Peak Hour	A	A	-	A	-	A	A	A	A	-	A	A	-	-	-	-	9.12 A*
PM Peak Hour	A	A	-	A	-	A	A	A	A	-	A	A	-	-	-	-	9.37 A*
Collector Road 1/Access D – One-Way Stop Controlled																	
AM Peak Hour	A	A	-	A	-	A	A	A	A	-	A	A	-	-	-	-	8.91 A*
PM Peak Hour	A	A	-	A	-	A	A	A	A	-	A	A	-	-	-	-	9.06 A*
Collector Road 2/Access E – One-Way Stop Controlled																	
AM Peak Hour	-	-	-	-	A	-	A	A	A	A	-	A	A	-	A	A	8.79 A*
PM Peak Hour	-	-	-	-	A	-	A	A	A	A	-	A	A	-	A	A	8.96 A*
Green Road/Access F – One-Way Stop Controlled																	
AM Peak Hour	-	A	A	A	A	A	-	A	-	-	-	-	B	-	B	B	11.46 B*
PM Peak Hour	-	A	A	A	A	A	-	A	-	-	-	-	C	-	B	B	10.51 B*
Green Road/Access G – One-Way Stop Controlled																	
AM Peak Hour	-	A	A	A	-	A	-	A	-	-	-	-	-	-	B	B	11.78 B*
PM Peak Hour	-	A	A	A	-	A	-	A	-	-	-	-	-	-	B	B	10.70 B*

*The overall LOS letter grade for two-way stop-controlled intersections is shown as the worst approach.

The Pinal County study area intersections operate at LOS C or better except for Papago Road/Access A in the morning and evening peak hours. Through and left-turning movements on stop-controlled minor roads and driveways that intersect with major streets typically experience greater delay for short periods of time in the peak hours due to the wait for acceptable gaps on the major street, while the free-flowing major streets experience minimal delay.

Gaps in traffic provided by the signalized intersections of Papago Road/Green Road and Papago Road/Collector Road 1 are not accounted for in Vistro. These gaps will assist motorists in making a left turn from the minor roadway onto the major roadway.

During the evening, the intersection of SR347/Papago Road continues to produce unacceptable delay as traffic volumes increase through the horizon years.

TABLE 15: 2035 TOTAL TRAFFIC CONDITIONS INTERSECTION LEVELS OF SERVICE

Intersection Location	NB LOS				SB LOS				EB LOS				WB LOS				Overall Intersection
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	AvgDelay/ LOS*
SR347/Papago Road – Signalized																	
AM Peak Hour	E	C	-	D	-	D	D	D	C	-	B	C	-	-	-	-	31.49 C
PM Peak Hour	F	A	-	F	-	B	F	F	F	-	F	F	-	-	-	-	288.23 F
Green Road/Papago Road – Signalized																	
AM Peak Hour	C	D	E	D	C	D	D	C	A	C	A	C	C	A	A	B	25.53 C
PM Peak Hour	E	D	D	E	C	D	D	C	C	C	B	C	C	D	A	D	34.71 C
Amarillo Valley Road/Papago Road – Signalized																	
AM Peak Hour	B	D	D	D	D	C	C	D	B	C	B	B	C	B	B	B	25.50 C
PM Peak Hour	C	D	D	C	D	C	C	D	B	B	B	B	B	B	B	B	23.56 C
Green Road/Adjacent Driveway Collector Road 2 – Two-Way Stop Controlled																	
AM Peak Hour	-	A	A	A	A	A	A	A	B	-	-	B	B	-	A	A	13.48 B*
PM Peak Hour	-	A	A	A	A	A	A	A	B	-	-	B	B	-	A	B	13.66 B*
Green Road/Val Vista Road – One-Way Stop Controlled																	
AM Peak Hour	-	A	-	A	-	A	A	A	A	-	-	A	-	-	-	-	9.34 A*
PM Peak Hour	-	A	-	A	-	A	A	A	A	-	-	A	-	-	-	-	9.19 A*
Papago Road/Access A – One-Way Stop Controlled																	
AM Peak Hour	F	-	E	F	-	-	-	-	-	A	A	A	D	A	-	A	154.00 F*
PM Peak Hour	F	-	C	E	-	-	-	-	-	A	A	A	C	A	-	A	39.25 E*
Papago Road/Collector Road 1 – Signalized																	
AM Peak Hour	D	-	D	D	-	-	-	-	-	B	A	B	C	A	-	A	14.23 B
PM Peak Hour	D	-	D	D	-	-	-	-	-	A	A	A	A	B	-	B	8.95 A
Collector Road 1/Access B – One-Way Stop Controlled																	
AM Peak Hour	A	A	-	A	-	A	A	A	A	-	A	A	-	-	-	-	9.12 A*
PM Peak Hour	A	A	-	A	-	A	A	A	A	-	A	A	-	-	-	-	9.37 A*
Collector Road 1/Access D – One-Way Stop Controlled																	
AM Peak Hour	A	A	-	A	-	A	A	A	A	-	A	A	-	-	-	-	8.91 A*
PM Peak Hour	A	A	-	A	-	A	A	A	A	-	A	A	-	-	-	-	9.06 A*
Collector Road 2/Access E – One-Way Stop Controlled																	
AM Peak Hour	-	-	-	-	A	-	A	A	A	A	-	A	A	-	A	A	8.79 A*
PM Peak Hour	-	-	-	-	A	-	A	A	A	A	-	A	A	-	A	A	8.96 A*
Green Road/Access F – One-Way Stop Controlled																	
AM Peak Hour	-	A	A	A	A	A	-	A	-	-	-	-	B	-	B	B	11.46 B*
PM Peak Hour	-	A	A	A	A	A	-	A	-	-	-	-	C	-	B	B	10.51 B*
Green Road/Access G – One-Way Stop Controlled																	
AM Peak Hour	-	A	A	A	-	A	-	A	-	-	-	-	-	-	B	B	11.78 B*
PM Peak Hour	-	A	A	A	-	A	-	A	-	-	-	-	-	-	B	B	10.70 B*

*The overall LOS letter grade for two-way stop-controlled intersections is shown as the worst approach.

Table 16 illustrates the traffic control proposed for each of the study intersections within the given horizon years.

TABLE 16: PROPOSED TRAFFIC CONTROL BY YEAR WITH LOS PRESENTED

Location	2021	2025		2030		2035	
	Existing	Background	Total	Background	Total	Background	Total
SR347/ Papago Road	STOP 1 Way B/B	C/D	D/F	C/F	C/F	C/F	C/F
Green Road/ Papago Road	STOP 2 Way A/A	A/A	A/A	B/B	B/C	C/B	C/C
Amarillo Valley Road/ Papago Road	STOP 2 Way A/A	B/B	B/B	B/B	C/B	B/B	C/C
Green Road/ E-W Collector	STOP 1 Way A/A	STOP 1 Way A/A	STOP 1 Way B/B	STOP 1 Way B/B	STOP 1 Way B/B	STOP 1 Way B/B	STOP 1 Way B/B
Green Road/Val Vista Road	-	STOP 1 Way A/A	STOP 1 Way A/A	STOP 1 Way A/A	STOP 1 Way A/A	STOP 1 Way A/A	STOP 1 Way A/A
Papago Road/ Access A	-	-	STOP 1 Way C/B	-	STOP 1 Way F/E	-	STOP 1 Way F/E
Papago Road/ N-S Collector Road	-	-	STOP 1 Way C/B	-	B/B	-	B/A
N-S Collector Road/ Access B	-	-	STOP 1 Way A/A	-	STOP 1 Way A/A	-	STOP 1 Way A/A
N-S Collector Road / Access D	-	-	STOP 1 Way A/A	-	STOP 1 Way A/A	-	STOP 1 Way A/A
E-W Collector Road/ Access E	-	-	STOP 1 Way A/A	-	STOP 1 Way A/A	-	STOP 1 Way A/A

Location	2021	2025		2030		2035	
	Existing	Background	Total	Background	Total	Background	Total
Green Road/ Access F	-	-	-	-	STOP 1 Way B/B	-	STOP 1 Way B/B
N-S Collector Road/Access G	-	-	-	-	STOP 1 Way A/A	-	STOP 1 Way A/A

*For one and two way stop conditions, the LOS shown as the worst approach LOS.

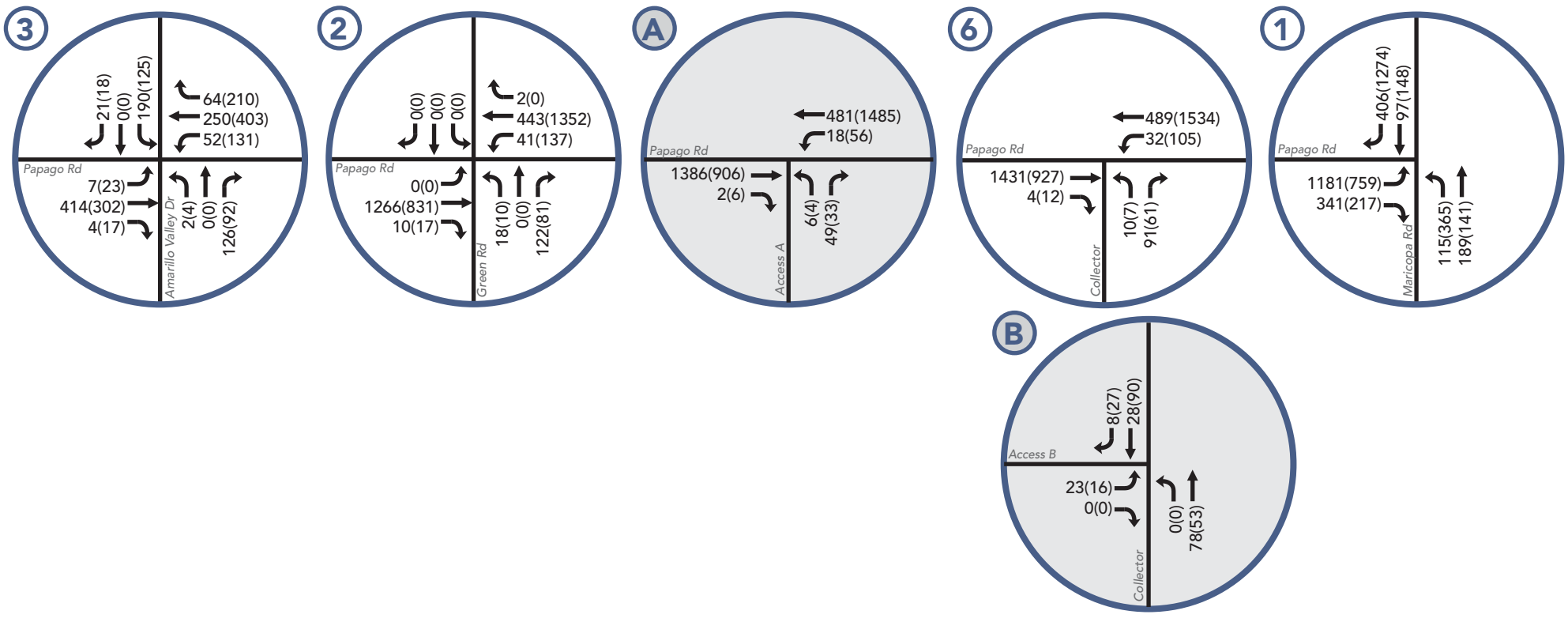
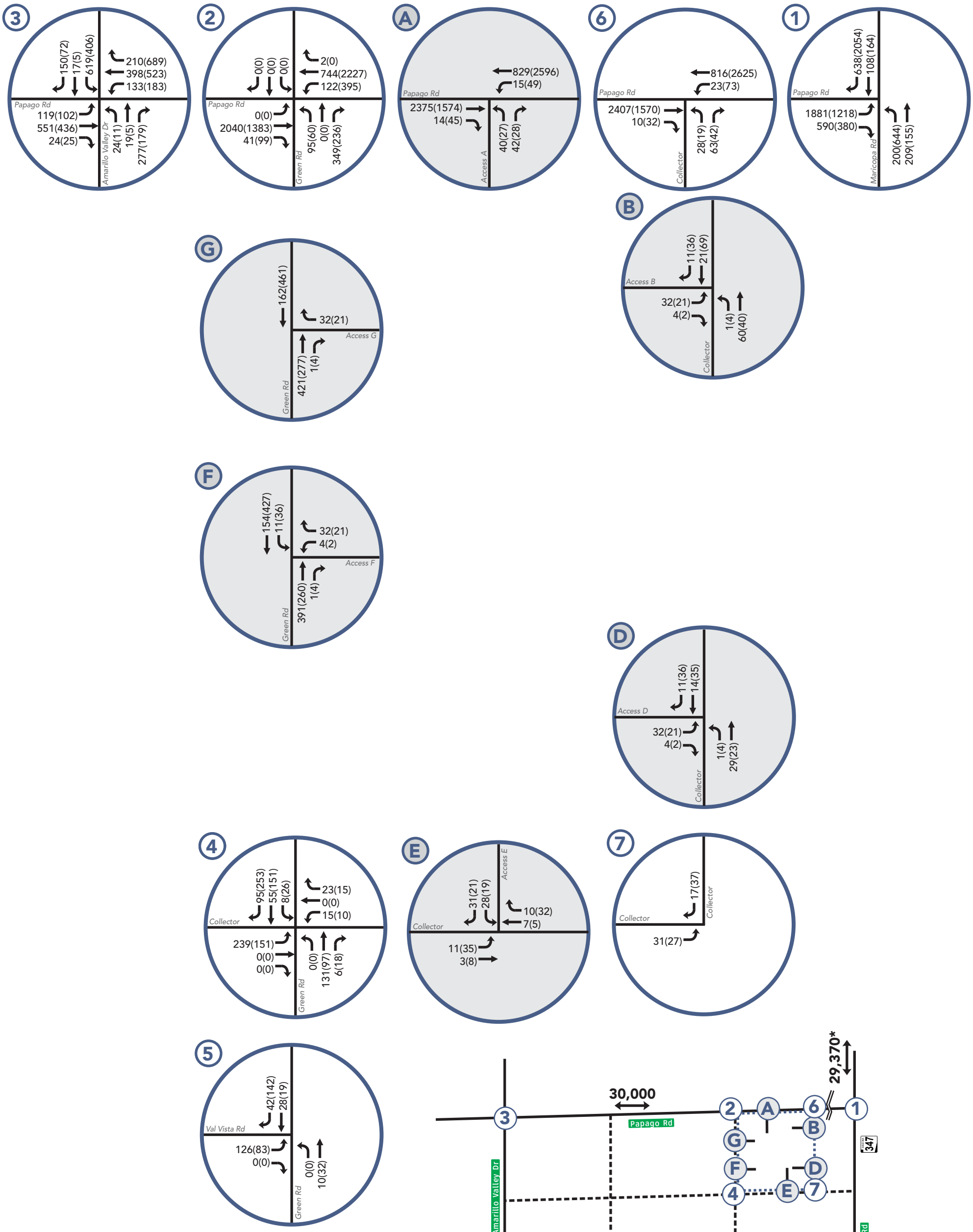


Figure 10: Total Traffic - Year 2025



LEGEND

XX(XX)	AM(PM) Peak Hour Traffic Volume
- - -	Unimproved Road
⟷	ADT - 24 Hrs

*estimate may be low due to unknown development to the west and south

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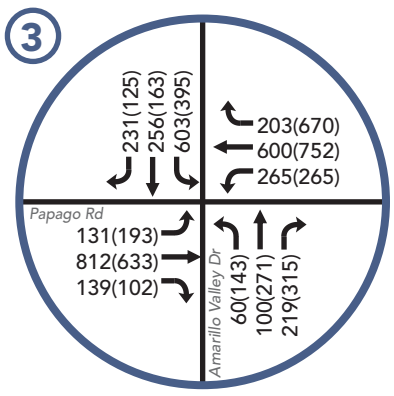
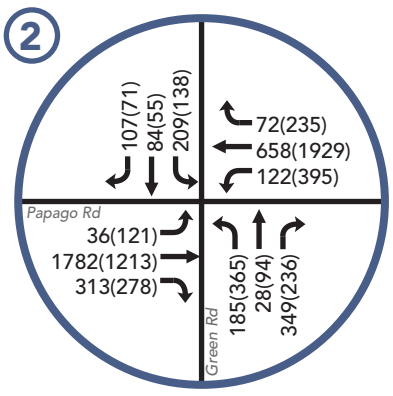
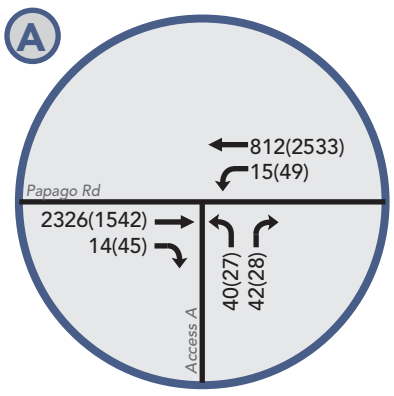
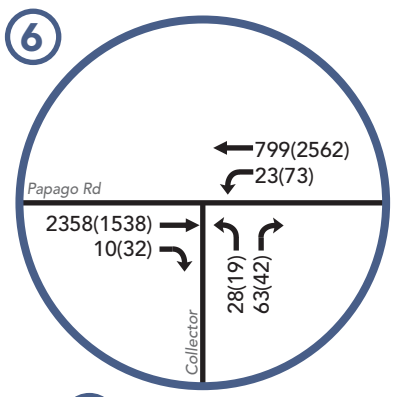
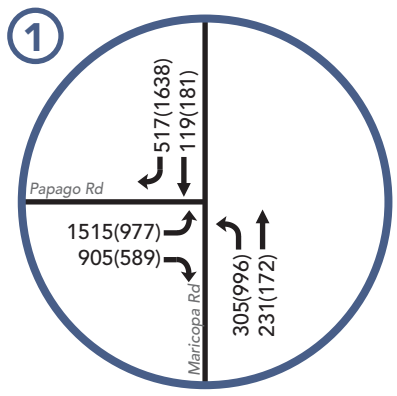
Figure 11: Total Traffic - Year 2030

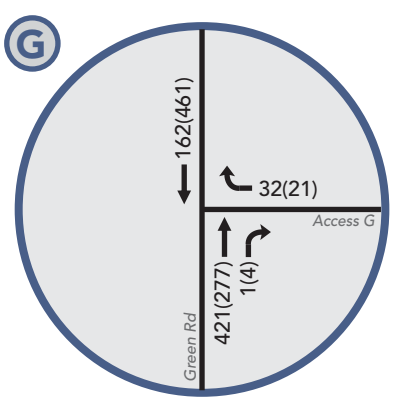


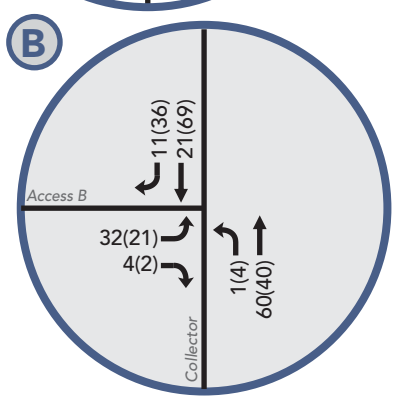


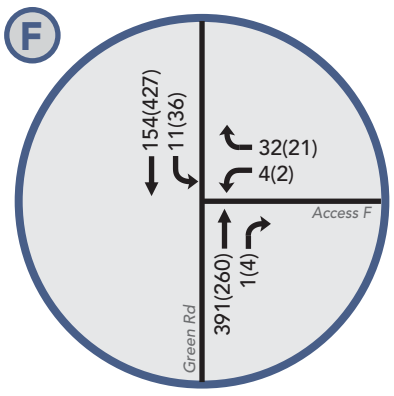


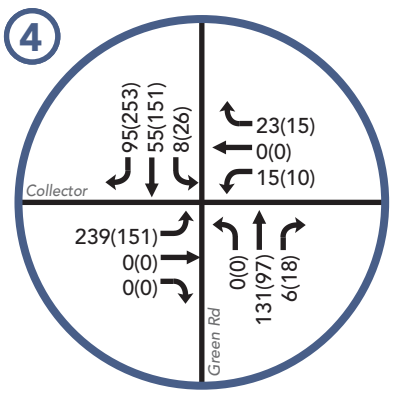


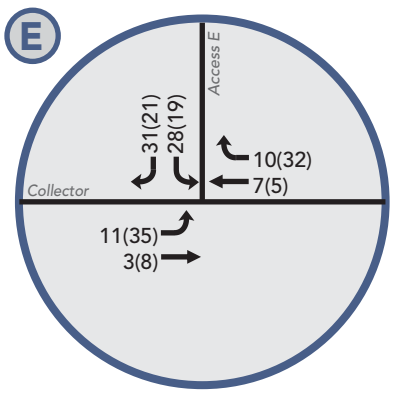


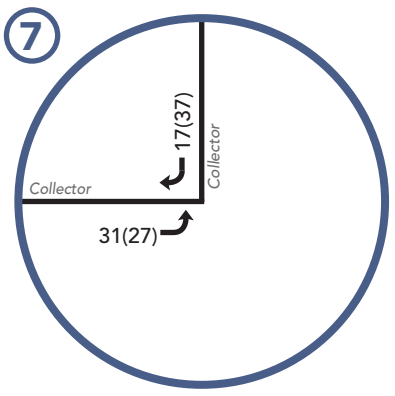


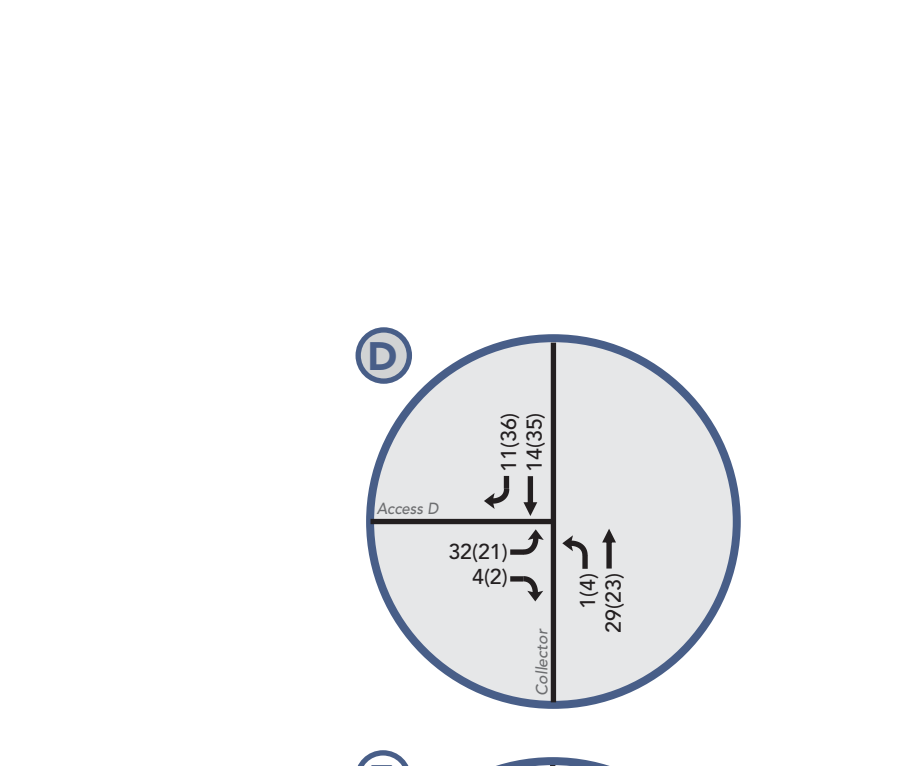












LEGEND

XX(XX)	AM(PM) Peak Hour Traffic Volume
- - -	Unimproved Road
⟷	ADT - 24 Hrs

*estimate may be low due to unknown development to the west and south

not to scale

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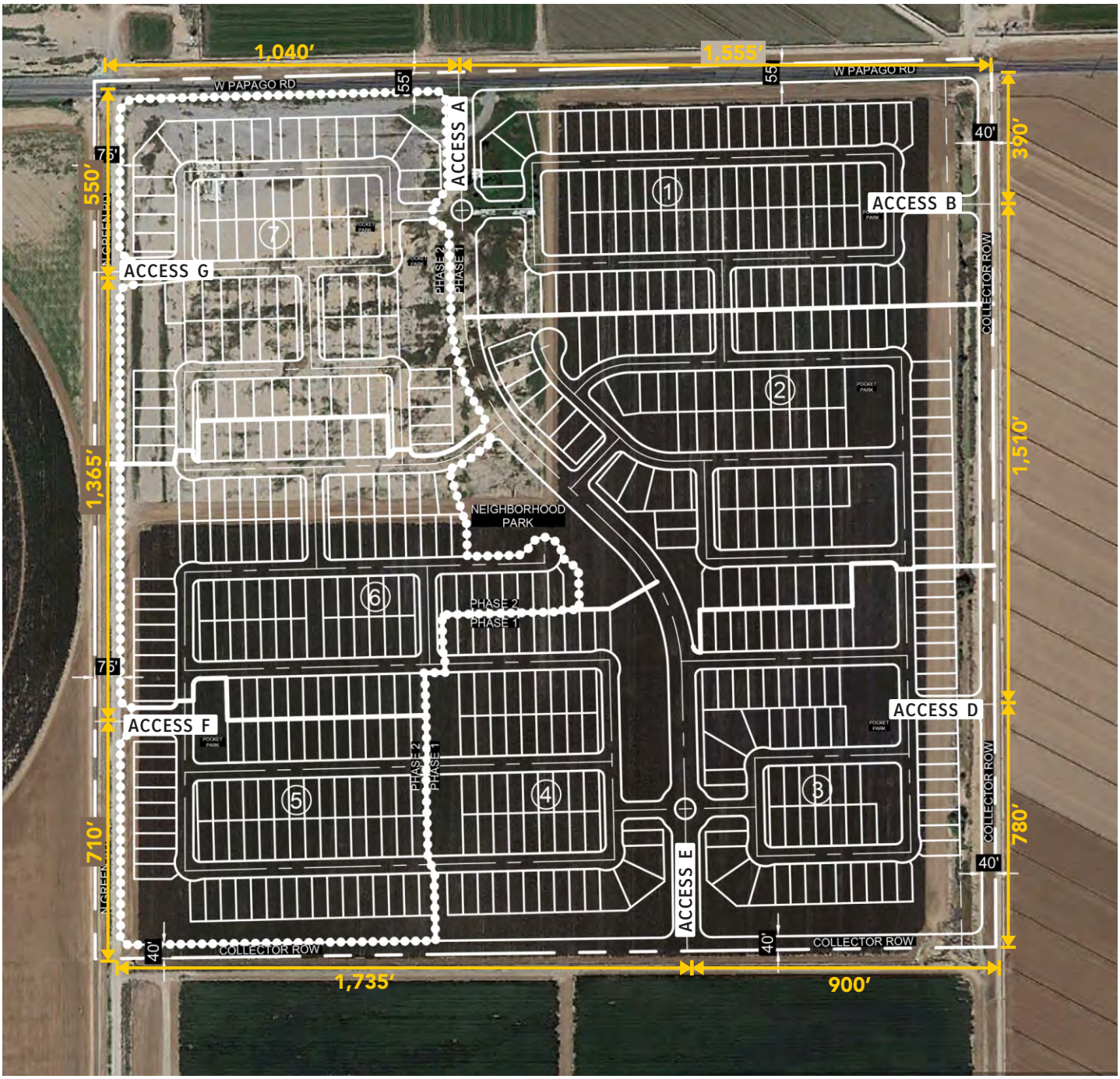
Figure 12: Total Traffic - Year 2035



not to scale

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Figure 13: Driveway Spacing

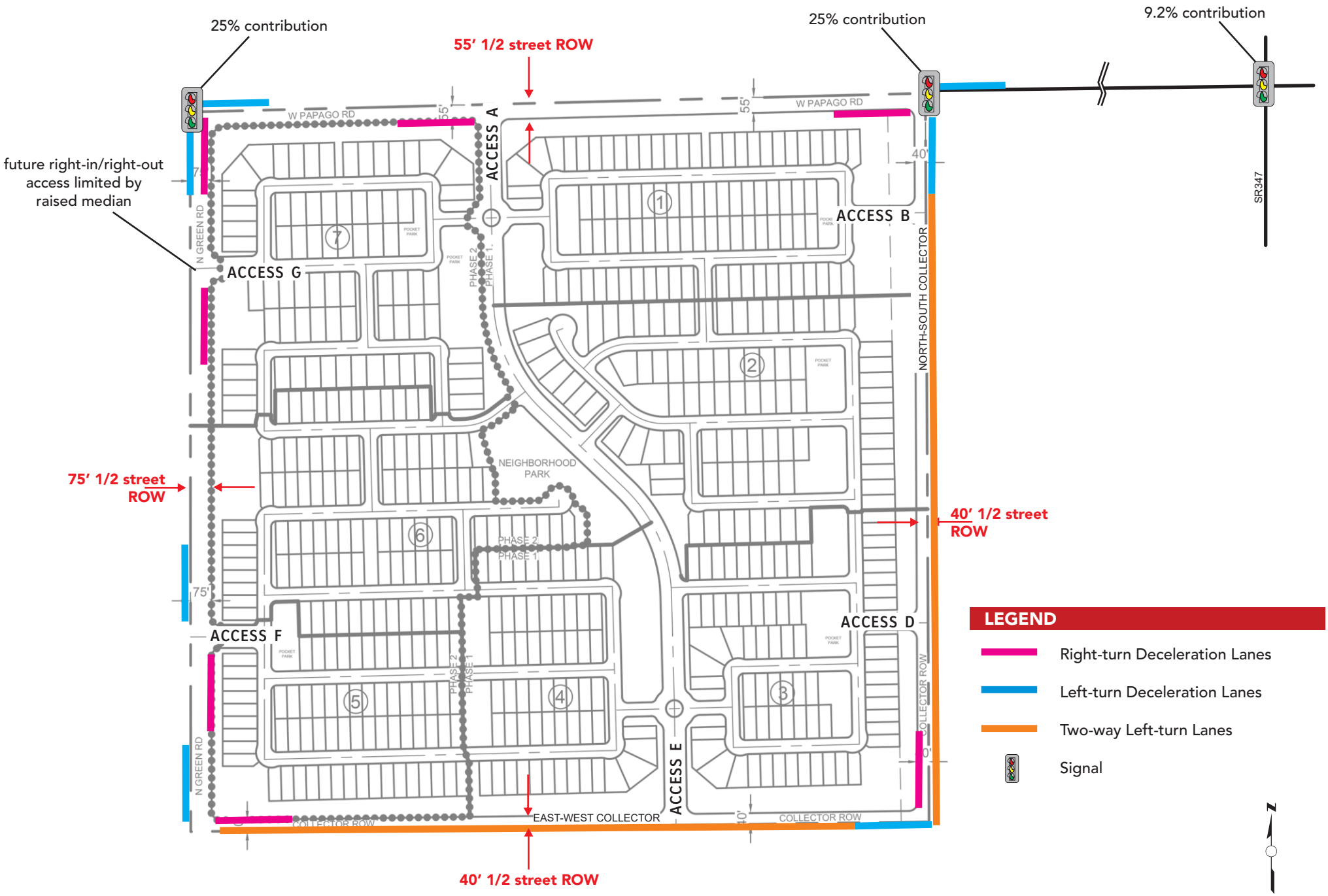


Figure 14: Recommendations

VII. CONCLUSIONS AND RECOMMENDATIONS

The proposed Venida development is a single-family residential community. Venida will include 554 single family homes. The Venida development is planned to be constructed in two phases. Phase 1 includes 317 single family homes and Phase 2 is planned to include 237 homes.

