



May 17, 2018

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Expires 12-31-2018

***RE: Parking Demand Study for Proposed Tea House: 90 N. Dobson Road - Mesa, Arizona***

Dear Ms. Liu:

Y2K Engineering has been retained to provide traffic engineering services for a parking demand study for the proposed Bubble Tea House at 90 N. Dobson Road in Mesa, Arizona. Recognizing the existing site constraints, the proposed Bubble Tea House is applying for a Substantial Conformance Improvement Permit (SCIP) through the City of Mesa.

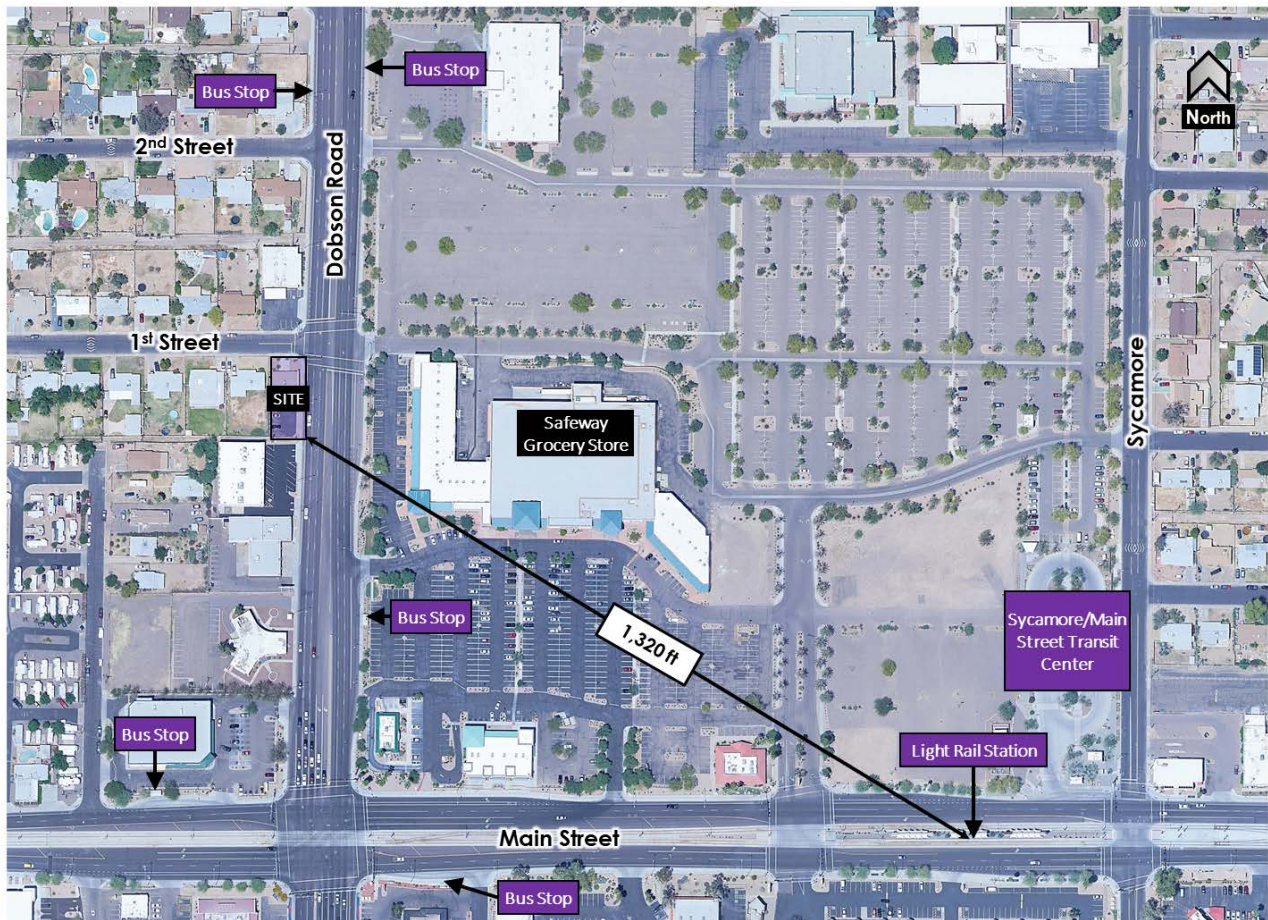
## PROPOSED DEVELOPMENT

The proposed development, Bubble Tea House, will occupy an existing vacant neighborhood commercial building at 90 N. Dobson Road in the southwest corner of Dobson Road and 1<sup>st</sup> Street in Mesa, Arizona. The site is within a ¼ mile from the Sycamore/Main Street Transit Center and the Sycamore/Main Street Metro Light Rail station. The site is located 800 feet from the Main Street & Dobson bus stop, which is serviced by bus route #40 (Apache/Price PNR). The Dobson & 2<sup>nd</sup> Street bus stop is within 500 feet and services the bus routes #30 and #96. There is also a bus stop

