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OREM

OREM CITY PARKING STUDY

APRIL 2019

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Prepared for:

The City of Orem

56 North State Street

Orem, Utah

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EXECUTIVE SUMMARY

The goal of the Orem City Parking Study is to provide recommendations for new parking requirements for selected land uses associated with new development. These recommendations are based on recognized standards, local parking counts, and proximity to existing and future transit. The recommendations in this study will serve as the basis for new parking standards that will be presented to the Orem City Council for adoption into the Orem City Code.

This study has identified five land use categories for which it is recommended that a new city-wide standard be adopted.

Table 1: Summary of Minimum Parking Requirements for Selected Land-Uses

Land Use	Recommended (Min.)	Recommended (Max.)
Single-family Attached	2 per unit	
Multifamily	0.75 per bedroom or 2 per unit, whichever is lower	1 per bedroom or 2 per unit, whichever is lower + 0.25 per unit for guest parking
Retail / Office	2 per 1,000 sq. ft. GLFA	3 per 1,000 sq. ft. GLFA
Mixed Use (MXD) with shared parking	Either commercial or residential minimum, whichever is larger	
Transit-Oriented Development (TOD)	50% reduction from MXD	25% reduction from MXD

One of the major recommendations of this study is to move away from a per-unit parking requirement and utilize a per-bedroom standard. This reflects existing trends in Orem for new multifamily developments and student housing, and more effectively requires the amount of parking supply that is actually needed. In addition, this study significantly lowers the parking requirements for retail and office uses, allowing greater flexibility for businesses (especially smaller businesses with lower parking demands).

INTRODUCTION

With a limited amount of remaining undeveloped land, much of Orem's future growth is expected to occur through the redevelopment of existing sites throughout the City. One of the challenges with redevelopment is regulating parking. When projects are built with too little parking, there is the potential for "spillover parking" – a situation in which business patrons, residents, and visitors to housing developments park on city public streets – to lead some nearby residents to complain. When projects are built with too much parking, lots are underutilized, wasting valuable land and development costs, which raises the price of housing, goods, and services for everyone.

Currently, the City has different parking standards for each zone. This has created a wide range of parking requirements, sometimes applying different standards to similar projects that happen to be in different zones. The purpose of this study is to re-evaluate the existing requirements and to provide uniform recommendations based on more accurate measurements and data.

STANDARDIZATION OF OREM PARKING REGULATIONS

In the past, new development in Orem has been primarily low density. Occasional requests for higher density development were approved by the City Council utilizing the "Planned Development" (PD) zone. Rather than being a standardized zone that applies the same requirements across many sites, the PD zone is a customized zone for each site. As a result, the City has over time accumulated 48 separate PD zones, each with unique parking requirements.

With changing trends, the demand for higher density development is increasing. Responding to this demand, the Orem City Council has worked with residents to create a plan for responsible growth.[1] In 2018, the Orem City Council adopted five districts along State Street where future higher density development will be concentrated. With these districts, it is important that the parking requirements be updated to reflect fair and uniform standards.

HIGH COST OF PARKING

Parking is expensive to provide, especially with the recent increases in land values and construction costs in Utah. Recent estimates suggest that surface parking costs between $5,000 and $10,000 per stall, while structured parking costs between $15,000 and $25,000 per stall.[2] When parking requirements are too high, they can represent a significant portion of a project's costs and inhibit development altogether. This is especially concerning when it impacts residential projects, given that Orem is currently experiencing a housing affordability crisis due primarily to a lack of supply.[3] This study recognizes the high cost of parking and recommends decreasing the parking requirements for land uses where an over-supply can be demonstrated.

TRANSIT IN OREM

This past year, Utah's first bus rapid transit (BRT) began running through Orem. BRT's efficiency – namely its ability to carry a high number of passengers per vehicle while maintaining the flexibility of bus service with lower capital costs than light rail – provides an affordable transportation alternative in growing cities. Over time, the availability of public transit in Orem is expected to reduce residents' dependence on automobiles, particularly for people who live near transit stops. This study recognizes the impact of

[1] Orem State Street Corridor Master Plan. Appendix D of the General Plan. https://orem.org/generalplan/
[2] Carl Walker (2016), Mean Construction Costs, Carl Walker Consulting (www.carlwalker.com)
[3] Orem Moderate-Income Housing Study, 2018: https://orem.org/wp-content/uploads/2018/09/Orem-Moderate-Income-Housing-Study_2018.09.12.pdf

transit and provides a recommendation for updating the parking requirements to include a discount for developments located within proximity to an existing or announced transit stop.

EXISTING PARKING REQUIREMENTS

The existing Orem City Code contains parking requirements for over 70 different land uses categories. More than 60 codes apply to parking provisions for residential uses, 30 for commercial uses, and 10 for office uses. This section examines a selection of Orem's existing parking requirements and provides a comparison to the recommendations provided by the ITE's *Parking Generation Manual* and other cities in the region.

RESIDENTIAL ZONES

The number of off-street parking spaces Orem requires in zones of single-family, detached houses ranges from 2 to 2.5 per dwelling. Houses with an accessory dwelling unit on the property are required to have a minimum of three spaces. The top of this range is higher than ITE's recommended standard of two spaces per unit, and the entire range is higher than the average peak demand of 1.8 spaces per unit observed by ITE. In the Wasatch Front region, Orem's parking requirements are on the low end.

Table 2: Existing Orem Residential Parking Standards Comparison

Land Use Category	Orem's Existing Code	ITE (Supply)	ITE (Peak Demand)	Regional High	Regional Low
Residential – Single-family detached	2.0-2.5 per unit (3.0 with accessory dwelling)	2 per unit	1.8 per unit	4 per unit + 2 per accessory unit (Pleasant Grove)	2 per unit (South Jordan, American Fork)
Accessory Apartments	+0.5-1.0 per unit. (Min. 3 per 1-family dwelling)	-	-	+2 per unit (Pleasant Grove)	+1 per unit (American Fork)
Residential – Single-family attached	2 per unit + 0.25-0.78 per unit for guest parking	1.4 per unit	1.38 per unit	4 per unit (Vineyard, South Jordan)	1 per bedroom or 2 per unit, whichever is lower (Saratoga Springs)
Residential – Multifamily	1-2.5 per unit or 0.65-1.75 per bedroom + 0.25-0.78 per unit guest parking. (Not all PD zones require guest parking.)	1.4-2.0 per unit	1.2-1.37 per unit	0.66-1.75 per bedroom + 0.25 per unit guest parking (Provo)	1 per bedroom or 2 per unit, whichever is lower (Saratoga Springs)
Residential – Student housing overlay	0.8 per unit	-	-	-	-

Source: Orem City Code, ITE, University of Utah Metropolitan Research Center

The number of spaces Orem requires for single-family, attached houses (which includes duplexes, triplexes, and townhouses) is two per dwelling unit plus 0.25 to 0.78 spaces per unit for guest parking (depending on the zone). This range of 2.25 to 2.78 spaces per unit is substantially higher than ITE's recommended standard of 1.4 spaces per unit and the average peak demand of 1.38 spaces per unit observed by ITE. In the Wasatch Front region, Orem's parking requirements for single-family, attached dwellings lies in the middle of the range.

The number of spaces Orem requires for multifamily residential buildings ranges from 1 to 2.5 spaces per dwelling unit or 0.65 to 1.75 spaces per bedroom, with an additional 0.25 to 0.78 spaces per unit required for guest parking. The large range of requirements is a result of the proliferation of "Planned Development" zones where parking requirements have not been standardized. This range of required parking extends both higher and lower than ITE's recommended standard of 1.4 to 2 spaces per unit and is mostly higher than the average peak demand of 1.38 spaces per unit observed by ITE. In the Wasatch Front region, Orem's parking requirements are among the highest. Orem tops both Provo's requirement of 0.91 to 2 spaces per bedroom and Saratoga Springs' requirement for one space per bedroom or two spaces per unit, whichever is lower. However, Orem is the only city in the Wasatch Front region with a student housing overlay district. At 0.8 spaces per dwelling unit, parking requirements in the student housing overlay district are lower than those for any other type of multifamily housing in the city.

OFFICE ZONES

The number of off-street parking spaces Orem requires for professional and government office buildings ranges from 2.4 to 4 per 1,000 sq. ft. of gross leasable floor area (GLFA), with no building allowed to have fewer than five total spaces. This range starts lower than ITE's recommended standard of 3.3 to 4 spaces per 1,000 sq. ft. GFLA and the average peak demand of 2.84 to 4.15 per 1,000 sq. ft. GFLA observed by ITE. In the Wasatch Front region, Orem's parking requirements are much lower than the 6.67 spaces per 1,000 sq. ft. GFLA required by Provo and Vineyard but range higher than the 2.5 spaces per 1,000 sq. ft. GFLA required by Bluffdale and South Jordan.