The proposed Venida development is a single-family residential community. Venida will include 554 single family homes. The Venida development is planned to be constructed in two phases. Phase 1 includes 317 single family homes and Phase 2 is planned to include 237 homes.

Phase 1 of the development will be constructed and occupied by 2025 and Phase 2 by 2030. For this development, five-years after full buildout (2035) was analyzed based on Pinal County Traffic Impact Analysis Guidelines & Procedures to identify any foreseen traffic impacts five years after the site is fully constructed and occupied.

The proposed Venida development will have one main access on Papago Road Access A, three accesses on the North-South Collector Road 1, Accesses B, C, and D. on the East West Collector Road 2, one access E is planned. On Green Road, one access, Access F is planned. All the site accesses are proposed as full movement accesses. The site access locations meet the Pinal County requirements for driveway spacing.

On a typical weekday, after full build-out, the development of 554 single family dwelling units on 158.25 acres of land is forecasted to generate 5,130 total daily trips, with 380 trips in the morning peak hour and 511 trips in the evening peak hour.

Half street improvements are planned along the boundary off site roadways. The half street cross sections include Papago Road and Green Road as minor arterial roadways with 55 feet of right of way. The North-South and East-West Collector Roadway cross sections should be designed as major collector roadways with 40 feet of right of way.

A traffic signal is warranted at the intersection of Papago Road/North-South Collector Road 1 in 2030 using projected traffic volumes. Once the Venida development is built out, warrants should be completed using actual traffic counts to determine the need for a traffic signal in the future. When warranted using actual traffic data, the traffic signal should be installed. The development should be responsible for a portion of the cost of the signal, 25%.

Due to surrounding developments, traffic signals are required at some of the study area intersections. The Venida development is responsible for their proportionate share of 9.2% of the signal cost at the intersection of SR347/Papago Road. In

addition, the development is responsible for 25% of the signal at the intersection of Green Road/Papago Road.

By year 2035, all of study area intersections and site accesses within Pinal County are anticipated to operate at an LOS or better, except for Papago Road/Access A which operates with delay in the morning and evening peak periods. Through and left-turning movements on stop-controlled minor roads and driveways that intersect with major streets typically experience greater delay for short periods of time in the peak hours due to the wait for acceptable gaps on the major street, while the free-flowing major streets experience minimal delay. Gaps in traffic provided by the signalized intersections of Papago Road/Green Road and Papago Road/Collector Road 1 are not accounted for in Vistro. These gaps will assist motorists in making a left turn from the minor roadway onto the major roadway.

During the evening by 2035, the intersection of SR347/Papago Road produces unacceptable delay as traffic volumes increase through the horizon years.

Proper intersection sight distance and sight triangles shall be provided and maintained at all site access driveways of the proposed development to give drivers exiting the site a clear view of oncoming traffic. The landscape and hardscape (monument signs) within the sight triangles must not obstruct the driver's view of the adjacent travel lanes.

Based on this TIA, the following roadway and intersection improvements are proposed.

PHASE 1 – 2025
By Venida

- Construct half street improvements along Papago Road at the site's northern boundary from Green Road east to the proposed ½ mile collector road. This improvement should provide 55 feet of right of way.
- Construct half street improvements on the North-South Collector Road 1 from Papago Road south to East West Collector Road 2. This improvement should provide 40 feet of right of way.
- Construct half street improvements on the East-West Collector Road 2 from the North-South Collector Road 1 to the Phase 2 boundary of the project. This improvement should provide 40 feet of right of way.
- Install dedicated right and exclusive left turn lanes at site accesses and study area intersections as recommended in Tables 10 and 11.
- Consider installing two-way-left-turn lanes on the North-South Collector Road 1 and East-West Collector Road 2 to accommodate vehicles turning left into the Venida Development.

By Others

- Widen the eastbound leg of the SR 347/Papago Road intersection to accommodate right and left turning vehicles.
- Construct a signal at the intersection of SR 347/Papago Road. Development to contribute 9.2% of the cost of the signal.
- Construct a signal at the intersection of Papago Road/Green Road. Development to contribute proportionate share 25% of the cost of the signal.

PHASE 2 – 2030

By Venida

- Construct half street improvements along Papago Road at the site's northern boundary from Access A west to Green Road. This improvement should provide 55 feet of right of way.
- Construct half street improvements along Green Road at the site's western boundary from Papago Road to the East-West Collector Road 2. This improvement should provide 75 feet of right of way.
- Construct half street improvements on the East-West Collector Road 2 from the Phase 2 boundary of the project to Green Road. This improvement should provide 40 feet of right of way.
- Install dedicated right and exclusive left turn lanes at site accesses and study area intersections as recommended in Tables 10 and 11.

By Others

- Construct a traffic signal at the intersection of Papago Road/North-South Collector Road 1. Development to contribute proportionate share of signal cost of 25%.

VIII. LIMITATIONS

Our professional services have been performed using the degree of skill ordinarily exercised, under similar circumstances, by reputable transportation engineering firms practicing in this locality. No other warranty, expressed or implied, is made.

The contents of this report are intended for the sole use of the addressee and his/her designees. In completing this report, data was obtained from a variety of sources (i.e., City, County, State and Federal sources); United Civil Group has assumed these sources to be reliable and accurate. Should deviations from this report be noted, this firm shall be contacted for review of the area of concern.

A reasonable attempt was made to acquire recent traffic impact studies, traffic projections and/or data that may be helpful in more accurately projecting traffic volumes. United Civil Group is not responsible for incorporating data made available after this document has been finalized.

This report is issued with the understanding that it is the responsibility of the owner to see that its provisions are carried out or brought to the attention of those concerned. If any changes of the proposed project are planned, the conclusions and recommendations contained in this report shall be reviewed and the report shall be modified or supplemented, as necessary.

IX. SOURCES

Arizona Department of Transportation Traffic Engineering Guidelines and Processes, June 2015.

A Policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials, 2018.

Highway Capacity Manual, HCM, Transportation Research Board, 2010.

Manual on Uniform Traffic Control Devices, Federal Highway Administration, MUTCD 2009.

Pinal County Access Management Manual, February 24, 2017.

Pinal County Regionally Significant Routes for Safety and Mobility Final Report. December 2008.

Pinal County Small Area Transportation Study Final Report, August 2006.

Pinal County Subdivision & Infrastructure Design Manual.

Pinal County Traffic Assessment Guidelines & Procedures, January 2007.

Trip Generation, 10th Edition, Institute of Transportation Engineers, 2017.

Appendix A

United Civil Group

Turning Movement Count

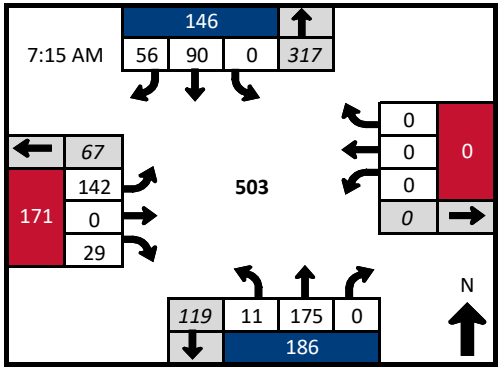
Project No: TR21096

Location: SR347
and Papago Road

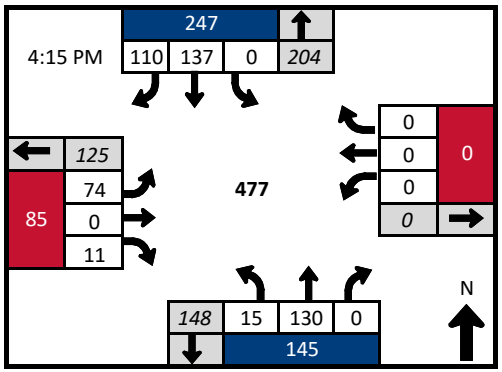
Intersection Configuration: Unsignalized

September 8, 2021 (Wednesday)

	Speed Limit	Lt	Lt\T	T	T/Rt	Rt	Lt/T/Rt	Lt/Rt
Northbound	65	1		2				
Southbound	65			2		1		
Eastbound	45							1
Westbound								



	SR347				SR347				Papago Road				Papago Road				Total	Peak Hour
	Northbound				Southbound				Eastbound				Westbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	2	35	0	0	0	25	7	0	31	0	5	5	0	0	0	0	105	
7:15 AM	4	49	0	0	0	16	7	0	33	0	8	0	0	0	0	0	117	
7:30 AM	3	42	0	0	0	26	12	0	43	0	7	0	0	0	0	0	133	
7:45 AM	2	44	0	0	0	24	10	0	33	0	4	0	0	0	0	0	117	472
8:00 AM	2	40	0	0	0	24	27	0	33	0	10	0	0	0	0	0	136	503
8:15 AM	4	23	0	0	0	21	21	0	16	0	6	0	0	0	0	0	91	477
8:30 AM	1	31	0	0	0	16	19	0	26	0	1	0	0	0	0	0	94	438
8:45 AM	1	32	0	0	0	28	14	0	20	0	3	0	0	0	0	0	98	419
Peak Hour Total	**11**	**175**	**0**	**0**	**0**	**90**	**56**	**0**	**142**	**0**	**29**	**0**	**0**	**0**	**0**	**0**	**503**	



	SR347				SR347				Papago Road				Papago Road				Total	Peak Hour
	Northbound				Southbound				Eastbound				Westbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
4:00 PM	3	27	0	0	0	32	27	0	22	0	3	0	0	0	0	0	114	
4:15 PM	7	39	0	0	0	40	25	0	18	0	2	0	0	0	0	0	131	
4:30 PM	4	36	0	0	0	25	23	0	21	0	4	0	0	0	0	0	113	
4:45 PM	1	31	0	0	0	35	29	0	17	0	3	0	0	0	0	0	116	474
5:00 PM	3	24	0	0	0	37	33	0	18	0	2	0	0	0	0	0	117	477
5:15 PM	5	15	0	0	0	36	22	0	12	0	1	0	0	0	0	0	91	437
5:30 PM	6	33	0	0	0	53	27	0	15	0	1	0	0	0	0	0	135	459
5:45 PM	4	35	0	0	0	32	29	0	17	0	1	0	0	0	0	0	118	461
Peak Hour Total	**15**	**130**	**0**	**0**	**0**	**137**	**110**	**0**	**74**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**477**	

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Turning Movement Count

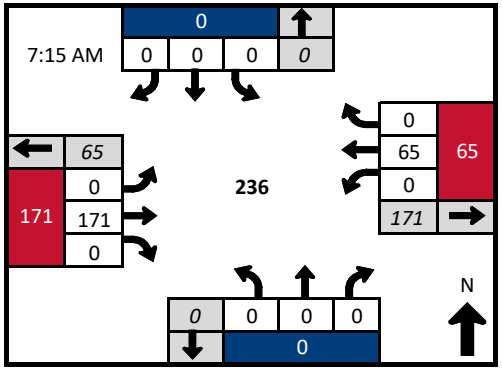
Project No: TR21096

Location: Green Road and Papago Road

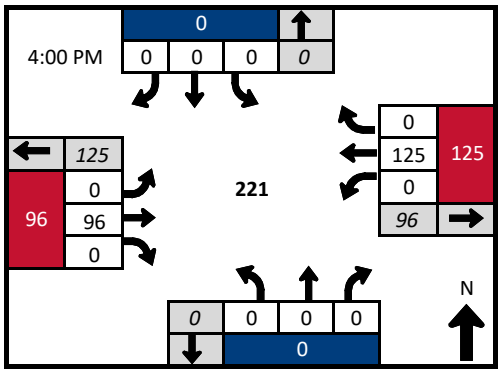
Intersection Configuration: Unsignalized

September 8, 2021 (Wednesday)

	Speed Limit	Lt	Lt\T	T	T/Rt	Rt	Lt/T/Rt	Lt/Rt
Northbound	25						1	
Southbound	25						1	
Eastbound	45						1	
Westbound	45						1	



	Green Road				Green Road				Papago Road				Papago Road				Total	Peak Hour
	Northbound				Southbound				Eastbound				Westbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	0	0	0	0	0	0	0	0	0	36	0	5	0	6	0	0	42	
7:15 AM	0	0	0	0	0	0	0	0	0	45	0	0	0	10	0	0	55	
7:30 AM	0	0	0	0	0	0	0	0	0	45	0	0	0	14	0	0	59	
7:45 AM	0	0	0	0	0	0	0	0	0	43	0	0	0	14	0	0	57	213
8:00 AM	0	0	0	0	0	0	0	0	0	38	0	0	0	27	0	0	65	236
8:15 AM	0	0	0	0	0	0	0	0	0	30	0	0	0	20	0	0	50	231
8:30 AM	0	0	0	0	0	0	0	0	0	25	0	0	0	21	0	0	46	218
8:45 AM	0	0	0	0	0	0	0	0	0	25	0	0	0	19	0	0	44	205
Peak Hour Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**171**	**0**	**0**	**0**	**65**	**0**	**0**	**236**	



	Green Road				Green Road				Papago Road				Papago Road				Total	Peak Hour
	Northbound				Southbound				Eastbound				Westbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
4:00 PM	0	0	0	0	0	0	0	0	0	25	0	0	0	32	0	0	57	
4:15 PM	0	0	0	0	0	0	0	0	0	19	0	0	0	33	0	0	52	
4:30 PM	0	0	0	0	0	0	0	0	0	25	0	0	0	27	0	0	52	
4:45 PM	0	0	0	0	0	0	0	0	0	27	0	0	0	33	0	0	60	221
5:00 PM	0	0	0	0	0	0	0	0	0	13	0	0	0	34	0	0	47	211
5:15 PM	0	0	0	0	0	0	0	0	0	12	0	0	0	24	0	0	36	195
5:30 PM	0	0	0	0	0	0	0	0	0	20	0	0	0	31	0	0	51	194
5:45 PM	0	0	0	0	0	0	0	0	0	15	0	0	0	34	0	0	49	183
Peak Hour Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**96**	**0**	**0**	**0**	**125**	**0**	**0**	**221**	

United Civil Group

Turning Movement Count

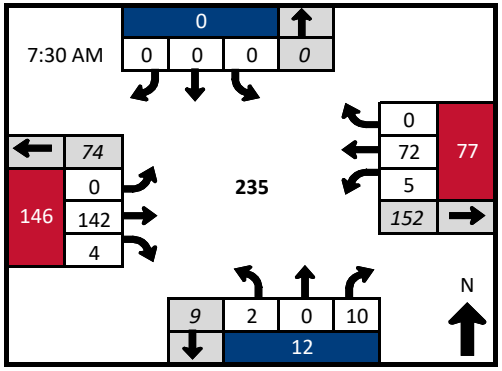
	Speed Limit	Lt	Lt\T	T	T/Rt	Rt	Lt/T/Rt	Lt/Rt
Northbound							1	
Southbound		1			1			
Eastbound	45						1	
Westbound	45		1			1		

Project No: TR21096

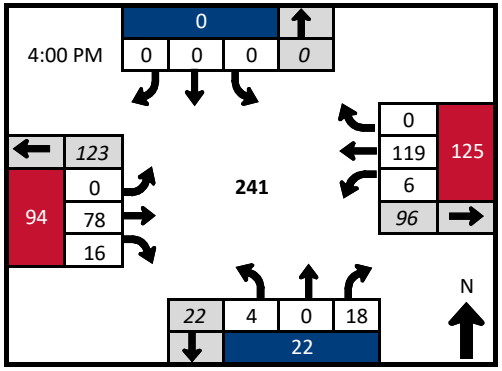
Location: Amarillo Valley Road and Papago Road

Intersection Configuration: Unsignalized

September 8, 2021 (Wednesday)



	Amarillo Valley Road				Amarillo Valley Road				Papago Road				Papago Road				Total	Peak Hour
	Northbound				Southbound				Eastbound				Westbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	3	0	0	0	0	0	0	0	0	34	2	5	0	7	0	0	46	
7:15 AM	3	0	0	0	0	0	0	0	0	42	1	0	0	8	1	0	55	
7:30 AM	0	0	2	0	0	0	0	0	0	43	1	0	0	14	0	0	60	
7:45 AM	1	0	3	0	0	0	0	0	0	37	1	0	2	10	0	0	54	215
8:00 AM	0	0	1	0	0	0	0	0	0	32	0	0	1	27	0	0	61	230
8:15 AM	1	0	4	0	0	0	0	0	0	30	2	0	2	21	0	0	60	235
8:30 AM	1	0	1	0	0	0	0	0	0	24	5	0	1	18	0	0	50	225
8:45 AM	2	0	1	0	0	0	0	0	1	20	3	0	3	18	0	0	48	219
Peak Hour Total	**2**	**0**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**142**	**4**	**0**	**5**	**72**	**0**	**0**	**235**	



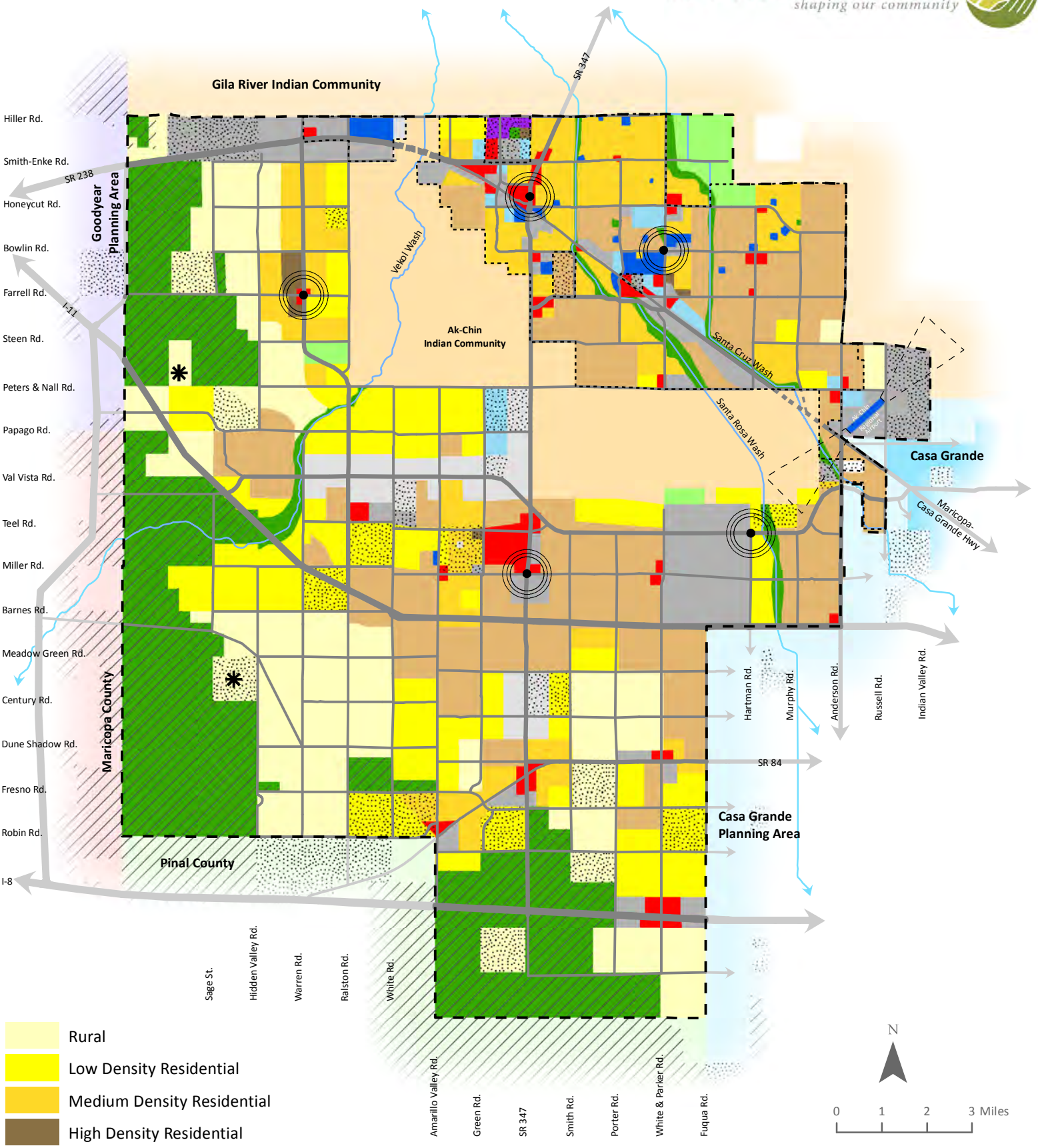
	Amarillo Valley Road				Amarillo Valley Road				Papago Road				Papago Road				Total	Peak Hour
	Northbound				Southbound				Eastbound				Westbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
4:00 PM	1	0	5	0	0	0	0	0	0	17	3	0	2	30	0	0	58	
4:15 PM	1	0	5	0	0	0	0	0	0	19	4	0	2	31	0	0	62	
4:30 PM	2	0	7	0	0	0	0	0	0	21	4	0	0	28	0	0	62	
4:45 PM	0	0	1	0	0	0	0	0	0	21	5	0	2	30	0	0	59	241
5:00 PM	1	0	2	0	0	0	0	0	0	11	4	0	0	36	0	0	54	237
5:15 PM	0	0	1	0	0	0	0	0	0	13	4	0	3	22	0	0	43	218
5:30 PM	2	0	5	0	0	0	0	0	0	17	4	0	6	27	0	0	61	217
5:45 PM	2	0	5	0	0	0	0	0	0	13	4	0	2	30	0	0	56	214
Peak Hour Total	**4**	**0**	**18**	**0**	**0**	**0**	**0**	**0**	**0**	**78**	**16**	**0**	**6**	**119**	**0**	**0**	**241**	

Appendix B

Appendix C

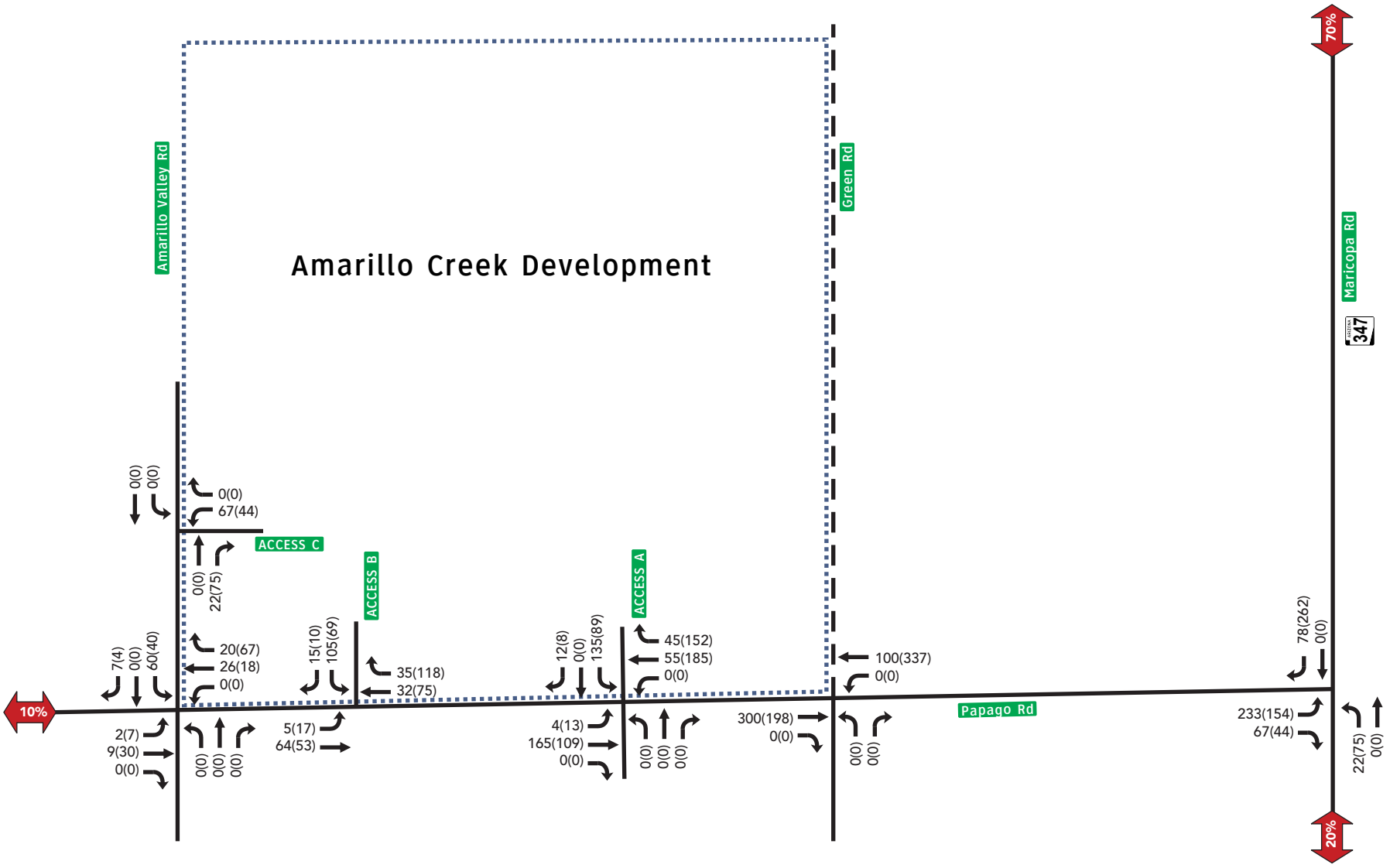
FUTURE LAND USE

PLANNING MARICOPA
shaping our community



- Rural
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Master Planned Community
- Mixed Use
- Commercial
- Public/Institutional
- Research & Development
- Agriculture
- Park/Open Space
- Employment/Industrial
- Light Industrial
- City Limits
- Planning Area
- B.L.M.
- State Land
- Village Center
- Resort

Appendix D



LEGEND

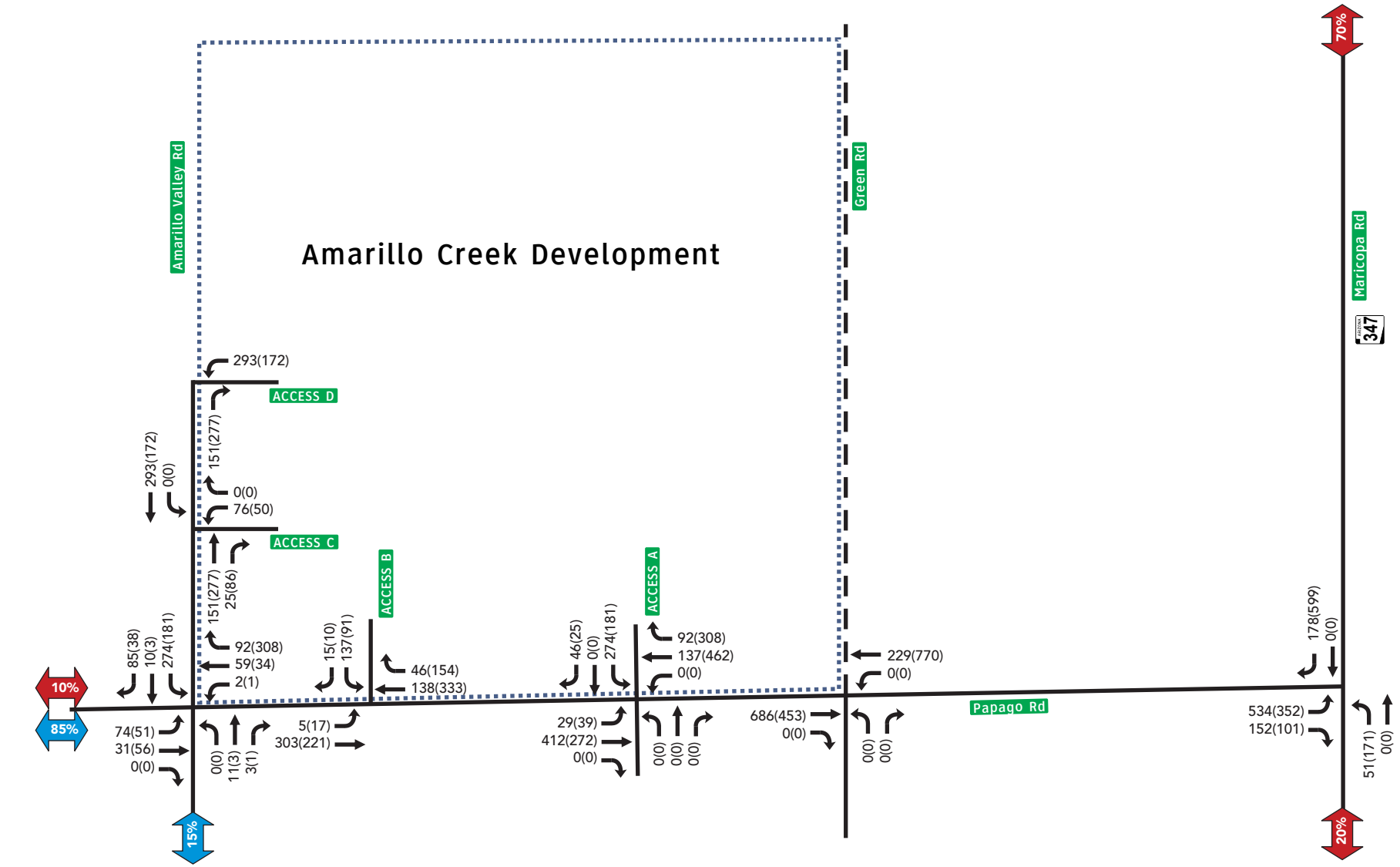
XX(XX)	AM(PM) Peak Hour Traffic Volume
X%	Trip Distribution - Residential Homes
- - -	Unimproved Road

N

not to scale

UCG
United Civil Group

Figure 5: Site Generated Traffic and Trip Distribution - Phase I



LEGEND

XX(XX)	AM(PM) Peak Hour Traffic Volume
X%	Trip Distribution - Residential Homes
X%	Trip Distribution - Schools
- - -	Unimproved Road