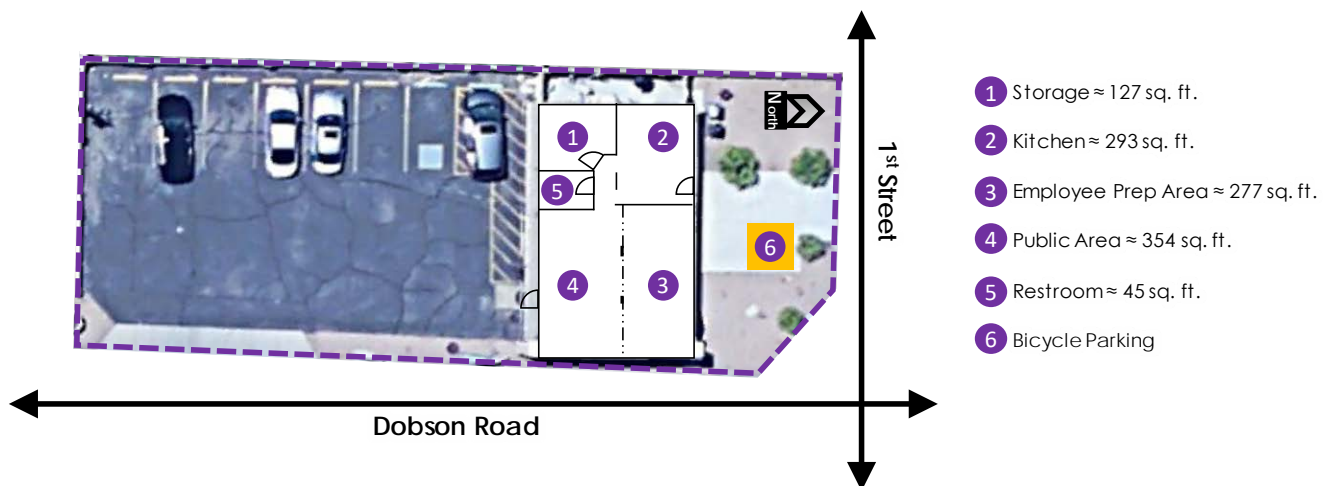
The existing site consists of a 1,131 square foot vacant building, which was previously occupied by a nail salon. **Figure 1** depicts the site location and **Figure 2** is a conceptual floor plan of the proposed Bubble Tea House overlaid on the site. A bike rack will be provided to service bicyclists including those from the residential area northwest of the site. The site currently has seven (7) parking spaces, and is proposed to be restriped to provide eight (8) parking spaces. **Figure 3** is a conceptual site plan illustrating the eight (8) parking spaces.

The Bubble Tea House will have approximately eleven indoor seats comprised of four tables with two chairs each and an eight-foot bar with three chairs. The menu will primarily consist of tea, coffee, hot chocolate, fruit smoothies, popcorn chicken, and french fries. All of the menu items are carryout and can be prepared in a few minutes with customers receiving their orders within 2 to 8 minutes.





