CivTech

July 11, 2019

Mr. Tom Lewis
Managing Director, Southwest
Alliance Residential
2525 East Camelback Road, Suite 500
Phoenix, Arizona 85016

RE: PARKING ANALYSIS FOR BROADSTONE DOBSON RANCH - 1666 SOUTH DOBSON ROAD, MESA

Dear Mr. Lewis:

CivTech is pleased to present you with this parking analysis for the proposed "Broadstone Dobson Ranch" residential development located at 1666 South Dobson Road in the Mesa, Arizona. CivTech was engaged to determine if a reduction in the amount of the City of Mesa's (the "City") code-required parking for the Broadstone Dobson Ranch development could be supported. CivTech's analysis below does support such a reduction.

This parking analysis represents a 2nd Submittal of a version dated June 26, 2019. It has been revised to address several City comments reported to the development via a memorandum dated July 8, 2019.

The site is proposed to have 288 dwelling units consisting of 398 total bedrooms. Per the proposed site plan (dated April 20, 2019), 464 parking spaces will be provided, yielding a parking ratio of approximately 1.61 parking spaces per unit. The unit mix per the site plan (see **Attachment A**) is summarized in **Table 1**.

TABLE 1 – PROPOSED RESIDENTIAL UNITS

UNIT TYPE	NUMBER OF UNITS	NUMBER OF BEDROOMS
Studio	49	49
One-Bedroom	129	129
Two-Bedroom	110	220
TOTAL	**288**	**398**

PARKING REQUIREMENTS BY CODE

Parking requirements established by the City's Zoning Ordinance (the "Code") were used to calculate the required number of parking spaces. The Code states that "apartments, multiple residence condominiums, mixed-use residential, townhomes, patio homes, and similar multiple residence buildings: development site not located within ¼-mile radius (1,320- feet) of bus rapid transit or light rail station, regardless of bedroom count" are required to provide approximately 2.1 spaces per unit. **Table 2** summarizes the Code's parking requirements.

TABLE 2: SPACES REQUIRED BY CODE

UNIT TYPE	NUMBER OF UNITS	SPACES PER UNIT	PARKING SPACES
Studio	49	2.1	102.9
One-Bedroom	129	2.1	270.9
Two-Bedroom	110	2.1	231.0
Total Required	**288**	**2.1**	**605**
	Spaces Provided	**1.61**	**464**
		Number Below ZDC Requirement	**141**

The City's Code requires 141 more parking spaces than are being provided at Broadstone Dobson Ranch.

SITE'S PROXIMITY TO ALTERNATE MODES OF TRANSPORTATION

The City is actively engaged with transit and has both Light Rail Transit, Bus Rapid Transit, High Capacity Transit and several local transit routes available through both Valley Metro and City provided circulators such as the Downtown Buzz.

The Mesa Transit Plan 2040 states "The Transit Master Plan is needed to respond to a change in travel patterns in the City, as land use and transit opportunities become more urban in character. This includes an increased emphasis on making connections to major activity centers and regional transportation nodes." It further states that, "The recent demographic changes in Mesa are well documented (see **Attachment B**). Mesa is continuing to transform from a suburban bedroom community that was primarily auto-oriented to a more urbanized city that includes multi-modal transportation connections and defined character areas." Reducing parking, and thus reducing the reliance on owned vehicles, enhances the future transit system thoughtfully planned for the City.

The site is uniquely located within close proximity to the City of Tempe which places a heavy emphasis on transit to provide mobility to their residents. The site is close enough to be benefited by transit services provided by and within the City of Tempe as well as the City.

BUS/PREMIUM BUS/LIGHT RAIL TRANSIT/RAIL

Existing

Valley Metro route 96 operates on Dobson Road adjacent to the site. Route 77 operates on Baseline Road located approximately ¼ mile south of the site. Both routes are considered local providing bus operation between 8:00 am and 12:00 pm at 30-minute headways. Route 61 along Southern Avenue operates between 8:00 am and 12:00 pm at 15-minute headways and is located just over ½-mile north the site. Express route 541, which runs in the mornings and afternoons only, links the site directly to employment centers in downtown Phoenix and the State Capitol area; it can be boarded at the intersection of Alma School and Baseline Roads, less than 1½ miles from the site. Premium Metro LINK bus service ran in the Main Street and Country Club Drive corridors. However, the City's reviewer pointed out to CivTech that both of these LINK routes are no longer active; therefore, they are no longer to be considered as being supportive of a reduction in parking.

The Valley Metro Light Rail runs east-west along Main Street, just over two miles north of the project site. A resident can take local bus route 96 north to Main Street and transfer to the Light Rail there. Currently there is no other commuter rail closer to the project. Nor is there any Bus Rapid Transit (BRT) in the area.

Other systems in close proximity include the City of Tempe's neighborhood circulators providing free transit to many destinations within the City of Tempe. The Orbit Mars is located approximately 1½ miles from the site at Southern Avenue and Evergreen Road. Tempe's Orbit Saturn can be boarded at Baseline Road and Kenwood Lane, approximate 1¾ miles from the site.

Finally, there are Union Pacific Railroad (UPRR) heavy rail tracks approximately two-and-a-half miles to the east. This is the main link between Phoenix and UPRR cross-country mainline tracks in Tucson. A spur line that serves Chandler and the Gila River Indian Community diverges from this main line at Baseline Road. Currently there is no passenger rail on these UPRR tracks.

Proposed

Mesa's 2040 transit plan shows that no additional local or express bus routes are expected in the area. Improvements to these fixed routes will include more frequent service. The Metro LINK bus service could transition to an undetermined type of high capacity transit in the mid-term (i.e., by 2030) with passenger rail envisioned in the long term (by 2030) between Rural Road in Tempe and Gateway Airport either along US 60 or along the existing UPRR tracks. No BRT routes are expected.)

PEDESTRIAN/BICYCLE

Mesa has a long-standing commitment to encourage bicycling since the preparation of the first Mesa Bicycle Study in the late 1970s. This commitment was renewed in the City's 2012 Bicycle Master Plan and reinforced in the City's 2040 General Plan, adopted in 2014. The site could have a high volume of pedestrian and bicycle activity due to its proximity to transit service and other amenities (shopping, restaurants, etc.). The sidewalks along Dobson Road are part of an existing pedestrian network and are pedestrian friendly. Adjacent Juanita Avenue is a bicycle route that connects to Longmore Road, which has bicycle lanes and provides access to the heart of the Fiesta District without the need to travel along an arterial street or to cross over US 60 at a freeway interchange. The development is being designed with pedestrians and bicyclists in mind and will provide sidewalks that will preserve existing connectivity.

PROPOSED PARKING REDUCTION

Parking Trends – Short Term and Mid Term

The ownership of vehicles with the adoption of ride hail and ride share in Arizona has steadily decreased. A report prepared by the American Apartment Association called the *Transformation of Parking* (https://www.naahq.org/news-publications/transformation-parking) details this trend between the years 2006 and 2016. The report suggests that the trend of lower parking rates for mid-rise and garden apartments is expected to continue. The report states that the average parking ratios for apartment properties with 50 or more units peaked at 1.62 in the 2000s before declining to 1.46 in the current decade, its lowest rate since the 1960s. Decreases in parking rates are being

aggressively pursued by the American Planning Association in the People over Cars campaign. The City appears to be actively engaged in providing alternate forms of transportation and supporting the use of bus, high-capacity transit, rail, as well as other options to reduce the use of vehicles based on the future services shown in the Transit Plan 2040.