N

not to scale

UCG
United Civil Group

Figure 6: Site Generated Traffic and Trip Distribution - Phases I and II

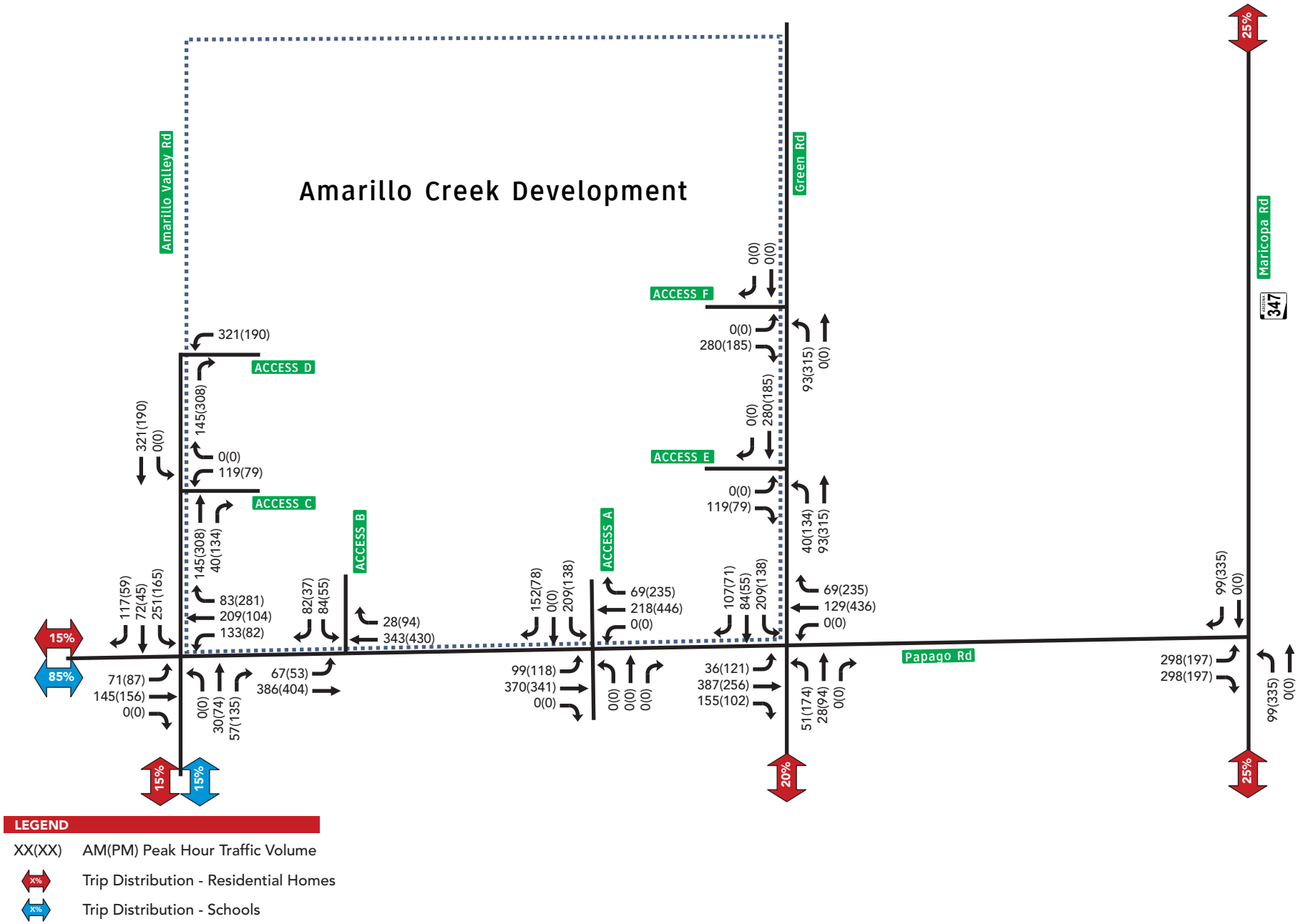


Figure 7: Site Generated Traffic and Trip Distribution - Full Build Out

United Civil Group

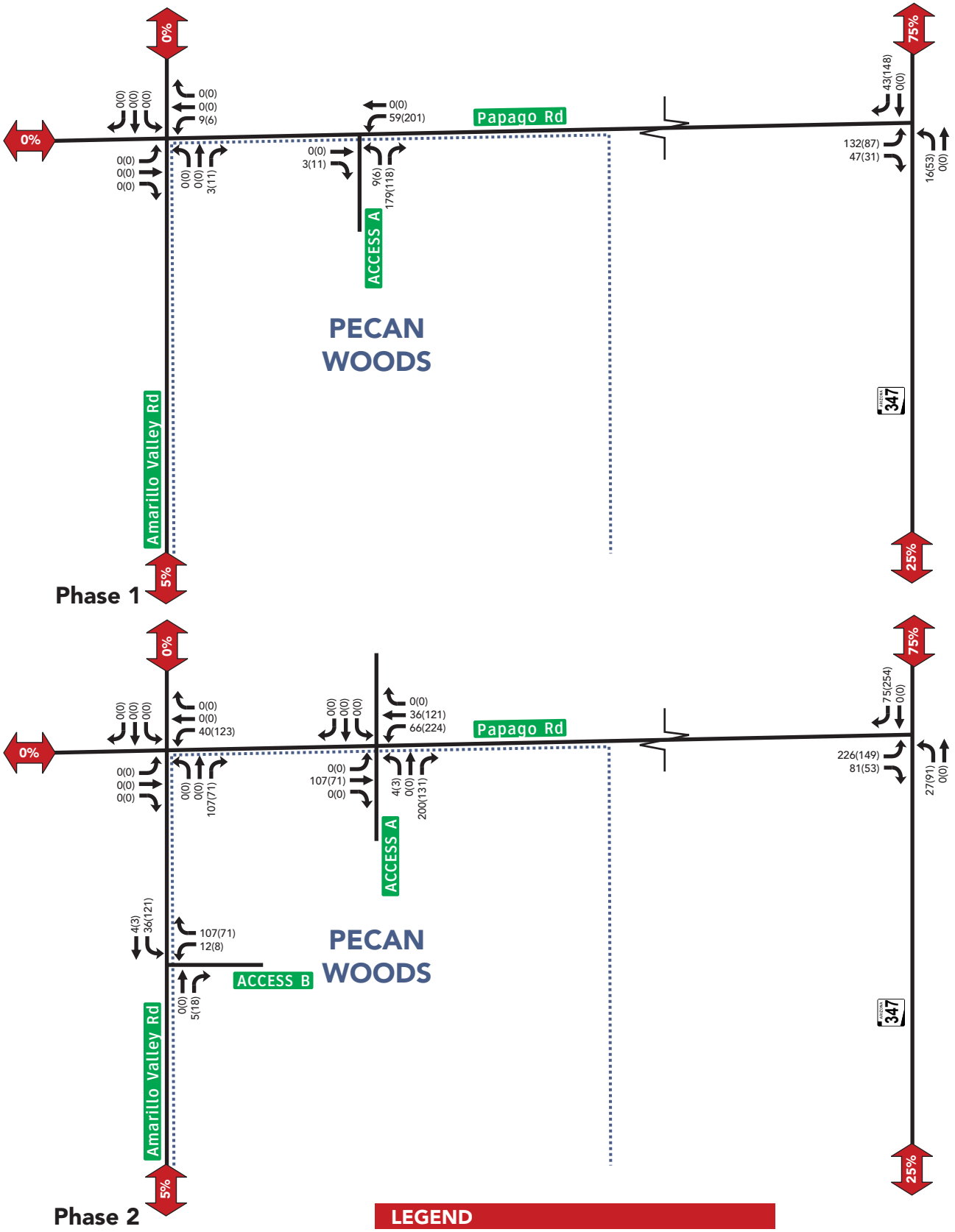
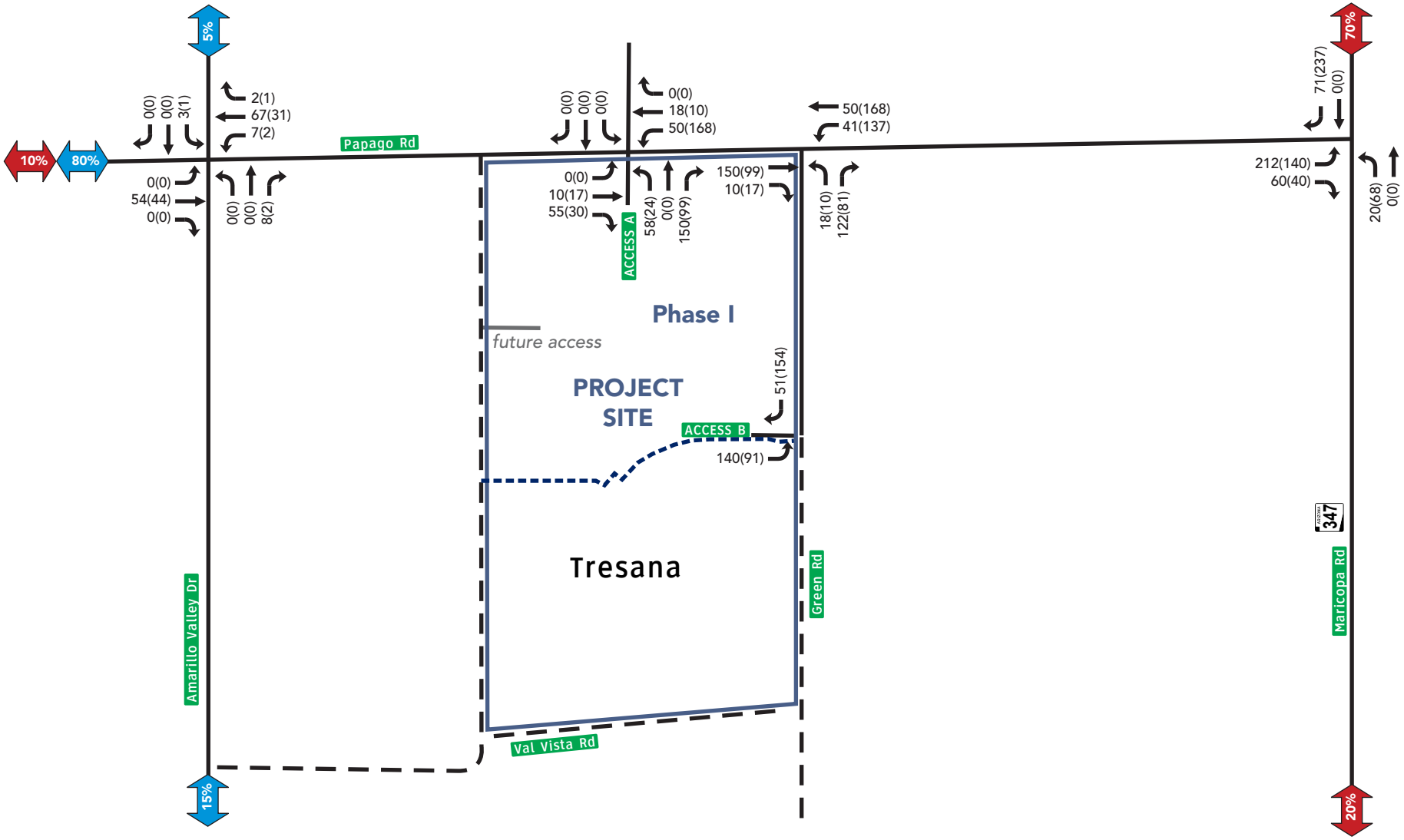


Figure 9: Site Generated Traffic and Trip Distribution



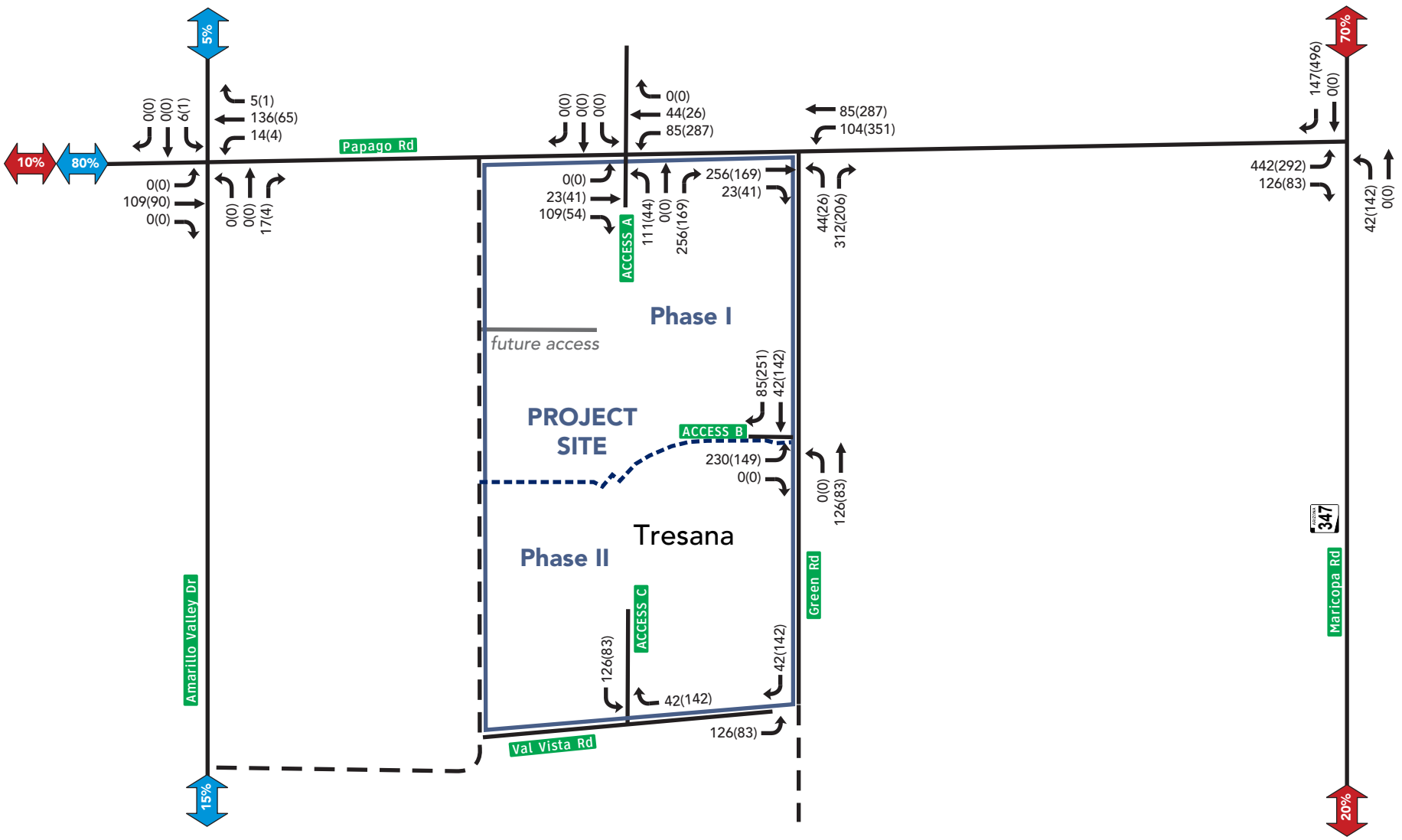
LEGEND

XX(XX)	AM(PM) Peak Hour Traffic Volume
X%	Trip Distribution - Residential Homes
X%	Trip Distribution - Elementary School
- - -	Unimproved Road

not to scale

UCG
United Civil Group

Figure 5: Site Generated Traffic and Trip Distribution - Phase I



LEGEND

XX(XX)	AM(PM) Peak Hour Traffic Volume
X%	Trip Distribution - Residential Homes
X%	Trip Distribution - Elementary School
- - -	Unimproved Road

N

not to scale

UCG
United Civil Group

Figure 6: Site Generated Traffic and Trip Distribution - Phases I and II

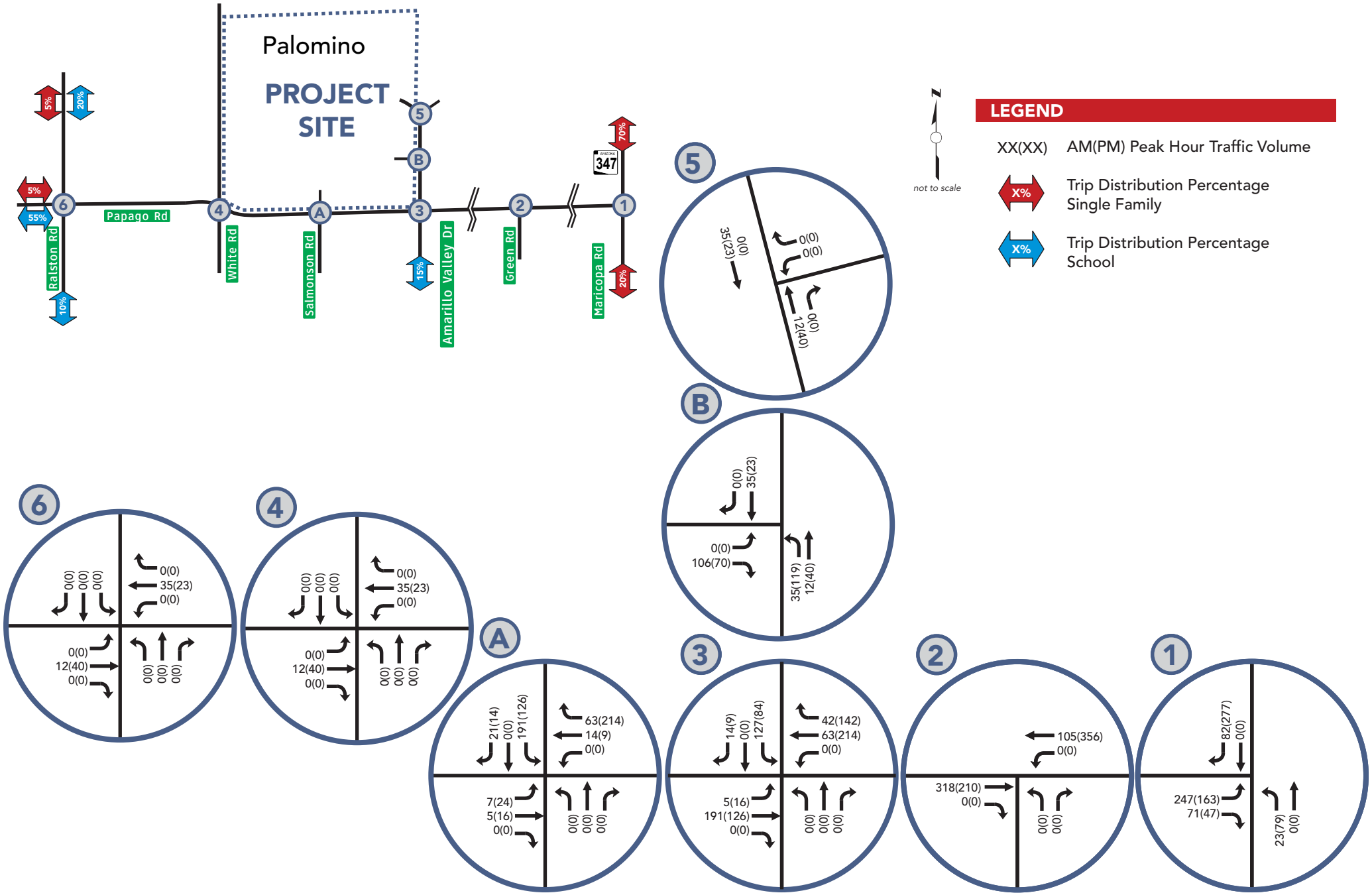


Figure 5: Site Generated Traffic and Trip Distribution - Phase 1

United Civil Group

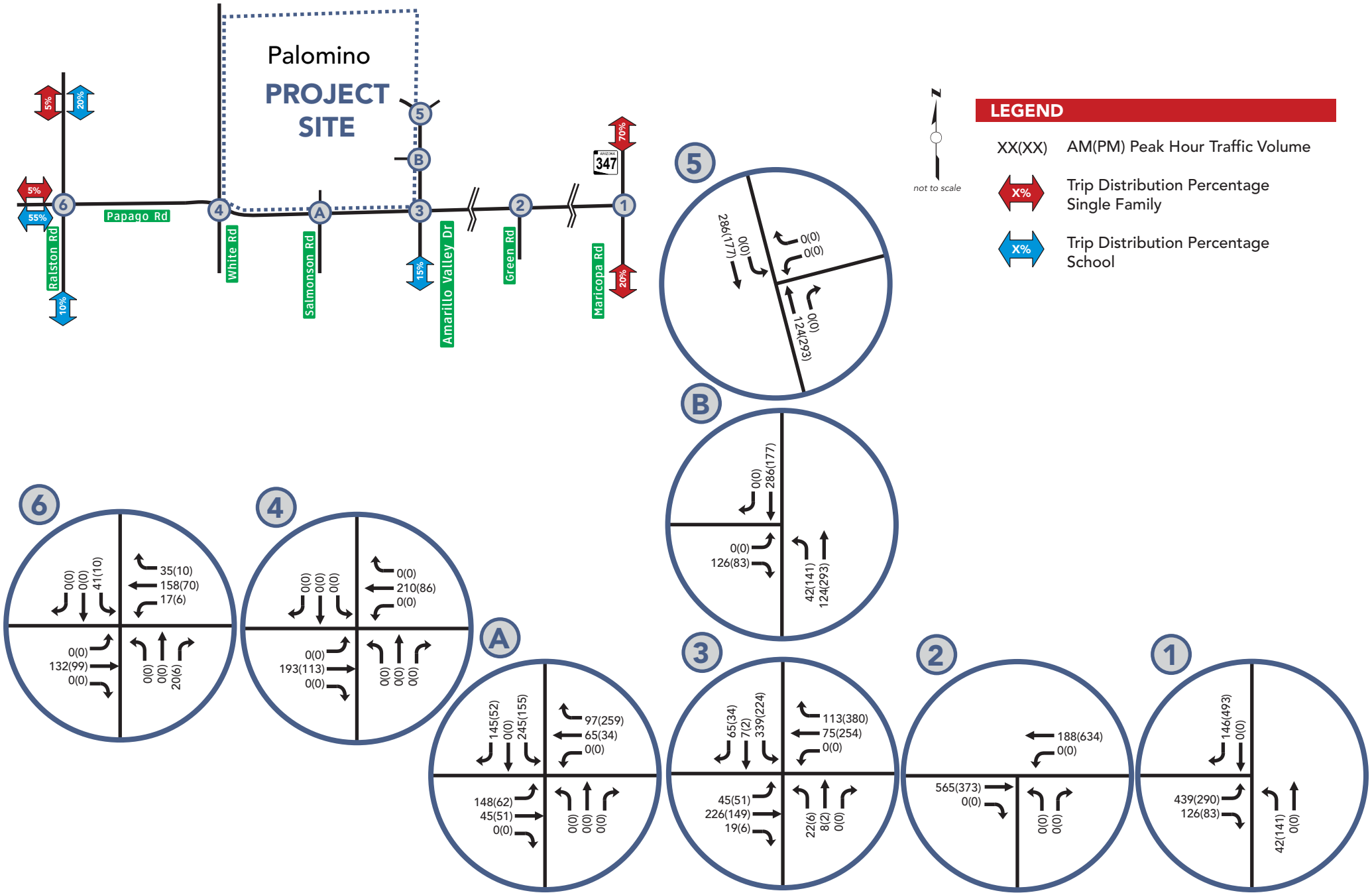


Figure 6: Site Generated Traffic and Trip Distribution - Phases 1-2

United Civil Group

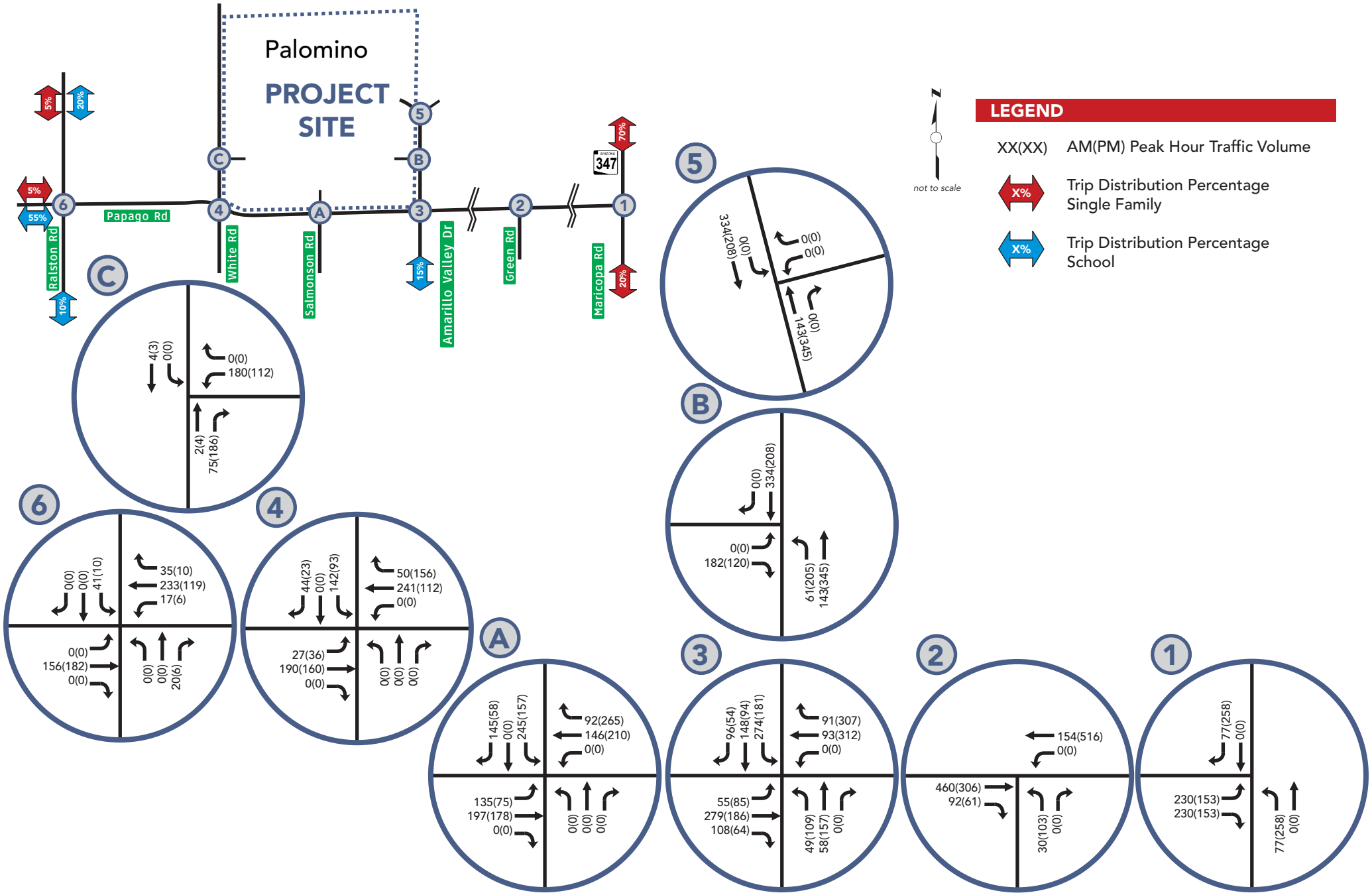


Figure 7: Site Generated Traffic and Trip Distribution - Phases 1-3

United Civil Group

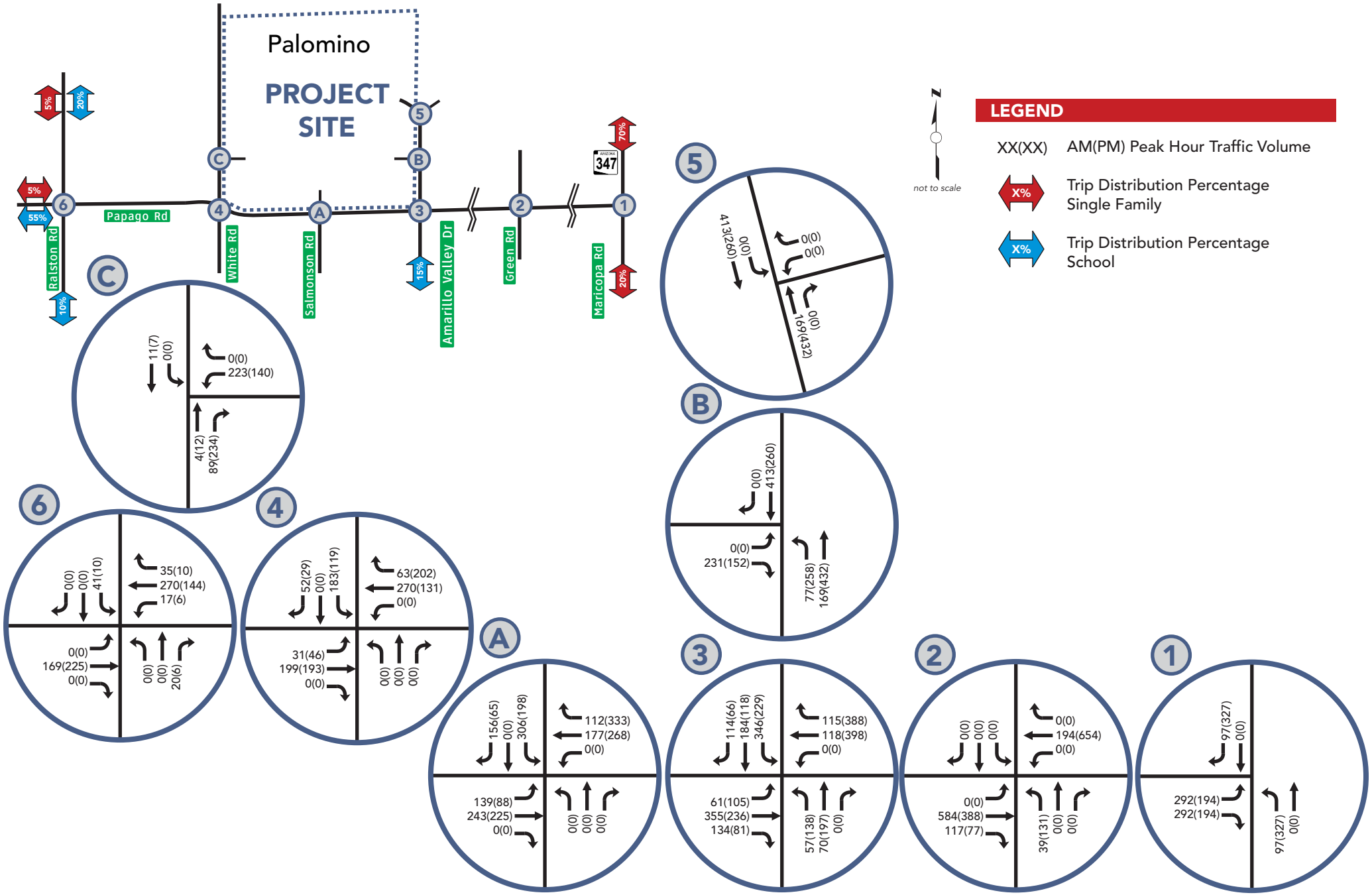


Figure 8: Site Generated Traffic and Trip Distribution - Full Build-Out

United Civil Group

Appendix E

MUTCD Signal Warrant Analysis

Horizon Year	**2035 Total Traffic**			
Community Type	Isolated community with less than 10,000 people			
Street Name	Collector Road 1		Papago Road	
Posted Speed (mph)	45		45	
Direction	NB	SB	EB	WB
Number of Lanes	2 or more		2 or more	
	Minor Street		Major Street	
Morning Volume	135	0	2410	840
Evening Volume	0	0	0	0

8 Highest Hours	Hourly Factors*	Major Street *(both directions)*	Minor Street *(higher one direction)*
1	0.0771	3250	135
2	0.0730	3077	128
3	0.0688	2900	120
4	0.0656	2765	115
5	0.0618	2605	108
6	0.0612	2580	107
7	0.0573	2415	100
8	0.0572	2411	100

** Source: Pignataro Traffic Engineering Theory and Practice, 1973*

70% Warrant Criteria	Major Street	Minor Street
Condition A	420	140
Condition B	630	70
30% Condition for A and E	504	112

8 Highest Hours	Met? Warrant 1 Condition A	Warrant 1 Condition B	80% Warrant for Conditions A and B**
1	NO	YES	YES
2	NO	YES	YES
3	NO	YES	YES
4	NO	YES	YES
5	NO	YES	NO
6	NO	YES	NO
7	NO	YES	NO
8	NO	YES	NO