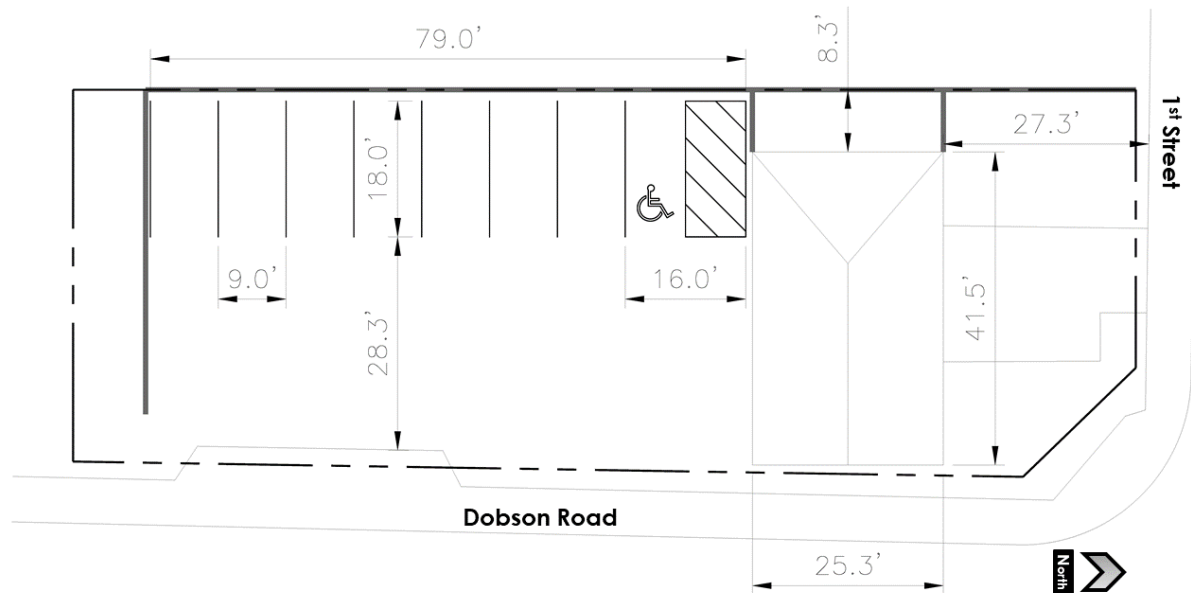
**Figure 1: Site Location**



**Figure 2: Conceptual Floor Plan Overlaid on Existing Site<sup>1</sup>**

<sup>1</sup> Interior measurements were provided by the owner.





**Figure 3: Conceptual Site Plan with 8 Parking Spaces**

## CITY OF MESA PARKING REQUIREMENTS

Parking requirements are specified in Chapter 32 (Site Parking, Loading and Circulation) of the Mesa Zoning Ordinance (August 2017). As a specialty, carryout bubble tea business, the Bubble Tea House is not expected to generate a parking demand similar to typical eating and drinking establishments. The Bubble Tea House expects to have three (3) employees. When calculating the parking requirement, 631 square feet was utilized for the size based on the public space of the tea house for customers (354 square feet) and the employee serving area (277 square feet). The remainder of the building will be used for storage and kitchen preparation and washing.

**Table 1** summarizes the requirements per the City of Mesa's parking ratios. An excerpt of the requirements is included in Attachment A.

**Table 1: Required Parking Spaces per City of Mesa's Parking Ratios**

Land Use	Size	Mesa Parking Ratio <sup>(1)</sup>	Required Vehicle Spaces
Eating and Drinking Establishments (no drive through window)	631 SF	1.0 space per 75 SF	8.41

1. The parking ratios are from Chapter 32 of the Mesa Zoning Ordinance (August 2017).

Per Mesa's parking ratios, nine (9) vehicle parking spaces are required for the proposed Bubble Tea House. The size of the site parcel is a physical constraint and there is not enough land area to accommodate nine (9) vehicle parking spaces for the proposed Bubble Tea House.