COMMERCIAL ZONES

The number of off-street parking spaces Orem requires for commercial buildings ranges from two to four spaces per 1,000 sq. ft. GLFA. This range is lower than ITE's recommended standard of 3.2 to 5.8 spaces per 1,000 sq. ft. GLFA but close to the average peak demand of 2.27 to 4.67 observed by ITE. In the Wasatch Front region, Orem's parking requirements are substantially lower than the six spaces per 1,000 sq. ft. GLFA required by American Fork but higher than Bluffdale and Provo's requirements for 1.67 spaces per 1,000 sq. ft. GFLA.

The number of spaces Orem requires for movie theaters is 0.25 per seat. This is lower than the 0.3 spaces per seat recommended by ITE but higher than the average peak demand of 0.15 spaces per seat observed by ITE. In the Wasatch Front region, Orem's parking requirements are almost identical to South Jordan's requirement for 0.33 spaces per seat but higher than Bluffdale and Provo's requirements for 0.25 spaces per seat.

MIXED-USE ZONES

Orem city code allows all parking at mixed-use developments to be shared among residential and non-residential uses. The total number of off-street parking spaces required is the greater of either 0.65 to 1 space per bedroom, 1 to 4.65 spaces per dwelling unit, or 2 to 5 spaces per 1,000 sq. ft. of non-residential GLFA. The 4th edition of ITE's *Parking Generation Manual* does not recommend a standard or list an average peak demand for mixed-use developments. In the Wasatch Front region, Orem's requirements are similar to the 1 space per bedroom or 2 per unit, whichever is lower, for residential portions and the two to four spaces per 1,000 sq. ft. of GLFA for non-residential uses required by Saratoga Springs. By contrast, Orem's requirements are higher than Vineyard's requirements for 1.5 spaces per unit for residential portions and three spaces per 1,000 sq. ft. GFA for non-residential portions of mixed-use developments.

Table 3: Existing Orem Office, Commercial, and Mixed-Use Parking Standards Comparison

Land Use Category	Orem's Existing Code	ITE (Supply)	ITE (Peak Demand)	Regional High	Regional Low
Office	2.4-4.0 per 1,000 sq. ft. GLFA	3.3-4 per 1,000 sq. ft. GLFA	2.84-4.15 per 1,000 sq. ft. GLFA	6.67 per 1,000 sq. ft. GLFA (Provo, Vineyard)	2.5 per 1,000 sq. ft. GLFA (South Jordan, Bluffdale)
Retail Shopping Center	2-4 per 1,000 sq. ft. GLFA	4.7-4.9 per 1,000 sq. ft. GLFA	2.27-4.67 per 1,000 sq. ft. GLFA	6 per 1,000 sq. ft. GLFA (American Fork)	1.67 per 1,000 sq. ft. GLFA (Bluffdale, Provo)
Mixed Use	Residential: 0.65-1.0 per bedroom or 1.0-4.65 per unit; Non-residential: 2.0-5.0 per 1,000 sq. ft. GLFA. (All parking can be shared.)	-	-	Residential: 1 per bedroom or 2 per unit; Non-residential: based on sq. ft. of individual use (Saratoga Springs)	Residential: 1.5 per unit; Non-residential: 3 per 1,000 sq. ft. GFA

Source: Orem City Code, ITE, University of Utah Metropolitan Research Center

DATA SOURCES

This section provides an overview of the data and methodology used to inform the recommendations of this study.

ITE TRIP AND PARKING GENERATION

For many cities, parking requirements are based in whole or part on trip generation data provided by the Institute of Transportation Engineers (ITE). Trip generation is a term used to describe how many people or vehicles come and go from a location during a certain time. Trip generation is typically determined by referencing the ITE's *Trip Generation Manual*. This manual utilizes hundreds of traffic studies conducted in many locations throughout the country to estimate the average traffic demand that can be expected from various land uses. This data forms the basis for the ITE's *Parking Generation Manual*. [4]

While ITE's manuals are recognized as the authority on trip and parking generation, they readily acknowledge that the data was "primarily collected at suburban locations having little or no transit service, nearby pedestrian amenities, or travel demand management (TDM) programs."[5] The *Trip Generation Manual* also states: "At specific sites, the user may wish to modify trip-generation rates presented in this document to reflect the presence of public transportation service, ridesharing, or other TDM measures; enhanced pedestrian and bicycle trip-making opportunities; or other special characteristics of the site or surrounding area."

Understanding these limitations, this study includes parking counts for ten sites located in Orem. Combining ITE data with local parking counts (administered by an objective third party and capturing both on- and off-street parking numbers) represents the most accurate way to measure parking demand.

PARKING COUNTS

The City of Orem contracted with the University of Utah's Metropolitan Research Center (MRC) to evaluate Orem's existing parking requirements, perform parking counts at various sites in Orem, and provide recommendations based on all collected data. This section explains the process that was undertaken to gather parking counts in Orem.

Parking Count Team

To collect data on trip and parking generation at the ten Orem sites, the MRC hired students from local universities and assigned them to specific locations within the developments. A total of 61 students were employed on Thursday, September 27, 2018. (Parking counts should be conducted on Tuesdays,

[4] ITE, Parking Generation Manual, 5th Edition
[5] ITE, Trip Generation Manual, 10th Edition

Wednesday, or Thursdays, as these days are most representative of weekday peak traffic). For quality control, the MRC's project manager traveled from location to location during the count day. Every student was found to be at the assigned location doing the assigned task. Students were assigned one of two roles: counters or surveyors.

Counters

Counters conducted 100% counts of persons and vehicles coming and going at designated access points. Every entry point at each site was observed from 7 am until 9 pm and tabulated in 15-minute intervals. Trips were counted separately for each mode of transportation, specifically: solo drivers, two-person carpools, three or more-person carpools, walkers, bicyclists, and others. The "other" category was for people traveling by skateboard, scooter, or the like. The purpose was to obtain 100% counts that could be compared to vehicle trip generation rates for stand-alone suburban developments as published in the ITE's *Trip Generation Manual*.

Surveyors

Surveyors were assigned a dual role. Every two hours between 7 am and 9 pm, they performed parking occupancy counts, recording the number of parked cars in each site's lot or garage. For the residential projects, a count was also conducted at around 11 pm to capture what is typically the period of peak demand for parking at residential developments. These students also circulated around the developments throughout the day conducting intercept surveys of residents, shoppers, or office workers to determine their mode of travel to/from the developments, the purpose of their trips, and the location where they parked. The last of these questions was to determine the number of residents who were parking outside apartment complexes on neighborhood streets. The mode shares presented for each development are based on the intercept surveys.

Occupancy counts suggest the true demand for on-site parking. These counts are compared to the parking supply and peak demand values found in the ITE *Parking Generation Manual* to see if Orem developments are generating parking demands above, below, or at typical suburban levels (as the ITE numbers are representative of suburban developments as explained previously).

Off-Site Parking

The MRC conducted a supplemental study in four neighborhoods adjacent to multifamily projects to measure off-site parking. In the past, the Orem City Council has received complaints about drivers parking on public streets in nearby neighborhoods. The perception is that some of these developments may not supply enough tenant or visitor parking on site, or that tenants may be avoiding parking fees.

A supplemental count of on-street parking was conducted near four multifamily apartment sites: Promenade, Canyon View Crossing, Monteval, and Parc on Center. To determine how many drivers park

on neighborhood streets during evening peak hours, observers were stationed at key intersections near each of the four sites from 5 pm to 9 pm on Nov. 13, 2018.

OTHER DATA SOURCES

Although the recommendations in the study are based primarily on the Orem parking counts conducted by the MRC and the data provided by the ITE, three other data sources provide meaningful insight: the American Community Survey (ACS), the 2012 Utah Household Travel Survey, and a parking demand study conducted at apartments in Salt Lake City.

Vehicle Ownership in Orem

Based on data from the US Census American Community Survey (ACS), the average vehicle ownership per household in Orem is 2.10 vehicles per household. The following table provides a detailed breakdown of vehicle ownership by household size. These figures are for all households, regardless of housing type. The ACS does not provide a cross tabulation of vehicle ownership by housing type, and thus multifamily housing cannot be separated from single-family housing. Due to household income differences, it is assumed that households living in multifamily housing have fewer than average vehicles for each household size.

Table 4: Orem Vehicle Ownership

Households	0 vehicles	1 vehicle	2 vehicles	3 vehicles	4+ vehicles	All
1 Person Households	597	2,905	611	84	39	4,236
2 Person Households	166	1,865	5,390	862	168	8,451
3 Person Households	120	1,084	1,704	1,425	321	4,654
4+ Person Households	95	1,043	4,335	2,529	2,175	10,177
All	978	6,897	12,040	4,900	2,703	27,518
% of all	**3.60%**	**25.10%**	**43.80%**	**17.80%**	**9.80%**	**100%**

Source: Source: 2017 of "2013-2017 American Community Survey 5-Year Estimates" *Note: 4+ vehicles is assumed at 4.5

Compared to more urban places like Salt Lake City, Orem is still very auto-oriented. Low parking requirements would be unrealistic in much of Orem because the city remains suburban in nature. Only in the case of new development forms, such as the State Street Districts and other future mixed-use and transit-oriented developments, should the parking requirements deviate from suburban norms.