***80% Condition for Warrants A and B is intended for application at locations where Condition A is not satisfied and Condition B is not satisfied and should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.*

SR 347 and Papago Road Traffic Signal Participation

	Area (ac)	% of SR347 Signal	ADOT Signal Cost:	$500,000
Palomino Ranch	640	36.8%	$183,908	
Amarillo Creek Unit	460	26.4%	$132,184	
Pecan Woods	160	9.2%	$45,977	
Tresana	320	18.4%	$91,954	
Venida	160	9.2%	$45,977	
Total	1740		$500,000	

Appendix F

Storage Length/Queue Analysis

Project: Venida

Design Year: Total 2035

Signalized intersections:

AASHTO/ITE Traffic Engineering Handbook Queue Storage Length Formula for Signalized Intersections:

Left Turns:

Queue Storage Length = VKL(1+p)/Nc, where:

V= peak 15-min flow rate expressed in vph (use peak hour volume)

K= constant reflecting random arrivals (use 2)

Nc= Number of Cycles per hour (use 36 for 100 sec cycle length)

p= percentage of trucks or buses (use 0 for this site, trucks/buses negligible)

L= length of typical vehicle (use 25 feet)

Right Turns:

Queue Storage Length = (1-G/C)VKL(1+p)/Nc, where:

V= peak 15-min flow rate expressed in vph (use peak hour volume)

K= constant reflecting random arrivals (use 1.5 for right-on-red, 2 for no right-on-red)

L= length of typical vehicle (use 25 feet)

Nc= Number of Cycles per hour (use 36 for 100 sec cycle length)

C= Cycle Length in seconds (use 100)

G= Green time in seconds (per vistro model - optimized)

p= percentage of trucks or buses (use 0 for this site, trucks/buses negligible)

Direction	Turning Vol (veh/hr)	Calculated Queue Length (ft)	Cycle	Major Street g/C - per Vistro optimized
Papago Road/Collector Road 1			*90*	
		LEFT TURNS		
NB	46	**43**		
WB	100	**94**		
		RIGHT TURNS		
EB	52	**12**		0.7
		0		0.3
Papago Road/Green Road			*90*	
		LEFT TURNS		
WB	377	**353**		
		RIGHT TURNS		
NB	333	**153**		0.4
		0		0.6

Storage Length/Queue Analysis

Project: Venida

Design Year: Total 2035

Unsignalized intersections:

Pinal County Procedures Minimum Storage = 100 feet

Right Turns:

Queue Storage Length = vehicles/2 min period x L

vph= vehicles per hour (use peak hour volume)

L= length of typical vehicle (use 25 feet)

30 two minute periods per hour

Left turns calculated by AASHTO Methodologies

Direction	Turning Vol (veh/hr)	Calculated Queue Length (ft)	Rec. Minimum
	Collector Road 1/Collector Road 2		
	RIGHT TURN		
SB	42	35	100
	LEFT TURN		
EB	35/500	19	100
	Collector Road 2/Green Road		
	RIGHT TURN		
WB	25	21	100
	LEFT TURN		
SB	28/192	11	
	Papago Road/Access A		
	RIGHT TURN		
EB	49	41	100
	LEFT TURN		
WB	52/1551	93	
	Green Road/Access F		
	RIGHT TURN		
NB	4	3	100
	LEFT TURN		
SB	39/257	16	
	Collector Road 1/Access B		
	LEFT TURN		
NB	4/113	0	100
	Collector Road 1/Access C		
	LEFT TURN		
NB	4/39	0	100
	Collector Road 1/Access D		
	LEFT TURN		
NB	4/40	0	100
	Collector Road 2/Access E		
	LEFT TURN		
EB	38/8	0	100

Appendix G

Andrew Smith
Public Works Director

Joe Ortiz
Deputy Director

Christopher Wanamaker
County Engineer

PINAL COUNTY
WIDE OPEN OPPORTUNITY

Leo Lew
County Manager

Public Works Traffic Engineering Review Comment Letter

Project Name:		Venida TIA (SEC Papago at Green Rd)			
Engineering Firm:		UCG		Reviewed by:	John Kraft
Engineer:		Sarah Simpson, #32850, Sealed 10/05/2021			
Case #:	PZ-042-21	Review Status:	1st Review	Date:	12/14/2021
		RESPOND TO ALL COMMENTS AND REDLINES:			
Sheet #	Comment #				
Cover Sheet	1	**Add: Pinal Case # PZ-042-21 1st Review by: John Kraft 12/14/2021 to the Cover of the report under County Case Number & UCG Project # (2nd Cover sheet.**			
Pg 5	2	Reference "554 single family homes." Identify size or acerage of site that will receive 554 d.u.			
Pg 6	3	Referencing "with exception of:" Reference Trip Generation volumes estimated for 554 d.u. on __ acres estimated as Projected Traffic Volumes of 5229 total daily trips for this proposed development shown on page 24 of this report.			
Pg 9	4	Reference Site Location, Figure 3 on Page 13 of this report also shows Proposed Site Location with Access Locations.			
Pg 9	5	Under "Site Accessibility" reference Figure 3 on page 13 for Access Locations.			
Pg 21	6	Referencing Figure 9 & Figure 10, Mention comparison between buildout & build condition in year 2023 with suggested mitigation measures.			
Pg 19	7	Under Intersection Level of Service Analysis, last two sentences of first paragraph, Pinal County strives, and Intersections having a LOS D, E, or F may warrant improvements or traffic reductions. Good statements!			
Pg 19	8	Referencing Figure 5, this page appears to accurately show Site Generated Traffic and Trip Distribution for Phase I of development as does Figure 6 for Full Buildout Condition.			
Pg 30	9	Referencing LOS F in Table 8 and discussion up to "show delay", Please mention mitigation measures that may be made to reduce delay times to acceptable levels (LOS C or better).			
Pg 31	11	Referencing "The all" check grammer.			
Pg 35	12	Referencing Access E, phase o, check or correct phase.			
Pg 37	13	Referencing Major Collector Detail, revise to show 26 feet of new pavement with 12' lane width pavement marking for two 12' lanes and 6 inch white along edgeline to define 2' paved shoulder.			
Pg 37	14	Referencing "9.2% of the cost of the signal." Please elaborate on how this percentage was arrived at and state that contribution will be provided upon approval of final plat for Phase 1.			
Pg 38	15	Referencing Major Collector Detail, revise to show 26 feet of new pavement with 12' lane width pavement marking for two 12' lanes and 6 inch white along edgeline to define 2' paved shoulder. Unless Right Turn Lanes or Left Turn Lanes are necessary as shown on Table 10, and part C.3 of this report, this two twelve foot lane requirement will pertain to all half street improvements within 40 foot of half street ROW.			

PINAL COUNTY
WIDE OPEN OPPORTUNITY

Pg 44	16	Referencing Table 44, 25% contribution toward signal, please elaborate on how the 25% amount was arrived at and include discussion on who else may provide contrubutions toward new signal.
Figure 14	17	Under Legend, To each descriptor, Add: “And one 12’ thru lane in each direction”

April 15, 2022

Project:	**TIA for Venida**
County Case Number:	PZ-042-21
UCG Project Number:	TR21096 – Sealed 10/05/21
Reviewing Agency:	Pinal County
Revision:	1st Review Comments
Date Reviewed:	**December 14, 2021**

No.	Page	Response
1	General	*Added: PZ-042-21 and 1st Review by John Kraft to the cover and also the title sheet.*
2	Page 5	Added: … on 158.25 acres of agricultural land. Added acreage of land to each phase of development.
3	Page 6	The land uses referenced as 554 single family dwelling units on 158.25 acres. In addition, Section V. Projected Traffic is referenced for phasing.
4	Page 9	Added: **Figure 3** presents the site plan for the Venida Development.
5	Page 9	Added: **Figure 3** illustrates the site accesses for the Venida Development.
6	Page 21	For Figures 7 through 9, Added: **These traffic volumes do not include site generated traffic. For Figures 10 through 12 added: which includes the site generated traffic.**
7	Page 19	Thanks!
8	Page 19	Figures 5 and 6 show how the trips to and from the Venida Development will be distributed for Phases 1 and 1+2 (Full Buildout), respectively.
9	Page 30	In the background, during the evening peak period, delay is forecast at the intersection of SR347/Papago Road. This is due to the high volume of southbound right turning movements and the eastbound left turn movements at the intersection. Because ADOT is not planning to widen SR347 within the vicinity of the site by 2030, delay will likely be present during the peak periods. As more roadways within the area are constructed, such as Val Vista Road that add capacity to the roadway network, traffic will shift to the new roadways.
11	Page 31	Revised to read "The…"
12	Page 35	Corrected: Access E will be constructed with Phase I of Development
13	Page 37	Removed the Standard County Detail graphics because the section described in the comment is different. Therefore, the TIA states that the cross section should follow the county standard, at a minimum. Civil Engineer to provide cross section details on their plans.
14	Page 37	Added paragraph that a cost share was prepared for the signal at SR347/Papago. The cost share was based on known acreage to be developed along Papago Road. The cost share is provided in Appendix E.
15	Page 38	Removed the Standard County Detail graphics because the cross section described in the comment is different. Therefore, the TIA states that the cross section should follow the county standard, at a minimum. Civil Engineer to provide cross section details on their plans.

16	Page 44	Added: Other developments are planned in the area such as Amarillo Creek, Tresana, and Pecan Woods. These developments will also contribute toward signal needs in the area. The 25% signal contributions at the intersections of Papago Road/Green Road and Papago Road/N-S Collector Road are based on quadrant of the intersection.
Fig 14	17	The roadway civil plans will show the proposed cross section and lane widths for the roadways to be constructed.

Arizona Environmental Online Review Tool Report

Arizona Game and Fish Department Mission
To conserve Arizona's diverse wildlife resources and manage for safe, compatible outdoor recreation opportunities for current and future generations.

Project Name:
Venida

User Project Number:
Z-PA-068-21

Project Description:
Report to supplement a Major PAD Amendment for the Venida subdivision.

Project Type:
Development Outside Municipalities (Rural Development), Residential subdivision and associated infrastructure, New construction

Contact Person:
Julie Vermillion

Organization:
CVL Consultants

On Behalf Of:
PINAL

Project ID:
HGIS-14688

Please review the entire report for project type and/or species recommendations for the location information entered. Please retain a copy for future reference.

Disclaimer:

1. This Environmental Review is based on the project study area that was entered. The report must be updated if the project study area, location, or the type of project changes.
2. This is a preliminary environmental screening tool. It is not a substitute for the potential knowledge gained by having a biologist conduct a field survey of the project area. This review is also not intended to replace environmental consultation (including federal consultation under the Endangered Species Act), land use permitting, or the Departments review of site-specific projects.
3. The Departments Heritage Data Management System (HDMS) data is not intended to include potential distribution of special status species. Arizona is large and diverse with plants, animals, and environmental conditions that are ever changing. Consequently, many areas may contain species that biologists do not know about or species previously noted in a particular area may no longer occur there. HDMS data contains information about species occurrences that have actually been reported to the Department. Not all of Arizona has been surveyed for special status species, and surveys that have been conducted have varied greatly in scope and intensity. Such surveys may reveal previously undocumented population of species of special concern.
4. HabiMap Arizona data, specifically Species of Greatest Conservation Need (SGCN) under our State Wildlife Action Plan (SWAP) and Species of Economic and Recreational Importance (SERI), represent potential species distribution models for the State of Arizona which are subject to ongoing change, modification and refinement. The status of a wildlife resource can change quickly, and the availability of new data will necessitate a refined assessment.

Locations Accuracy Disclaimer:
Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Report is solely responsible for the project location and thus the correctness of the Project Review Report content.

Recommendations Disclaimer:

1. The Department is interested in the conservation of all fish and wildlife resources, including those species listed in this report and those that may have not been documented within the project vicinity as well as other game and nongame wildlife.
2. Recommendations have been made by the Department, under authority of Arizona Revised Statutes Title 5 (Amusements and Sports), 17 (Game and Fish), and 28 (Transportation).
3. Potential impacts to fish and wildlife resources may be minimized or avoided by the recommendations generated from information submitted for your proposed project. These recommendations are preliminary in scope, designed to provide early considerations on all species of wildlife.
4. Making this information directly available does not substitute for the Department's review of project proposals, and should not decrease our opportunity to review and evaluate additional project information and/or new project proposals.
5. Further coordination with the Department requires the submittal of this Environmental Review Report with a cover letter and project plans or documentation that includes project narrative, acreage to be impacted, how construction or project activity(s) are to be accomplished, and project locality information (including site map). Once AGFD had received the information, please allow 30 days for completion of project reviews. Send requests to:
   Project Evaluation Program, Habitat Branch
   Arizona Game and Fish Department
   5000 West Carefree Highway
   Phoenix, Arizona 85086-5000
   Phone Number: (623) 236-7600
   Fax Number: (623) 236-7366
   Or
   PEP@azgfd.gov
6. Coordination may also be necessary under the National Environmental Policy Act (NEPA) and/or Endangered Species Act (ESA). Site specific recommendations may be proposed during further NEPA/ESA analysis or through coordination with affected agencies

Venida

USA Topo Basemap With Locator Map

Project Boundary

Buffered Project Boundary

Project Size (acres): 1,757.22

Lat/Long (DD): 32.9815 / -112.0611

County(s): Pinal

AGFD Region(s): Mesa; Yuma

Township/Range(s): T5S, R3E

USGS Quad(s): ANTELOPE PEAK NE

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap

Venida

Web Map As Submitted By User

Project Boundary

Buffered Project Boundary

Project Size (acres): 1,757.22

Lat/Long (DD): 32.9815 / -112.0611

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Venida

Important Areas

- Project Boundary
- Buffered Project Boundary
- Wildlife Connectivity
- Important Connectivity Zones
- Pinal County Riparian
- Critical Habitat
- Important Bird Areas

Project Size (acres): 1,757.22

Lat/Long (DD): 32.9815 / -112.0611

County(s): Pinal

AGFD Region(s): Mesa; Yuma

Township/Range(s): T5S, R3E

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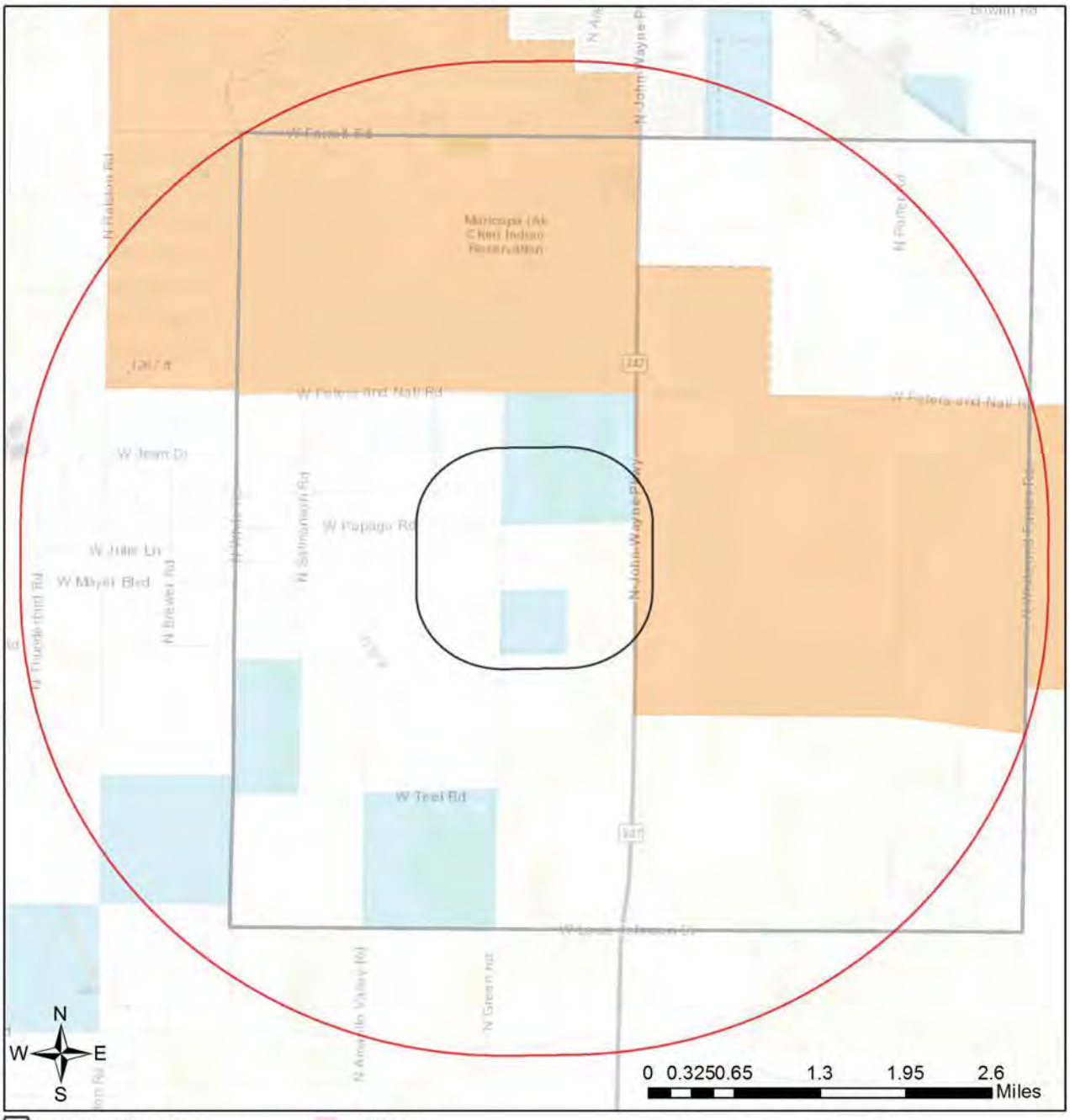
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Venida

Township/Ranges and Land Ownership



Project Boundary
Buffered Project Boundary
Township/Ranges

Land Ownership

AZ Game & Fish Dept.
BLM
BOR
Indian Res.
Military
Mixed/Other
National Park/Mon.
Private
State & Regional Parks
State Trust
US Forest Service
Wildlife Area/Refuge

Project Size (acres): 1,757.22
Lat/Long (DD): 32.9815 / -112.0611
County(s): Pinal
AGFD Region(s): Mesa; Yuma
Township/Range(s): T5S, R3E
USGS Quad(s): ANTELOPE PEAK NE

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Special Status Species Documented within 3 Miles of Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Athene cunicularia hypugaea	Western Burrowing Owl	SC	S	S		1B

Note: Status code definitions can be found at https://www.azgfd.com/wildlife/planning/wildlifeguidelines/statusdefinitions/
.

Special Areas Documented that Intersect with Project Footprint as Drawn

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Ak-Chin Indian Reservation	Ak-Chin Indian Reservation					
Riparian Area	Riparian Area					

Note: Status code definitions can be found at https://www.azgfd.com/wildlife/planning/wildlifeguidelines/statusdefinitions/
.

Species of Greatest Conservation Need Predicted that Intersect with Project Footprint as Drawn, based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Aix sponsa	Wood Duck					1B
Ammospermophilus harrisii	Harris' Antelope Squirrel					1B
Athene cunicularia hypugaea	Western Burrowing Owl	SC	S	S		1B
Buteo regalis	Ferruginous Hawk	SC		S		1B
Calypte costae	Costa's Hummingbird					1C
Chilomeniscus stramineus	Variable Sandsnake					1B
Colaptes chrysoides	Gilded Flicker			S		1B
Coluber bilineatus	Sonoran Whipsnake					1B
Corynorhinus townsendii pallescens	Pale Townsend's Big-eared Bat	SC	S	S		1B
Crotalus tigris	Tiger Rattlesnake					1B
Crotaphytus nebrius	Sonoran Collared Lizard					1B
Euderma maculatum	Spotted Bat	SC	S	S		1B
Eumops perotis californicus	Greater Western Bonneted Bat	SC		S		1B
Glaucidium brasilianum cactorum	Cactus Ferruginous Pygmy-owl	SC	S	S		1B
Gopherus morafkai	Sonoran Desert Tortoise	C	S	S		1A
Haliaeetus leucocephalus	Bald Eagle	SC, BGA	S	S		1A
Heloderma suspectum	Gila Monster					1A
Lasiurus blossevillii	Western Red Bat		S			1B
Lasiurus xanthinus	Western Yellow Bat		S			1B
Leptonycteris yerbabuenae	Lesser Long-nosed Bat	SC				1A
Lepus alleni	Antelope Jackrabbit					1B
Macrotus californicus	California Leaf-nosed Bat	SC		S		1B
Melanerpes uropygialis	Gila Woodpecker					1B
Melospiza lincolnii	Lincoln's Sparrow					1B

Species of Greatest Conservation Need Predicted that Intersect with Project Footprint as Drawn, based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Melozone aberti	Abert's Towhee		S			1B
Micrathene whitneyi	Elf Owl					1C
Micruroides euryxanthus	Sonoran Coralsnake					1B
Myiarchus tyrannulus	Brown-crested Flycatcher					1C
Myotis velifer	Cave Myotis	SC		S		1B
Myotis yumanensis	Yuma Myotis	SC				1B
Nyctinomops femorosaccus	Pocketed Free-tailed Bat					1B
Oreoscoptes montanus	Sage Thrasher					1C
Oreothlypis luciae	Lucy's Warbler					1C
Passerculus sandwichensis	Savannah Sparrow					1B
Perognathus longimembris	Little Pocket Mouse	No Status				1B
Phrynosoma goodei	Goode's Horned Lizard					1B
Phrynosoma solare	Regal Horned Lizard					1B
Progne subis hesperia	Desert Purple Martin			S		1B
Sphyrapicus nuchalis	Red-naped Sapsucker					1C
Spizella breweri	Brewer's Sparrow					1C
Tadarida brasiliensis	Brazilian Free-tailed Bat					1B
Toxostoma lecontei	LeConte's Thrasher			S		1B
Vireo bellii arizonae	Arizona Bell's Vireo					1B
Vulpes macrotis	Kit Fox	No Status				1B

Species of Economic and Recreation Importance Predicted that Intersect with Project Footprint as Drawn

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Callipepla gambelii	Gambel's Quail					
Pecari tajacu	Javelina					
Puma concolor	Mountain Lion					
Zenaida asiatica	White-winged Dove					
Zenaida macroura	Mourning Dove					

Project Type: Development Outside Municipalities (Rural Development), Residential subdivision and associated infrastructure, New construction

Project Type Recommendations:
Fence recommendations will be dependant upon the goals of the fence project and the wildlife species expected to be impacted by the project. General guidelines for ensuring wildlife-friendly fences include: barbless wire on the top and bottom with the maximum fence height 42", minimum height for bottom 16". Modifications to this design may be considered for fencing anticipated to be routinely encountered by elk, bighorn sheep or pronghorn (e.g., Pronghorn fencing would require 18" minimum height on the bottom). Please refer to the Department's Fencing Guidelines located on Wildlife Friendly Guidelines page, which is part of the WIldlife Planning button at https://www.azgfd.com/wildlife/planning/wildlifeguidelines/.

During the planning stages of your project, please consider the local or regional needs of wildlife in regards to movement, connectivity, and access to habitat needs. Loss of this permeability prevents wildlife from accessing resources, finding mates, reduces gene flow, prevents wildlife from re-colonizing areas where local extirpations may have occurred, and ultimately prevents wildlife from contributing to ecosystem functions, such as pollination, seed dispersal, control of prey numbers, and resistance to invasive species. In many cases, streams and washes provide natural movement corridors for wildlife and should be maintained in their natural state. Uplands also support a large diversity of species, and should be contained within important wildlife movement corridors. In addition, maintaining biodiversity and ecosystem functions can be facilitated through improving designs of structures, fences, roadways, and culverts to promote passage for a variety of wildlife. Guidelines for many of these can be found at: https://www.azgfd.com/wildlife/planning/wildlifeguidelines/.

Consider impacts of outdoor lighting on wildlife and develop measures or alternatives that can be taken to increase human safety while minimizing potential impacts to wildlife. Conduct wildlife surveys to determine species within project area, and evaluate proposed activities based on species biology and natural history to determine if artificial lighting may disrupt behavior patterns or habitat use. Use only the minimum amount of light needed for safety. Narrow spectrum bulbs should be used as often as possible to lower the range of species affected by lighting. All lighting should be shielded, canted, or cut to ensure that light reaches only areas needing illumination.

Minimize the potential introduction or spread of exotic invasive species, including aquatic and terrestrial plants, animals, insects and pathogens. Precautions should be taken to wash and/or decontaminate all equipment utilized in the project activities before entering and leaving the site. See the Arizona Department of Agriculture website for a list of prohibited and restricted noxious weeds at https://www.invasivespeciesinfo.gov/unitedstates/az.shtml and the Arizona Native Plant Society https://aznps.com/invas for recommendations on how to control. To view a list of documented invasive species or to report invasive species in or near your project area visit iMapInvasives - a national cloud-based application for tracking and managing invasive species at https://imap.natureserve.org/imap/services/page/map.html.

- To build a list: zoom to your area of interest, use the identify/measure tool to draw a polygon around your area of interest, and select “See What’s Here” for a list of reported species. To export the list, you must have an account and be logged in. You can then use the export tool to draw a boundary and export the records in a csv file.

The construction or maintenance of water developments should include: incorporation of aspects of the natural environment and the visual resources, maintaining the water for a variety of species, water surface area (e.g., bats require a greater area due to in-flight drinking), accessibility, year-round availability, minimizing potential for water quality problems, frequency of flushing, shading of natural features, regular clean-up of debris, escape ramps, minimizing obstacles, and minimizing accumulation of silt and mud.

Minimization and mitigation of impacts to wildlife and fish species due to changes in water quality, quantity, chemistry, temperature, and alteration to flow regimes (timing, magnitude, duration, and frequency of floods) should be evaluated. Minimize impacts to springs, in-stream flow, and consider irrigation improvements to decrease water use. If dredging is a project component, consider timing of the project in order to minimize impacts to spawning fish and other aquatic species (include spawning seasons), and to reduce spread of exotic invasive species. We recommend early direct coordination with Project Evaluation Program for projects that could impact water resources, wetlands, streams, springs, and/or riparian habitats.

The Department recommends that wildlife surveys are conducted to determine if noise-sensitive species occur within the project area. Avoidance or minimization measures could include conducting project activities outside of breeding seasons.

Based on the project type entered, coordination with State Historic Preservation Office may be required (http://azstateparks.com/SHPO/index.html).

Trenches should be covered or back-filled as soon as possible. Incorporate escape ramps in ditches or fencing along the perimeter to deter small mammals and herptefauna (snakes, lizards, tortoise) from entering ditches.

Communities can actively support the sustainability and mobility of wildlife by incorporating wildlife planning into their regional/comprehensive plans, their regional transportation plans, and their open space/conservation land system programs. An effective approach to wildlife planning begins with the identification of the wildlife resources in need of protection, an assessment of important habitat blocks and connective corridors, and the incorporation of these critical wildlife components into the community plans and programs. Community planners should identify open spaces and habitat blocks that can be maintained in their area, and the necessary connections between those blocks to be preserved or protected. Community planners should also work with State and local transportation planning entities, and planners from other communities, to foster coordination and cooperation in developing compatible development plans to ensure wildlife habitat connectivity. The Department's guidelines for incorporating wildlife considerations into community planning and developments can be found on the Widlife Friendly Guidelines portion of the Wildlife Planning page at https://www.azgfd.com/wildlife/planning/wildlifeguidelines/.

Design culverts to minimize impacts to channel geometry, or design channel geometry (low flow, overbank, floodplains) and substrates to carry expected discharge using local drainages of appropriate size as templates. Reduce/minimize barriers to allow movement of amphibians or fish (e.g., eliminate falls). Also for terrestrial wildlife, washes and stream corridors often provide important corridors for movement. Overall culvert width, height, and length should be optimized for movement of the greatest number and diversity of species expected to utilize the passage. Culvert designs should consider moisture, light, and noise, while providing clear views at both ends to maximize utilization. For many species, fencing is an important design feature that can be utilized with culverts to funnel wildlife into these areas and minimize the potential for roadway collisions. Guidelines for culvert designs to facilitate wildlife passage can be found on the home page of this application at https://www.azgfd.com/wildlife/planning/wildlifeguidelines/.

Based on the project type entered, coordination with Arizona Department of Environmental Quality may be required (http://www.azdeq.gov/).

Based on the project type entered, coordination with Arizona Department of Water Resources may be required (https://new.azwater.gov/).

Based on the project type entered, coordination with U.S. Army Corps of Engineers may be required (http://www.usace.army.mil/)

Based on the project type entered, coordination with County Flood Control district(s) may be required.

Development plans should provide for open natural space for wildlife movement, while also minimizing the potential for wildlife-human interactions through design features. Please contact Project Evaluation Program for more information on living with urban wildlife at PEP@azgfd.gov or
at https://www.azgfd.com/wildlife/planning/wildlifeguidelines/ and https://www.azgfd.com/Wildlife/LivingWith.

Vegetation restoration projects (including treatments of invasive or exotic species) should have a completed site-evaluation plan (identifying environmental conditions necessary to re-establish native vegetation), a revegetation plan (species, density, method of establishment), a short and long-term monitoring plan, including adaptive management guidelines to address needs for replacement vegetation.

The Department requests further coordination to provide project/species specific recommendations, please contact Project Evaluation Program directly at PEP@azgfd.gov.

Project Location and/or Species Recommendations:
This review has identified **riparian areas** within the vicinity of your project. During the planning stage of your project, avoid, minimize, or mitigate any potential impacts to riparian areas identified in this report. Riparian areas play an important role in maintaining the functional integrity of the landscape, primarily by acting as natural drainages that convey water through an area, thereby reducing flood events. In addition, riparian areas provide important movement corridors and habitat for fish and wildlife. Riparian areas are channels that contain water year-round or at least part of the year. Riparian areas also include those channels which are dry most of the year, but may contain or convey water following rain events. All types of riparian areas offer vital habitats, resources, and movement corridors for wildlife. The Pinal County Comprehensive Plan (i.e. policies *6.1.2.1* and *7.1.2.4*), Open Space and Trails Master Plan, Drainage Ordinance, and Drainage Design Manual all identify riparian area considerations, guidance, and policies. Guidelines to avoid, minimize, or mitigate impacts to riparian habitat can be found at https://www.azgfd.com/wildlife/planning/wildlifeguidelines/. Based on the project type entered, further consultation with the Arizona Game and Fish Department and Pinal County may be warranted.

Tribal Lands are within the vicinity of your project area and may require further coordination. Please contact:
Ak-Chin Indian Community Council
42507 W Peters & Nail Rd
Maricopa, AZ 85239
(520) 568-2618
(520) 568-4566 (fax)

HDMS records indicate that **Western Burrowing Owls** have been documented within the vicinity of your project area. Please review the western burrowing owl resource page at:
https://www.azgfd.com/wildlife/speciesofgreatestconservneed/burrowingowlmanagement/.