## TRANSIT-ORIENTED DEVELOPMENT

The site is within a one-quarter mile of the Sycamore/ Main Street Metro Light Rail station and the Sycamore/Main Street Transit Center as depicted in **Figure 1**. The site is also located 800 feet from the Main Street & Dobson bus stop, which is serviced by bus route #40 (Apache/Price PNR). The Dobson & 2<sup>nd</sup> Street bus stop is within 500 feet and services the bus routes #30 and #96. The proposed Bubble Tea House will also provide bicycle parking on-site.

Per Chapter 32 of the Mesa Zoning Ordinance (MZO), an optional transit reduction to required parking may be applied per the following:

- a. The minimum number of parking spaces may be reduced by up to 10% for sites in which the closest portion of the requested parcel is no more than a 1/4 of a mile (1320- linear feet) radius from a light rail station or bus rapid transit stop.
- b. The minimum number of parking spaces may be reduced by up to 5 percent for sites in which the closest portion of the requested parcel is no more than a 1/2 of a mile (2640 linear feet) radius from a light rail station or bus rapid transit stop.
- c. The distances specified shall be measured in a straight line from the nearest property line of the development site to the nearest pay kiosk, shade canopy, or transit stop sign post, whichever is closest.

Due to the proposed Bubble Tea House's location to the Sycamore/Main Street Metro Light Rail station, a 10 percent transit reduction may be applied to the required parking resulting in eight (8) required vehicle parking spaces.

## CONCLUSIONS

When calculating the parking requirement, 631 square feet was utilized for the size of the business based on the public space of the tea house for customers (354 square feet) and the employee serving area (277 square feet). This assumption was made, since the Bubble Tea House is not expected to generate a parking demand similar to typical eating and drinking establishments. Utilizing Mesa's parking ratio and a 10 percent transit reduction, the required parking is eight (8) spaces. The site currently has seven (7) striped vehicle parking spaces and intends to have a contractor re-stripe to eight (8) spaces.

Sincerely,  
Y2K Engineering, LLC.



Kelly S. Fletcher, PE  
Transportation Engineer

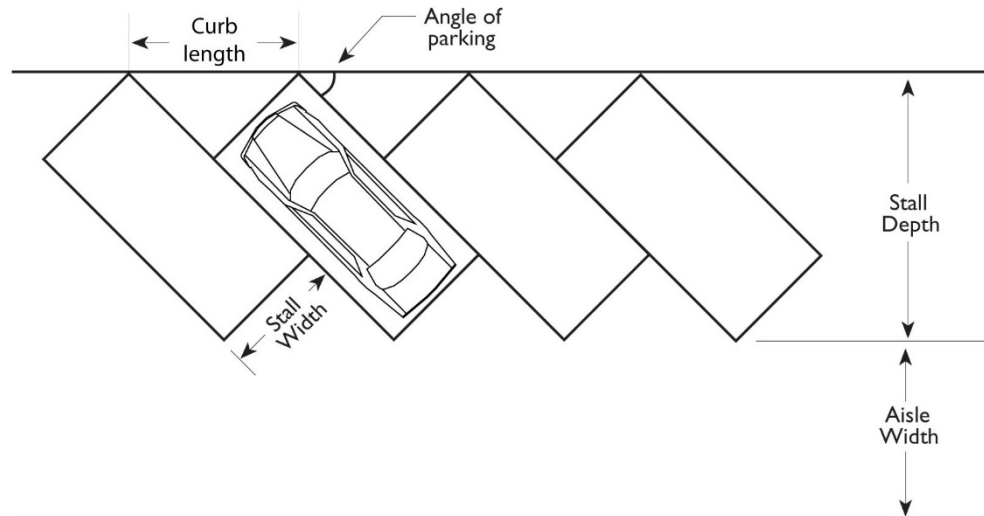
## **ATTACHMENT A**

### **MESA'S PARKING REQUIREMENTS**

H. **Size of Parking Spaces and Maneuvering Aisles.** Parking spaces and maneuvering aisles shall be provided to meet the minimum dimensions required by this subsection. Screening walls, roof support posts, columns, or other structural members shall not intrude into the required dimensions for parking spaces.

1. **Standard Parking Spaces.** The minimum basic dimension for standard parking spaces is 9feet by 18 feet. Table 11-32-2(H)1 provides the dimensions of spaces (stalls) and aisles according to the angle of parking spaces.