ITE Parking Generation

Parking Generation, now in its 5th edition, published earlier in 2019, is a document prepared and published by the Institute of Transportation Engineers (ITE) that summarizes a collection of parking demand data observations made all over the world by land use type. *Parking Generation* provides statistics on the average peak parking demand. For urban low- and mid-rise multifamily developments, the average peak parking demand is 1.31 vehicles per dwelling unit (DU) for mid-rise multifamily residences in an urban/suburban setting more than ½-mile from rail transit. This site, with 288 DUs, would generate an average peak parking demand of 377 spaces, well below the 464 spaces being proposed. Peak parking demand is overnight, when most residents are home sleeping. *Parking Generation* also indicates that the 85th percentile of all peak parking rates observed at low/mid-rise multifamily developments is 1.47 vehicles per dwelling unit. This value serves as a conservative estimate for the parking likely to be experienced at Broadstone Dobson Ranch. Therefore, an overall parking rate, including guests, of at least 1.47 is recommended. The developer is proposing a supply equal to the recommendation resulting in 1.61 spaces per unit, which exceeds the 85th percentile average rate. (Please note that the developer's proposed 1.61 spaces per unit rate is only slightly less than the 2000's peak as reported by the apartment association and that ITE's 85th percentile 1.47 spaces per unit is similar to the currently-reported average reported by the association.) In response to a City review comment, **Attachment C** provides the excerpts from *Parking Generation* from which the above information is taken.

Proposed Parking After Applied Reduction

Four hundred and sixty-four parking spaces will be provided, resulting in a parking ratio of 1.61 parking spaces per unit. The proposed parking rate for Broadstone Dobson Ranch can be identified in **Table 3**.

TABLE 3: PROPOSED PARKING

UNIT TYPE	NUMBER OF UNITS	SPACES PER UNIT	PARKING SPACES
Studio	49	1.61	78.9
One-Bedroom	129	1.61	207.7
Two-Bedroom	110	1.61	177.1
Total Proposed	**288**	**1.61**	**464**

An in-depth comparison of parking ratios for other multifamily developments has been developed. The results of the research are documented in **Table 4** below. Parking ratios between 0.79 and 1.89 spaces per unit for eleven projects in Tempe are documented. A comparison to the parking ratio provided for Broadstone Dobson Ranch and ITE Parking Generation manual are included.

TABLE 4: COMPARISON OF PARKING PROVIDED AT OTHER DEVELOPMENTS

PROJECT	# OF UNITS	PARKING REQUIRED	PARKING PROVIDED	PER UNIT PARKING
University Village 2.0	260	639	470	1.81
922 Place	132	369	249	1.89
Broadstone Lakeside	168	314	269	1.60
Hanover	341	620	271	0.79
Residences @ University Center	296	378	432	1.46
Jefferson Town Lake	244	432	432	1.77
The Motley	399	523	607	1.52
SALT	264	528	459	1.74
Skyview	392	521	462	1.17
Broadstone Dobson Ranch	**288**	**605**	**464**	**1.61**
ITE *Parking Generation* 85th Percentile of all Peaks	70	-	-	1.61

The results between similar researched developments and ITE provided a range of rates that varied around the 1.61 proposed rate. The proposed rate of 1.61 spaces per unit would be applied regardless of the number of bedrooms for this analysis.

CONCLUSIONS

Based on the above, CivTech concludes the following:

- At full build-out, the site will consist of 288 mid-rise multifamily dwelling units (398 bedrooms).
- The proposed site will provide a total of 464 parking spaces. ITE *Parking Generation* predicts an average peak parking demand of 377 spaces, significantly below the 464 being provided, which are provided at a parking ratio of 1.61 parking spaces per unit. (The developer's proposed 1.61 spaces per unit rate is only slightly less than the 2000's peak as reported by the American Apartment Association and ITE's 85th percentile 1.47 spaces per unit is similar to the currently-reported average reported by the same association.)
- The *Parking Generation* 85th-percentile of all peaks resulted in a rate of 1.47 spaces per unit inclusive of guest parking. The parking required when using the 1.61 spaces per unit rate is 464 parking spaces.
- The proximity of the site to transit options will also contribute to a lower parking demand at Broadstone Dobson Ranch. The need for parking to support the residents within the development is expected to be reduced over time.
- The proposed number of vehicle parking spaces are sufficient to meet the needs of the development.

Thank you for allowing CivTech to assist you on this project. Should you wish to discuss this information further, please contact me at (480) 659-4250.

Sincerely,

CivTech

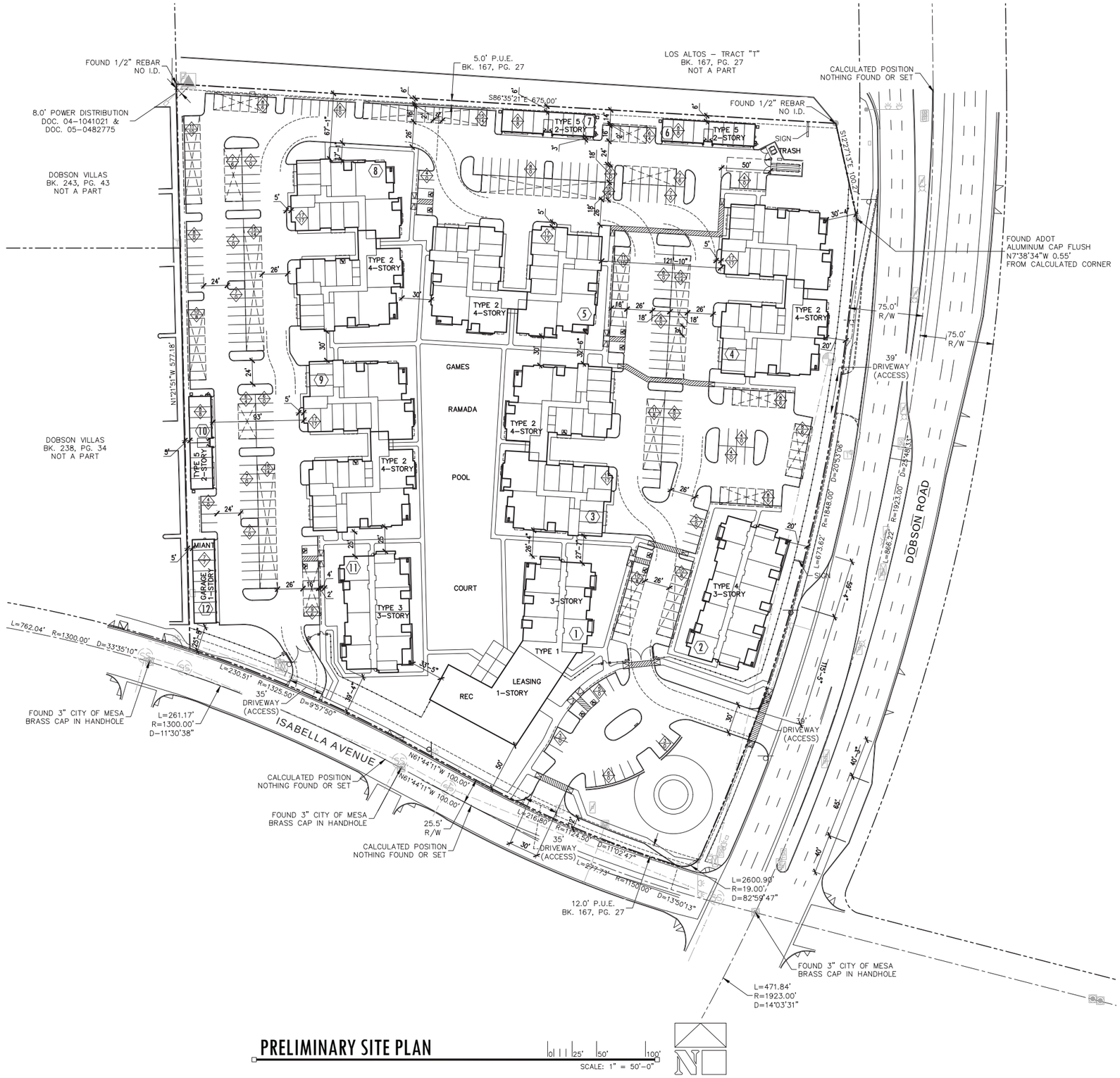
Joseph F. Spadafino, P.E., PTOE, PTP
Project Manager/Senior Traffic Engineer