Leo Lew
County Manager

PINAL COUNTY
WIDE OPEN OPPORTUNITY

PROCEDURE AND APPLICATION FOR A PLANNED AREA DEVELOPMENT (PAD) OVERLAY IN UNINCORPORATED PINAL COUNTY

1. Submit a Pre-Application meeting request with the Community Development Department for a meeting with Planning Department and other affected County agencies. - (The Pre-application review is a separate application prior to applying for a PAD).*

2. Hold a **Neighborhood / Community Meeting** per requirements outlined in Section – [2.166.050 (E)] of the PCDSC.

3. Submit a **PAD Application** with the required supporting documentation using the attached forms.**

4. Submit the following fees made payable to Pinal County in accordance with Section [2.167] of the PCDSC:

   a. without accompanying zone change 0-499 mail-outs: $4,478.00
   b. without accompanying zone change 500 or more mail-outs: $4,880.00
   c. with accompanying zone change: $888.00
   d. Public Works Fees: TIA Review : $750.00; Drainage Review: $750.00 (*Fees are due at application submittal and at subsequent reviews)

5. Attend **Planning & Zoning Commission Public Hearing** for Commission recommendation to the Board of Supervisors. - (Time frame is approximately 10 to 15 weeks from application acceptance by the Planning Department).

6. Attend **Board of Supervisors Public Hearing** for decision. – (Time Frame is approximately 4 to 8 weeks after Planning & Zoning Commission Public Hearing).***

Applicants should allow 4 to 6 months from the application acceptance by the Planning Department to a decision from the Pinal County Board of Supervisors.

* Your **pre-application meeting request** can be found here: http://www.pinalcountyaz.gov/CommunityDevelopment/Planning/Documents/2019%20NEW%20APPLICATIONS/Zone%20Change%20Pre-App.pdf

** ***Your application can also be submitted digitally via email or FTP site please call or email the Planning Division for more information.***

*** **A PAD Overlay is not effective until 31 days after approval by the Board of Supervisors**

Leo Lew
County Manager

PINAL COUNTY
WIDE OPEN OPPORTUNITY

APPLICATION FOR PLANNED AREA DEVELOPMENT (PAD) OVERLAY DISTRICT IN AN UNINCORPORATED AREA OF PINAL COUNTY, ARIZONA

(All Applications Must Be Typed or Written in Ink)

Formal PAD Application & Property Information:

(feel free to include answers and to these questions in a Supplementary Narrative, when doing so write see narrative on the space provided)

1. Pinal County Staff Coordinator: Gilbert Olgin
2. Date of Pre-application Review: 7 / 27 / 21 Pre-Application Review No.: Z-PA-068-21
3. Current Zoning *(Please provide Acreage Breakdown)*: CB-1 PAD (15.0 acres) & CR-3 PAD (143.50 acres)
4. Requested Zoning *(Please provide Acreage Breakdown)*: R-7 PAD (158.25 acres)
5. Parcel Number(s) (Please attach a separate list if more space is needed): 510520030, & 510520020
6. Parcel Size(s): 158.25 acres
7. The existing use of the property is as follows: disturbed agricultural and undeveloped land
8. The exact use proposed under this request: single family detached residential community
9. What is the Comprehensive Plan Designation for the subject property: Moderate Low Density Residential
10. Is the property located within three (3) miles of an incorporated community? ■ YES ❑ NO
11. Is an annexation into a municipality currently in progress? ❑ YES ■ NO
12. Is there a zoning violation on the property for which the owner has been cited? ❑ YES ■ NO

    If yes, zoning violation # _____
13. Is this a major PAD Amendment request (no zone accompanying change)? ❑ YES ❑ NO If yes what was the previous PAD case number PZ-PD-_____
14. Discuss any recent changes in the area that would support your application i.e.: zone change(s), subdivision approval, Planned Area Development (PAD), utility or street improvements, adopted comprehensive/area plan(s) or similar changes. After market conditions went south in the early 2000's, master planned communities in the area were put on hold. Now the area is thriving with interest in reviving the prior entitlements to facilitate new development.
15. Explain why the proposed development is needed and necessary at this time. As Venida begins to develop, approximately 15 years after the initial approval of the original PAD, there is a need to bring the original design up to current Pinal County standards and revise the land use and lot mix to better suit current market demands.

INV#:_____ AMT:_____ DATE:_____ CASE:_____ Xref:_____

PROPERTY OWNERSHIP LIST

(Required for filing all applications)

Instructions: Print Name, Address, City, State, Zip Code and Tax Parcel Number for each property owner within 600/ (1,200) (circle one) feet of the subject parcel boundary. Feel free to attach a separate list if generated digitally. Please see "How to use the Buffer Tool" on our FAQ's page if you are generating the list.

Parcel No.: 510520020
Name: HAM PAPAGO LLC
Address: PO BOX 15662
City/ST/Zip: PHOENIX, AZ 85060

Parcel No.: 510520030
Name: HAM PAPAGO LLC
Address: PO BOX 15662
City/ST/Zip: PHOENIX, AZ 85060

Parcel No.: 510 480 15 F
Name: PICACHO LANDING EQUITIES LLC
Address: 5346 E CALLE DEL NORTE
City/ST/Zip: PHOENIX, AZ 85018

Parcel No.: 51048009H
Name: AMARILLO MARKETPLACE LLC
Address: 5346 E CALLE DEL NORTE
City/ST/Zip: PHOENIX, AZ 85018

Parcel No.: 510528030
Name: N/A
Address:
City/ST/Zip:

Parcel No.: 510480350
Name: ZENN ARIZONA INC
Address: 4791 TIMBER PLACE
City/ST/Zip: VICTORIA , BC

Parcel No.: 5105200 A
Name: PRATT EDWARD C TRUSTEE
Address: 45065 W PAPAGO RD
City/ST/Zip: MARICOPA, AZ 85139

Parcel No.: 510 480 4A
Name: N/A
Address:
City/ST/Zip:

Parcel No.: 5 0 8015 G
Name: AMARILLO CREEK SOUTH LLC ETAL
Address: 5346 E CALLE DEL NORTE
City/ST/Zip: PHOENIX, AZ 85018

Parcel No.: 5 0 4 80 0 9
Name: JHC AMARILLO 3 LLP
Address: 10218-111 STREET NW
City/ST/Zip: EDMONTON, AB

I hereby verify that the name list above was obtained on the 24 day of August, 20 21, at the office of CVL Consultant s and is accurate and complete to the best of my knowledge.
(Source of Information)

Julie Vermillion
Applicant/Representative Signature

10/05/21
Date

This instrument was acknowledged before me on this 5th day of October, 20 21, by Julie Vermillion. In witness whereof I hereunto set my hand and official seal.

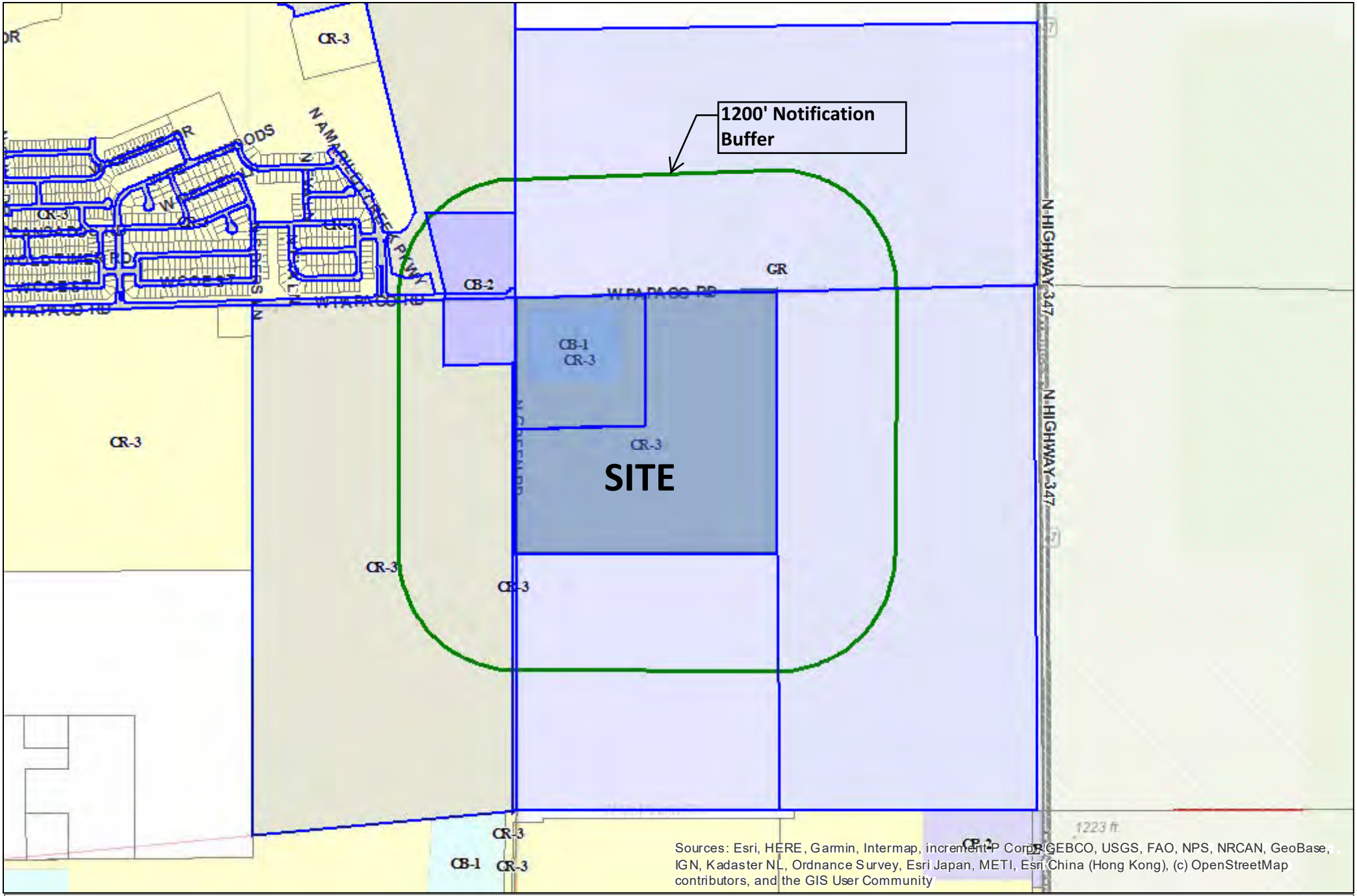
Krista Zinser
Notary Public

KRISTA ZINSER
NOTARY PUBLIC - ARIZONA
MARICOPA COUNTY
COMMISSION # 579798
MY COMMISSION EXPIRES
JANUARY 13, 2024

My commission expires January 13, 2024

PINAL COUNTY
WIDE OPEN OPPORTUNITY

Community Development Status Viewer



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AMARILLO MARKETPLACE LLC
5346 E CALLE DEL NORTE
PHOENIX, AZ 85018

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,

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JHC AMARILLO 3 LLP
10218-111 STREET NW
EDMONTON, AB

,

AMARILLO CREEK SOUTH LLC ...
5346 E CALLE DEL NORTE
PHOENIX, AZ 85018

PICACHO LANDING EQUITIES L...
5346 E CALLE DEL NORTE
PHOENIX, AZ 85018

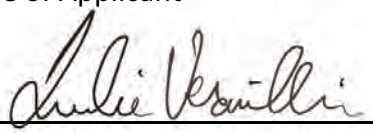
HAM PAPAGO LLC
PO BOX 15662
PHOENIX, AZ 85060

HAM PAPAGO LLC
PO BOX 15662
PHOENIX, AZ 85060

PRATT EDWARD C TRUSTEE
45065 W PAPAGO RD
MARICOPA, AZ 85139

ZENN ARIZONA INC
4791 TIMBER PLACE
VICTORIA , BC

I **certify the information included in this application is accurate, to the best of my knowledge. I have read the application and I have included the information, as requested. I understand if the information submitted is incomplete, this application cannot be processed. All notices will be sent to the applicant unless otherwise directed in writing**

CVL Consultants - Julie Vermillion	4550 North 12th Street	
Name of Applicant	Address	
	jvermillion@cvlci.com	602-285-4765
Signature of Applicant	E-Mail Address	Phone Number

same as above		
Name of Agent/Representative	Address	
Signature of Agent/Representative	E-Mail Address	Phone Number

The Agent/Representative has the authority to act on behalf of the landowner/applicant, which includes agreeing to stipulations. The agent will be the contact person for Planning staff and must be present at all hearings. Please use attached Agency Authorization form, if applicable.

HAM PAPAGO LLC	PO BOX 15662	
Name of Landowner	Address	
See attached Agency Authorization letter		
Signature of Landowner	E-Mail Address	Phone Number

If landowner is not the applicant, then applicant must submit a signed notarized consent form from the landowner with this application. Please use attached Consent to Permit form, if applicable.

AGENCY AUTHORIZATION

(To be completed by all landowners who do not represent themselves. Instructions for completing required information are in bold and brackets below lines. If applicant is a company, corporation, partnership, joint venture, trustee, etc., please use the corporate signature block and have the notary fill in the notarization section for corporations not individuals and cannot be submitted digitally)

TO: Pinal County Community Development
P.O. Box 2973
Florence, AZ 85232

HAM PAPAGO LLC

[Insert Name -- If a Corporation, Partnership or Association, Include State of Incorporation]

Hereinafter referred to as "Owner," is/are the owner(s) of approximately 158.25 acres located at the southeast corner of Papago Road and Green Road, and further identified

[Insert Address of Property]

As assessor parcel number 510520030 and 510520020 and legally described as follows:

[Insert Parcel Number]

Insert Legal Description Here OR Attach as Exhibit A
See attached Exhibit A.

Said property is hereinafter referred to as the "Property."
Owner hereby appoints Coe & Van Loo Consultants, Inc. (CVL)

[Insert Agent's Name. If the Agent Is a Company, Insert Company Name Only]

Hereinafter referred to as "Agent," to act on Owner's behalf in relation to the Property in obtaining approval from Pinal County for a minor land division and to file applications and make the necessary submittals for such approvals.

[Individual PROPERTY OWNER signature block and acknowledgment.
DO NOT SIGN HERE IF SIGNING AS AN OFFICER OF A CORPORATION SIGN NEXT PAGE]

[Signature]

5050 N. 40th Street, Suite 330, Phoenix, AZ 85018
[Address]

Dated: 9/20/2021

[Signature]

[Address]

Dated: _____

STATE OF ARIZONA)
) ss.
COUNTY OF MARICOPA) (SEAL)

The foregoing instrument was acknowledged before me, this 20th day SEPTEMBER, 2021
by HARRY ZEITLIN

My Commission Expires 1/18/24

Signature of Notary Public

LUIS E GOMEZ
Printed Name of Notary

Signature of Notary

CORPORATE PROPERTY OWNER SIGNATURE BLOCK AND ACKNOWLEDGMENT

_____
[Insert Company's or Trust's Name]

By: _____
[Signature of Authorized Officer, or Trustee]

Its: _____
[Insert Title]

Dated: _____

STATE OF_____)
) ss.
COUNTY OF_____)

The foregoing instrument was acknowledged before me, this_____ day of _____, 20____ by

_____, _____
[Insert Signor's Name] *[Insert Title]*

_____, _____an,
[Name of Company or Trust] *[Insert State of Incorporation, if applicable]*

And who being authorized to do so, executed the foregoing instrument on behalf of said entity for the purposes stated therein.

My Commission Expires: _____

_____ _____
Printed Name of Notary Signature of Notary

ALTERNATE: Use the following acknowledgment only when a second company is signing

On behalf of the owner:

STATE OF_____)
) ss. (Seal)
COUNTY OF_____)

The foregoing instrument was acknowledged before me, this_____ day of _____, 20____ by
_____, who acknowledges himself/herself to be
[Insert Signor's Name]

_____, of _____
[Title of Office Held] *[Second Company]*

As _____ for _____, and who being
[i.e. member, manager, etc.] *[Owner's Name]*

Authorized to do so, executed the foregoing instrument on behalf of said entities for the purposes stated therein.

My Commission Expires_____

_____ _____
Printed Name of Notary Signature of Notary

September 24, 2021

LEGAL DESCRIPTION FOR
VENIDA
PROPERTY BOUNDARY

That part of the Northwest Quarter of Section 21, Township 5 South, Range 3 East, of the Gila and Salt River Meridian, Pinal County, Arizona, more particularly described as follows:

Beginning at the Northwest Corner of said Section 21;

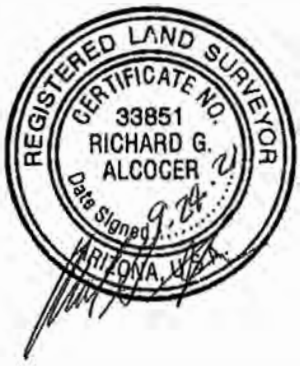
Thence North 88°32'15" East, along the North line of the Northwest Quarter of said Section 21, a distance of 2,643.85 feet, to the North Quarter Corner of said Section 21;

Thence departing said North line, South 00°17'18" East, along the East line of said Northwest Quarter, a distance of 2,618.77 feet, to the Center of said Section 21;

Thence South 89°14'14" West, along the South line of said Northwest Quarter, a distance of 2,653.95 feet, to the West Quarter Corner of said Section 21;

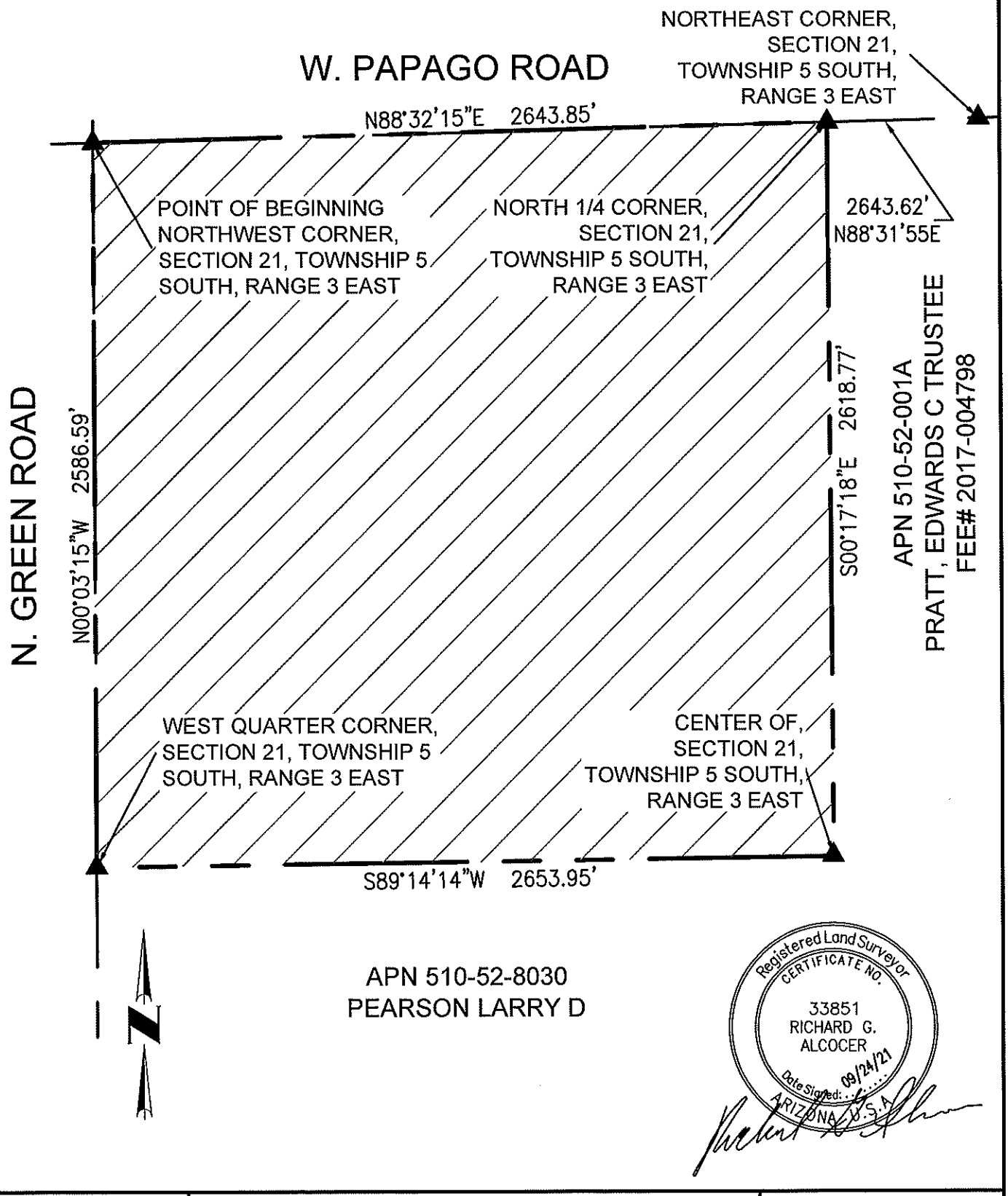
Thence North 00°03'15" West, along the West line of said Northwest Quarter, a distance of 2,586.59 feet to the Point of Beginning.

Containing 6,893,158 Square Feet or 158.245 Acres, more or less.



4550 N 12th Street | Phoenix AZ 85014 | 602.264.6831 | (F) 602.264.0928

CVL CONSULTANTS



SCALE 1" = 500'	VENIDA	CVL CONSULTANTS CELEBRATING 60 YEARS
EXHIBIT	PROPERTY BOUNDARY	1 OF 1
4550 North 12th Street Phoenix, Arizona 85014 Phone 602-264-6831 http://www.cvlci.com		

N:\01\0372301\CADD\Exhibits\VX.VENIDA.dwg **JamesG** **September 24, 2021**

CLOSURE REPORT
VENIDA
PROPERTY BOUNDARY

BOUNDARY

N88°32'14.6248" E 2,643.85

S00°17'17.7300" E 2,618.77

S89°14'14.1005" W 2,653.95

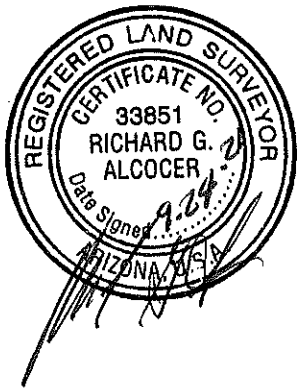
N00°03'15.1368" W 2,586.59

Area = 6,893,158 158.245 AC

Closing course: 276°40'43.3655" 0.007208

Misclosure: 1/1,000,000+

North Error: 0.000838
East Error: 0.007159



Application Checklist:

FOR A PROPOSED PLANNED AREA DEVELOPMENT (PAD) OVERLAY DISTRICT IN UNINCORPORATED PINAL COUNTY

A. Check the appropriate item:

❑ This PAD is being submitted without a zone change request

❑ This PAD is being submitted in conjunction with a zone change request.

The applicant must complete a zone change application. – ***(Please utilize the "PAD Book" and the "Site Plan" of the PAD application to fulfill the Zoning Application "Narrative" and "Site Plan" in lieu of while having separate copies for each application).***

B. Hold a Neighborhood/Community Meeting:

❑ **1.** Notify all property owners within 1200' (feet)

❑ **2.** Hold the meeting within five (5) miles of the subject property

❑ **3.** Hold the meeting between 5:00 pm – 9:00 pm

❑ **4.** Include with the application the following:

- ❑ Copy of Notice of Neighborhood/Community Meeting
- ❑ List of property owners notified - ***(Use page 2 of this application)***
- ❑ Minutes of the meeting
- ❑ Attendance sign-in sheet with names & addresses

C. Submit a completed **"Agency Authorization"** form ***(if applicable, Use page 4 of this application)***.

D. Submit a **"PAD Book"** (written narrative) concerning the proposed development to include the following sections – *Refer to Chapter 2.176.240 (B) of the PCDSC* for further clarification ***(NOTE: Please No Spiral Binding)***:

❑ **1.** Title Page

❑ **2.** Purpose of Request

❑ **3.** Description of Proposal

- ❑ Nature of the Project
- ❑ Proposed Land Uses
- ❑ Building Types & Densities
- ❑ Conformance to adopted Land Use Plans
- ❑ Circulation and Recreation Systems

❑ **4. Relationship to surrounding properties within one mile**

- ☐ **5. Schools**
- ☐ **6. Public Services/Community Services and how will the need for these services be addressed**
- ☐ **8. Location & Accessibility**
- ☐ **9. Compliance with RSRSM, Access Management Manual, October 2008**
- ☐ **10. Utilities & Services**
- ☐ **11. Ownership & Control – [*See Section 2.176.240 (B)11*]**
- ☐ **12. Timing of Development (Phasing Schedule)**
- ☐ **13. Conformance with the Comprehensive Plan**
- ☐ **14. Recreational Amenities**
- ☐ **15. Fences, Walls & Screening**
- ☐ **16. Total number of dwelling units**
- ☐ **17. Maximum Residential Density of each planning unit**
- ☐ **18. Total number of parking spaces for recreational facilities**
- ☐ **19. Type of landscaping**
- ☐ **20. Preliminary hydrologic data and a statement on drainage**
- ☐ **21. Additional Information for Commercial & Industrial Uses *(if applicable)*:**
    - ☐ Total Area in acres proposed *(Commercial & Industrial Separated)*
    - ☐ Approximate retail sales floor area *(Commercial)*
    - ☐ The uses proposed uses based on permitted uses in the base zone.
    - ☐ The standards of height, open space, buffering, landscaping, pedestrian and vehicle circulation, off-street parking and loading, signs, outdoor lighting, and nuisance controls intended for the development.
- ☐ **22. Tables:**
    - o **Land Use Table(s) to include the following:**
        - ☐ Total Acreage of the site
        - ☐ Total Area of arterial & collector streets
        - ☐ Total Area & Percent of Open Space
        - ☐ Total Number of each type of dwelling unit
        - ☐ Total Number of all dwelling units proposed including the range and mixture of lot sizes within each base zone
        - ☐ The Overall proposed Density

- **Amended Development Standards Table comparing proposed and current zoning code standards for:**
  - ☐ Minimum Lot Area
  - ☐ Minimum Lot Width
  - ☐ Minimum Building Setbacks
  - ☐ Maximum Building Height
  - ☐ Minimum Distance between main & detached accessory buildings
  - ☐ Buildable Area
- **Amended Use Tables:**
  - ☐ Permitted Uses
  - ☐ Non-Permitted Uses
- **Utilities & Services Table of type and source:**
  - ☐ Sewer
  - ☐ Water
  - ☐ Electric
  - ☐ Telephone
  - ☐ Police
  - ☐ Fire
  - ☐ Schools
  - ☐ Solid Waste Disposal

☐ 24. Appendix, as applicable (Cultural Biological/environmental studies, or other items)

E. **Submit** a **map** that shows the relationship to surrounding properties within one mile of the project boundaries. The map shall be drawn at a sufficient scale so as to not exceed a print size larger than 11" X 17". The lettering shall be of sufficient size to be legible when reduced to an 8½" X 11" print. The map shall contain the following information:

- ☐ Zoning Boundaries
- ☐ Street Alignment
- ☐ Open Space
- ☐ Trails

F. **Submit** a current preliminary **Title Report** *(dated within 60 days prior to application)*

G. Submit a **Development Plan.** The submittal shall be drawn at a sufficient scale as to not exceed a print size larger than **24" X 36"** with **11" X 17"** reductions to be included in the PAD Overlay District Application where the lettering is of sufficient size to be readable. The Development Plan shall include:

❑ **1. Site Plan:**

- ❑ Title of project as shown in the narrative report, such as ***"Planned Area Development for (insert name of Development)"*** in bold letters.
- ❑ Name(s) of Landowner(s), Developer, Applicant, and Person or Firm preparing the plan.
- ❑ North Arrow, Scales *(written & graphic)*, Preparation Date & Subsequent Revision Dates.
- ❑ Vicinity Map showing project, surrounding development and applicable zoning districts *(scale no less than 1" = 2,000')*
- ❑ Existing Zone designation & requested zone change *(as applicable)*
- ❑ Legal Description of total site
- ❑ Boundaries of the proposed PAD Overlay Zoning District delineated and dimensioned by bearing and distance.
- ❑ All existing and proposed public and/or private streets, location and width of associated easements and rights-of-way and whether they will remain or be extinguished.
- ❑ Location & Identification of all existing and proposed utilities, location and width of associated easements.
- ❑ Location of all existing structures and significant natural features.
- ❑ Nearest regional significant routes to proposed development as projected in RSRSM Final Report, December 2008.
- ❑ All points of ingress and egress.
- ❑ Parking Areas.
- ❑ Identify & Delineate existing and/or proposed trails as shown on the Pinal County trails system master plan.
- ❑ Indicate and/or label *(as applicable)*:
    - Areas to be reserved for residential, commercial, industrial, open space, public use, facilities, drainage, and recreation.
    - Who will own, control and maintain the landscaping, recreational facilities, open areas, refuse disposal, streets, private utility systems.
    - Topography with a maximum contour interval of two feet except where existing ground is on a slope of less than two percent, then either one foot contours or spot elevation shall be provided where necessary.
    - Phase Lines *(as applicable)*
- ❑ Provide lot typical (typical should show building envelope, setbacks, lot dimensions and fences/walls) for:
    - Each type of dwelling unit
    - Lots in unusual locations (i.e. Cul-de-sacs, corners, hillside lots where clustering will occur.

- ☐ Indicate by notes the existing drainage pattern and proposed drainage plans for handling on-site and off-site storm water runoff
- ☐ Indicate location, type, height, and materials for proposed walls, fences, and signs.
- ☐ Location and types of existing and proposed landscaping.
- ☐ Designated Flood Zone

☐ **2. Quantitative Development Data Tables**

- ☐ Land Use table to include:
    - Total Gross Acreage of site
    - Total Area of Streets (Public & Private)
    - Total Area of Public Open Space
    - Total Net Area of all intended uses
    - Total Areas of Open Space for PAD Residents, and total Recreation Area Open Space
    - Total Dwelling Units permitted under base zoning district
    - Total number of each dwelling type including range and mixture of lot sizes within each base zone
    - Grand Total of Dwelling Units
    - Overall Density proposed
- ☐ Zoning Comparison Table of Existing & Proposed to include:
    - Lot area per dwelling unit
    - Setbacks
    - Minimum Lot Widths
    - Maximum Building Heights
- ☐ Parking (number of spaces)
- ☐ Utility & Services Table indicating type and source:
    - Sewer
    - Electric
    - Telephone
    - Water
    - Police/Security
    - Fire
    - Schools
    - Solid Waste Disposal
- ☐ Street Type Table indicating proposed rights-of-way and pavement widths for arterials, collectors, and neighborhood streets.

☐ **3. Submit** an **Open Space & Recreation Plan** ("OSRP") that includes – *Refer to Chapter 2.176*

- ☐ **Reviewed** the Pinal County Open Space & Recreational Area Guideline
- ☐ **Site Analysis**
  - Aerial Photo
  - Preferred scale of 1"=50' *(maximum scale of 1"=100')*
  - Site Analysis should be produced in an **8½" X 11" format for text**
  - Site Analysis should be produced in an **24" X 36" format for plans* (coordinate this requirement with your case coordinator)**
- ☐ Total acreage of proposed development
- ☐ Context Map showing the proximity and relationship to the County's trails, parks, or schools and connectivity to the adjacent neighborhoods, off-site trails, paths, bikeways, and transit areas.
- ☐ A concept drawing of the proposed development including:
  - Gross Site Area
  - Number of proposed lots
  - Proposed Arterial & Collector street circulationsystem
  - Proposed lot size(s),
  - Proposed Retention/detention areas
  - Proposed Development Phasing
- ☐ Context Map showing the proximity and relationship to the County's trails, parks, or schools and connectivity to the adjacent neighborhoods, off-site trails, paths, bikeways, and transit areas.
- ☐ A concept drawing of the proposed development including:
  - Gross Site Area
  - Number of proposed lots
  - Proposed Arterial & Collector street circulationsystem
  - Proposed lot size(s),
  - Proposed Retention/detention areas
  - Proposed Development Phasing
- ☐ A pedestrian circulation system
- ☐ A Slope Analysis identifying the following slope categories:
  - 1) 0% - 5%
  - 2) 5% - 10%
  - 3) 10% and greater

- ☐ Identification of wash corridors and preliminary hydrologic information for the contributing watershed.
- ☐ Identification of the location of riparian vegetation and biological habitats. Aerial photos should be used to map the limits of notable vegetation.
- ☐ Identification of potential view corridors
- ☐ Identification of the projected 100-year floodplain and floodway boundary as required by FEMA.
- ☐ A record check through Arizona State Museum ("ASM") for archeological sites and identification of any sites or surveys
- ☐ The location and percentage of each proposed development to be preserved as conservation open space and the features to be protected including parcel size and minimum dimensions
- ☐ The location and percentage of each proposed development to be preserved as developed open space and the specific Recreation Areas, including amenities, parcel size and minimum dimensions.