Table 11-32-2-H-1: Standard Parking Space and Aisle Dimensions					
Angle of Parking	Stall Width	Curb Length Per Stall	Stall Depth	One-Way Aisle Width	Two-Way Aisle Width
Parallel	9'0"	22'0"	9'0"	12'	20'
30°	9'0"	18'0"	17'4"	11'	20'
40°	9'0"	14'0"	19'2"	12'	22'
45°	9'0"	12'9"	19'10"	13'	24'
50°	9'0"	11'9"	20'5"	15'	24'
60°	9'0"	10'5"	21'0"	18'	24'
70°	9'0"	9'8"	21'0"	19'	24'
90°	9'0"	9'0"	18'0"	24'	24'



**FIGURE 11-32-2.H.1: PARKING SPACES AND AISLES**

2. **Compact Parking Spaces.** The minimum basic dimension for compact parking stalls shall be 8 feet by 16 feet. Table 11-32-2(H)2 provides the dimensions of spaces and aisles according to angle of parking spaces. See Table 11-32-2.H.2

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<b>Table 11-32-2.H.2: Parking Area and Space Dimensions – Compact Spaces</b>					
<i>Angle of Parking</i>	<i>Stall Width</i>	<i>Curb Length Per Stall</i>	<i>Stall Depth</i>	<i>One-Way Aisle Width</i>	<i>Two-Way Aisle Width</i>
Parallel	9'0"	22'0"	9'0"	11'	20'
30°	9'0"	18'0"	14'11"	11'	20'
40°	9'0"	14'0"	16'5"	11'	22'
45°	9'0"	12'9"	17'0"	11'	24'
50°	9'0"	11'9"	17'5"	13'	24'
60°	9'0"	10'5"	17'10"	16'	24'
70°	9'0"	9'8"	17'9"	16'	24'
90°	9'0"	9'0"	16'0"	21'	24'

3. **Loading Spaces.** If loading spaces are provided they shall be a minimum 10 feet by 30 feet.
- I. **Size of Parking Spaces for Motorcycles, Scooters, and Golf Carts.** Motorcycle and Scooter parking spaces shall have a minimum dimension of 5 feet by 9 feet. Golf cart parking spaces shall have a minimum dimension of 5 feet by 10 feet.
- J. **Drive Aisle without Associated Parking Spaces.** One-way drive aisles that do not provide access to parking or loading spaces shall be at least 12-feet wide. 2-way drive aisles that do not provide access to parking or loading spaces shall be at least 20-feet wide.

### 11-32-3: Parking Spaces Required

- A. The following chart specifies the minimum parking spaces required for each permitted use (For exceptions, see Sections 11-32-5, 6, and 7):

Table 11-32-3.A: Required Parking Spaces By Use		
Use	Minimum Standard	
Residential		
Single Residence, detached or attached, including Manufactured Home Subdivisions	2 spaces per dwelling which may be in tandem with Zoning Administrator approval	
Multiple Residence (Typical)	See sub categories, below	
Apartments, multiple residence condominiums, and mixed-use residential, townhomes, patio homes and similar multiple residence buildings: development site located within 1/4 mile radius (1320- feet) of bus rapid transit or light rail station, regardless of bedroom count	9 or fewer total units	1.4 spaces per dwelling unit
	10 – 25 total units	1.3 spaces per dwelling unit
	26 or more total units	1.2 spaces per dwelling unit
Apartments, multiple residence condominiums, mixed-use residential, townhomes, patio homes, and similar multiple residence buildings: development site not located within 1/4 mile radius (1320- feet) of bus rapid transit or light rail station, regardless of bedroom count	2.1 spaces per dwelling unit	