Attachments (2)

A. Site Plan
B. Mesa Demographic Data
C. Excerpts from *Parking Generation*

ATTACHMENT A

SITE PLAN



PRELIMINARY SITE PLAN

SCALE: 1" = 50'-0"

PROJECT DATA:

ZONING / LAND USE:

EXISTING: LC
PROPOSED: RM-4

SITE AREA:

NET AREA: 10.059 ACRES (438,152 S.F.)

DWELLING UNIT / DENSITY:

DWELLING UNIT QUANTITY:

STUDIO	49
1 BEDROOM	129
2 BEDROOM	110
TOTAL	288

DENSITY (DU/ACRE)
ALLOWED: 43 MAX. (20 MIN.)
PROVIDED: 28.6

BUILDING HEIGHT :

ALLOWED: 50 FT.
PROPOSED: 50 FT. (4 STORY)

BUILDING SETBACKS:

	REQUIRED	PROPOSED
FRONT (EAST)	0	20'
REAR (WEST GARAGE BLDG)	15'	5'
REAR (WEST CARRIAGE BLDG)	25'	5'
SIDE (SOUTH)	0	25'-8"
SIDE (NORTH)	0	6'

PARKING:

RESIDENTIAL PARKING REQUIRED:
(26 OR MORE UNITS LOCATED WITHIN 1/4 MILE RADIUS OF BUS RAPID TRANSIT OR LIGHT RAIL STATION:
1.2 SPACES PER DWELLING UNIT)
288 D.U. X 2.1 = 605 P.S

PARKING PROVIDED:

OPEN PARKING:	176 P.S.
CARPORT PARKING:	172 P.S.
GARAGE PARKING:	116 P.S.
TOTAL PARKING PROVIDED:	464 P.S.

RESIDENTIAL RATIO:
464 P.S. / 288 UNITS = 1.61 SPACES PER UNIT

ACCESSIBILITY (INCLUDED IN COUNT ABOVE):
ACCESSIBLY PARKING REQUIRED (2%):
REQUIRED PARKING = 10 P.S.

ACCESSIBLE PARKING PROVIDED:

OPEN SPACES =	4 P.S.
CARPORT SPACES =	3 P.S.
GARAGE SPACES =	3 P.S.
TOTAL SPACES PROVIDED =	10 P.S.

LOT COVERAGE:

ALLOWED: 65% (284,798.80 S.F.)
PROVIDED: 36% (156,533 S.F.)

OPEN SPACE:

REQUIRED: 120 S.F. PER DU
288x120 = 34,560 S.F.
PROVIDED: 50,000 S.F.

BROADSTONE DOBSON RANCH

1666 SOUTH DOBSON ROAD
MESA, ARIZONA 85202

Office of Rich Barber Architecture, LLC
ORB
WorldHQ@ORBArch.com
REGISTERED ARCHITECT
CERTIFICATE No.
18215
Rich Barber
DATE 3/31/2020

PRELIMINARY
NOT FOR
CONSTRUCTION

ALLIANCE
RESIDENTIAL COMPANY

Attachment A

DATE: APRIL 20, 2019 ORB # 18-223

A1.10

SITE PLAN
PRELIMINARY

ATTACHMENT B

MESA DEMOGRAPHIC DATA

2.0 TRANSIT PROFILE

The transit profile in Mesa has changed dramatically in recent years. The implementation of new transit services (such as METRO light rail), the Great Recession and "new normal" economy, and the continued development and evolution of activity centers and districts (such as Downtown Mesa, Fiesta District, and Gateway) have changed the transit landscape in Mesa. This includes both those who ride transit in Mesa today as well as who are likely to do so in the future.

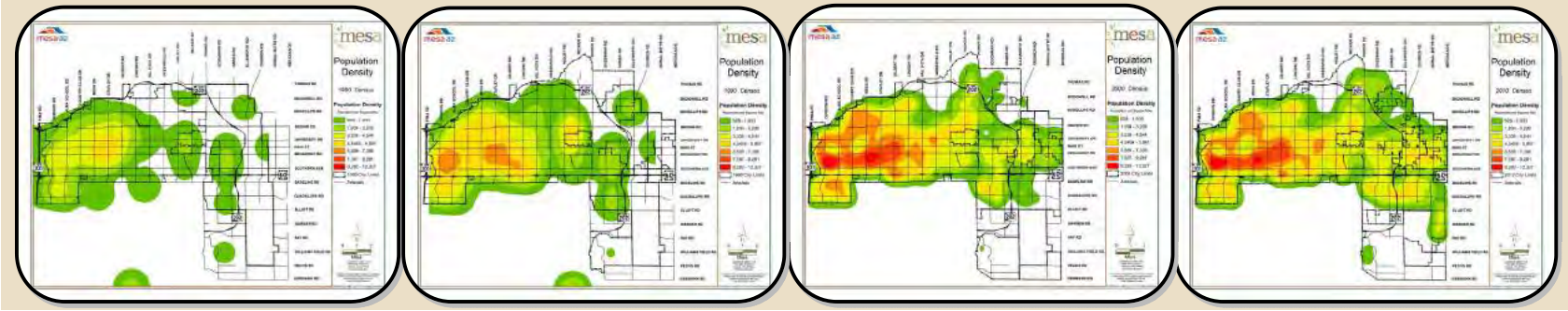
2.1 Demographics

The recent demographic changes in Mesa are well documented (see Figure 2). Mesa is continuing to transform from a suburban bedroom community that was primarily auto-oriented to a more urbanized city that includes multi-modal transportation connections and defined character areas.