☐ **4. Submit** a **Landscape Plan** that includes – *Refer to Chapter 2.176.240 (C) of the PCDSC*:

- ☐ A Vegetation Salvage Plan
- ☐ Proposed treatment of all ground surfaces (paving, turf, gravel, grading, etc.)
- ☐ Extent and location of all plant materials and other landscape features.
- ☐ Extent of decorative design elements such as fountains, pools, benches, sculptures, planters, and similar elements.
- ☐ Location of Water Outlets.

☐ **5. Submit a report utilizing the Arizona Game and Fish** ERT online review tool for Habitat and Riparian area identification.

☐ **Reviewed, Met,** and/or **addressed the** following in Chapter 2.176of the PCDSC:

- ☐ Minimum requirements for Open Space – (Section 130)
- ☐ Uses permitted within open space areas – (Section 140)
- ☐ Uses prohibited within open space areas – (Section 150)
- ☐ Minimum requirements for recreation areas – (Section 160)
- ☐ Minimum requirements for multi-use paths and trails – (Section 170)
- ☐ Minimum requirements for storm water retention & detention basins – (Section 180)
- ☐ Minimum requirements for streetscapes & entryways – (Section 190)
- ☐ Minimum requirements for conservation open space – (Section 200)

☒ **Submit** a **Master Sign Plan** detailing the location and type ofall proposed signage for the project. *(signage must be approved under separate permit, the PAD document cannot alter development standards for signs)*

☒ **Submit** a **Preliminary Drainage Report***

☒ **Submit** a **Preliminary Traffic Impact Assessment** (TIA)* (Your TIA must be approved prior to scheduling of your Public Hearing)

☒ **Submit** a copy of a certified **A.L.T.A.** survey, including a legal description of the PAD boundary and legal descriptions of all zoning district boundaries

☒ **Aware** that earth fissure maps are available online from theArizona State Geologic Survey.

☒ **Submit a list of all property owners within 600' (feet)** of thesubject property boundary showing name, mailing address and tax parcel numbers. This list must be obtained within 30 days prior to application submission. A map showing the 600' boundary and parcels must be included as well (*A Tax Assessor Parcel Map is Acceptable*). - ***(This list is a separate list from the "Neighborhood/Community Meeting list of 1,200' however use Page 5 of this application).***

☒ **Submit** separate preliminary reports or master plans for:

- ☒ Storm water drainage
- ☒ Wastewater & Domestic water service.

☐ **Submit** additional materials required for specific types ofcommercial and industrial uses as follows *(as applicable)*:

- ☐ **Commercial Uses:**
  - Retail sales floor area and total area proposed for commercial development
  - Type of uses proposed
- ☐ **Industrial Uses**
  - Total Area proposed for industrial uses
  - Types of uses proposed
  - Anticipated employment for development per major phases
- ☐ **Standards of:**
  - Height
  - Open Space
  - Buffering

- Landscaping
- Pedestrian & Vehicular circulation
- off-street parking & Loading (the PAD document cannot alter minimum requirements for parking)
- Signs (the PAD document cannot alter the maximum amount of signage)
- Nuisance Controls

☐ **Complete and Submit the** "Comprehensive Plan Compliance Checklist"

☐ Non-Refundable filing fee for a Planned Area Development & Non-Refundable Public Works Fees

☐ **Submit** one **(1) hard copy** of all documentation outlined in the PAD application and one **(1) digital copy** in a multi-PDF format per item of the application with all supporting documentation on **one (1) CD.** **Your application can also be submitted digitally via email or FTP site please call or email the Planning Division for more information.

☐ **Submit** one (1) CD which contains:

☐ An ESRI shapefile for land use (conceptual) which shows all proposed zoning lines and zoning classifications for the project in NAD_1983_stateplan_arizona_central_fips_0202_intlfeet projection

OR

☐ An AutoCAD (.dwg file), which includes the following layers:

- Parcel
- Right-of-way
- Sub-perimeter
- Centerlines
- Section Lines
- Street names
- Lot-numbers
- Distances & Bearings tied by course and distance to two Pinal County survey control points or established city or county survey monuments. *(Information on these control points can be obtained from Public Works, Engineering Technicians at 520-866-6411).*

☐ **Aware to Install Broadcast Notification Sign(s) on the site in conformance with the information shown in this application.** (*See page 16 of this application for illustrative details*).

☒ **Aware** that all newspaper advertising fees must be paid by the applicant in addition to application fees.

☒ **Aware** that all public works fees are due at application submittal and for each subsequent submittal

☒ **Aware** that on property owner notifications that <u>exceed 30 mail outs the applicant will be responsible</u> for **notice prep and postage**

☒ **Aware** that this application will be submitted to AZGF Department for review and analysis with the ERT online review tool for Habitat and Riparian area identification.

☒ Signature at the end of the **"Checklist"** stating you have reviewed and addressed all areas within it.

I certify that I have submitted all the required information listed above, and I understand that this application for a Planned Area Development cannot be processed until all required information is submitted

9/23/21

Signature Date

Leo Lew
County Manager

PINAL COUNTY
WIDE OPEN OPPORTUNITY

PROCEDURE AND APPLICATION FOR A ZONE CHANGE IN UNINCORPORATED PINAL COUNTY

1. Submit a Pre-Application meeting request with the Community Development Department for a meeting with Planning Department and other affected County agencies. - (The Pre-application review is a separate application prior to applying for a rezone).*****

2. Hold a **Neighborhood / Community Meeting** per requirements outlined in Section – [2.166.050 (E)] of the PCDSC.

3. Submit a **Zone Change Application** with the required supporting documentation using the attached forms.******

4. Submit the following fees made payable to Pinal County in accordance with Section [2.166.050] of the PCDSC:

    a. 0-499 mail-outs: $4,478.00
    b. 500 or more mail-outs: $4,880.00
    d. Public Works Fees: TIA Review : $750.00; Drainage Review: $750.00 (*Fees are due at application submittal and at subsequent reviews)
    e. Advertising and postage fees shall be paid by the applicant

5. Attend **Planning & Zoning Commission Public Hearing** for Commission recommendation to the Board of Supervisors. - (Time frame is approximately 10 to 15 weeks from application acceptance by the Planning Department).

6. Attend **Board of Supervisors Public Hearing** for decision. – (Time Frame is approximately 4 to 8 weeks after Planning & Zoning Commission Public Hearing).***

Applicants should allow 4 to 6 months from the application acceptance by the Planning Department to a decision from the Pinal County Board of Supervisors.

* Your **pre-application meeting request** can be found here: http://www.pinalcountyaz.gov/CommunityDevelopment/Planning/Documents/2019%20NEW%20APPLICATIONS/Zone%20Change%20Pre-App.pdf

** ***Your application can also be submitted digitally via email or FTP site please call or email the Planning Division for more information.***

*** **A Zone Change is not effective until 31 days after approval by the Board of Supervisors**

Leo Lew
County Manager

PINAL COUNTY
WIDE OPEN OPPORTUNITY

APPLICATION FOR CHANGE OF ZONING REGULATIONS IN AN UNINCORPORATED AREA OF PINAL COUNTY, ARIZONA
(All Applications Must Be Typed or Written in Ink)

Formal Zoning Change & Property Information:
(feel free to include answers and to these questions in a Supplementary Narrative, when doing so write see narrative on the space provided)

1. Pinal County Staff Coordinator: Gilbert Olgin
2. Date of Pre-application Review: 7 / 27 / 21 Pre-Application Review No.: Z-PA-068 - 21
3. Current Zoning *(Please provide Acreage Breakdown)*: CB-1 PAD (15.0 acres) & CR-3 PAD (143.50 acres)
4. Requested Zoning *(Please provide Acreage Breakdown)*: R-7 PAD (158.25 acres)
5. Parcel Number(s): 510520030 & 510520020
6. Parcel Size(s): 158.25 acres
7. The existing use of the property is as follows: disturbed agricultural and undeveloped land
8. The exact use proposed under this request: single family detached residential community
9. What is the Comprehensive Plan Designation for the subject property: Moderate Low Density Residential
10. Is the property located within three (3) miles of an incorporated community? ■ YES ❑ NO
11. Is an annexation into a municipality currently in progress? ❑ YES ■ NO
12. Is there a zoning violation on the property for which the owner has been cited? ❑ YES ■ NO

    If yes, zoning violation # _____

13. Discuss any recent changes in the area that would support your application i.e.: zone change(s), subdivision approval, Planned Area Development (PAD), utility or street improvements, adopted comprehensive/area plan(s) or similar changes. After market conditions went south in the early 2000's, master planned communities in the area were put on hold. Now the area is thriving with interest in reviving the prior entitlements to facilitate new development.

14. Explain why the proposed development is needed and necessary at this time. As Venida begins to develop, approximately 15 years after the initial approval of the original PAD, there is a need to bring the original design up to current Pinal County standards and revise the land use and lot mix to better suit current market demands.

INV#:_____ AMT:_____ DATE:_____ CASE:_____ Xref:_____

SUPPORTING INFORMATION

1. Note any services that are not available to the site. Discuss any improvements of services that would be paid for by the public: Existing community facilities have been determined adequate for servicing the proposed project.

2. What is the amount of traffic to be generated (# of trips/day, deliveries/week)? Show ingress/egress on the site plan: Please refer to the TIA

3. How many parking spaces are to be provided (employees and customers)? Indicate these parking spaces on the site plan: Parking will be provided for each single-family home via driveways and garages.

4. Is there a potential for excessive noise (I.E.; children, machinery) or the production of smoke, fumes, dust or glare with this proposed land use? If yes, how will you alleviate these problems for your neighbors?

No

5. What type of landscaping are you proposing to screen this use from your neighbors?

Landscape buffers are provided along the Project boundaries. Please refer to the open space plan for reference.

6. What type of signage are you proposing for the activity? Where will the signs be located?

Please refer to the walls and signage plan for reference.

7. If the proposed land use involves any type of manufacturing or production process, provide a short synopsis of the processes utilizing diagrams, flowcharts and/or a short narrative: N/A

8. Explain how the appearance and operation of the proposed land use will maintain the integrity and character of the zone in which the use is requested: The commercial parcel being rezoned will be replaced with the R-7 PAD designation currently in place on the majority of the property and surrounding area.

9. Have you discussed possible conditions that may be placed on the approval with the Planning Department?

■ YES ❑ NO

10. Do you understand that if a condition is violated, that there is a public process by which your zoning may be reverted? ■ YES ❑ NO

(Required for filing all applications)

Instructions: Print Name, Address, City, State, Zip Code and Tax Parcel Number for each property owner within 600/ (1,200) (circle one) feet of the subject parcel boundary. Feel free to attach a separate list if generated digitally. Please see "How to use the Buffer Tool" on our FAQ's page if you are generating the list.

Parcel No.: 510520020
Name: HAM PAPAGO LLC
Address: PO BOX 15662
City/ST/Zip: PHOENIX, AZ 85060

Parcel No.: 510520030
Name: HAM PAPAGO LLC
Address: PO BOX 15662
City/ST/Zip: PHOENIX, AZ 85060

Parcel No.: 51048015F
Name: PICACHO LANDING EQUITIES LLC
Address: 5346 E CALLE DEL NORTE
City/ST/Zip: PHOENIX, AZ 85018

Parcel No.: 51048009H
Name: AMARILLO MARKETPLACE LLC
Address: 5346 E CALLE DEL NORTE
City/ST/Zip: PHOENIX, AZ 85018

Parcel No.: 510528030
Name: N/A
Address:
City/ST/Zip:

Parcel No.: 510480350
Name: ZENN ARIZONA INC
Address: 4791 TIMBER PLACE
City/ST/Zip: VICTORIA , BC

Parcel No.: 51052001A
Name: PRATT EDWARD C TRUSTEE
Address: 45065 W PAPAGO RD
City/ST/Zip: MARICOPA, AZ 85139

Parcel No.: 51048804A
Name: N/A
Address:
City/ST/Zip:

Parcel No.: 51048015G
Name: AMARILLO CREEK SOUTH LLC ETAL
Address: 5346 E CALLE DEL NORTE
City/ST/Zip: PHOENIX, AZ 85018

Parcel No.: 51048009K
Name: JHC AMARILLO 3 LLP
Address: 10218-111 STREET NW
City/ST/Zip: EDMONTON, AB

I hereby verify that the name list above was obtained on the 24 day of August, 2021, at the office of CVL Consultants and is accurate and complete to the best of my knowledge.
(Source of Information)

Julie Vermillion
Applicant/Representative Signature

10/05/21
Date

This instrument was acknowledged before me on this 5th **day of** October,
2021, **by** Julie Vermillion. **In witness whereof**
I hereunto set my hand and official seal.

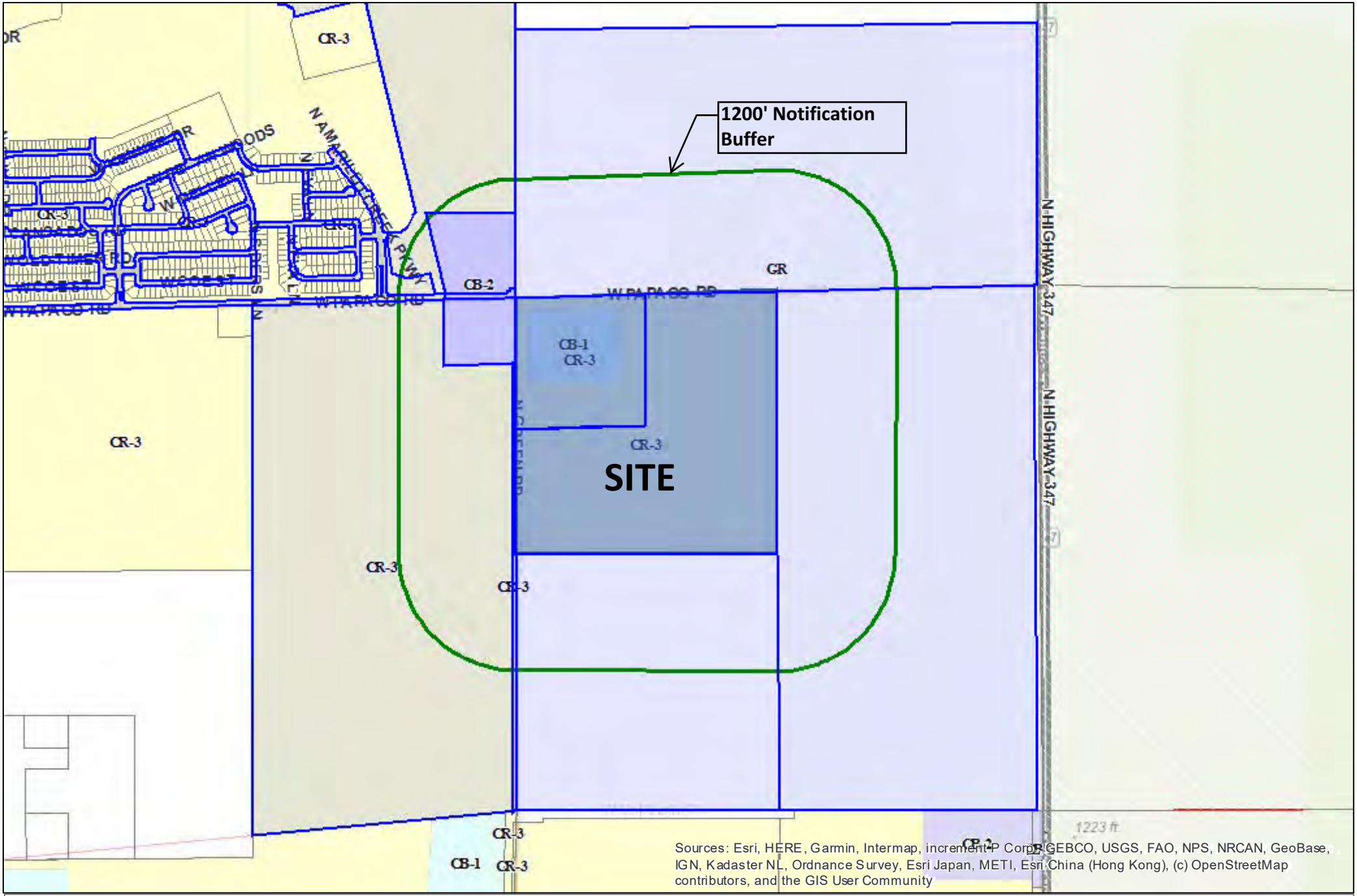
Krista Zinser
Notary Public

KRISTA ZINSER
NOTARY PUBLIC - ARIZONA
MARICOPA COUNTY
COMMISSION # 579798
MY COMMISSION EXPIRES
JANUARY 13, 2024

My commission expires January 13, 2024

PINAL COUNTY
WIDE OPEN OPPORTUNITY

Community Development Status Viewer



,

AMARILLO MARKETPLACE LLC
5346 E CALLE DEL NORTE
PHOENIX, AZ 85018

,

,

,

JHC AMARILLO 3 LLP
10218-111 STREET NW
EDMONTON, AB

,

AMARILLO CREEK SOUTH LLC ...
5346 E CALLE DEL NORTE
PHOENIX, AZ 85018

PICACHO LANDING EQUITIES L...
5346 E CALLE DEL NORTE
PHOENIX, AZ 85018

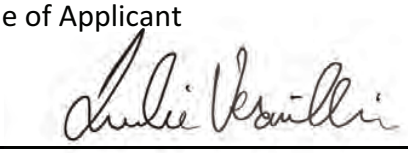
HAM PAPAGO LLC
PO BOX 15662
PHOENIX, AZ 85060

HAM PAPAGO LLC
PO BOX 15662
PHOENIX, AZ 85060

PRATT EDWARD C TRUSTEE
45065 W PAPAGO RD
MARICOPA, AZ 85139

ZENN ARIZONA INC
4791 TIMBER PLACE
VICTORIA , BC

I **certify the information included in this application is accurate, to the best of my knowledge. I have read the application and I have included the information, as requested. I understand if the information submitted is incomplete, this application cannot be processed. All notices will be sent to the applicant unless otherwise directed in writing**

CVL Consultants, attn: Julie Vermillion	4550 North 12th Street, Phoenix AZ 85014	
Name of Applicant	Address	
	jvermillion@cvlci.com	602-285-4765
Signature of Applicant	E-Mail Address	Phone Number

same as above		
Name of Agent/Representative	Address	
Signature of Agent/Representative	E-Mail Address	Phone Number

The Agent/Representative has the authority to act on behalf of the landowner/applicant, which includes agreeing to stipulations. The agent will be the contact person for Planning staff and must be present at all hearings. Please use attached Agency Authorization form, if applicable.

HAM PAPAGO LLC	PO BOX 15662	
Name of Landowner	Address	
See attached Agency Authorization letter		
Signature of Landowner	E-Mail Address	Phone Number

If landowner is not the applicant, then applicant must submit a signed notarized consent form from the landowner with this application. Please use attached Consent to Permit form, if applicable.

Application Checklist:

A. Check the appropriate item:

❑ This Zone Change is being submitted without a PAD request

❑ This Zone Change is being submitted in conjunction with a PAD request.

The applicant must complete a PAD application. – *(Please utilize the "PAD Book" and the "Site Plan" of the PAD application to fulfill the Zoning Application "Narrative" and "Site Plan" in lieu of while having separate copies for each application).*

B. Hold a Neighborhood/Community Meeting:

❑ Notify all property owners within 1200' (feet)

❑ Hold the meeting within five (5) miles of the subject property

❑ Hold the meeting between 5:00 pm – 9:00 pm

❑ Include with the application the following:

- Copy of Notice of Neighborhood/Community Meeting
- List of property owners notified - ***(Use page 5 of this application)***
- Minutes of the meeting
- Attendance sign-in sheet with names & addresses

C. Submit a completed **"Agency Authorization"** form *(if applicable).*

D. Submit a written **Narrative** concerning the proposed development ***(if not submitting in conjunction with a PAD Application)*** to include:

❑ **1.** Title Page

❑ **2.** Purpose of Request

❑ **3.** Description of Proposal

- **a.** Nature of the Project including Proposed Land Use
- **b.** Conformance to adopted Comprehensive Plan
- **c.** Answers to the questions from the **Supporting Information** sheet
- **d.** Location & Accessibility
- **e.** Utilities & Services
- **f.** Neighborhood Meeting Information
- **g.** Appendix, as applicable

E. Submit a **Site Plan** ***(if not submitting in conjunction with a PAD Application)*****.** The submittal shall be professionally prepared (*by a surveyor, architect, or other design professional*) and drawn at a sufficient scale as to not exceed a print size larger than 11" X 17". The lettering shall be of sufficient size to be legible when reduced to an 8½" X 11" print and include:

- ☐ **1.** Legal Description of total site.
- ☐ **2.** Name(s) of Landowner(s), Developer, Applicant and Person or Firm preparing plan.
- ☐ **3.** North Arrow, Scales (*written and graphic*), Preparation Date and Subsequent Revision Dates.
- ☐ **4.** Location of all Existing & Proposed Structures & Buildings
- ☐ **5.** Location of all Existing & Proposed Utilities with Location & Width of Associated Easements.
- ☐ **6.** All Existing & Proposed Public and/or Private Streets with Location & Width of Associated Easements & Right-of-Ways.
- ☐ **7.** All Points of Ingress & Egress.
- ☐ **8.** Location & Types of Existing & Proposed Landscaping.
- ☐ **9.** Indicate Location, Type, Height, & Materials for Proposed Walls, Fences & Signs.
- ☐ **10.** Show whether the property is adjacent to a projected regionally significant route (RSR) as identified on the Corridor Preservation Map (Figure 9) in the Regionally Significant Routes for Safety and Mobility (RSRSM), Final Report. If adjacent to a projected RSR, show how applicant will comply with the RSRSM Final Report and the RSRSM Access Management Manual.

F. Submit the following information regarding **Water Supply**:

- ☐ **1**. Identify the water service provider
- ☐ **2**. Provide an estimated range of water demand and include an explanation of the method used to obtain the estimate
- ☐ **3.** Provide information about water supply and source, including renewable and non-groundwater supplies
- ☐ **4**. If a portion of the water supply for the proposed project is groundwater, the application shall be accompanied by the following information that is publicly available from the Arizona Department of Water Resources (ADWR) and/or Arizona Geological Survey, or otherwise available to the land owner:
    - o Depth to bedrock & Depth to groundwater
    - o Known fissures or land subsidence in the area
    - o Known wells in the area, available information on status and water levels
    - o Summary of data-gathering efforts and sources of information

G. **Submit** a copy of a certified **A.L.T.A.** survey, including a legal description of proposed zoning districts.

H. Submit a **Drainage report** and a **TIA report.** ***(Public Works fees for these reviews will be due at the time of submittal and each subsequent review until deemed acceptable).***

I. **Aware** that earth fissure maps are available online from the Arizona State Geologic Survey.

J. **Submit a list of all property owners within 600' (feet)** of the subject property boundary showing name, mailing address and tax parcel numbers. This list must be obtained within 30 days prior to application submission. A map showing the 600' boundary and parcels must be included as well (*A Tax Assessor Parcel Map is Acceptable*). - ***(This list is a separate list from the "Neighborhood/Community Meeting list of 1,200' however use Page 5 of this application as well).***

K. **Complete and Submit** the "Comprehensive Plan Compliance Checklist" a copy of the Checklist can be found here: http://www.pinalcountyaz.gov/CommunityDevelopment/Planning/Documents/Planning%20Applications/CompPlan%20Checklist.pdf

L. **Submit** the Non-Refundable fees for a zone change outlined on page one of the Zone Change Application.

M. **Submit** one **(1) hard copy** of all documentation outlined in the Zone Change application and one **(1) digital copy** in a multi-PDF format per item of the application with all supporting documentation on **one (1) CD or Jump Drive along with:**

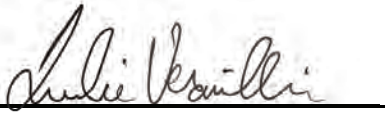
a. An ESRI shapefile for land use (conceptual) which shows all proposed zoning lines and zoning classifications for the project in NAD_1983_stateplan_arizona_central_fips_0202_intlfeet projection

** Your application can also be submitted digitally via email or FTP site please call or email the Planning Division for more information.*

N. **Aware to Install Broadcast Notification Sign(s) on the site in conformance with the information shown in this application.** (*See page 10 & 11 of this application for illustrative details*). **Aware** that newspaper advertising fees and postage must be paid **by the applicant.** *(in addition to application fees)*

O. Signature at the end of the **"Checklist"** stating you have reviewed and addressed all areas within it.

I certify that I have submitted all the required information listed above, and I understand that this application for a Zone Change cannot be processed until all required information is submitted.



09/23/21

Signature Date

AGENCY AUTHORIZATION

(To be completed by all landowners who do not represent themselves. Instructions for completing required information are in bold and brackets below lines. If applicant is a company, corporation, partnership, joint venture, trustee, etc., please use the corporate signature block and have the notary fill in the notarization section for corporations not individuals and cannot be submitted digitally)

TO: Pinal County Community Development
P.O. Box 2973
Florence, AZ 85232

HAM PAPAGO LLC

[Insert Name -- If a Corporation, Partnership or Association, Include State of Incorporation]

Hereinafter referred to as "Owner," is/are the owner(s) of approximately 158.25 acres located at the southeast corner of Papago Road and Green Road, and further identified

[Insert Address of Property]

As assessor parcel number 510520030 and 510520020 and legally described as follows:

[Insert Parcel Number]

Insert Legal Description Here OR Attach as Exhibit A
See attached Exhibit A.

Said property is hereinafter referred to as the "Property."
Owner hereby appoints Coe & Van Loo Consultants, Inc. (CVL)

[Insert Agent's Name. If the Agent Is a Company, Insert Company Name Only]

Hereinafter referred to as "Agent," to act on Owner's behalf in relation to the Property in obtaining approval from Pinal County for a minor land division and to file applications and make the necessary submittals for such approvals.

[Individual PROPERTY OWNER signature block and acknowledgment.
DO NOT SIGN HERE IF SIGNING AS AN OFFICER OF A CORPORATION SIGN NEXT PAGE]

[Signature]

5050 N. 40th Street, Suite 330, Phoenix, AZ 85018
[Address]

Dated: 9/20/2021

[Signature]

[Address]

Dated: _____

STATE OF ARIZONA)
) ss.
COUNTY OF MARICOPA)

(SEAL)

The foregoing instrument was acknowledged before me, this 20th day SEPTEMBER, 20 21
by HARRY ZEITLIN

My Commission Expires 1/18/24

Signature of Notary Public

LUIS E GOMEZ
Printed Name of Notary

Signature of Notary

LUIS EDUARDO GOMEZ
NOTARY PUBLIC - ARIZONA
MARICOPA COUNTY
COMMISSION # 576899
MY COMMISSION EXPIRES
JANUARY 18, 2024

CORPORATE PROPERTY OWNER SIGNATURE BLOCK AND ACKNOWLEDGMENT

_____
[Insert Company's or Trust's Name]

By: _____
[Signature of Authorized Officer, or Trustee]

Its: _____
[Insert Title]

Dated: _____

STATE OF_____)
) ss.
COUNTY OF_____)

The foregoing instrument was acknowledged before me, this_____ day of _____, 20____ by

_____, _____
[Insert Signor's Name] *[Insert Title]*

_____, _____an,
[Name of Company or Trust] *[Insert State of Incorporation, if applicable]*

And who being authorized to do so, executed the foregoing instrument on behalf of said entity for the purposes stated therein.

My Commission Expires: _____

_____ _____
Printed Name of Notary Signature of Notary

ALTERNATE: Use the following acknowledgment only when a second company is signing

On behalf of the owner:

STATE OF_____)
) ss. (Seal)
COUNTY OF_____)

The foregoing instrument was acknowledged before me, this_____ day of _____, 20____ by
_____, who acknowledges himself/herself to be
[Insert Signor's Name]

_____, of _____
[Title of Office Held] *[Second Company]*

As _____ for _____, and who being
[i.e. member, manager, etc.] *[Owner's Name]*

Authorized to do so, executed the foregoing instrument on behalf of said entities for the purposes stated therein.