Utah Household Travel Study

The 2012 Utah Household Travel Survey is another source of data on vehicle ownership which relates to overall parking demand. Household records were extracted for different housing types in the Point of the Mountain (PoM) study area, which covers a large area of Utah County and is comparable to Orem. Though based on a small sample of households, the average (mean) number of vehicles per multifamily household in the study area is 1.6.

Table 5: Average (Mean) Vehicle Ownership by Housing Type in the PoM Study Area

Type of Housing	Sample Size	Average (Mean)
Single-Family Detached	759	2.35
Single-Family Attached	65	1.86
Multifamily	48	1.6

Source: 2012 Utah Household Travel Survey

Salt Lake County Apartment Parking Demand Study

An extensive apartment parking demand study was conducted in Salt Lake City County at many suburban apartment complexes along the Wasatch Front. As shown in the following table, these apartment complexes are typically supplying at least two spaces per apartment and producing average peak demand of 1.6 spaces per occupied apartment. While this data was not collected in the City, most of these apartments are in neighborhoods with similar density and land use patterns as Orem. Therefore this information is helpful as a way to corroborate the parking counts collected locally.

Table 6: Apartment Parking Supply and Demand in the Salt Lake County

Property	Supply (stalls/unit)	Demand (stalls/occupied unit)
Timbergate Apartments	2.01	1.46
Farmgate Apartments	2	1.72
Mission Meadowbrook Apartments	1.93	1.1
Mountain Shadows Apartments	2.09	1.28
Egate Apartments	1.81	1.73
San Marino Apartments	2.04	1.48
San Moritz Apartments	2.01	1.74
San Tropez Apartments	2.05	1.68
Coppergate Apartments	2.22	1.42
Liberty Bend	2.23	1.94
Liberty Commons Apartments	2.2	1.4
Lionsgate Apartments	1.59	2.03

Hales Engineering, 2014

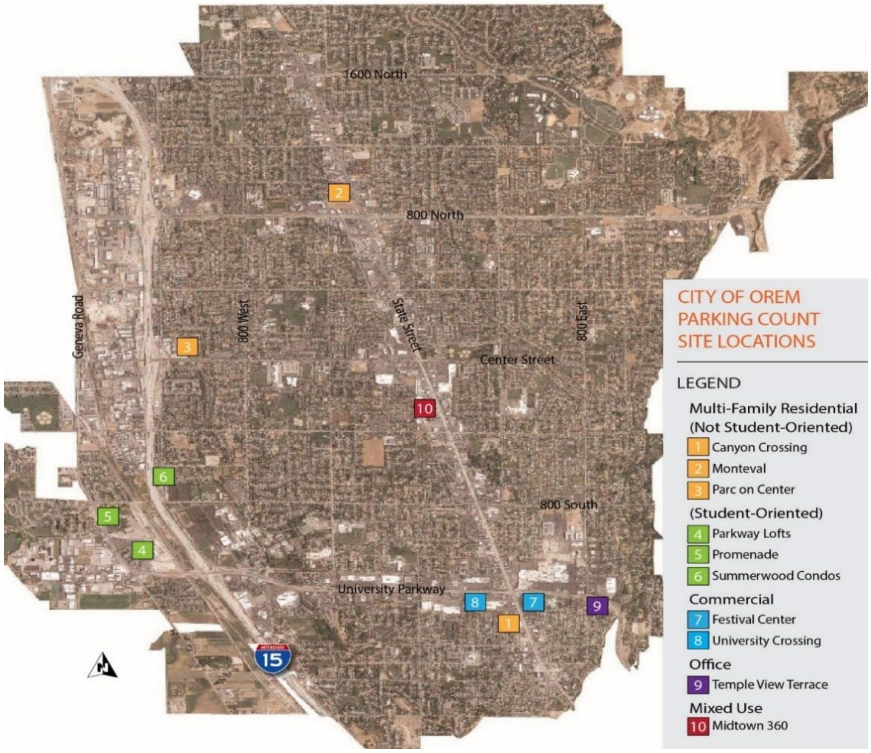
FINDINGS

This chapter contains the data for each of the ten sites in Orem where parking counts took place. This data is analyzed and compared to ITE standards. Based on this data, recommendations are provided in the next chapter.

Study Sites in Orem

This study assessed parking supply and demand at ten privately-owned developments within Orem city limits. These sites are all relatively high-density land uses for Orem and range from residential to commercial, including office parks, shopping centers, multifamily housing (both near to and far from UVU's campus), and a mixed-use development.

Figure 1: Parking Count Site Locations



Site Statistics

The following two tables provide an overview of the supply and demand characteristics for the ten sites in Orem where parking counts took place. Note that Midtown 360 is separated into two lines two show the statistics for the commercial space separate from the residential units.

Table 7: Characteristics of Parking Count Locations

Site	ITE Category	Parking Supply	SF GLA	Dwelling Units	*Total Bedrooms*
Canyon View Crossing	Low/Mid-Rise Apartment (221)	295	-	180	*273*
Monteval	Low/Mid-Rise Apartment (221)	180	-	131	*206*
Parc on Center	Low/Mid-Rise Apartment (221)	201	-	168	*317*
Parkway Lofts	Low/Mid-Rise Apartment (221)	613	-	332	*556*
Promenade	Low/Mid-Rise Apartment (221)	275	-	112	*421*
Summerwood Condos	Low/Mid-Rise Apartment (221)	259	-	72	*286*
Festival Center	Community Shopping Center (820)	492	98,369	-	-
University Crossing	Community Shopping Center (820)	814	206,035	-	-
Temple View Terrace	Office Building (701)	175	52,360	-	-
Midtown 360	Mixed Use Complex	689	50,049	284	*535*

Site	ITE Category	Parking Supply	SF GLA	Dwelling Units	*Total Bedrooms*
Midtown Residential	*High-Rise Apartment (222)*	*487*	*-*	*284*	*535*
Midtown Retail	*Neighborhood Shopping Center (820)*	*202*	*50,049*	*-*	*-*

Source: City of Orem

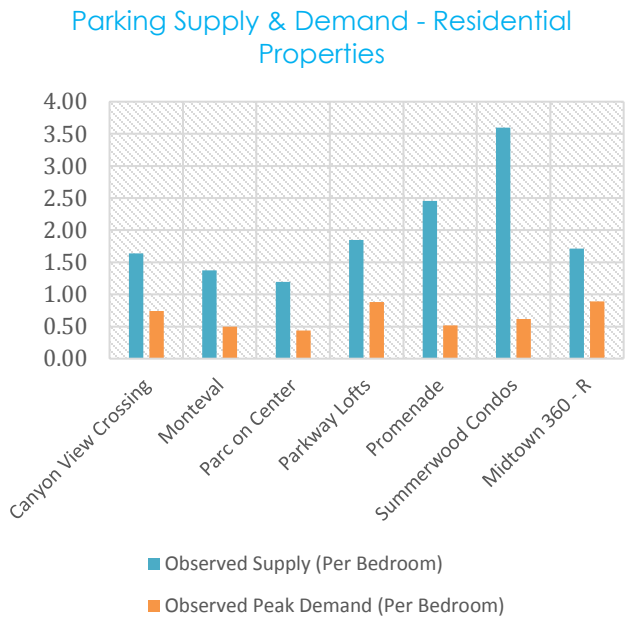
PARKING DEMAND

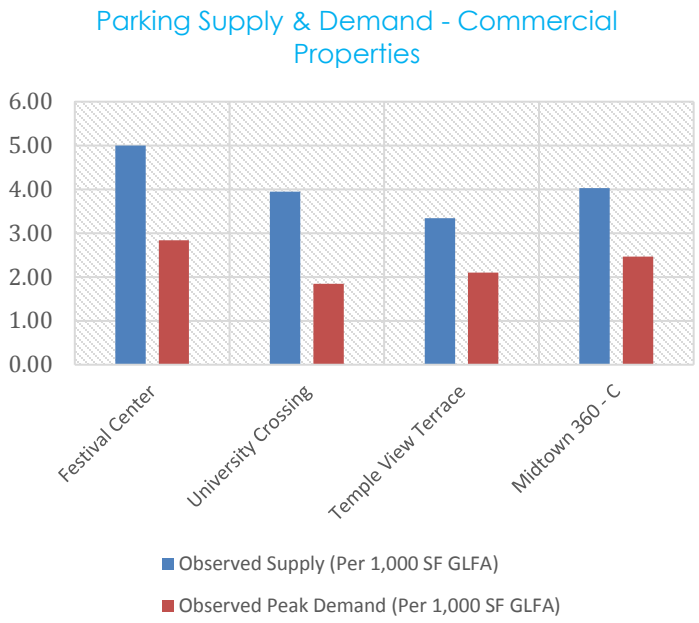
Based on the data collected by the Metropolitan Research Center and Orem City staff, parking demand was calculated for each of the ten sites. These figures take on-street "spillover" parking into account as discussed in a later section. Even including "spillover" parking, observed supply exceeds observed peak demand at every study site. The highest observed parking occupancy rate is 92% at Park on Center. The lowest observed parking occupancy rate is 47% at University Crossing. These numbers suggest that Orem is overparked.