Figures 1 through 11 show a sample of current demographic information in Mesa, including:

- Population density
- Employment density
- Minority population density
- Hispanic population density
- Population under 18 density
- Population over 65 density
- Household density
- Housing units density
- Vehicle availability

Figure 2: Population Growth in Mesa



Source: Mesa 2040 General Plan, 2013

Figure 3: Population Density

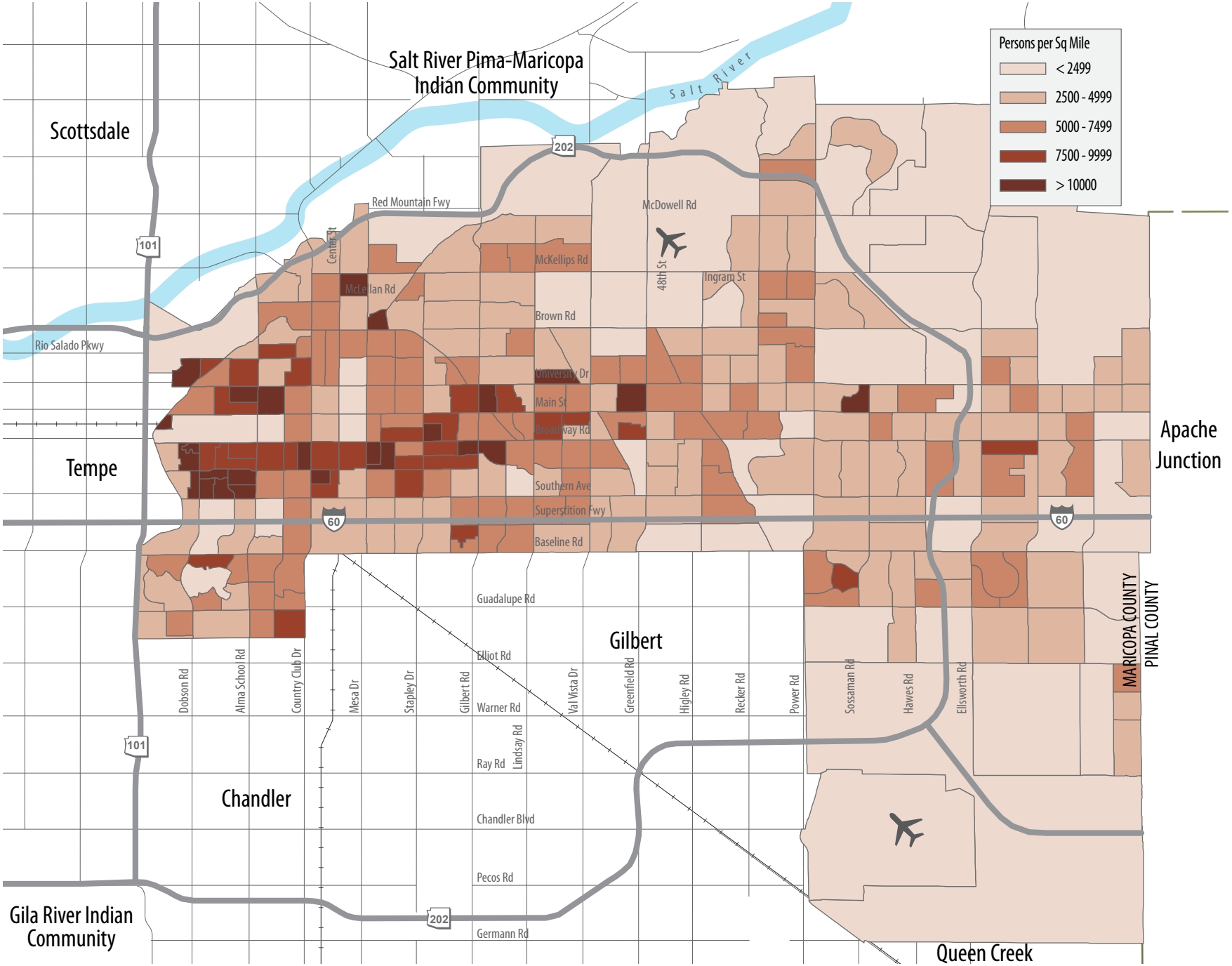


Figure 4: Employment Density

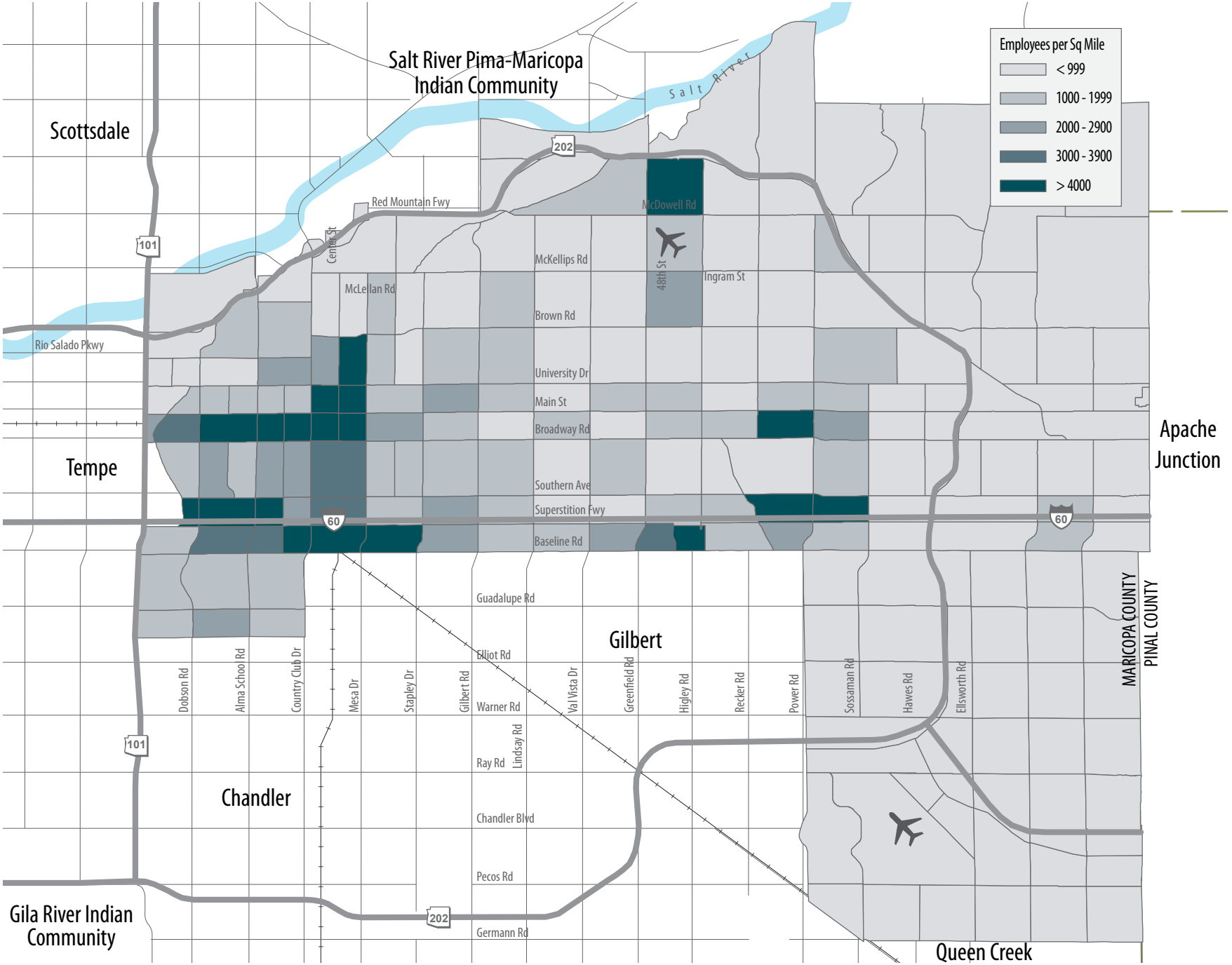