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<b>Table 11-32-3.A: Required Parking Spaces By Use</b>	
<i>Use</i>	<i>Minimum Standard</i>
Group Residential (Boarding House, Assisted Living, Group Homes for the Handicapped in excess of 10 persons)	1.2 spaces per dwelling unit for development with distinguishable dwelling units 1.0 space for each room plus 2 additional spaces for development with congregate dining and no distinguishable separate dwelling units
Group Home for the Handicapped (10 or less persons)	Same as Single Residence
Live-Work Units	2.1 spaces per unit
Residential Care, General (Nursing Home, Hospice)	1.0 space per room or dwelling unit plus 2 additional spaces
RV Parks	1 full-sized space for each RV space, plus 1 guest parking space per 10 (or fraction thereof) RV spaces for the overall development
RV Subdivisions	1 full-sized space and 1 golf cart space for each lot; plus 1 full-sized guest parking space per 10 (or fraction thereof) dwelling units for the overall development
Manufactured Home Parks	2 full-sized space for each lot (may include tandem spaces); plus 1 guest parking space per 10 (or fraction thereof) dwelling units for the overall development
<b>Public Assembly and Schools</b>	
Theaters, auditoriums, assembly halls, places of worship, clubs, lodges and fraternal buildings, funeral homes, community centers, libraries	1 space per 75 square feet used for public assembly
Museums	1 space per 250 square feet used for public assembly plus accessory uses
Stadiums	1 space per 5 seats plus 1 space per 300 square feet for accessory uses
School, kindergarten through 9th grade	1 space per 75 feet for public assembly space, such as auditoriums and theaters, and 1 space per 600 square feet for all other areas
High schools, academies, colleges, universities, trade or vocational schools	1 space per 200 square feet
<b>Health Care</b>	
Medical/dental offices and outpatient clinics	1 space per 200 square feet
Hospitals, hospices, nursing, and convalescent homes	1 space per 400 square feet
Day care centers	1 space per 375 square feet
<b>Group Commercial Developments</b>	
Shell buildings (no specified use)	1 space per 275 square feet
<b>Independent Commercial Buildings and Uses</b>	
General offices, retail, and services	1 space per 375 square feet
General auto repair, garages, service stations, car washes, and drive-through lubrication shops	1 space per 375 square feet, including service bays, wash tunnels, and retail areas
Hotels and motels	1 space per room or suite of rooms with individual exits plus ancillary use requirements
Eating and Drinking Establishments (no drive through window)	1 space per 75 square feet for indoor area, and 1space per 200 square feet for outdoor seating area
Eating Establishments (with drive-through window and associated queuing drive aisle)	1 space per 100 square feet for indoor area, and 1 space per 200 square feet for outdoor seating area
Outdoor sales and service areas (car lots, plant nurseries, building supplies, etc.)	1 space per 375 square feet of sales and service building, but not less than 4 spaces per use
<b>Temporary Outdoor Uses</b>	
Swap Meets (See Section 11-20-29)	1 space per 300 square feet of designated vendor area

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<b>Table 11-32-3.A: Required Parking Spaces By Use</b>	
<i>Use</i>	<i>Minimum Standard</i>
Farmer's Markets (See Section 11-20-29)	1 space per 400 square feet of designated vendor area
<b>Recreation</b>	
Bowling centers	5 spaces per lane plus ancillary use requirements
Golf driving range	1 space per tee plus ancillary use requirements
Miniature golf, amusement parks, batting ranges, and water slides	1 space per 500 square feet of outdoor recreations area plus ancillary use requirements
Health space and clubs, gyms, and tennis, handball, and racquetball courts and clubs	1 space per 100 square feet, excluding courts, plus 2 spaces per court
Skating rinks and dance halls	1 space per 75 square feet used for recreational activities plus ancillary use requirements
<b>Group Industrial Buildings and Uses</b>	
Shell buildings (no specified use)	75% at 1 space per 500 square feet plus 25% at 1 space per 375 square feet
<b>Independent Industrial Buildings and Uses</b>	
Mini-storage (dead storage only)	4 spaces plus 2 for manager's quarters; Drive aisles between buildings shall maintain minimum distance of 24 feet
Warehousing and Storage, excluding Min-storage	1 space per 900 square feet
Industrial	1 space per 600 square feet
<b>Airport Buildings and Uses</b>	
Aircraft Hangars	2 per aircraft, plus ancillary use requirements
<b>Public Facilities and Uses</b>	
Fire stations	1 space per bed, plus 1 space per 75 square feet for Community Room
Police Substations	1 space per 300 square feet, plus 1 space per 75 square feet for Community Room, plus ancillary use requirements

**B. Basis of Calculation.** The on-site parking requirements specified in this Section are based on gross floor area unless otherwise stated.