Table 8: Parking Supply & Demand at 10 Sites in Orem

Site	Observed Supply (On-Site)	Observed Peak Demand*	Peak Demand / Supply	Rate per Unit / 1000 SF GLA	Rate per Bedroom
Canyon View Crossing	295	241	82%	-	*1.08*
Monteval	180	116	64%	-	*0.87*
Parc on Center	201	185	92%	-	*0.63*
Parkway Lofts	613	524	85%	-	*1.01*
Promenade	275	261	95%	-	*0.65*
Summerwood Condos	259	190	73%	-	*0.91*
Festival Center	492	279	57%	2.84	-
University Crossing	814	380	47%	1.84	-
Temple View Terrace	175	110	63%	2.10	-
Midtown 360 Residential	*689*	*511*	*74%*	-	*0.97*
Midtown 360 Commercial	*689*	*121*	*52%*	*2.42*	-

Source: Orem Parking Counts and Surveys Conducted September 27, 2018, University of Utah Metropolitan Research Center
* The 'Observed Peak Demand' includes on street 'spillover' parking





TRAVEL MODE SHARE

At the ten sites in Orem selected for parking counts, intercept surveys were conducted of people coming and going. While the emphasis of this study is on parking counts, people's mode of travel getting to and from these developments can be used to validate the findings. If everyone travels by automobile, standard suburban parking ratios should apply. Estimates of mode share may suggest it is possible to reduce parking demand at walkable, transit-friendly locations. Note that it is not a one-to-one relationship between auto mode share and auto parking requirements, as people who own cars may choose to travel by other modes and leave their cars at home. But all else being equal, a high alternative mode share should result in a somewhat reduced parking demand.

Non-Residential Mode Share

Temple View, the office property is 100% auto access. We would expect the trip and parking generation to be very similar to the suburban ITE rates. The commercial centers, Festival Center and University Crossing, are almost entirely auto-oriented with 95% and 92% auto access, respectively. However, they both have 5% walk access, which likely results in a small reduction of vehicle trip generation rates relative to ITE rates. As usage for the BRT route increases over time, the non-auto mode share is expected to increase.

Residential Mode Share

For the multifamily projects (non-student), there is a large reduction in auto access. Monteval has 39% walk access; Canyon View Crossing has 21% walk access; and Parc on Center has 15% walk access. These rates suggest that parking requirements could be successfully decreased from the ITE's recommendations for more auto-dependent suburban developments.

Table 9: Mode Shares at Sampled Developments

Property	Auto	Transit	Bike	Walk	Other
Summerwood Condos	42%	18%	5%	35%	0%
Monteval	61%	0%	0%	39%	0%
Promenade	65%	19%	7%	7%	2%
Midtown 360	74%	0%	2%	24%	0%
Canyon View Crossing	76%	3%	0%	21%	0%
Parc on Center	80%	5%	0%	15%	0%
Parkway Lofts	88%	9%	0%	3%	0%
University Crossing	92%	2%	2%	5%	0%
Festival Center	95%	0%	0%	5%	0%
Temple View	100%	0%	0%	0%	0%

Source: Orem Parking Counts and Surveys Conducted September 27, 2018, University of Utah Metropolitan Research Center

For student oriented multifamily housing, we have the lowest rate of auto access of any project, 42% at Summerwood Condos. Summerwood also has a high rate of walk access (35%) and a high rate of transit access (18%). Promenade, also student housing, has 7% walk access and 19% transit access, the highest percentage of transit access in our sample. Parkway Lofts has mode shares similar to non-student oriented multifamily developments with 88% auto access, 3% walk access, and 9% transit access. This is noteworthy because Parkway Lofts is the closest project to the Orem FrontRunner station. Perhaps the most interesting case is the mixed-use development, Midtown 360. Consistent with the literature on mixed-use development, the auto share of trips is low in this development.

VEHICLE TRIP GENERATION COMPARED TO ITE

Vehicles entering and leaving each of the sampled sites were tracked and compared to the ITE *Trip Generation Manual* estimates. ITE represents suburban averages, so alignment with ITE would suggest typical suburban conditions. An undercount would suggest less auto orientation than ITE, while an overcount would suggest more auto orientation than ITE.

As noted with mode shares, vehicle trip generation does not directly relate to parking demand. Residents might own cars they don't use much, and shoppers may turn over parking spaces at varying rates in retail and office developments. However, this data is helpful to validate parking count numbers. Also worth noting is that there is a high degree of confidence in the vehicle trip counts taken at the ten Orem sites. The counters were checked up on regularly and all were at their posts covering all entrances/exits as assigned.

The following table compares Orem vehicle trip counts to ITE estimated counts for the same type and level of development activity. In some cases, the Orem counts are higher. In other cases, the Orem counts are lower.

Table 9: Observed Vehicle Trip Generation Compared to ITE

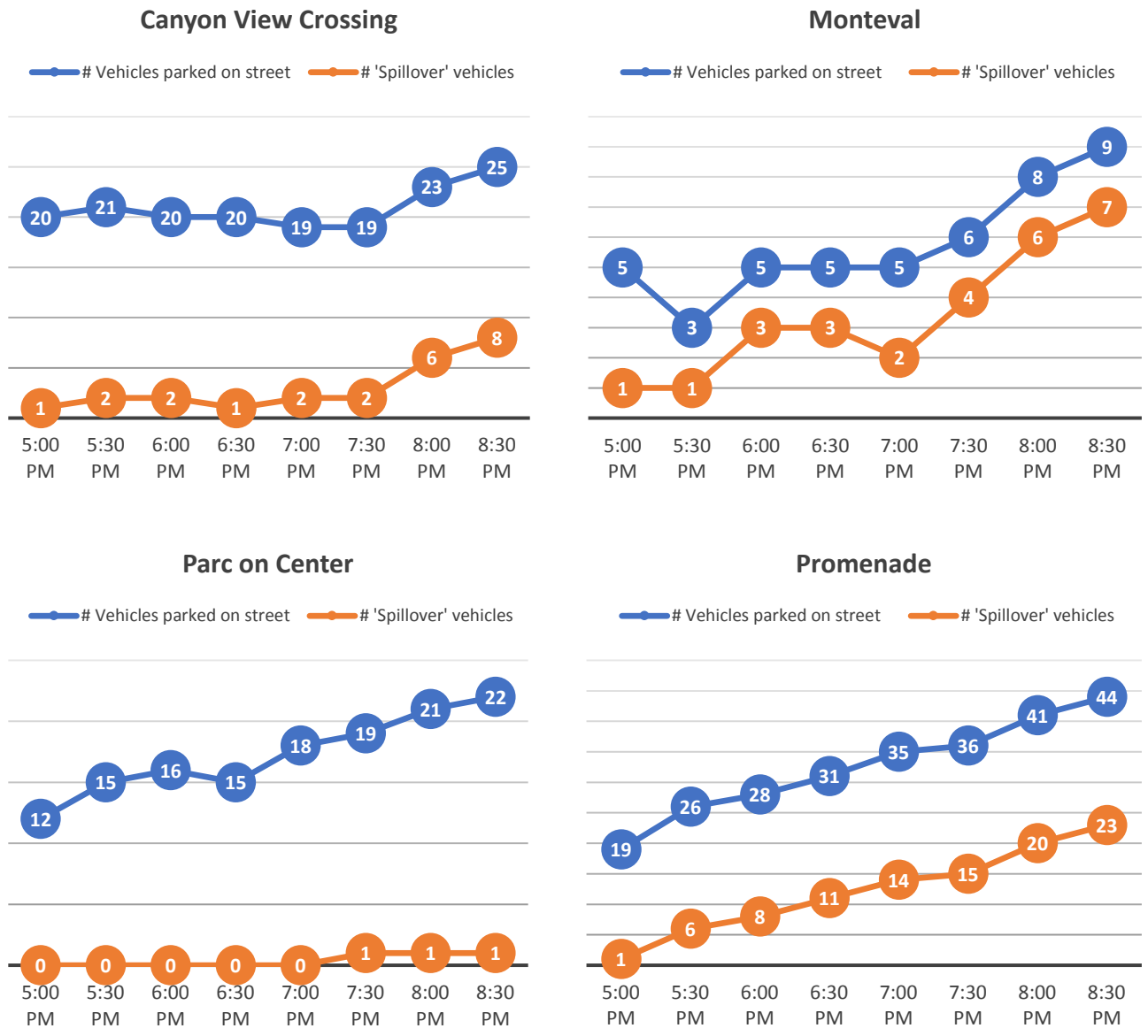
Property	Land Use	ITE Land Use Category	Orem Vehicle Trips per Unit / 1000 SF	ITE Vehicle Trips per Unit / 1000 SF	*% ITE Prediction (Obs. / ITE)*
Canyon View Crossing	Multifamily	Low/Mid-Rise Apartment (221)	6.51	6.65	*98%*
Monteval	Multifamily	Low/Mid-Rise Apartment (221)	3.94	6.65	*59%*
Parc on Center	Multifamily	Low/Mid-Rise Apartment (221)	3.52	6.65	*53%*
Parkway Lofts	Student Housing	Low/Mid-Rise Apartment (221)	5.24	6.65	*79%*
Promenade	Student Housing	Low/Mid-Rise Apartment (221)	9.69	6.65	*146%*
Summerwood Condos	Student Housing	Low/Mid-Rise Apartment (221)	8.21	5.81	*141%*
Festival Center	General Commercial	Community Shopping Center (820)	55.07	42.7	*129%*
University Crossing	General Commercial	Community Shopping Center (820)	14.95	42.7	*35%*
Temple View Terrace	Office	Office Building (701)	8.35	11.03	*76%*
Midtown 360	Mixed Use	Mixed Use	-		
Midtown 360 – R	*Residential*	*High-Rise Apartment (222)*	*5.17*	*6.65*	*78%*
Midtown 360 – C	*Commercial*	*Neighborhood Shopping Center (820)*	*32.19*	*42.7*	*75%*