Figure 5: Minority Population Density

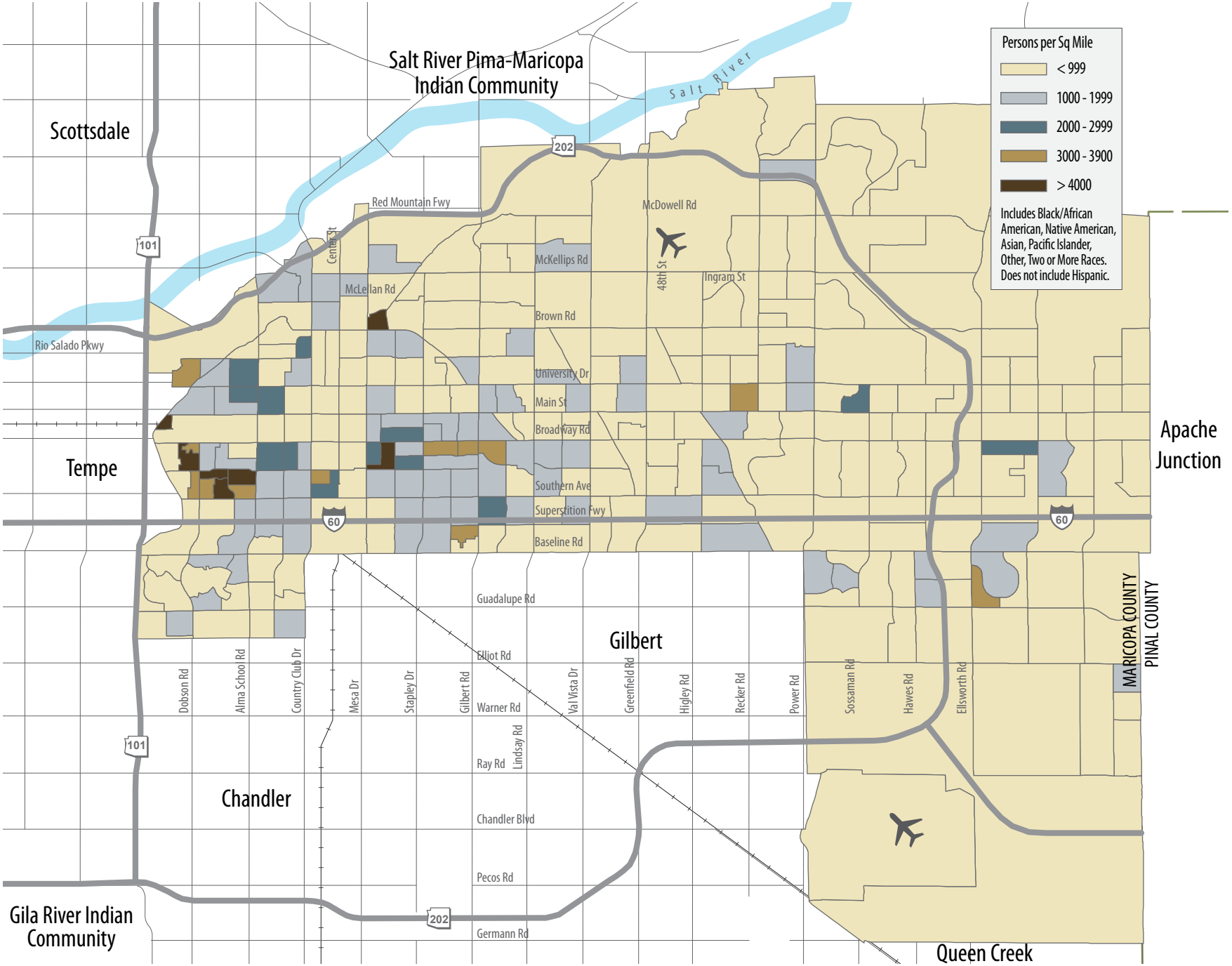


Figure 6: Hispanic Population Density

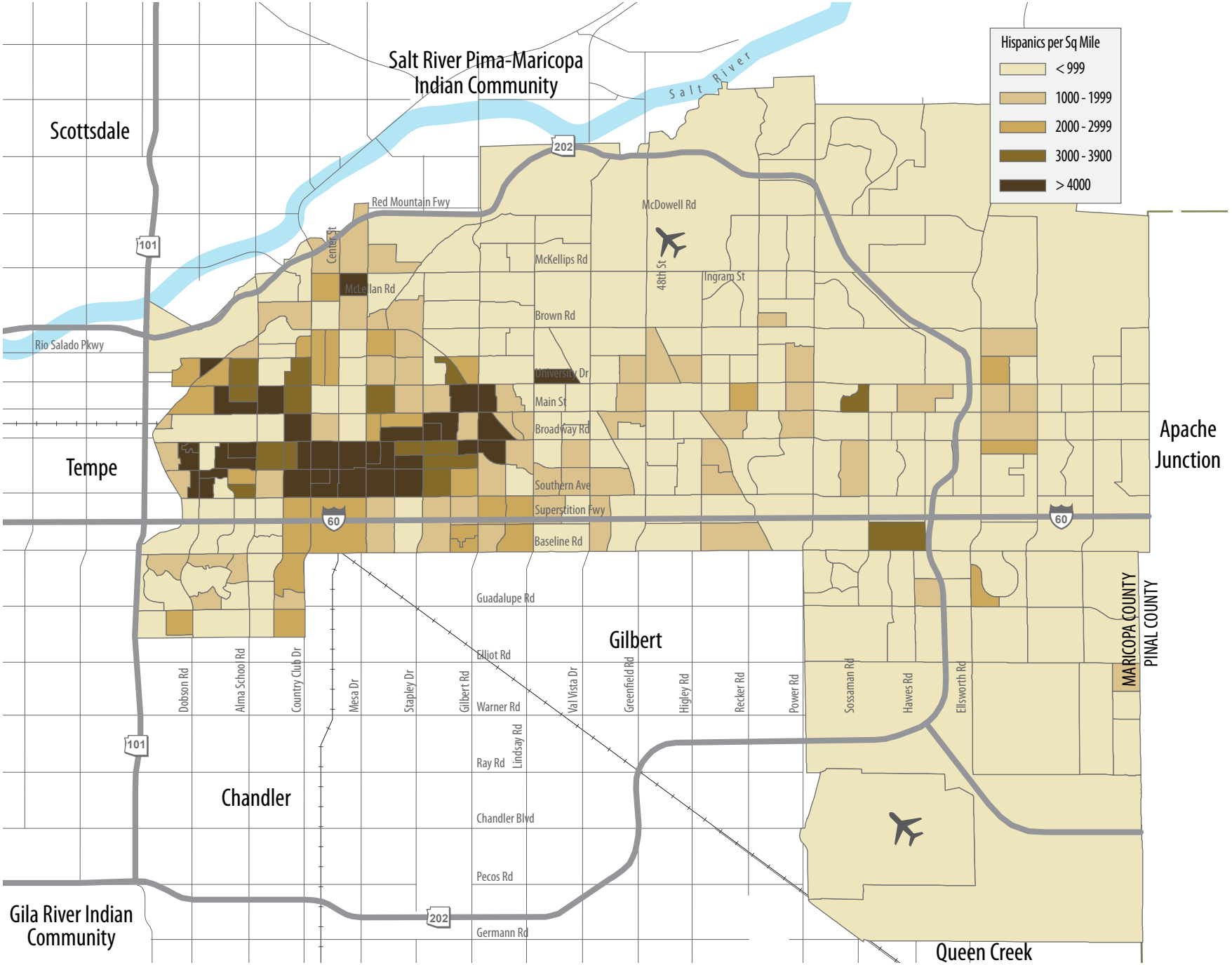


Figure 7: Population Under 18 Density

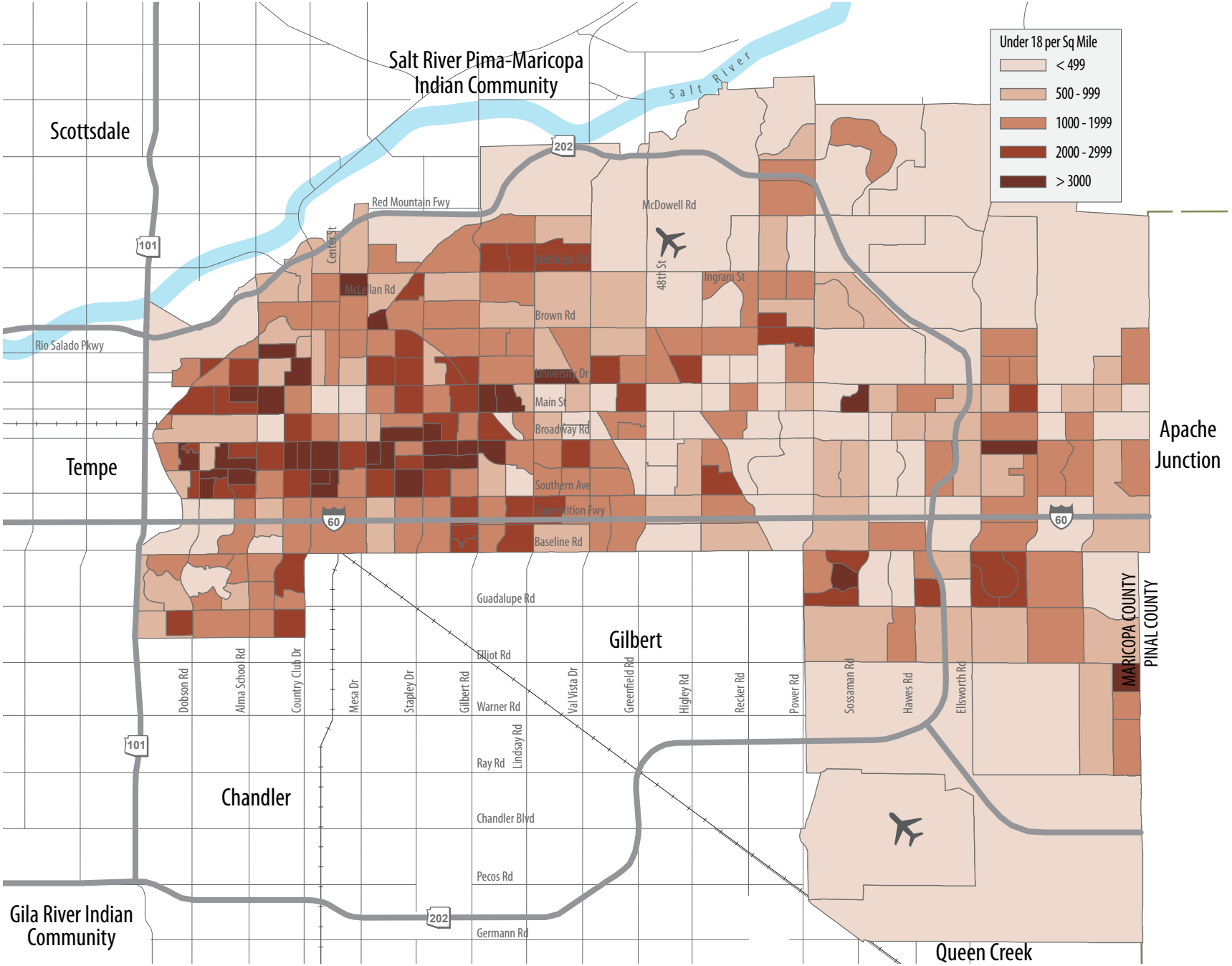


Figure 8: Population Over 65 Density

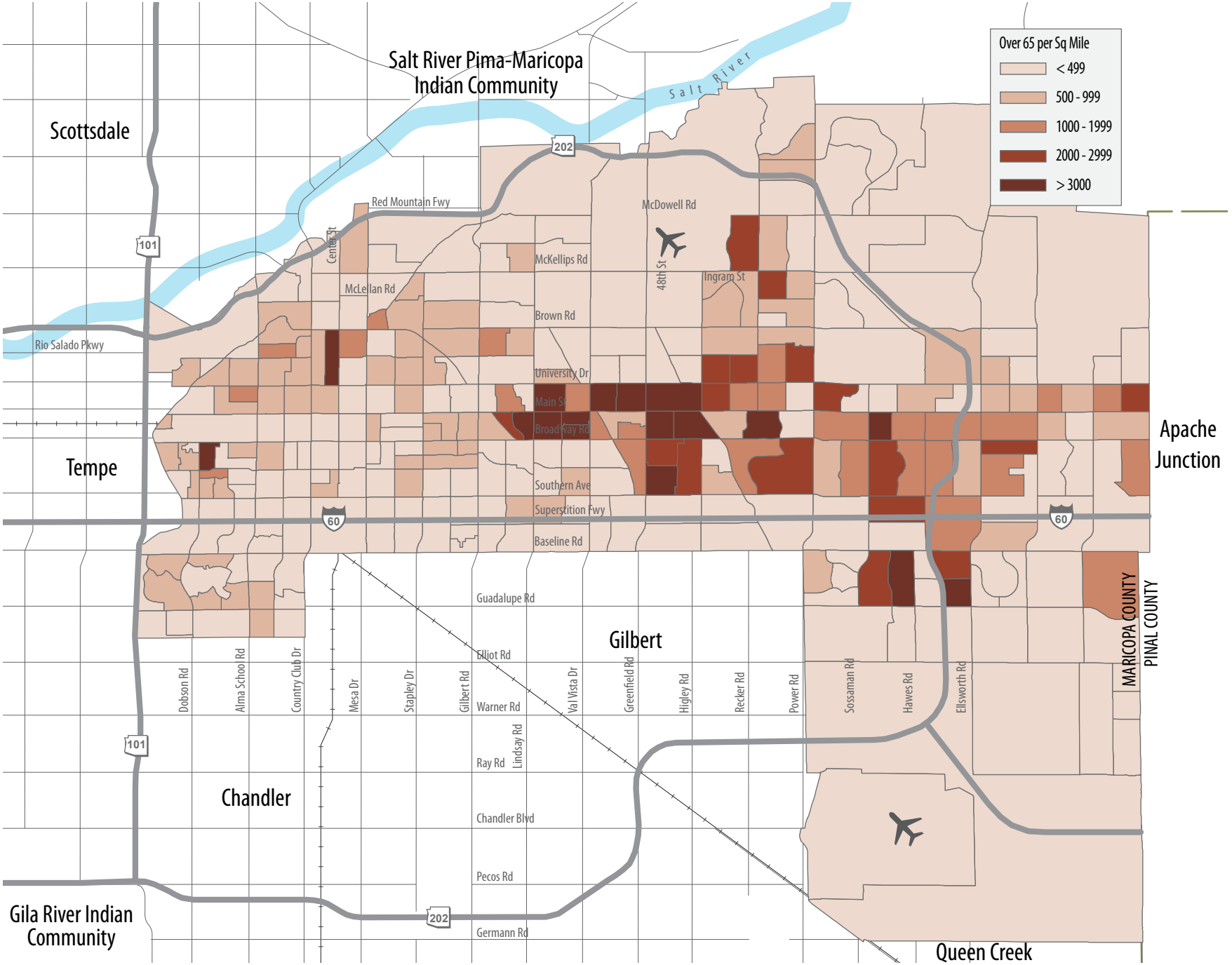


Figure 9: Household Density

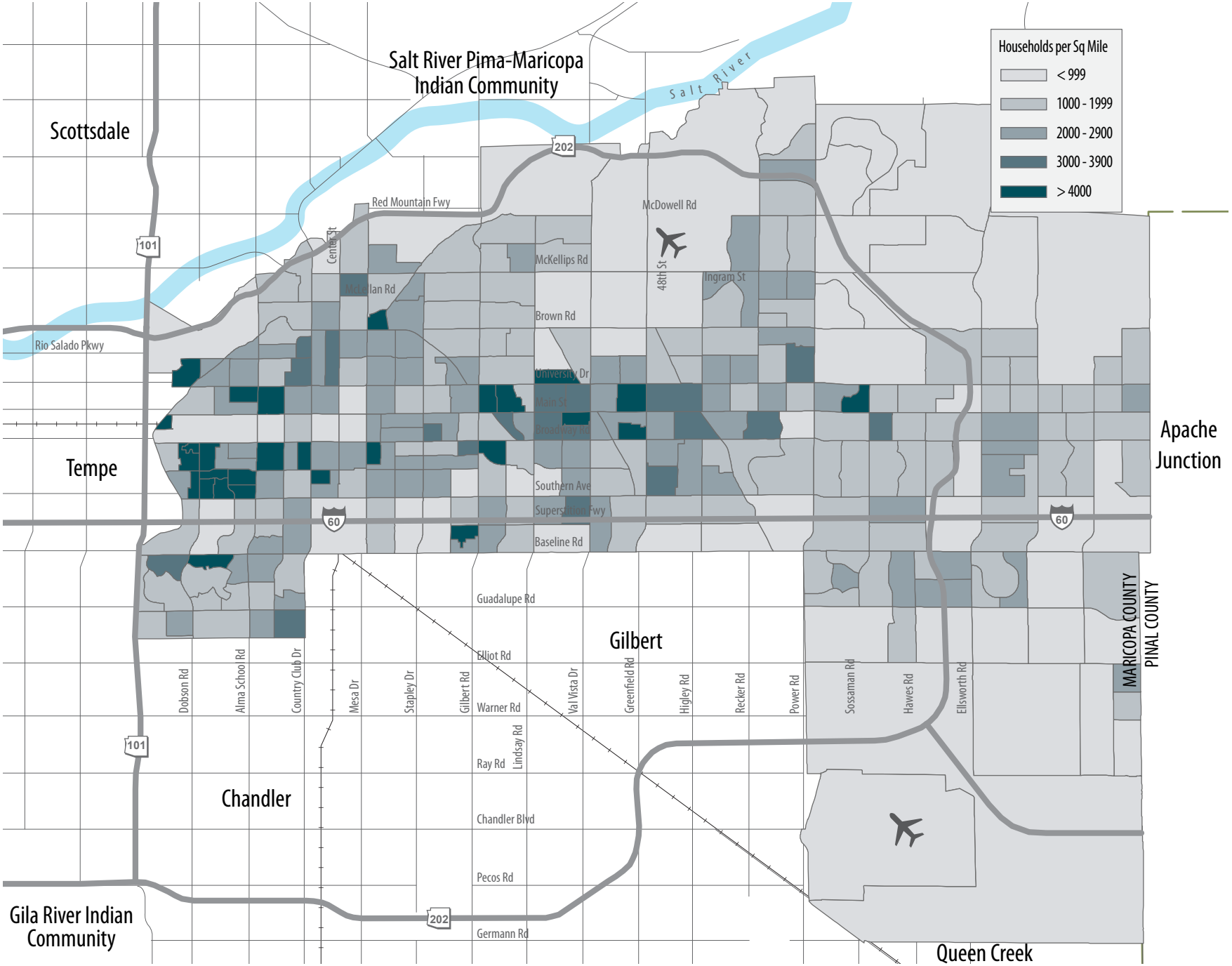


Figure 10: Housing Units Density

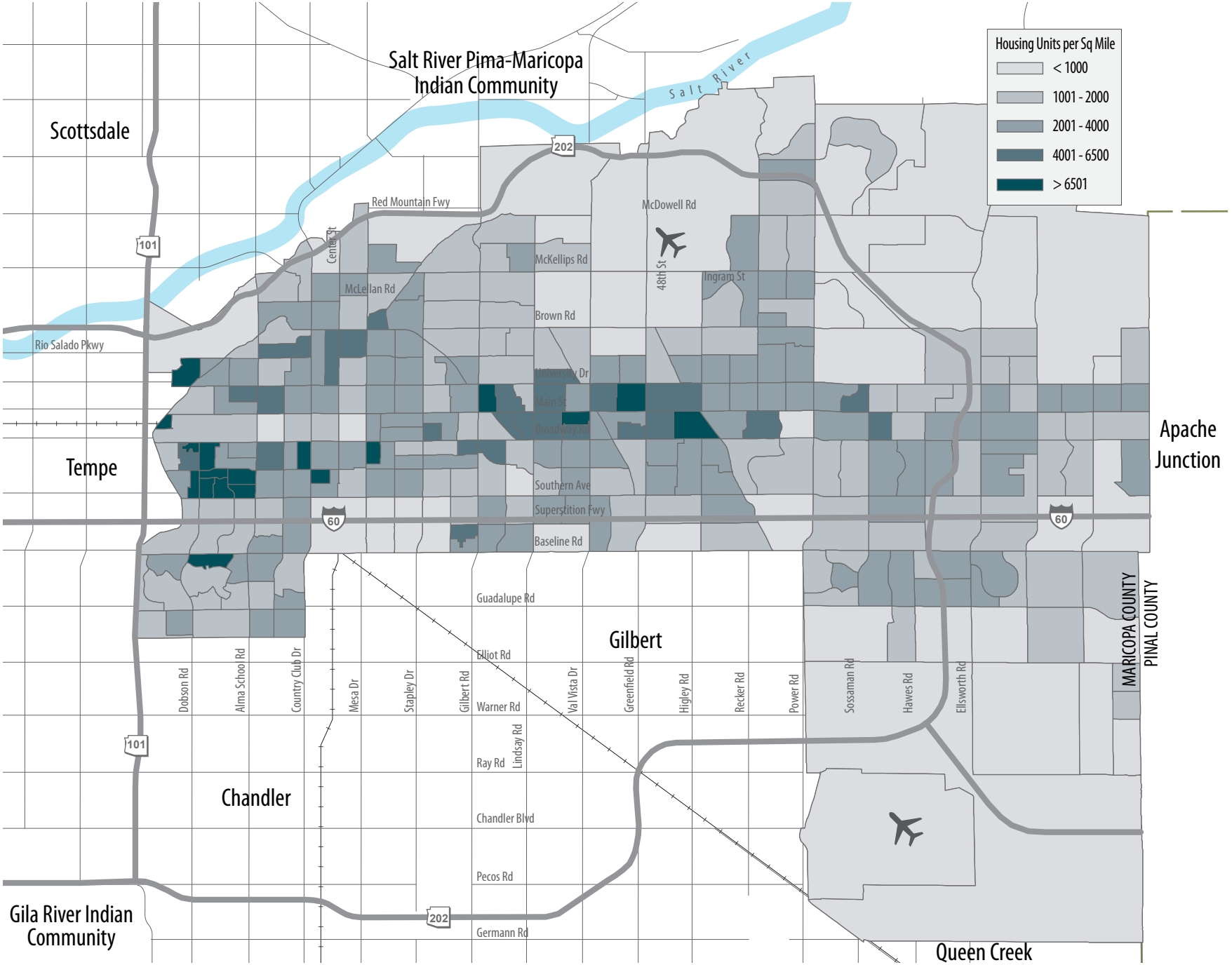
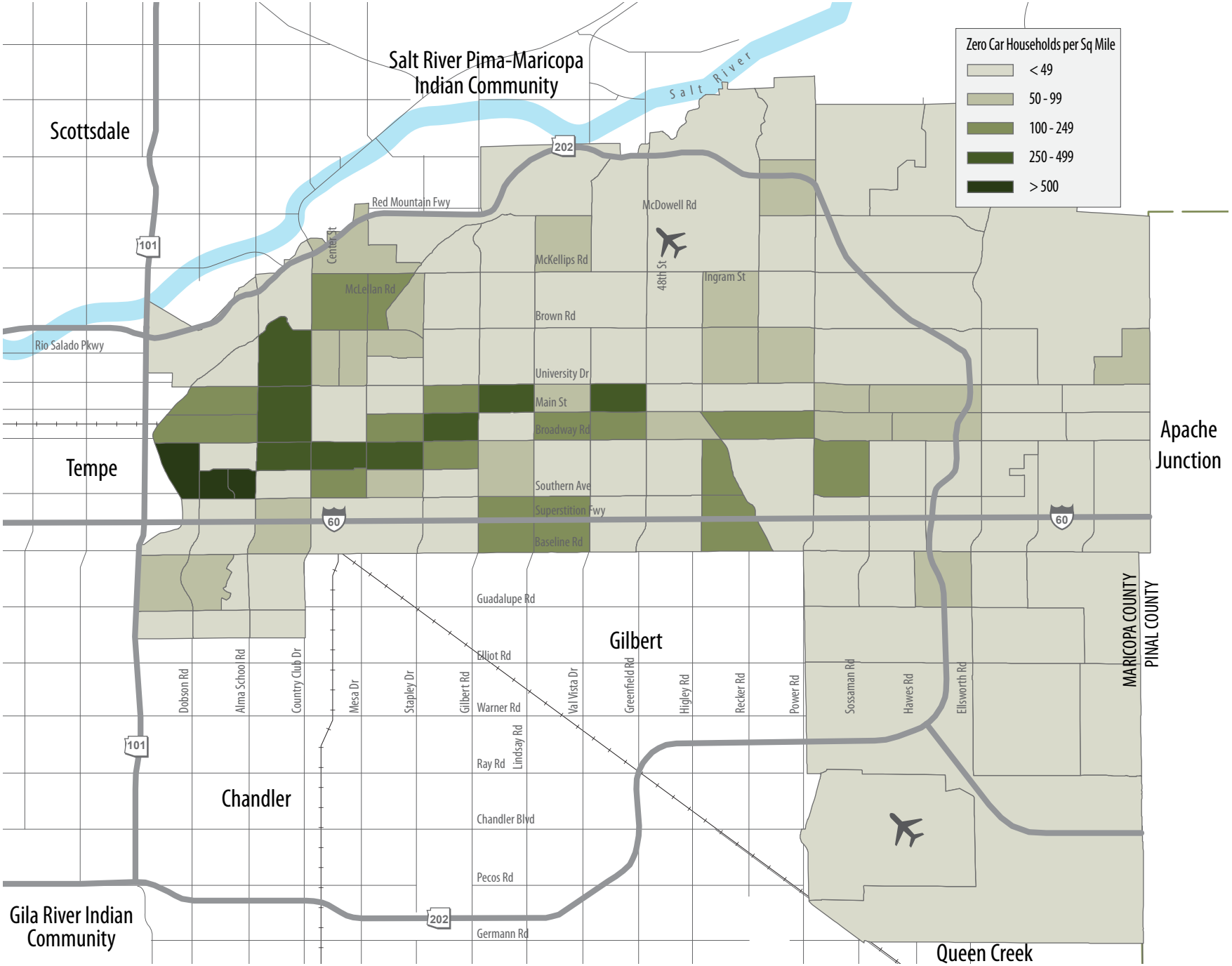