My Commission Expires_____

_____ _____
Printed Name of Notary Signature of Notary

September 24, 2021

LEGAL DESCRIPTION FOR
VENIDA
PROPERTY BOUNDARY

That part of the Northwest Quarter of Section 21, Township 5 South, Range 3 East, of the Gila and Salt River Meridian, Pinal County, Arizona, more particularly described as follows:

Beginning at the Northwest Corner of said Section 21;

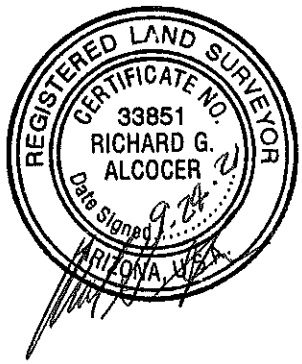
Thence North 88°32'15" East, along the North line of the Northwest Quarter of said Section 21, a distance of 2,643.85 feet, to the North Quarter Corner of said Section 21;

Thence departing said North line, South 00°17'18" East, along the East line of said Northwest Quarter, a distance of 2,618.77 feet, to the Center of said Section 21;

Thence South 89°14'14" West, along the South line of said Northwest Quarter, a distance of 2,653.95 feet, to the West Quarter Corner of said Section 21;

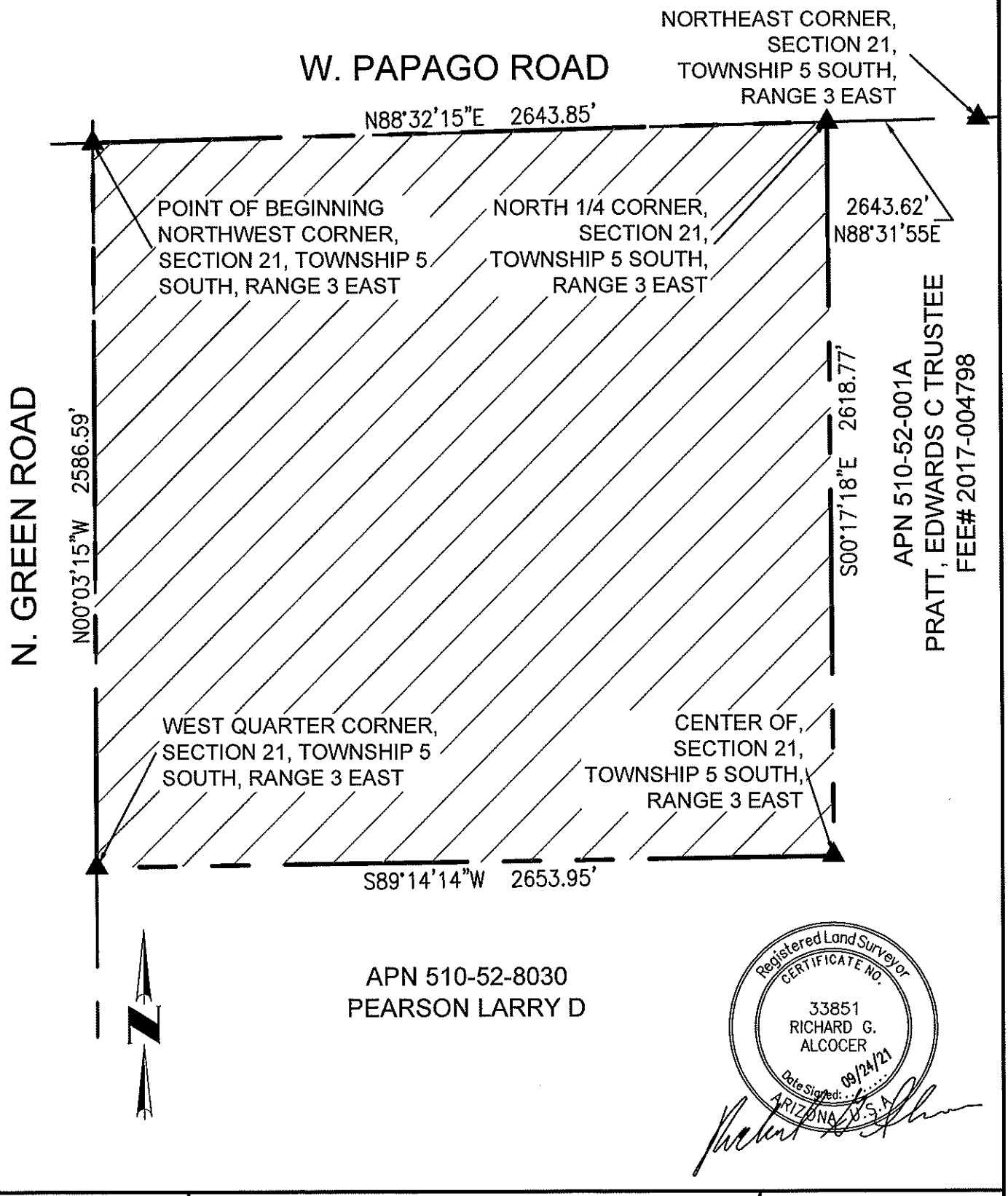
Thence North 00°03'15" West, along the West line of said Northwest Quarter, a distance of 2,586.59 feet to the Point of Beginning.

Containing 6,893,158 Square Feet or 158.245 Acres, more or less.



4550 N 12th Street | Phoenix AZ 85014 | 602.264.6831 | (F) 602.264.0928

CVL CONSULTANTS



SCALE 1" = 500'	VENIDA	CVL CONSULTANTS CELEBRATING 60 YEARS
EXHIBIT	PROPERTY BOUNDARY	1 OF 1
4550 North 12th Street Phoenix, Arizona 85014 Phone 602-264-6831 http://www.cvlci.com		

N:\01\0372301\CADD\Exhibits\VX.VENIDA.dwg **JamesG** **September 24, 2021**

CLOSURE REPORT
VENIDA
PROPERTY BOUNDARY

BOUNDARY

N88°32'14.6248" E 2,643.85

S00°17'17.7300" E 2,618.77

S89°14'14.1005" W 2,653.95

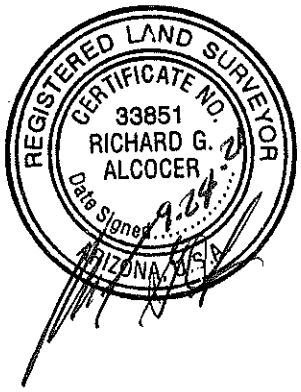
N00°03'15.1368" W 2,586.59

Area = 6,893,158 158.245 AC

Closing course: 276°40'43.3655" 0.007208

Misclosure: 1/1,000,000+

North Error: 0.000838
East Error: 0.007159



AGENCY AUTHORIZATION

(To be completed by all landowners who do not represent themselves. Instructions for completing required information are in bold and brackets below lines. If applicant is a company, corporation, partnership, joint venture, trustee, etc., please use the corporate signature block and have the notary fill in the notarization section for corporations not individuals and cannot be submitted digitally)

TO: Pinal County Community Development
P.O. Box 2973
Florence, AZ 85232

HAM PAPAGO LLC

[Insert Name -- If a Corporation, Partnership or Association, Include State of Incorporation]

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Insert Legal Description Here OR Attach as Exhibit A
See attached Exhibit A.

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Owner hereby appoints Coe & Van Loo Consultants, Inc. (CVL)

[Insert Agent's Name. If the Agent Is a Company, Insert Company Name Only]

Hereinafter referred to as "Agent," to act on Owner's behalf in relation to the Property in obtaining approval from Pinal County for a minor land division and to file applications and make the necessary submittals for such approvals.

[Individual PROPERTY OWNER signature block and acknowledgment.
DO NOT SIGN HERE IF SIGNING AS AN OFFICER OF A CORPORATION SIGN NEXT PAGE]

[Signature]

5050 N. 40th Street, Suite 330, Phoenix, AZ 85018
[Address]

Dated: 9/20/2021

[Signature]

[Address]

Dated: _____

STATE OF ARIZONA)
) ss.
COUNTY OF MARICOPA) (SEAL)

The foregoing instrument was acknowledged before me, this 20th day SEPTEMBER, 20 21
by HARRY ZEITLIN

My Commission Expires 1/18/24

Signature of Notary Public Luis E Gomez

LUIS E GOMEZ
Printed Name of Notary

Signature of Notary

CORPORATE PROPERTY OWNER SIGNATURE BLOCK AND ACKNOWLEDGMENT

_____
[Insert Company's or Trust's Name]

By: _____
[Signature of Authorized Officer, or Trustee]

Its: _____
[Insert Title]

Dated: _____

STATE OF_____)
) ss.
COUNTY OF_____)

The foregoing instrument was acknowledged before me, this_____ day of _____, 20____ by

_____, _____
[Insert Signor's Name] *[Insert Title]*

_____, _____an,
[Nome of Company or Trust] *[Insert State of Incorporation, if applicable]*

And who being authorized to do so, executed the foregoing instrument on behalf of said entity for the purposes stated therein.

My Commission Expires: _____

_____ _____
Printed Name of Notary Signature of Notary

ALTERNATE: Use the following acknowledgment only when a second company is signing

On behalf of the owner:

STATE OF_____)
) ss. (Seal)
COUNTY OF_____)

The foregoing instrument was acknowledged before me, this_____ day of _____, 20____ by
_____, who acknowledges himself/herself to be
[Insert Signor's Name]

_____, of _____
[Title of Office Held] *[Second Company]*

As _____ for _____, and who being
[i.e. member, manager, etc.] *[Owner's Name]*

Authorized to do so, executed the foregoing instrument on behalf of said entities for the purposes stated therein.

My Commission Expires_____

_____ _____
Printed Name of Notary Signature of Notary

Appendix A: Comprehensive Plan Compliance Checklist

Purpose:

Provide guidance to ensure conformity of development proposals with the Pinal County Comprehensive Plan.

Intent:

1. Explain how to determine if development proposals are compatible with the Comprehensive Plan.
2. Explain why unique conditions exist to deviate from the Plan.

The Pinal County Comprehensive Plan graphics, Land Use, Circulation (two graphics), and Economic Development, are not intended to be zoning maps that outlines specific locations and parcel-by-parcel determination for land uses and facilities. The Comprehensive Plan's intent is to provide policy direction and a framework for how the Pinal County "development form" or layout should occur over time. It is not the intent to predetermine specifically where land uses must occur. Guidelines within the Land Use element provide direction on development and how it relates to transportation corridors, surrounding land uses, public facilities, and natural environment.

Determination:

Comprehensive Plan Compliance is determined by the development's conformity with the Comprehensive Plan's land use designations (Land Use graphic and Land Use element text) and activity centers (Land Use and Economic Development graphics and Economic Development element text) as well as the goals, objectives, policies and guidelines outlined in the Pinal County Comprehensive Plan. Planning guidelines for each of the land use designations and Activity Centers are also included in the Land Use element. It is important to note that all components and concepts may not apply to every potential proposal.

Organization:

The Compliance Checklist focuses on two major components:

1. Consistency with Pinal County's Vision Components
2. Consistency with the Plan's Key Concepts illustrated on Land Use, Circulation, and Economic Development graphics.

How Is the Checklist Used?

Various concepts are discussed and a "YES" checkbox is provided to indicate if the proposal complies with the key concepts of the Plan.

- If a project complies, it receives a ✓ in the appropriate box.
- If it does not comply, the checkbox will remain blank, and additional information would need to be provided to explain the unique circumstance, if applicable.

- If a project has no relation to a particular check list item, a "non applicable" response is acceptable with a brief explanation.

Who Should Use the Checklist?

Developers, staff, and decision-makers should use the Comprehensive Plan Compliance Checklist.

- ✓ Developers should use this checklist as a guide to the Plan's policies in the early stages of a development proposal and when submitting an application for review.
- ✓ Staff should use it to review development proposals and to make recommendations to decision-makers. The checklist can assist in developing the staff report.
- ✓ Decision-makers can use the checklist to better understand how well a proposal does or does not comply with the Pinal County Comprehensive Plan.

PART ONE

Consistency with Pinal County's Vision Components

The Pinal County Comprehensive Plan is a vision-based plan that provides the framework that all decisions related to growth and development are measured against. The following is intended to describe how the proposal meets the various vision components.

Pinal County Vision The County recognizes the importance of the region's strategic location between the Phoenix and Tucson Metropolitan Areas and its relationship to the overall well-being of the state of Arizona. What happens in Pinal County does not stay in Pinal County; the decisions made here will impact the entire state on many levels: business development, mobility, land management, air quality, water, and overall quality of life. People choose Pinal County for the diverse opportunities it offers; this diversity is what makes Pinal County unique but also represents a challenge as Pinal County continues to grow and change.

Pinal County is a place where history, culture and heritage are the foundation for its future. Pinal County will be seen as a leader in environmental stewardship and conservation practices by ensuring that the natural environment is preserved, yet still available to be discovered. Pinal County provides quality educational and training opportunities placing residents in cutting edge, environmentally-compatible jobs within the County. While communities within Pinal County retain and celebrate their unique qualities, governments and agencies share a collaborative spirit to ensure successes across Pinal County and remain responsive and accountable to their constituents.

Sense of Community—Pinal County is a collection of unique communities, each of which has something special to offer residents and visitors. Balancing emerging urban centers and Pinal County's rural character is important to residents; ensuring that the threads of Pinal County's history, heritage, and culture are woven into its future is what makes Pinal County unique from other regions. Ensuring places exist for people to gather and for communities to showcase the diversity of places, people, lifestyles, cultures, and opportunities will help to define Pinal County's identity.

The proposal:

☑ Is consistent with the **Sense of Community** vision component

Please explain:

The proposed community provides a balance between residential use in support of existing or future work and education opportunities and future commercial use, supportive of potential on-site work, play and live opportunities. The development proposal incorporates open space connectivity, provides access to trails, and creates recreational opportunities for the community.

Mobility and Connectivity—Ensuring Pinal County has adequate transportation corridors and a variety of multimodal transportation options addressing all populations is essential for moving goods and people throughout the County and State with minimal affect on Pinal County's native wildlife. Offering multiple mobility and communication options, to effectively connect communities and activity centers throughout the County, will reduce congestion and improve air quality while enhancing the area's quality of life.

The proposal:

☑ Is consistent with the **Mobility and Connectivity** vision component

Please explain:
Venida provides a circulation system of residential streets, trails, and sidewalks that connects the new community's parks, open space, and neighborhoods. The proposed multi modal transportation system also provides arterial road, collector road, trail, and sidewalk improvements that provide an opportunity for connection to any adjacent neighborhoods and parks proposed for future development in the area.

Economic Sustainability—Expanding opportunities for residents to live, work, learn, and play in close proximity promotes long-term economic viability. Pinal County desires activity centers that serve the current and future residents' needs offering services, businesses and employment opportunities, including high-tech and environmentally-friendly employers who champion Pinal County's conservation philosophy. The creation of the full range of quality jobs that allow residents to start their career, raise a family, and move up instead of out of Pinal County for career advancement is essential. (This may not apply to all projects)

The proposal:

☑ Is consistent with the **Economic Sustainability** vision component

Please explain:
Venida is a residential development. However, the proposed residential growth resulting from the development will spur an increase in retail and service business activities in the area.

Open Spaces and Places—Residents value the large connected open spaces and unique places of Pinal County, not only as part of their quality of life, but as an important resource to sustain the region's immense wildlife habitat and their corridors. From the majestic mountains rising from the desert floor in the west to the high desert and rugged mountain terrain to the east, enjoyment of and respect for the natural surroundings is a big part of why people choose Pinal County to live and visit.

The proposal:

☑ Is consistent with the **Open Spaces and Places** vision component

Please explain:

A connected system of open space, parks sidewalks, and trails is proposed that is designed to provide connected open spaces. The proposed development provides a safe separation between non-motorized trails and the motorized roadway network corridors. An accessible, comprehensive park system is proposed that provides a balance of passive and active recreational opportunities.

Environmental Stewardship—People value the views of the mountains and open vistas during the day and the stars at night. These values have translated to a strong conservation ethic that stresses the importance of maintaining the quality of Pinal County's natural resources for future generations. Pinal County is the leader in environmental stewardship, and rewards and encourages sustainable practices such as innovative land use planning, sustainable agriculture, water conservation, green building development, and the use of renewable and alternative energy sources.

The proposal:

☑ Is consistent with the **Environmental Stewardship** vision component

Please explain:

The site is currently previously disturbed, undeveloped land, however, during the development design design process, consideration was given to the existing site. Areas left as open space could potentially serve as habitats for plant and animal species, be instrumental in ground water recharge, and serve as flood control to protect developed areas.

Healthy, Happy Residents—Access to quality healthcare and healthy lifestyle choices is a priority. Pinal County is a healthy, safe place where residents can walk or ride to activity centers and where interaction in Pinal County's clean, natural environment is encouraged. Ensuring residents are healthy, safe and happy in their community is a priority for Pinal County.

The proposal:

☑ Is consistent with the **Healthy, Happy Residents** vision component

Please explain:

Venida is a residential, urban-type housing development pattern appropriately located on an arterial intersection. This quality residential development and well-designed neighborhood is propsed with the intent to retain and attract quality employment opportunities and to achieve a healthy, balanced region.

Quality Educational Opportunities—Quality, community-based Pre k-12 programs that provide youth with a competitive edge along with a wide variety of post-secondary educational opportunities and technical or specialized workforce training are necessities. Pinal County residents seek out life-long opportunities that help to expand their minds and diversify their experiences. (This may not apply to all projects)

The proposal:

☑ Is consistent with the **Quality Educational Opportunities** vision component

Please explain:

Efforts have been made to provide safe and convenient pedestrian, bicycle and pedestrian access for students to existing and future schools in the area.

PART TWO

Consistency with the Plan's Key Concepts illustrated on Land Use, Economic, and Circulation graphics

Consistency with the Land Use Designation shown on the graphics

The project land uses:

☑ Are shown as indicated on the Land Use and Economic Development graphic

☑ Are not shown as indicated on the Land Use and Economic Development graphic

The current Pinal County Comprehensive Plan designates the site's land use as "Moderate Low Density Residential" (MLDR) with a typical overall density range of between 1 and 3.5 du/ac. The community will be developed as single family residential within this density range.

Consistency with the Mixed Use Activity Center Concept

The project land uses:

☐ Meet the Mixed Use Activity Center requirements

☑ Are not shown within a Mixed Use Activity Center

If shown within a Mixed Use Activity Center, explain how it meets the planning guidelines outlined in the Land Use element.

N/A

The land use proposal includes a Mixed Use project, not shown in a Mixed Use Activity Center; explain how it meets the planning guidelines and intent of the Plan.

N/A

Consistency with the Planning Guidelines described in the Land Use element

The project land uses:

☑ Are consistent with the applicable Planning Guidelines described in the Land Use element

Venida utilizes compatibility and relationship to existing and proposed neighborhoods with transitional uses, open space buffers, and landscaping. The community utilizes open space and residential neighborhood enhancements where neighborhoods may be impacted by adjacent roads with landscaping or other types of buffering. It is designed to be a safe, attractive, and well-maintained place.

Quality Employment Opportunities County-wide

The Comprehensive Plan stresses the importance of increasing the number of opportunities to locate quality jobs County-wide in order to increase the jobs-to-population ratio.

The proposal:

☑ Is consistent with the Economic Development element

☑ Includes additional information about how the development addresses the Economic Development Vision embodied in the Comprehensive Plan.

Please explain:

The proposal for the Venida community is not directly consistent with the Economic Sustainability vision component since it is not an economic, commercial or employment development. However, the proposed residential growth resulting from the development of Venida will spur an increase in retail and service business activities.

Viable Agriculture, Equestrian and Rural Lifestyle

Historically, agriculture has played an important role in Pinal County's economy and lifestyle. Encouraging the continuation of viable agriculture and protecting it is an important component of the Plan. Additionally, supporting an equestrian and rural lifestyle has a place in Pinal County as it continues to urbanize.

The proposal:

☑ Clusters development to protect open space and agriculture

☐ Includes additional information about how the development addresses Viable Agriculture, Equestrian, and Rural Lifestyle.

Please explain:

The proposal clusters development to protect open space but does not relate to the protection of agriculture. The Venida community addresses support and protection of any adjacent rural lifestyle uses by utilizing open space buffers and landscaping to minimize any potential negative impact to those uses along the north, east or south boundaries of the community.

System of Connected Trails and Preservation of Open Space

Pinal County is committed to the preservation of large swaths of open space and the development of a connected system of trails. This applies to <u>all</u> projects/proposals/actions.

The proposal:

☑ Is consistent with *Pinal County Trails and Open Space Master Plan* and Comprehensive Plan Open Space and Places Chapter

☐ Includes additional information about how the development addresses the open space Vision and goals

Please explain:

A connected system of open space, parks sidewalks, and trails is proposed that is designed to protect and conserve natural, physical and social resources.The proposed plan provides potential links to future municipal trail systems. An accessible, comprehensive park system is proposed that provides passive and active recreational opportunities.

Natural and Cultural Resource Conservation

The Comprehensive Plan strives to protect natural/cultural resources, wildlife corridors and environmentally-sensitive areas such as mountains and foothills, major washes, and vistas. These areas are predominantly undeveloped and contain sensitive resources or natural hazard areas.

The proposal:

☑ Address environmentally sensitive areas it may impact.

☐ Includes additional information about how the development addresses the natural and cultural resource conservation.

Please explain:

Efforts have also been made to preserve or provide native vegetation in applicable open space areas. These areas can serve as potential habitats for plant and animal species, be instrumental in ground water recharge, or serve as flood control to protect developed areas.

Water Resources, Public Facilities/Services, and Infrastructure Support

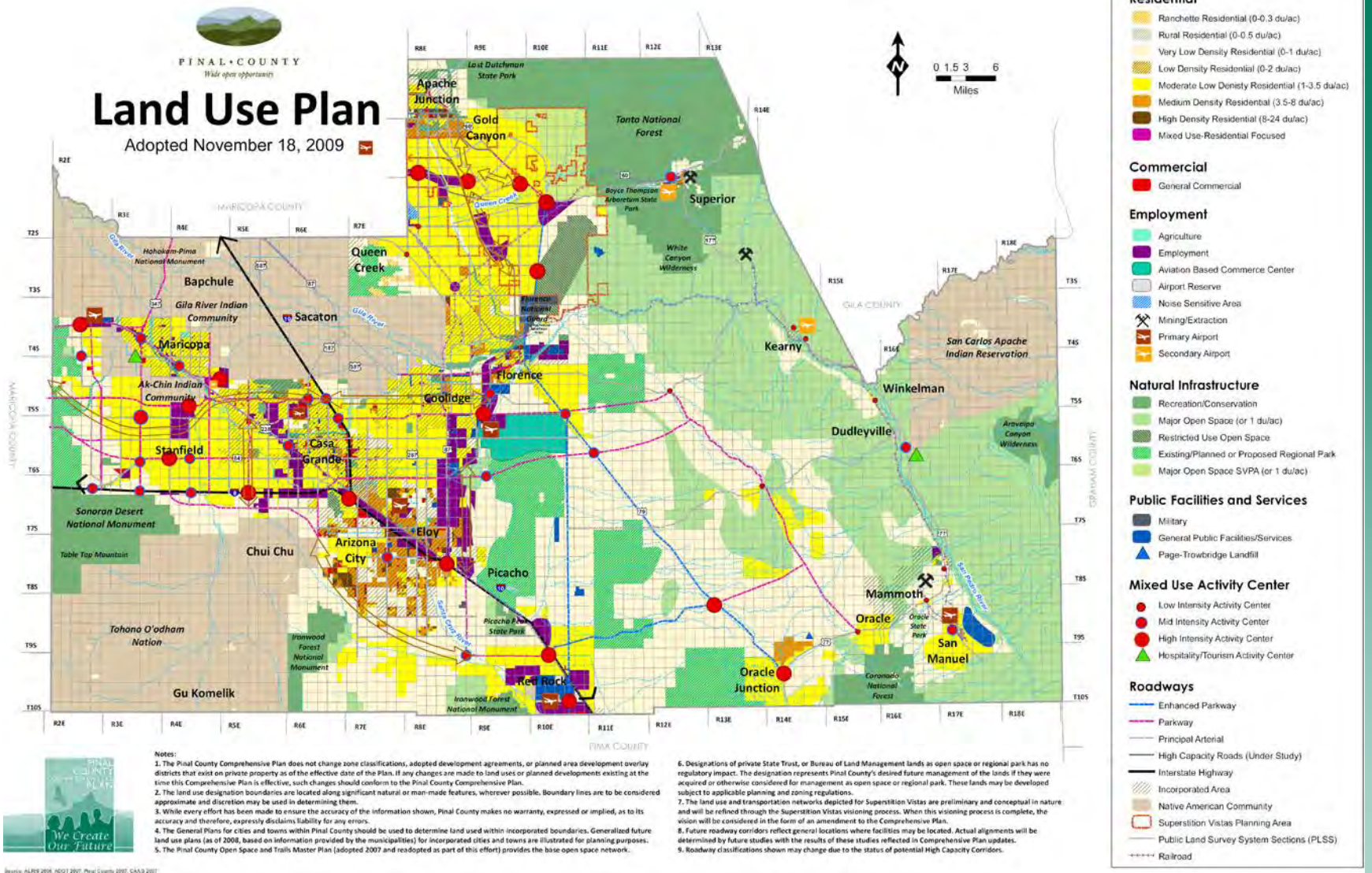
All developments must bring adequate water resources and the necessary infrastructure to support the intensity of development in order to minimize the impact on the County's ability to provide public services. All development and growth, public and private, must acknowledge its impacts and pay its own way.

The proposal:

☑ Ensures that adequate public facilities are in place or planned for within a reasonable time of the start of the new development

Please explain:

Venida will provide adequate water and other infrastructure to support the proposed densities as documented within this narrative and in further analysis to be provided during the Tentative or Final platting process. The Venida development team is committed to paying their associated fair share of costs as necessary to serve the development where applicable.



Notes:
1. The Pinal County Comprehensive Plan does not change zone classifications, adopted development agreements, or planned area development overlay districts that exist on private property as of the effective date of the Plan. If any changes are made to land uses or planned developments existing at the time this Comprehensive Plan is effective, such changes should conform to the Pinal County Comprehensive Plan.
2. The land use designation boundaries are located along significant natural or man-made features, wherever possible. Boundary lines are to be considered approximate and discretion may be used in determining them.
3. While every effort has been made to ensure the accuracy of the information shown, Pinal County makes no warranty, expressed or implied, as to its accuracy and therefore, expressly disclaims liability for any errors.
4. The General Plans for cities and towns within Pinal County should be used to determine land used within incorporated boundaries. Generalized future land use plans (as of 2008, based on information provided by the municipalities) for incorporated cities and towns are illustrated for planning purposes.
5. The Pinal County Open Space and Trails Master Plan (adopted 2007 and readopted as part of this effort) provides the base open space network.
6. Designations of private State Trust, or Bureau of Land Management lands as open space or regional park has no regulatory impact. The designation represents Pinal County's desired future management of the lands if they were acquired or otherwise considered for management as open space or regional park. These lands may be developed subject to applicable planning and zoning regulations.
7. The land use and transportation networks depicted for Superstition Vistas are preliminary and conceptual in nature and will be refined through the Superstition Vistas visioning process. When this visioning process is complete, the vision will be considered in the form of an amendment to the Comprehensive Plan.
8. Future roadway corridors reflect general locations where facilities may be located. Actual alignments will be determined by future studies with the results of these studies reflected in Comprehensive Plan updates.
9. Roadway classifications shown may change due to the status of potential High Capacity Corridors.

Source: ALRIS 2008, ADOT 2007, Pinal County 2007, CAAG 2007

Hearing Notices

NOTICE OF PUBLIC HEARING MEETING BY THE PINAL COUNTY PLANNING AND ZONING COMMISSION AT 9:00 A.M. ON THE **15th** DAY OF **SEPTEMBER 2022**, AT THE PINAL COUNTY ADMINISTRATIVE COMPLEX, IN THE BOARD OF SUPERVISORS HEARING ROOM, 135 N. PINAL STREET, FLORENCE, ARIZONA, TO CONSIDER THE APPLICATION FOR A **REZONING** & A **PLANNED AREA DEVELOPMENT (PAD) OVERLAY DISTRICT AMENDMENT** IN THE UNINCORPORATED AREA OF PINAL COUNTY, ARIZONA.

PZ-042-21 - PUBLIC HEARING/ACTION: HAM PAPAGO LLC/Harry Zeitlin, landowner and CVL Consultants/Julie Vermillion, applicant/agent, requesting approval of a rezoning from **CB-1 (Local Business Zone) and CR-3 (Single Residence Zone)** (cases #PZ-023-06/PZ-PD-023-06), to **R-7 (Single Residence Zoning District)** to allow a 544-lot single-family residential development on 158.25± acres of land, as part of the Venida Subdivision Development; situated in that part of the Northwest Quarter of Section 21, Township 5 South, Range 3 East of G&SRB&M, Pinal County, AZ; tax parcels 510520030 and 510520020 (legal on file); located at the southeast corner of Papago and North Green Roads, about 8 miles from the westernmost boundary of Pinal County and two miles west and one mile south of the Ak Chin Indian Community of the Maricopa Indian Reservation, in Pinal County.

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DOCUMENTS PERTAINING TO THIS CASE CAN BE FOUND ON THE NOTICE OF HEARING PAGE FOR THE P&Z COMMISSION AT:
http://pinalcountyaz.gov/CommunityDevelopment/Planning/Pages/NoticeofHearing.aspx#

DATED THIS **18h** DAY OF **AUGUST 2022**, by Pinal County Community Development Dept.

By:_____
Brent Billingsley, Community Development Director

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PINAL COUNTY COMMUNITY DEVELOPMENT DEPARTMENT
PO BOX 2973 (85 N FLORENCE ST)
FLORENCE, AZ 85132
NO LATER THAN 5:00 PM ON SEPTEMBER 8th, 2022.

Contact for this matter: Evan Evangelopoulos, e-mail address: evan.evangelopoulos@pinal.gov
Phone #: (520) 866-6642, Fax: (520) 866-6435

[*Anything below this line is not for publication.*]
PUBLISHED ONCE:
Pinal Central Dispatch
Casa Grande Dispatch

CASA GRANDE VALLEY NEWSPAPERS INC
200 W. 2ND ST.
CASA GRANDE AZ 85122

(520) 836-7461
Fax (520) 836-2944

Advertising Memo Bill

1| Memo Bill Period	2| Advertiser/Client Name
08/2022	PINAL COUNTY COMMUNITY DEVELOP

23| Total Amount Due	*Unapplied Amount	3| Terms of Payment
26.37		

21| Current Net Amount Due	22| 30 Days	60 Days	Over 90 Days
.00	.00	.00	.00

4| Page Number	5| Memo Bill Date	6| Billed Account Number	7| Advertiser/Client Number
1	08/24/22	12870 CHRIS.	**12870**

8\| Billed Account Name and Address

PINAL COUNTY COMMUNITY DEVELOPMENT
ATTN: EMMA GONZALEZ
P.O. BOX 2973
FLORENCE AZ 85132

Amount Paid: _____

Comments:

Ad #: 149011

Please Return Upper Portion With Payment

10| Date	11| Newspaper Reference	12|13|14| Description-Other Comments/Charges	15| 16| SAU Size Billed Units	17| 18| Times Run Rate	19| Gross Amount	20| Net Amount
08/25/22	149011	PZ-042-21	1.0X13.87	1		
	PCCHG	NOTICE OF PUBLIC HEARI	14.00	25.90	25.90	26.37
		08/25				
		CGIT CGPC				
		P# 240812				
	AZTPT	AZ TPT TAX		.47		

PLEASE RETURN THIS
INVOICE WITH REMITTANCE
THANK YOU

Statement of Account - Aging of Past Due Amounts

21| Current Net Amount Due	22| 30 Days	60 Days	Over 90 Days	*Unapplied Amount	23| Total Amount Due
0.00	0.00	0.00	0.00		**26.37**

CASA GRANDE VALLEY NEWSPAPERS INC.
(520) 836-7461

* UNAPPLIED AMOUNTS ARE INCLUDED IN TOTAL AMOUNT DUE

24| Invoice	25| Advertiser Information			
	1| Billing Period	6| Billed Account Number	7| Advertiser/Client Number	2| Advertiser/Client Name
149011	08/2022	12870	12870	PINAL COUNTY COMMUNITY

STATE OF ARIZONA

COUNTY OF PINAL } SS.

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By: /s/Brent Billingsley
Brent Billingsley, Community Development Director

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FLORENCE, AZ 85132
NO LATER THAN 5:00 PM ON SEPTEMBER 8th, 2022.

Contact for this matter: Evan Evangelopoulos, e-mail address: evan.evangelopoulos@pinal.gov
Phone #: (520) 866-6642, Fax: (520) 866-6435
No. of publications: 1; date of publication: Aug. 25, 2022.