Source: ITE, Orem Parking Counts and Surveys Conducted September 27, 2018, University of Utah Metropolitan Research Center

NEIGHBORHOOD SPILLOVER PARKING COUNTS

The Orem City Council has received a handful of complaints about tenants and visitors at multifamily developments parking on city streets in abutting/adjacent neighborhoods. The perception is that some drivers seek to avoid fees and other restrictions on parking on-site at these developments. Council members and city staff have expressed a particular concern about so-called “spillover” parking near a subset of sites from the 10 included in this study sample. Therefore, the MRC completed a supplemental count of on-street parking near four sites: Promenade, Canyon View Crossing, Monteval, and Parc on Center.

Figure 2: Neighborhood Parking Spillover Counts



Source: Supplemental counts conducted November 13, 2018, University of Utah Metropolitan Research Center

To determine how many drivers park on neighborhood streets during evening peak hours, the MRC stationed observers at key intersections near each of the four sites from 5-9 pm on Nov. 13, 2018. Each observer counted the number of cars parked on the streets upon their arrival, then tallied the total number of arriving and departing vehicles parking on the streets during half-hour increments. The observers also tracked how many of the vehicles parked on the street had occupants who entered or left the apartment complexes (as opposed to other nearby homes or businesses).

The following figures compare the number of vehicles parked on the street by people entering or exiting the apartment complexes as a subset of the total number of vehicles parked on the street (meaning the

latter total includes the former). Note that it was not determined how many of the vehicles on the street when the observers arrived at 5 pm were parked there by people who subsequently entered the apartment complex (it is very likely that many if not all of these are spillover parking).

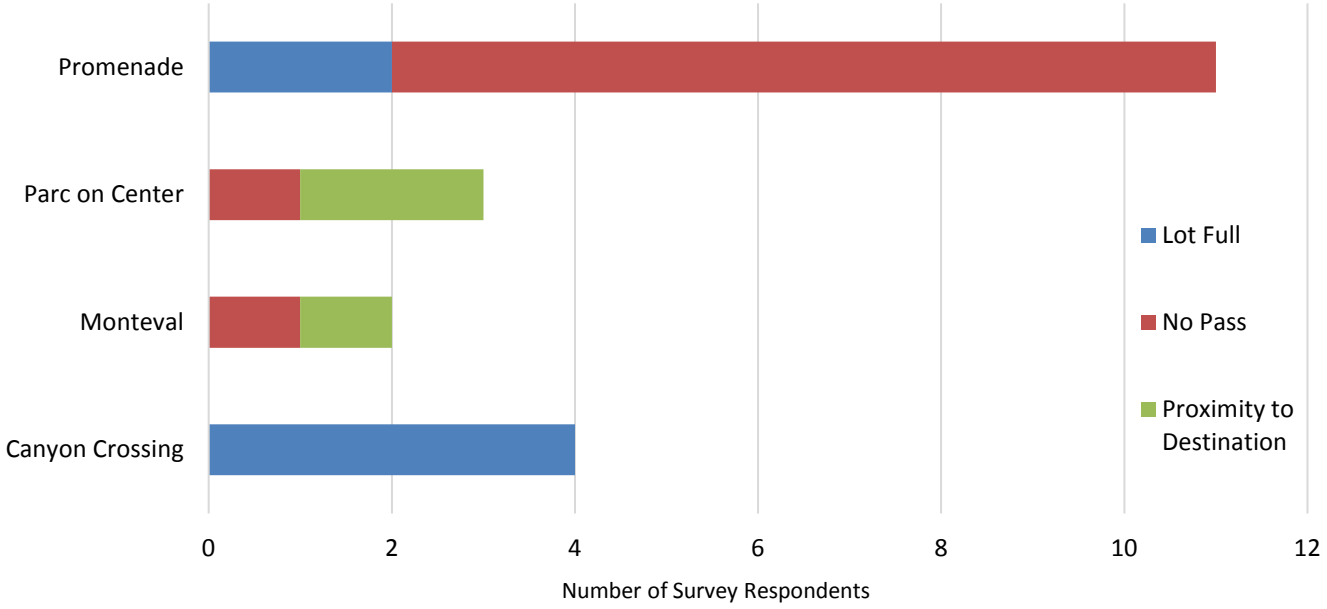
Promenade Apartments: The observer for the count at Promenade, Taylor Nelson, was stationed at the intersection of 800 South and Geneva Road, directly in front of the LDS church on that corner. From this vantage point, he had a view of both streets. Geneva Road is a busy arterial with bike lanes on both sides and posted no-parking zones along the entire segment. 800 South is local street located directly to the north of Promenade. One car was parked on Geneva Road at 5 p.m. and one additional car parked there during the rest of the four-hour observation period. However, on 800 South there were 19 cars parked at 5 pm, and the number only grew from there. The total number of vehicles parked on the street doubled from 5pm to 9pm, from 19 to 44, with the vast majority of drivers parking on the street entering the apartment complex. By 9 pm, there was very little street space left in close proximity to Promenade.

Canyon View Crossing: The observer at Canyon View Crossing, Riley Norton, was stationed at the corner of 1500 South and 400 East. From this vantage, he could see both streets plus the entrances to the complex. Over the four hours of the count, there was a moderate amount of parking on the street, with a nearly even split between vehicle occupants who entered and exited the apartment complex and vehicle occupants who entered and exited nearby houses. At 9 pm, there were 28 cars parked on the street, but still open spots in the complex. One possible reason for this may be the fact that parking on the street is closer to many apartments than parking within the complex itself.

Monteval: The observer at Monteval, Keegan Stanton, was stationed at the corner of 920 North and 400 West. From this vantage point, he was able to view the length of both streets near the apartment complex. He also watched for vehicles and residents who may have gone or arrived behind him. Considering the capacity of on-street parking, parking along the street was light. Eleven of the thirteen drivers who parked on the street throughout the evening entered the apartment complex, and four of the eight drivers leaving an on-street parking space exited from the apartment complex. However, there were never so many parked cars that availability of parking was a concern.

Parc on Center: The observer at Parc on Center, Prof Reid Ewing, was stationed at the corner of 105 North and 1140 West. From this vantage, he could see both the entrance to the apartment complex and neighborhood streets. Over the four hours of the count, parking on the street was light. Only one driver parked on the street in the neighborhood and subsequently walked to the apartment complex. However, two single-family houses directly north of the apartment complex had a number of visitors who parked on the street. Due to this traffic, it is possible that other neighbors have assumed that these on-street parkers are residents of the apartment complex. On the south side of the complex, many residents park on the commercial streets that access Center Street. On a separate evening, Orem staff counted 35 vehicles associated with the complex. These were not counted in the neighborhood "spillover" counts shown previously, but were taken into account when calculating parking demand for the complex.

Figure 3: Intercept Survey Responses When Asked Why They Parked on the Street



Source: Surveys Conducted September 27, 2018, University of Utah Metropolitan Research Center

RECOMMENDATIONS

This chapter contains parking recommendations for non-student multifamily, student multifamily, retail, office, mixed-use, and transit-oriented developments.

NON-STUDENT MULTIFAMILY DEVELOPMENTS

The table in this section provides a comparison of Orem's existing parking standards, the MRC's recommended parking minimums, ITE estimates for parking supply and peak demand, and regional highs and lows for multifamily development. These figures are for 100% residential developments and are not applicable to mixed-use or transit-oriented developments. Orem standards currently range from 1 to 2.5 spaces per unit or 0.65 to 1.75 spaces per bedroom, plus 0.25 to 0.78 per unit guest parking (not all PD zones require guest parking.) That is a tremendous spread, and is the result of varying parking requirements which are primarily based on units (which range from one to four bedrooms and typically house one to four adults).

ITE supply values are 1.4 to 2.0 spaces per dwelling unit, depending on the number of stories in the building. For low rise apartments, the median supply of parking is 1.4 spaces per dwelling unit. ITE peak parking demand values (which are more meaningful than ITE supply numbers) are in the mid-range of Orem's minimum parking ratios, ranging from 1.2 to 1.37 spaces per unit. For low- and mid-rise apartments, the range of peak demand is 1.2 to 1.23 spaces per unit.