Figure 11: Vehicle Availability



ATTACHMENT C

EXCERPTS FROM ITE *PARKING GNERATION*

Parking Generation Manual

5th Edition

INSTITUTE OF TRANSPORTATION ENGINEERS

Land Use: 221 Multifamily Housing (Mid-Rise)

Description

Mid-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and with between three and 10 levels (floors) of residence. Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), and affordable housing (Land Use 223) are related land uses.

Time of Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand on a weekday (one general urban/suburban study site), a Saturday (two general urban/suburban study sites), and a Sunday (one dense multi-use urban study site).

	Percent of Peak Parking Demand		
Hour Beginning	Weekday	Saturday	Sunday
12:00–4:00 a.m.	100	100	100
5:00 a.m.	94	99	–
6:00 a.m.	83	97	–
7:00 a.m.	71	95	–
8:00 a.m.	61	88	–
9:00 a.m.	55	83	–
10:00 a.m.	54	75	–
11:00 a.m.	53	71	–
12:00 p.m.	50	68	–
1:00 p.m.	49	66	33
2:00 p.m.	49	70	40
3:00 p.m.	50	69	27
4:00 p.m.	58	72	13
5:00 p.m.	64	74	33
6:00 p.m.	67	74	60
7:00 p.m.	70	73	67
8:00 p.m.	76	75	47
9:00 p.m.	83	78	53
10:00 p.m.	90	82	73
11:00 p.m.	93	88	93

Multifamily Housing (Mid-Rise) (221)

Peak Period Parking Demand vs: Dwelling Units
On a: Weekday (Monday - Friday)
Setting/Location: General Urban/Suburban (no nearby rail transit)
Peak Period of Parking Demand: 10:00 p.m. - 5:00 a.m.
Number of Studies: 73
Avg. Num. of Dwelling Units: 261

Peak Period Parking Demand per Dwelling Unit

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.31	0.75 - 2.03	1.13 / 1.47	1.26 - 1.36	0.22 (17%)

Data Plot and Equation