1. In the case of mixed uses, the total requirements for off-street parking spaces shall be the sum of the requirements of the various uses computed separately as specified in this Section, and the off-street parking space for one use shall not be considered as providing the required off-street parking for any other use, unless a Shared Parking Plan has been approved in accordance with the requirements of Section 11-32-5.
2. In case of fractional results in calculating parking requirements from the chart above, the required number shall be rounded up to the nearest whole number.

**C. Maximum Parking Spaces.** The number of parking spaces provided by any development in surface parking lots shall not exceed 125% of the minimum required spaces in Table 11-32-3(A), except as follows:

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location of the activity served may be reviewed and approved through a Special Use Permit, pursuant to Chapter 70.

5. **Agreement.** An agreement providing for the shared use of parking areas, executed by the parties involved, must be filed with the Zoning Administrator in approved form, and then recorded with the Office of the Maricopa County Recorder. Shared parking privileges will continue in effect only as long as the agreement, binding on all parties, remains in force. Agreements must guarantee long-term availability of the parking, commensurate with the use served by the parking. If a shared parking agreement lapses or is no longer valid, then parking must be provided as otherwise required by this Chapter.

### 11-32-6: Parking Reductions

Required parking for any use may be reduced through approval of a Special Use Permit, pursuant to Chapter 70, unless specified otherwise, and the following:

- A. **Criteria for Approval.** A Special Use Permit for reduced parking shall only be issued if the following criteria are found to be true:
  1. Special conditions—including but not limited to the nature of the proposed operation; proximity to frequent transit service; transportation characteristics of persons residing, working, or visiting the site—exist that will reduce parking demand at the site;
  2. The use will adequately be served by the proposed parking; and
  3. Parking demand generated by the project will not exceed the capacity of or have a detrimental impact on the supply of on-street parking in the surrounding area.
- B. **Parking Demand Study.** In order to evaluate a proposed project's compliance with the above criteria, the Zoning Administrator may require submittal of a parking demand study that substantiates the basis for granting a reduced number of spaces and includes any of the following information:
  1. Total square footage of all uses within existing and proposed development and the square footage devoted to each type of use.
  2. A survey of existing on-street and off-street parking within 300 feet of the project site.
  3. Standard parking requirements for the use, based on Table 11-32-3(A).

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4. Estimated parking demand for the use, using any available existing parking generation studies from the Institute for Transportation Engineers (ITE) or other professionally recognized, and/or accredited sources. If appropriate parking demand studies are not available, the City may require the applicant to conduct a parking demand survey of a development similar to the proposed.
5. Comparison of proposed parking supply with parking requirements.
6. A shared parking analysis, as appropriate.
7. A description any other characteristics of the site or measures being undertaken that could result in reduced parking demand, including staggered work shifts, telecommuting, shuttles to transit stations, or similar programs.
8. Other information as required by the City.

**C. Optional Transit Reduction.**

1. Except residence uses, the following reductions may be factored directly when determining the minimum number of parking spaces required for a development, and do not require an Special Use Permit to be approved by the Zoning Administrator:
  - a. The minimum number of parking spaces may be reduced by up to 10% for sites in which the closest portion of the requested parcel is no more than a 1/4 of a mile (1320- linear feet) radius from a light rail station or bus rapid transit stop.
  - b. The minimum number of parking spaces may be reduced by up to 5 percent for sites in which the closest portion of the requested parcel is no more than a 1/2 of a mile (2640 linear feet) radius from a light rail station or bus rapid transit stop.
  - c. The distances specified shall be measured in a straight line from the nearest property line of the development site to the nearest pay kiosk, shade canopy, or transit stop sign post, whichever is closest.
2. Additional reductions to the minimum number of parking spaces may be requested through the Special Use Permit process described in Paragraph A of this Section.