Table 10: Existing Orem Parking Standards Comparison: Non-Student Multifamily

Land Use Category	Orem's Existing Code	Recommendation	ITE (Supply)	ITE (Peak Demand)	Regional High	Regional Low
Residential – Multifamily	1-2.5 per unit or 0.65-1.75 per bedroom + 0.25-0.78 per unit guest parking. (Not all PD zones require guest parking.)	0.75 per bedroom or 2 per unit, whichever is lower, or 1 per bedroom, plus 0.25 per unit for visitor parking	1.4-2.0 per unit	1.2-1.37 per unit	0.66-1.75 per bedroom + 0.25 per unit guest parking (Provo)	1 per bedroom or 2 per unit, whichever is lower (Saratoga Springs)

Source: Orem City Code, ITE, University of Utah Metropolitan Research Center

The three non-student multifamily developments for which data was collected are Canyon View Crossing, Monteval, and Parc on Center. The three provide parking at the following supply ratios: 1.64, 1.37, and 1.20 spaces per unit. On a per bedroom basis, parking supplies are 1.08, 0.87, and 0.63 spaces per bedroom. Peak demand over observed supply for on-site parking for each complex was 82%, 64%, and 92%, respectively. Each of these complexes had spillover parking, to varying degrees (as quantified in the previous section). Parc on Center had the lowest amount of spillover parking, though this is likely

due to the fact that streets internal to the complex are utilized for parking which are not reflected in the supply of parking stalls.

Based on the data in this study and the experience of City staff, multifamily complexes generally create a demand of one parking space per bedroom. Whether the typical two-bedroom apartment has two spouses or two unrelated roommates, both situations result in a need for two parking spaces. Adults need a car to live, study, and work in Orem, and current trends demonstrate that *the number of bedrooms in a complex correlate strongly with the number of adults renting*. This is the case even with four-bedroom units in Orem, despite having an occupancy limit of three unrelated adults per unit. These facts are the basis for the following recommendation, which seeks to standardize the parking requirements for multifamily developments throughout Orem.

This study recommends that Orem adopt a standard from a low of 0.75 parking spaces per bedroom or 2 per unit, whichever is lower, to a high of 1 parking spaces per bedroom plus0.25 visitor parking spaces per unit for multifamily developments. This recommendation is premised on two assumptions: first, that parking is free (bundled with the rent) and second, that where parking is unbundled (i.e. is subject to an additional charge), that there are not adjacent neighborhood streets onto which apartment parking is likely to spill over.

STUDENT HOUSING DEVELOPMENTS

On its face, there is little to distinguish suburban student housing from non-student multifamily development. The following table presents auto mode shares and vehicle trip rates relative to ITE. There is no distinguishing pattern. In addition, the ITE *Trip* and *Parking Generation* manuals make no distinction between student and other multifamily housing. Finally, note that the characterizations of apartments are somewhat arbitrary. There is no prohibition against students living in general multifamily housing, and no prohibition against non-students living in student housing.

Table 11: Multifamily Auto Mode Shares and % Vehicle Trip Generation Relative to ITE

Property	Land Use	ITE Land Use Category	% Auto Mode Share	*% ITE Prediction (Obs. / ITE)*
Canyon View Crossing	Multifamily	Low/Mid-Rise Apartment (221)	76%	*98%*
Monteval	Multifamily	Low/Mid-Rise Apartment (221)	61%	*59%*
Parc on Center	Multifamily	Low/Mid-Rise Apartment (221)	80%	*53%*
Parkway Lofts	Student Housing	Low/Mid-Rise Apartment (221)	88%	*79%*
Promenade	Student Housing	Low/Mid-Rise Apartment (221)	65%	*146%*
Summerwood Condos	Student Housing	Low/Mid-Rise Apartment (221)	42%	*141%*

Source: ITE, Orem Parking Counts and Surveys Conducted September 27, 2018, University of Utah Metropolitan Research Center

The three student housing developments for which parking data was collected are Parkway Lofts, Promenade, and Summerwood Condos. The three provide parking at the following supply ratios: 1.85, 2.46, and 3.60 spaces per unit. On a per-bedroom basis, parking supplies are 1.01, 0.65, and 0.91 spaces per bedroom, and are not so different from the general multifamily complexes described previously. Observed peak parking demand for the three apartment complexes (counted at 11 pm, after most residents are back for the night) is 0.88, 0.52, and 0.62 spaces per bedroom, respectively. Peak demand over observed supply for on-site parking for each complex was 85%, 95%, and 73%, respectively. These demand figures do not include on-street parking, which was measured for Promenade and showed that the complex created some spillover parking. These facts are the basis for the following recommendation, which seeks to standardize the parking requirements for student multifamily developments throughout Orem.

This study recommends that Orem adopt a uniform standard of from a low of 0.75 parking spaces per bedroom or 2 per unit, whichever is lower, to a high of 1 parking spaces per bedroom plus 0.25 visitor parking spaces per unit for multifamily developments for student housing developments.

This recommendation is premised on two assumptions: first, that parking is free (bundled with the rent) and second, that where parking is unbundled (is subject to an additional charge), that there are not adjacent neighborhood streets onto which apartment parking is likely to spill over.

Because it might be desirable for recommended parking requirements for student multifamily to be higher than non-student multifamily, it is important that City staff work with the Council to identify a standard that can be used rather than relying on a developer's intention. A suggestion would be a radius from Utah Valley University (UVU), as it is clear that multifamily developments near UVU are rented by UVU students and often have bedrooms with double-occupancy.

RETAIL DEVELOPMENTS

The table in this section provides a comparison of Orem's existing parking standards, the ITE estimates, and regional highs and lows for retail development. These figures are for suburban retail developments and are not applicable to mixed-use or transit-oriented developments. Note that Orem standards currently range from 2 to 4 spaces per 1,000 sq. ft. of gross leasable floor area (GLFA). The standard for neighborhood (30,000-100,000 sq. ft.) and community (100,000-400,000 sq. ft.) shopping centers in the ITE Parking Generation is 4.7 - 4.9 spaces per 1,000 sq. ft., respectively. ITE average peak demand for community shopping centers is 2.55 spaces per 1,000 sq. ft. There is wide variation in standards across the region. From a low of 1.67 spaces per 1,000 sq. ft. in Bluffdale and Provo to a high of 6 spaces per 1,000 sq. ft. in American Fork.

Table 12: Existing Orem Parking Standards Comparison: Retail

Land Use Category	Orem's Existing Code	ITE (Supply)	ITE (Peak Demand)	Regional High	Regional Low
Retail Shopping Center	2-4 per 1,000 sq. ft. GLFA	4.7-4.9 per 1,000 sq. ft. GLFA	2.27-4.67 per 1,000 sq. ft. GLFA	6 per 1,000 sq. ft. GLFA (American Fork)	1.67 per 1,000 sq. ft. GLFA (Bluffdale, Provo)

Source: Orem City Code, ITE, University of Utah Metropolitan Research Center

The study sampled two retail developments (shopping centers) for trip and parking generation, the Festival Center and University Crossing. The Festival Center has 492 spaces for a parking supply ratio of 5.0 spaces per 1,000 sq. ft. GLFA. University Crossing has 814 spaces for a parking supply ratio of 3.95 spaces per 1,000 sq. ft. Observed peak demand on the survey day was 2.84 occupied spaces per 1,000 sq. ft. at Festival Center, and 1.84 occupied spaces per 1,000 sq. ft. at University Crossing. Peak demand over observed supply for these developments were 57% and 47%, respectively.

Visitors accessed both of these shopping centers almost exclusively by automobile. Given the fairly low peak parking demands at both ITE sites and our two sampled sites, the City could decrease the parking requirements and allow retailers greater flexibility in determining their own need. **This study recommends that Orem adopt a standard from a low of 2 spaces per 1,000 sq. ft. GLFA to a high of 3 spaces per 1,000 sq. ft. for retail developments.**

OFFICE DEVELOPMENTS

The table in this section provides a comparison of Orem's existing parking standards, ITE estimates, and regional highs and lows for office development. These figures are for suburban single-use office buildings/parks and are not applicable to mixed-use or transit-oriented developments. Orem's parking supply standard is currently 4.0 spaces per 1,000 sq. ft. of GLFA. ITE peak demand values are somewhat lower than Orem's minimum parking ratios, ranging from 2.84 to 4.15 spaces per 1,000 sq. ft. of GLFA. Note also that the regional low requirement, applied by South Jordan and Bluffdale, is on the low end of the Orem parking supply range, at 2.5 spaces per 1,000 sq. ft.

Table 13: Existing Orem Parking Standards Comparison: Office

Land Use Category	Orem's Existing Code	ITE (Supply)	ITE (Peak Demand)	Regional High	Regional Low
Office	2.4-4.0 per 1,000 sq. ft. GLFA	3.3-4 per 1,000 sq. ft. GLFA	2.84-4.15 per 1,000 sq. ft. GLFA	6.67 per 1,000 sq. ft. GLFA (Provo, Vineyard)	2.5 per 1,000 sq. ft. GLFA (South Jordan, Bluffdale)

Source: Orem City Code, ITE, University of Utah Metropolitan Research Center

The one example of an office park for which data was collected in Orem is Temple View Terrace. It has a supply of 175 parking spaces. Its parking supply ratio is 3.34 spaces per 1,000 sq. ft. Its peak occupancy (peak demand) on the day of observation was 110 occupied spaces, for a peak occupancy rate of 63% and a peak occupancy ratio of 2.10 spaces per 1,000 sq. ft. It was exclusively accessed by people driving automobiles, so there is no discount for use of alternative modes. Yet, even with no transit or walk access, Temple View Terrace is greatly oversupplied with parking.