Affidavit of Publication

Kara K. Cooper, first being duly sworn deposes and says: That he/she is a native born citizen of the United States of America, over 21 years of age, that I am an agent and/or publisher of the Pinal Central Dispatch, a newspaper section published at Casa Grande, Pinal County, Arizona, Thursday of each week; that a notice, a full, true and complete printed copy of which is hereunto attached, was printed in the regular edition of said newspaper, and not in a supplement thereto, for ONE issue. The publications thereof having been on the following date:

08/25/2022

PINAL CENTRAL DISPATCH

By Kara K. Cooper
agent and/or publisher of the Pinal Central Dispatch

Sworn to before me this 24th
day of August A.D., 2022

Jennifer Pelaez
Notary Public in and for the County
Of Pinal, State of Arizona

Jennifer Pelaez
Notary Public
Pinal County, Arizona
My Comm. Expires 05-10-26
Commission No. 627960

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CASA GRANDE AZ 85122

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Fax (520) 836-2944

Advertising Memo Bill

1| Memo Bill Period	2| Advertiser/Client Name
08/2022	PINAL COUNTY COMMUNITY DEVELOP

23| Total Amount Due	*Unapplied Amount	3| Terms of Payment
59.86		

21| Current Net Amount Due	22| 30 Days	60 Days	Over 90 Days
.00	.00	.00	.00

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FLORENCE AZ 85132

Amount Paid: _____

Comments:

Ad #: 149008

Please Return Upper Portion With Payment

10| Date	11| Newspaper Reference	12|13|14| Description-Other Comments/Charges	15| SAU Size 16| Billed Units	17| Times Run 18| Rate	19| Gross Amount	20| Net Amount
08/25/22	149008	PZ-042-21	1.0X13.87	1		
	PCDIS	NOTICE OF PUBLIC HEARI	14.00	58.80	58.80	59.86
		08/25				
		CGCG CGIT				
		P# 240812				
	AZTPT	AZ TPT TAX		1.06		

PLEASE RETURN THIS
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THANK YOU

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0.00	0.00	0.00	0.00		**59.86**

CASA GRANDE VALLEY NEWSPAPERS INC.
(520) 836-7461

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149008	08/2022	12870	12870	PINAL COUNTY COMMUNITY

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Of Pinal, State of Arizona

Jennifer Pelaez
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e-mail address: evan.evangelopoulos@pinal.gov
Phone #: (520) 866-6642 - Fax: (520) 866-6435

PINAL COUNTY
WIDE OPEN OPPORTUNITY

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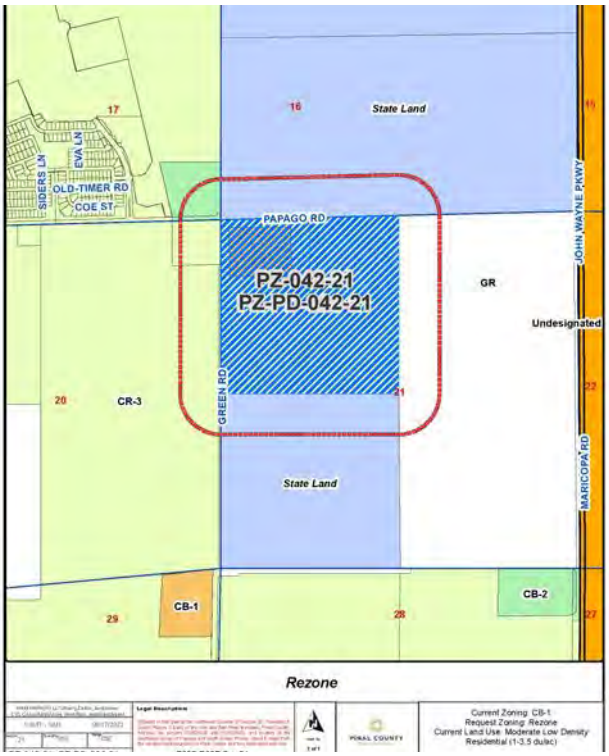
3) A brief statement of reasons for supporting or opposing the request
4) Whether or not you wish to appear and be heard at the hearing

WRITTEN STATEMENTS MUST BE FILED WITH:
PINAL COUNTY COMMUNITY DEVELOPMENT DEPARTMENT
PO BOX 2973 (85 N FLORENCE ST)
FLORENCE, AZ 85132

NO LATER THAN 5:00 PM ON SEPTEMBER 8th, 2022

Contact for this matter: Evan Evangelopoulos,
e-mail address: evan.evangelopoulos@pinal.gov
Phone #: (520) 866-6642 - Fax: (520) 866-6435



PINAL COUNTY
WIDE OPEN OPPORTUNITY

PINAL COUNTY
COMMUNITY DEVELOPMENT DEPARTMENT
P O BOX 2973 (85 N. FLORENCE ST.)
FLORENCE, AZ 85132

NOTICE OF PUBLIC HEARING

PINAL COUNTY
COMMUNITY DEVELOPMENT DEPARTMENT
P O BOX 2973 (85 N. FLORENCE ST.)
FLORENCE, AZ 85132

NOTICE OF PUBLIC HEARING

CERTIFICATION OF POSTING

I hereby certify that the notice(s) shown below was/were posted on the property described in the notice on 08/26/22

COMMUNITY DEVELOPMENT DEPARTMENT

BY: _____ Evan Evangelopoulos, Planner DATED: 8/26/22
[Signature] *[Print name and title]*

NOTICE OF PUBLIC HEARING MEETING BY THE PINAL COUNTY PLANNING AND ZONING COMMISSION AT 9:00 A.M. ON THE **15th** DAY OF **SEPTEMBER 2022**, AT THE PINAL COUNTY ADMINISTRATIVE COMPLEX, IN THE BOARD OF SUPERVISORS HEARING ROOM, 135 N. PINAL STREET, FLORENCE, ARIZONA, TO CONSIDER THE APPLICATION FOR A **REZONING** & A **PLANNED AREA DEVELOPMENT (PAD) OVERLAY DISTRICT AMENDMENT** IN THE UNINCORPORATED AREA OF PINAL COUNTY, ARIZONA.

PZ-042-21 - PUBLIC HEARING/ACTION: HAM PAPAGO LLC/Harry Zeitlin, landowner and CVL Consultants/Julie Vermillion, applicant/agent, requesting approval of a rezoning from **CB-1 (Local Business Zone) and CR-3 (Single Residence Zone)** (cases #PZ-023-06/PZ-PD-023-06), to **R-7 (Single Residence Zoning District)** to allow a 544-lot single-family residential development on 158.25± acres of land, as part of the Venida Subdivision Development; situated in that part of the Northwest Quarter of Section 21, Township 5 South, Range 3 East of G&SRB&M, Pinal County, AZ; tax parcels 510520030 and 510520020 (legal on file); located at the southeast corner of Papago and North Green Roads, about 8 miles from the westernmost boundary of Pinal County and two miles west and one mile south of the Ak Chin Indian Community of the Maricopa Indian Reservation, in Pinal County.

PZ-PD-042-21 – PUBLIC HEARING/ACTION: HAM PAPAGO LLC/Harry Zeitlin, landowner and CVL Consultants/Julie Vermillion, applicant/agent, requesting approval of an amendment to the **Venida Planned Area Development (PAD)** (cases #PZ-023-06/PZ-PD-023-06), to allow a 544-lot single-family residential development on 158.25± acres of land, as part of the Venida Subdivision Development; situated in that part of the Northwest Quarter of Section 21, Township 5 South, Range 3 East, of G&SRB&M, Pinal County, AZ; tax parcels 510520030 and 510520020 (legal on file); located at the southeast corner of Papago and North Green Roads, about 8 miles from the westernmost boundary of Pinal County and two miles west and one mile south of the Ak Chin Indian Community of the Maricopa Indian Reservation, in Pinal County.

ALL PERSONS INTERESTED IN THIS MATTER MAY APPEAR AND SPEAK AT THE PUBLIC HEARING AT THE DATE, TIME AND PLACE DESIGNATED ABOVE.
DOCUMENTS PERTAINING TO THIS CASE CAN BE FOUND ON THE NOTICE OF HEARING PAGE FOR THE P&Z COMMISSION AT:
http://pinalcountyaz.gov/CommunityDevelopment/Planning/Pages/NoticeofHearing.aspx#

DATED THIS **18h** DAY OF **AUGUST 2022**, by Pinal County Community Development Dept.

By:_____
Brent Billingsley, Community Development Director

TO QUALIFY FOR FURTHER NOTIFICATION IN THIS LAND USE MATTER YOU MUST FILE WITH THE PLANNING DEPARTMENT A WRITTEN STATEMENT OF SUPPORT OR OPPOSITION TO THE SUBJECT APPLICATION. YOUR STATEMENT **MUST** CONTAIN THE FOLLOWING INFORMATION:

1) Planning Case Number (see above)
2) Your name, address, telephone number and property tax parcel number **(Print or type)**
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WRITTEN STATEMENTS MUST BE FILED WITH:
PINAL COUNTY COMMUNITY DEVELOPMENT DEPARTMENT
PO BOX 2973 (85 N FLORENCE ST)
FLORENCE, AZ 85132
NO LATER THAN 5:00 PM ON SEPTEMBER 8th, 2022.

Contact for this matter: Evan Evangelopoulos, e-mail address: evan.evangelopoulos@pinal.gov
Phone #: (520) 866-6642, Fax: (520) 866-6435

[*Anything below this line is not for publication.*]
PUBLISHED ONCE:
Pinal Central Dispatch
Casa Grande Dispatch

Pinal County

AFFIDAVIT OF POSTING BROADCAST SIGN

I, the applicant's representative for case # PZ-042-21, PZ-PD-042-21, personally caused at least one sign to be posted in a visible place on or near the proposed project site at SEC Papago Road & Green Road, at least 28 days before the Planning and Zoning Commission Public Hearing, in Pinal County.

See attached photo exhibit.

Dynamite Signs
Sign Company Name

Meghan Liggett
Sign Company Representative

Subscribed and sworn to be on 06/22/22 by Meghan Liggett.

IN WITNESS WHEREOF, I Hereto set my hand and official seal.

Notary Public

MARYBETH CONRAD
Notary Public - Arizona
Maricopa County
Commission # 591461
My Comm. Expires Oct 25, 2024

My Commission expires: 10-25-24


PINAL COUNTY
Public Hearings
Case Numbers: PZ-042-21 & PZ-PD-042-21
Existing Zoning: R-7/PAD (Single Residence Zoning District), CB-1/PAD (Local Business Zone); Planned Area Development (PAD) Overlay Zoning District (PZ-PD-023-06/PZ-023-06)
Proposed Zoning: R-7/PAD (Single Residence Zoning District); Planned Area Development (PAD) Overlay Zoning District Amendment
Acreage: 158.25± Acres
Applicant Name: CVL Consultants
Applicant Phone Number: : 602-285-4756
Case Information Available at Pinal County Planning & Development Services
(520) 866-6442
Public Hearing Information
Jun 22, 2022 at 6:37:46 AM


PINAL COUNTY
Public Hearings
Case Numbers: PZ-042-21 & PZ-PD-042-21
Existing Zoning: R-7/PAD (Single Residence Zoning District), CB-1/PAD (Local Business Zone); Planned Area Development (PAD) Overlay Zoning District (PZ-PD-023-06/PZ-023-06)
Proposed Zoning: R-7/PAD (Single Residence Zoning District); Planned Area Development (PAD) Overlay Zoning District Amendment
Acreage: 158.25± Acres
Applicant Name: CVL Consultants
Applicant Phone Number: : 602-285-4756
Case Information Available at Pinal County Planning & Development Services
(520) 866-6442
Public Hearing Information
Jun 22, 2022 at 6:57:45 AM

PINAL • COUNTY
wide open opportunity

INFORMATION ABOUT CONSENT TO CONDITIONS/STIPULATIONS AND WAIVER OF CLAIMS FOR DIMINUTION IN VALUE

Pinal County, as part of the application process concerning land use requests, is now requesting that property owners or their authorized agents execute and return the attached Consent and Waiver. This policy is a result of that part of the Private Property Rights Protection Act (Proposition 207) that deals with regulatory takings and changes in land uses (A.R.S. §§12-1134 – 12-1138).

By signing the Consent and Waiver, the property owner agrees and consents to all conditions and stipulations in conjunction with the property owner's application, acknowledges that approval of the application might affect current or existing rights to use, divide, sell or possess the owner's property, and waives any right to compensation for diminution in value that may result from approval.

The Consent and Waiver form will be provided at the Concept Review Meeting to allow ample time for review. Should the Pinal County Planning and Zoning Commission ("Commission") recommend approval of the property owner's application, the form will again be provided to applicant together with the Commission's recommended stipulations/conditions. These materials will be provided to the applicant via e-mail, within three business days of the Planning Commission hearing. The property owner is requested to return the executed document to the Pinal County Planning and Development Department within 10 working days so that the document can be inserted into the packet to be presented to the Supervisors as part of the planning staff's report.

If an owner does not sign the Consent and Waiver, the application will continue through the normal County process. The Supervisors will be informed of the refusal and this will be one of the factors considered by the Supervisors.

If the Commission recommends denial of the property owner's application but the Supervisors decide to approve the application, the property owner will be requested to sign the Consent and Waiver with attached conditions/stipulations and conditions, after the Board of Supervisors' hearing.

When recorded return to:
Clerk
Pinal County Board of Supervisors
P.O. Box 827
Florence, AZ 85132

CONSENT TO ~~SCHEDULE FOR DEVELOPMENT AND~~ CONDITIONS/STIPULATIONS AND WAIVER OF CLAIMS FOR DIMINUTION IN VALUE

This Consent to ~~Schedule for Development and~~ Conditions/Stipulations and Waiver of Claims for Diminution in Value ("Consent and Waiver") is made in favor of Pinal County (the "County") by _____ ("Owner").

Owner warrants and represents that Owner is the fee title owner of the property described herein, and that no other entity or person has an ownership interest in the property. Prior to Owner's transfer, sale or conveyance of all or any part of its right, title and interest in the Property at any time within thirty (30) days of the County's approval of Owner's application described herein, Owner shall notify the County of said transfer, sale or conveyance and shall require the new Owner to execute and agree to this Consent and Waiver as part of any transfer, sale or conveyance of the property described herein.

Owner acknowledges that A.R.S. § 12-1134 of the Arizona Private Property Rights Protection Act provides in some cases that a county is required to pay just compensation to a landowner if the County approves a land use law that reduces the fair market value of the owner's property. Owner further acknowledges that A.R.S. § 12-1134 authorizes a private property owner to waive any claim for diminution in value of property in connection with any action proposed by a county or any action requested by the property owner.

Owner has submitted an application to Pinal County ("County") requesting the County approve a Zone Change & Major PAD Amendment for development of the following described property ("Property"):

["Legal description is attached hereto as Exhibit "A."]

By signing below, Owner agrees and consents to ~~the Schedule for Development and~~ all the conditions/stipulations imposed by Pinal County in conjunction with the approval of the Zone Change & Major PAD Amendment, Case No. PZ-042-21 & PZ-PD-042-21, which are attached hereto as

["Stipulations are attached here to as Exhibit "B."]

By signing below, Owner acknowledges that the approval of the Zone Change & Major PAD Amendment, Case No. PZ-042-21 & PZ-PD-042-21, might affect existing rights to use, divide, sell or possess the Property. By signing below, Owner hereby waives any and all rights to claim compensation for diminution in value pursuant to A.R.S. §12-1134 that may now or in the future exist as a result of the approval of the Zone Change & Major PAD Amendment, Case No. PZ-042-21 & PZ-PD-042-21, and the ~~Schedule for Development and~~ conditions/stipulations imposed in conjunction with the approval. Owner waives any and all rights to claim compensation for diminution in value for any action taken by the County to rescind approval of Zone Change & Major PAD Amendment in Case No. PZ-042-21 & PZ-PD-042-21 because of non-compliance with ~~the Schedule for Development and/or~~ any of the approved conditions/stipulations.

This Consent and Waiver shall run with the land and shall be binding upon all present and subsequent property owners.

Owner consents to the recordation of this Consent and Waiver after approval of the above-referenced case by the County. If Owner withdraws its application prior to final action of the County or the County denies the application, Owner is released from this Consent and Waiver.

OWNER: LGI Homes - Arizona, LLC
[Print Entity Name]

Ricki Tayner
Signature

Its: Officer
[Title, if applicable]

Dated: 10-4-2022

OWNER: _____
[Print Entity Name]

_____
Signature

Its: _____
[Title, if applicable]

Dated: _____

INDIVIDUAL ACKNOWLEDGMENT
[To be filled out if NOT a corporation, partnership, or trust]

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ____ day of _____, _____, by _____.
[Insert Name of Signor(s)]

_____
Notary Public

My commission expires: _____

CORPORATION, OFFICER, PARTNER OR TRUSTEE ACKNOWLEDGMENT
[To be filled out if a corporation, partnership, or trust]

STATE OF Arizona)
) ss.
COUNTY OF Maricopa)

The foregoing instrument was acknowledged before me, this 4 day of October, 2022, by Rick Taylien as Officer
[Insert Name of Officer] *[Insert Title]*
of LGI Homes - Arizona, LLC, an Arizona corporation,
[Insert Name of Company] *[Insert State of Incorporation]*
who being authorized to do so, executed the foregoing instrument on behalf of said entity for the purposes stated therein.

Eric Berman
Notary Public

My commission expires: 2-18-25

Eric Berman
Notary Public
Maricopa County, Arizona
My Comm. Expires 02-18-25
Commission No. 596962

ALTERNATE ACKNOWLEDGMENT: ***Use only when a second company is signing on behalf of owner***:

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me, this ____ day of _____, _____, by _____as _____
[Insert Signor's Name] ***[Insert Title]***
of _____, an _____ corporation,
[Insert Name of Second Company] ***[Insert State of Incorporation]***
as _____ *for* _____
[i.e. member, manager, etc.] ***[Owner's Name]***
who being authorized to do so, executed the foregoing instrument on behalf of said entities for the purposes stated therein.

_____
Notary Public

My commission expires: _____

CASA GRANDE VALLEY NEWSPAPERS INC
200 W. 2ND ST.
CASA GRANDE AZ 85122

(520) 836-7461
Fax (520) 836-2944

Advertising Memo Bill

1| Memo Bill Period	2| Advertiser/Client Name
09/2022	COE & VAN LOO CONSULTANTS, INC

23| Total Amount Due	*Unapplied Amount	3| Terms of Payment
82.09		

21| Current Net Amount Due	22| 30 Days	60 Days	Over 90 Days
.00	.00	.00	.00

4| Page Number	5| Memo Bill Date	6| Billed Account Number	7| Advertiser/Client Number
1	09/22/22	9892 CHRIS.	**9892**

8\| Billed Account Name and Address

COE & VAN LOO CONSULTANTS, INC.
ATTN: JULIE VERMILLION
4550 N. 12TH STREET
PHOENIX AZ 85014

Amount Paid: _____

Comments:

Ad #: 151526

Please Return Upper Portion With Payment

10| Date	11| Newspaper Reference	12|13|14| Description-Other Comments/Charges	15| SAU Size 16| Billed Units	17| Times Run 18| Rate	19| Gross Amount	20| Net Amount
09/29/22	151526	PZ-042-21	1.0X13.87	1		
	PWEEK	NOTICE OF PUBLIC HEARI	14.00	80.64	80.64	82.09
		09/29				
		CGIT CGPC				
	AZTPT	AZ TPT TAX		1.45		

PAID
9-22-22

Statement of Account - Aging of Past Due Amounts

21| Current Net Amount Due	22| 30 Days	60 Days	Over 90 Days	*Unapplied Amount	23| Total Amount Due
0.00	0.00	0.00	0.00		**82.09**

CASA GRANDE VALLEY NEWSPAPERS INC.
(520) 836-7461

* UNAPPLIED AMOUNTS ARE INCLUDED IN TOTAL AMOUNT DUE

24| Invoice	25| Advertiser Information			
	1| Billing Period	6| Billed Account Number	7| Advertiser/Client Number	2| Advertiser/Client Name
151526	09/2022	9892	9892	COE & VAN LOO CONSULTAN

STATE OF ARIZONA

COUNTY OF PINAL } ss.

NOTICE OF PUBLIC HEARING MEETING BY THE PINAL COUNTY BOARD OF SUPERVISORS AT 9:00 A.M. ON THE 26th DAY OF OCTOBER 2022, AT THE PINAL COUNTY ADMINISTRATIVE COMPLEX, IN THE BOARD OF SUPERVISORS HEARING ROOM, 135 N. PINAL STREET, FLORENCE, ARIZONA, TO CONSIDER THE APPLICATION FOR A REZONING & A PLANNED AREA DEVELOPMENT (PAD) OVERLAY DISTRICT AMENDMENT IN THE UNINCORPORATED AREA OF PINAL COUNTY, ARIZONA.

PZ-042-21 – PUBLIC HEARING/ACTION: HAM PAPAGO LLC/Harry Zeitlin, landowner and CVL Consultants/Julie Vermillion, applicant/agent, requesting approval of a rezoning from CB-1 (Local Business Zone) and CR-3 (Single Residence Zone) (cases #PZ-023-06/PZ-PD-023-06), to R-7 (Single Residence Zoning District) to allow a 544-lot single-family residential development on 158.25± acres of land, as part of the Venida Subdivision Development; situated in that part of the Northwest Quarter of Section 21, Township 5 South, Range 3 East of G&SRB&M, Pinal County, AZ; tax parcels 510520030 and 510520020 (legal on file); located at the southeast corner of Papago and North Green Roads, about 8 miles from the westernmost boundary of Pinal County and two miles west and one mile south of the Ak Chin Indian Community of the Maricopa Indian Reservation, in Pinal County.

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ALL PERSONS INTERESTED IN THIS MATTER MAY APPEAR AND SPEAK AT THE PUBLIC HEARING AT THE DATE, TIME AND PLACE DESIGNATED ABOVE.

DOCUMENTS PERTAINING TO THIS CASE CAN BE FOUND ONLINE ON THE NOTICE OF HEARING PAGE AT:
http://pinalcountyaz.gov/CommunityDevelopment/Planning/Pages/NoticeofHearing.aspx#

DATED THIS 19th DAY OF SEPTEMBER 2022, by Pinal County Community Development Dept.

By: /s/Brent Billingsley

Brent Billingsley, Community Development Director

TO QUALIFY FOR FURTHER NOTIFICATION IN THIS LAND USE MATTER YOU MUST FILE WITH THE PLANNING DEPARTMENT A WRITTEN STATEMENT OF SUPPORT OR OPPOSITION TO THE SUBJECT APPLICATION. YOUR STATEMENT MUST CONTAIN THE FOLLOWING INFORMATION:

1) Planning Case Number (see above)
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WRITTEN STATEMENTS MUST BE FILED WITH:
PINAL COUNTY COMMUNITY DEVELOPMENT DEPARTMENT
PO BOX 2973 (85 N FLORENCE ST)
FLORENCE, AZ 85132
NO LATER THAN 5:00 PM ON OCTOBER 17th, 2022.

Contact for this matter: Evan Evangelopoulos, e-mail address: evan.evangelopoulos@pinal.gov
Phone #: (520) 866-6642, Fax: (520) 866-6435
No. of publications: 1; date of publication: Sep. 29, 2022.

Affidavit of Publication

Kara K. Cooper, first being duly sworn deposes and says: That he/she is a native born citizen of the United States of America, over 21 years of age, that I am an agent and/or publisher of the Pinal Central Dispatch, a newspaper section published at Casa Grande, Pinal County, Arizona, Thursday of each week; that a notice, a full, true and complete printed copy of which is hereunto attached, was printed in the regular edition of said newspaper, and not in a supplement thereto, for ONE issue. The publications thereof having been on the following date:

09/29/2022

PINAL CENTRAL DISPATCH

By _____
agent and/or publisher of the Pinal Central Dispatch

Sworn to before me this 3rd

day of October A.D., 2022

_____
Notary Public in and for the County
Of Pinal, State of Arizona

Jennifer Pelaez
Notary Public
Pinal County, Arizona
My Comm. Expires 05-10-26
Commission No. 627960

CASA GRANDE VALLEY NEWSPAPERS INC
200 W. 2ND ST.
CASA GRANDE AZ 85122

(520) 836-7461
Fax (520) 836-2944

Advertising Memo Bill

1| Memo Bill Period	2| Advertiser/Client Name
09/2022	COE & VAN LOO CONSULTANTS, INC

23| Total Amount Due	*Unapplied Amount	3| Terms of Payment
119.72		

21| Current Net Amount Due	22| 30 Days	60 Days	Over 90 Days
.00	.00	.00	.00

4| Page Number	5| Memo Bill Date	6| Billed Account Number	7| Advertiser/Client Number
1	09/22/22	9892 CHRIS.	**9892**

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ATTN: JULIE VERMILLION
4550 N. 12TH STREET
PHOENIX AZ 85014

Amount Paid: _____

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09/27/22	151525	PZ-042-21	1.0X13.87	1		
	PCG	NOTICE OF PUBLIC HEARI	14.00	117.60	117.60	119.72
		09/27				
		CGCG CGIT				
	AZTPT	AZ TPT TAX		2.12		

PAID
9-22-22

Statement of Account - Aging of Past Due Amounts

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0.00	0.00	0.00	0.00		**119.72**

CASA GRANDE VALLEY NEWSPAPERS INC.
(520) 836-7461

* UNAPPLIED AMOUNTS ARE INCLUDED IN TOTAL AMOUNT DUE

24| Invoice	25| Advertiser Information			
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151525	09/2022	9892	9892	COE & VAN LOO CONSULTAN

STATE OF ARIZONA

COUNTY OF PINAL } ss.

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09/27/2022

CASA GRANDE DISPATCH

By _____
agent and/or publisher of the Casa Grande Dispatch

Sworn to before me this 2nd day of October A.D., 2022

_____
Notary Public in and for the County
Of Pinal, State of Arizona

Jennifer Pelaez
Notary Public
Pinal County, Arizona
My Comm. Expires 05-10-26
Commission No. 627960

NOTICE OF PUBLIC HEARING MEETING BY THE PINAL COUNTY BOARD OF SUPERVISORS AT 9:00 A.M. ON THE 26th DAY OF OCTOBER 2022, AT THE PINAL COUNTY ADMINISTRATIVE COMPLEX, IN THE BOARD OF SUPERVISORS HEARING ROOM, 135 N. PINAL STREET, FLORENCE, ARIZONA, TO CONSIDER THE APPLICATION FOR A REZONING & A PLANNED AREA DEVELOPMENT (PAD) OVERLAY DISTRICT AMENDMENT IN THE UNINCORPORATED AREA OF PINAL COUNTY, ARIZONA.

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http://pinalcountyaz.gov/CommunityDevelopment/Planning/Pages/NoticeofHearing.aspx#

DATED THIS 19th DAY OF SEPTEMBER 2022, by Pinal County Community Development Dept.

By: /s/Brent Billingsley

Brent Billingsley, Community Development Director

TO QUALIFY FOR FURTHER NOTIFICATION IN THIS LAND USE MATTER YOU MUST FILE WITH THE PLANNING DEPARTMENT A WRITTEN STATEMENT OF SUPPORT OR OPPOSITION TO THE SUBJECT APPLICATION. YOUR STATEMENT MUST CONTAIN THE FOLLOWING INFORMATION:

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PINAL COUNTY COMMUNITY DEVELOPMENT DEPARTMENT
PO BOX 2973 (85 N FLORENCE ST)
FLORENCE, AZ 85132
NO LATER THAN 5:00 PM ON OCTOBER 17th, 2022.

Contact for this matter: Evan Evangelopoulos, e-mail address: evan.evangelopoulos@pinal.gov
Phone #: (520) 866-6642, Fax: (520) 866-6435

No. of publications: 1; date of publication: Sep. 27, 2022.

NOTICE OF PUBLIC HEARING MEETING BY THE PINAL COUNTY BOARD OF SUPERVISORS AT 9:30 A.M. ON THE **26th** DAY OF **OCTOBER 2022**, AT THE PINAL COUNTY ADMINISTRATIVE COMPLEX, IN THE BOARD OF SUPERVISORS HEARING ROOM, 135 N. PINAL STREET, FLORENCE, ARIZONA, TO CONSIDER THE APPLICATION FOR A **REZONING** & A **PLANNED AREA DEVELOPMENT (PAD) OVERLAY DISTRICT AMENDMENT** IN THE UNINCORPORATED AREA OF PINAL COUNTY, ARIZONA.

PZ-042-21 - PUBLIC HEARING/ACTION: HAM PAPAGO LLC/Harry Zeitlin, landowner and CVL Consultants/Julie Vermillion, applicant/agent, requesting approval of a rezoning from **CB-1 (Local Business Zone) and CR-3 (Single Residence Zone)** (cases #PZ-023-06/PZ-PD-023-06), to **R-7 (Single Residence Zoning District)** to allow a 544-lot single-family residential development on 158.25± acres of land, as part of the Venida Subdivision Development; situated in that part of the Northwest Quarter of Section 21, Township 5 South, Range 3 East of G&SRB&M, Pinal County, AZ; tax parcels 510520030 and 510520020 (legal on file); located at the southeast corner of Papago and North Green Roads, about 8 miles from the westernmost boundary of Pinal County and two miles west and one mile south of the Ak Chin Indian Community of the Maricopa Indian Reservation, in Pinal County.

PZ-PD-042-21 – PUBLIC HEARING/ACTION: HAM PAPAGO LLC/Harry Zeitlin, landowner and CVL Consultants/Julie Vermillion, applicant/agent, requesting approval of an amendment to the **Venida Planned Area Development (PAD)** (cases #PZ-023-06/PZ-PD-023-06), to allow a 544-lot single-family residential development on 158.25± acres of land, as part of the Venida Subdivision Development; situated in that part of the Northwest Quarter of Section 21, Township 5 South, Range 3 East, of G&SRB&M, Pinal County, AZ; tax parcels 510520030 and 510520020 (legal on file); located at the southeast corner of Papago and North Green Roads, about 8 miles from the westernmost boundary of Pinal County and two miles west and one mile south of the Ak Chin Indian Community of the Maricopa Indian Reservation, in Pinal County.

ALL PERSONS INTERESTED IN THIS MATTER MAY APPEAR AND SPEAK AT THE PUBLIC HEARING AT THE DATE, TIME AND PLACE DESIGNATED ABOVE.
DOCUMENTS PERTAINING TO THIS CASE CAN BE FOUND ONLINE ON THE NOTICE OF HEARING PAGE AT:
http://pinalcountyaz.gov/CommunityDevelopment/Planning/Pages/NoticeofHearing.aspx#

DATED THIS **19h** DAY OF **SEPTEMBER 2022**, by Pinal County Community Development Dept.

By:_____
Brent Billingsley, Community Development Director

TO QUALIFY FOR FURTHER NOTIFICATION IN THIS LAND USE MATTER YOU MUST FILE WITH THE PLANNING DEPARTMENT A WRITTEN STATEMENT OF SUPPORT OR OPPOSITION TO THE SUBJECT APPLICATION. YOUR STATEMENT **MUST** CONTAIN THE FOLLOWING INFORMATION:

1) Planning Case Number (see above)
2) Your name, address, telephone number and property tax parcel number **(Print or type)**
3) A brief statement of reasons for supporting or opposing the request
4) Whether or not you wish to appear and be heard at the hearing

WRITTEN STATEMENTS MUST BE FILED WITH:
PINAL COUNTY COMMUNITY DEVELOPMENT DEPARTMENT
PO BOX 2973 (85 N FLORENCE ST)
FLORENCE, AZ 85132
NO LATER THAN 5:00 PM ON OCTOBER 17th, 2022.

Contact for this matter: Evan Evangelopoulos, e-mail address: evan.evangelopoulos@pinal.gov
Phone #: (520) 866-6642, Fax: (520) 866-6435

[*Anything below this line is not for publication*.]
PUBLISHED ONCE:
Pinal Central Dispatch
Casa Grande Dispatch

CERTIFICATION OF POSTING

I hereby certify that the notice(s) shown below was/were posted on the property described in the notice on 10/3/2022.

COMMUNITY DEVELOPMENT DEPARTMENT

BY: _____ Evan Evangelopoulos, Planner DATED: 10/3/2022
[Signature] *[Print name and title]*

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