This study recommends that Orem adopt a standard of 2 per 1,000 sq. ft. GLFA for office developments. This is a minimum parking requirement and can be exceeded if a developer believes additional parking is warranted.

MIXED-USE DEVELOPMENTS AND SHARED PARKING

In 2018, Orem City adopted five Districts along State Street where new higher-density development will be permitted. In the future, similar Districts may also be adopted along University Parkway, Geneva Road, and other major corridors. This strategy allows for necessary growth in Orem while preserving the character of existing low-density neighborhoods.

While these new Districts currently permit all uses allowed in general commercial, they also allow for higher density mixed-use developments. Mixed-use developments consist of two or more land uses between which trips can be made using local streets, without having to use major streets. These uses typically include residential, retail, office, and/or entertainment. By clustering these uses, walk and bike trips between uses are encouraged, resulting in a lower demand for vehicle trips and parking stalls.

The Metropolitan Research Center (MRC) at the University of Utah has identified a total of 345 MXDs in 11 regions. Based on over 1,000 households located in these MXDs, the average vehicle ownership was determined for three types of housing.

Table 14: Average Vehicle Ownership in Mixed-Use Districts

Type of Housing	Average Vehicle Ownership
Single-Family Detached	1.87
Single-Family Attached	1.33
Multifamily	0.88

Source: The Metropolitan Research Center at the University of Utah

For non-residential uses located in MXDs, the MRC collected mode shares for trips generated. The data shows that in MXDs, automobile trips account for 57.7% of total trips related to non-residential uses, while non-auto trips are 42.3%. This data demonstrates that in other regions where mixed-use developments have become more common, they do indeed decrease the frequency of vehicle trips.

Table 15: Average Mode Shares for Non-Residential Uses in Mixed-Use Districts

Category	Auto	Transit	Walk	Bike	Non-Auto
Mode Shares	57.7%	11.4%	28.7%	2.3%	42.3%

Source: The Metropolitan Research Center at the University of Utah

On the assumption that the total number of trips generated by non-residential uses is equivalent to ITE Trip Generation rates for suburban land uses, and that a rise in the non-auto mode share translates into a reduction in parking demand for non-residential uses, the ITE parking demand rates can be adjusted downward. This has been done successfully in Orem using a shared parking arrangement in the PD-23 Zone, currently known as Midtown 360 located at 320 South State Street. The parking requirements for this zone require one parking stall per 250 sq. ft. GLFA of commercial and office space. The total number of parking stalls provided for non-residential uses—divided by three—is granted as a "base residential density." A minimum of 1.65 parking stalls per unit shall be provided for each residential unit in excess of the base residential density.

With 284 residential units and just over 50,000 sq. ft. GLFA, Midtown 360 provides a total of 689 parking stalls, which equals one parking stall per 250 sq. ft. GLFA and roughly 1.7 parking stalls per residential unit. Peak occupancy (peak demand) on the day of observation was 381 occupied spaces, for a peak occupancy rate of 55%. This peak demand took place at midnight when the demand for parking was assumed to be entirely for residential uses. At noon, parking demand reached 121 occupied spaces as was assumed to be primarily for non-residential uses. According to the data collected for mode share, 74% of trips were from vehicles, 24% from pedestrians, and 2% from bikes. Based on the data collected at Midtown 360, the site has an oversupply of parking. These facts demonstrate that this shared parking arrangement works, and are the basis for the following recommendation.

This study recommends that Orem adopt the shared parking arrangement utilized in PD-23 for all mixed-use developments in all Districts or require that the larger of the applicable minimums for commercial/retail or residential minimums apply.

TRANSIT-ORIENTED DEVELOPMENTS

The current reality in Orem is that, with few exceptions, each adult must own a car to live, study, and work. However, as transit expands and it becomes possible to live, study, and work *without* a car, a parking reduction for developments near transit would be appropriate. **Anticipating this possibility in the near future, this study recommends reducing parking requirements for transit-oriented developments (TOD) by 50% to 25% below requirements for MXD developments.**

Table 16: Recommendations for Minimum Parking Requirements in Transit Oriented Developments

Land Use	Recommended (Min.)	Recommended (Max.)
Single-family Attached	2 per unit	
Multifamily	0.75 per bedroom or 2 per unit, whichever is lower	1 per bedroom or 2 per unit, whichever is lower + 0.25 per unit for guest parking
Retail / Office	2 per 1,000 sq. ft. GLFA	2 per 1,000 sq. ft. GLFA
Mixed Use (MXD) with shared parking	Either commercial or residential minimum, whichever is larger	
Transit-Oriented Development (TOD)	50% reduction from MXD	25% reduction from MXD

Requirements for Transit-Oriented Developments

It is recommended that the following criteria be used to determine whether a development qualifies as a TOD and allow for a parking reduction:

- Relatively dense (multi-story development)
- Mixed use (more than one land use in the same building)
- Pedestrian and bicycle friendly (with sidewalks on all driveways and streets, and adequate bicycle parking and other facilities)
- Adjacent to transit (the proposed building is located within 1,000 feet of the center of a bus rapid transit, light rail, or commuter rail station)
- Built after a high-quality transit line is constructed or officially planned (within 5 years)

Because it requires a mix of uses and higher density, single family (detached and attached) cannot qualify as TOD. Based on observation and data collected by the MRC, higher density residential TOD sites that meet all criteria have lower peak demand and should be allowed a parking reduction. The recommendation is 50% to 25% below standards for mixed-use developments.

APPENDIX A – EXISTING PARKING REQUIREMENTS

Table 16: Orem's Existing Parking Requirements by Zone

Zone	Definition	Parking Requirement
RESIDENTIAL ZONES (Article 22-6)		
Rural & Low Density (R20)	One single-family dwelling per lot. Minimum lot size of 20,000 square feet per lot.	At least two (2) parking spaces shall be required for each primary dwelling located in the R5, R6, R6.5, R7.5, R8, R12, and R20 zones (Article 22-6-8(G)).
Low Density (R12)	One single-family dwelling per lot. Minimum lot size of 12,000 square feet per lot.	At least two (2) parking spaces shall be required for each primary dwelling located in the R5, R6, R6.5, R7.5, R8, R12, and R20 zones (Article 22-6-8(G)).
Low Density (R8)	One single-family dwelling per lot. Minimum lot size of 8,000 square feet per lot.	At least two (2) parking spaces shall be required for each primary dwelling located in the R5, R6, R6.5, R7.5, R8, R12, and R20 zones (Article 22-6-8(G)).
Medium Density (R7.5)	One single-family dwelling per lot. Minimum lot size of 7,500 square feet per lot.	At least two (2) parking spaces shall be required for each primary dwelling located in the R5, R6, R6.5, R7.5, R8, R12, and R20 zones (Article 22-6-8(G)).
Medium Density (R6.5)	One single-family dwelling per lot. Minimum lot size of 6,500 square feet per lot.	At least two (2) parking spaces shall be required for each primary dwelling located in the R5, R6, R6.5, R7.5, R8, R12, and R20 zones (Article 22-6-8(G)).
Medium Density (R6)	One single-family dwelling per lot. Minimum lot size of 6,000 square feet per lot.	At least two (2) parking spaces shall be required for each primary dwelling located in the R5, R6, R6.5, R7.5, R8, R12, and R20 zones (Article 22-6-8(G)).
Medium Density (R5)	One single-family dwelling per lot. Minimum lot size of 5,000 square feet per lot. Effective May 1, 2004, the R5 zoning designation shall not be applied to any additional property within the City.	At least two (2) parking spaces shall be required for each primary dwelling located in the R5, R6, R6.5, R7.5, R8, R12, and R20 zones (Article 22-6-8(G)).
Planned Residential	PRDs include single-family dwellings, twin homes, condominiums, townhouses, zero lot line developments, and apartments	There shall be a minimum of two (2) parking spaces provided for each dwelling, one of which shall be covered. There shall also be a minimum

Zone	Definition	Parking Requirement
Developments (PRD)		of one half (½) parking space for each dwelling for guest parking within the development (Article 22-7-12(J)).
PLANNED DEVELOPMENT ZONES (Article 22-11)		
Planned Development (PD)	The purpose of Planned Development (PD) zones is to provide flexibility in the City's zoning scheme in order to allow for unique, innovative and well-planned developments that would not be possible under one of the City's existing zoning classifications. PD zones are not intended for use in situations where a proposed development is reasonably feasible under one of the City's existing zoning classifications. PD zones are intended for use primarily where no existing zoning classification is both sufficiently permissive to allow uses that would be suitable on the property and sufficiently restrictive to protect the character and quality of neighboring properties. Examples of this type of situation may include, but are not limited to, the following: · Mixed-use developments; · Townhouse or other high-density residential developments; · Where a few uses in an existing zone (such as the C2 zone) would be appropriate on a particular parcel of property, but the remainder of the uses in that zone would not be appropriate; · Where the setbacks, building height limits or other standards of an existing zone are not necessary for the protection of neighboring properties or the general welfare of the City because of the proximity of a parcel of property to a particular landscape feature such as a cliff or a hillside where there would be no negative impact from a relaxation of such standards; and · Where additional setbacks or other buffers are needed to protect	All commercial PD zones shall have the same parking requirements as stated in Off-Street Parking (Section 22-15-4(B)): unless otherwise specified in PD Zones (Section 22-11). Parking (Section 22-15-4(B)): "One stall shall be required for every 250 square feet of gross floor area."

Zone	Definition	Parking Requirement
	neighboring properties from uses to be employed on a parcel of property.	
PD-8 Zone, Palisades Drive between 600 North and 800 North	Provide an area within the City for the promotion of the television and motion picture industry; Promote the development of television and motion picture production, educational facilities and related support uses while protecting the character and quality of adjacent residential uses;	The amount of required off-street parking spaces shall be the sum of the parking required under this ordinance for the principal use together with a reasonable amount for all accessory uses. Said reasonable amount shall be determined in light of the uses, location and circumstances of the building or structure and in consideration of the provisions of this ordinance.
PD-9 Zone, Palisades Drive between 500 North and 600 North	Promote agricultural or rural density residential estate uses at a base density not to exceed three and sixty-three hundredths (3.63) dwelling units per gross acre for a standard subdivision or a total density of five (5) units per gross acre for a planned residential development, and to allow other selected uses which are compatible with the open and rural character of the zone; Promote the development of television and motion picture production educational facilities and related support uses while protecting the character and quality of adjacent residential uses;	The amount of required off-street parking spaces shall be the sum of the parking required under this ordinance for the principal use together with a reasonable amount for all accessory uses. Said reasonable amount shall be determined in light of the uses, location and circumstances of the building or structure and in consideration of the provisions of this ordinance.
PD-11 Zone, 1430 South Sandhill Road.	The purpose of the PD-11 Zone is to provide a planned development of attached residential dwelling units and detached residential dwelling units.	There shall be a minimum of two (2) parking spaces provided for each dwelling unit, at least one of which shall be covered. There shall also be a minimum 0.78 parking space for each dwelling for guest parking within the development.
PD-15 Zone, 2000 West Springwater Park Drive.	The purpose of the PD-15 zone is to accommodate development of a municipal golf course, city parks, and public recreational facilities, while establishing adjacent areas for medium density residential development. This particular mix of uses is not typically found in other zones of the City, so the PD-15 zone is established to provide a unique area for coexistence of these	Attached dwelling units shall be provided with not less than two (2) parking spaces each, both of which shall be in a garage attached to the dwelling the parking is to serve. In addition, one half (½) parking space for each dwelling shall be developed for guest parking within any attached unit development.

Zone	Definition	Parking Requirement
	uses, and to accomplish the City's goal of developing a significant, high-quality municipal golf course and recreational facilities, and to promote the overall vitality of the neighborhood and the City.	
PD-16 Zone, 400 South 1800 West	The purpose of the PD-16 Zone is to accommodate development of a medium density residential development area. The purpose is accomplished by: Allowing densities higher than a typical residential development; Requiring the consolidation of open spaces; and Establishing higher standards for landscaping, building and site design, public safety, parking, aesthetics, traffic circulation, fencing, lighting, and other similar site improvements.	Each dwelling shall be provided with not less than two (2) parking spaces, one of which shall be covered. In addition, one half (½) parking space for each dwelling shall be developed for guest parking within the development.
PD-17 Zone, 1200 South Between 20 East and 150 East	The purpose of the PD-17 Zone is to accommodate and encourage the development of affordable elderly housing. "Affordable elderly housing" is defined as housing designed and used exclusively for elderly persons whose income is at or below eighty percent (80%) of the median income for the Provo-Orem Metropolitan Statistical Area as published by the United States Department of Housing and Urban Development (HUD). Affordable housing is further defined as housing for which the rent does not exceed the standards and limits set forth in 24 CFR 800 through 899 as those sections may be amended. "Elderly person" is defined as a person who is 60 years old or older. The purpose of the PD-17 Zone is accomplished by: Allowing densities higher than typical residential developments; Establishing minimum standards for landscaping, building and site design, public safety, fencing, lighting, and other similar site improvements; and	Each dwelling unit shall be provided no less than one and one-half (1.5) parking stalls.

Zone	Definition	Parking Requirement
	Requiring standards that enable affordable elderly housing to fit into the surrounding neighborhood.	
PD-19 Zone, South Rim PRD, 1755 South 750 East	The purpose of the PD-19 zone is to provide a planned development of attached residential dwelling units with densities not to exceed nine (9) units per acre. The PD-19 zone may only be applied to parcel(s) shown in the Preliminary Development Plan included as Appendix M of the Orem City Code.	Parking for Area 1 and Area 3 shall be provided at the rate **of (0.65) parking spaces per occupancy unit**. Parking for Area 2 shall be provided at the rate of **0.62 parking spaces per occupancy unit**. Parking for commercial uses shall be provided at the rate of one (1) parking space per 500 square feet of floor area. Hotels shall have one (1) stall per room. Buildings over 30,000 square feet in size which have 50% or more of the building area used for commercial purposes must provide the required parking stalls, based on the rate listed above, next to the building.
PD-22 Zone, Urban Village	This property is a gateway to the City of Orem and as such is uniquely suited for commercial, office, and residential uses. Its development for these uses is important to the economic vitality and tax base of the City of Orem. The PD 22 zone is designed to maximize office, commercial, and residential uses within a mixed-use setting.	Residential Areas. Buildings containing residential uses only shall provide two (2) parking stalls for every dwelling unit. Nonresidential Areas. Buildings containing only nonresidential uses shall provide five (5) parking spaces for every one thousand (1000) square feet of gross leaseable floor area. Mixed-use Areas. Buildings containing a mix of residential and nonresidential uses shall provide five (5) parking spaces for every one thousand (1000) square feet of gross floor area of nonresidential uses. Additional parking stalls shall be required for residential units as follows: (1) One (1) parking stall shall be required for each residential unit with one (1) bedroom; and (2) Two (2) parking stalls for each residential unit with two (2) or more bedrooms. For purposes of calculating the parking requirement, a bedroom shall include any room that is reasonably likely to be used as a bedroom whether designated as a den, office, study, game room, or other similar appellation.
PD-23 Zone, Midtown Village, 320 South State	To promote the redevelopment and beautification of properties in the vicinity of 320 South State Street by encouraging the conversion of blighted and unsightly areas into new developments consisting	The base residential density shall be equal to the number of parking stalls provided for nonresidential uses divided by three (3). … Additional residential units in excess of the base residential density shall be allowed provided

Zone	Definition	Parking Requirement
	of an integrated mix of commercial and residential uses. To allow residential units to be located in commercial zones complimented by and integrated with compatible commercial uses. To allow for the creation of a new housing alternative that will provide individuals with the opportunity to live in proximity to places they work and shop by creating a more walkable community, which has the potential of reducing the number of vehicular trips per person.	that 1.65 parking stalls are provided for each residential unit in excess of the base residential density. (Article 22-11-36(C-2)). A total of sixty "large residential units" shall be allowed in the PD-23 zone. A large residential unit may be occupied by a family as defined in Section 22-2-1 of the Orem City Code or by up to five individuals who are not all related to each other. A large residential unit must have at least 2,000 square feet. (Article 22-11-36(C.3)). Four parking stalls shall be provided for every one thousand (1000) square feet of gross leaseable floor area of commercial or office uses. No parking stalls shall be required for residential units included within the base residential density (as defined in 22-11-36). A minimum of 1.65 parking stalls shall be provided for each residential unit in excess of the base residential density. In addition to the parking requirements stated above, one (1) additional parking stall shall be required for each large residential unit (in addition to the 1.65 stall requirement).
PD-29 zone (Siena Villas @ Columbia Lane)	The purpose of the PD-29 zone is to allow development of a high-density residential apartment complex.	Business Hours Parking Requirement. During all business hours (defined as 8:00 a.m. to 5:30 p.m., Monday through Friday) at least 1.75 parking spaces shall be provided for each one-bedroom dwelling unit, and at least 2.25 parking spaces shall be provided for each dwelling unit containing more than one bedroom. Nonbusiness Hours Parking Requirement. During all nonbusiness hours, at least 2.25 parking spaces shall be provided for each dwelling unit. Parking spaces located on adjacent property which are made available to the residents of the development through a recorded, perpetual parking easement may be counted toward the parking requirement. Other Parking Requirements. All parking spaces shall comply with Article 22-15 of the Orem City Code.

Zone	Definition	Parking Requirement
PD-32 zone, MBARQ Senior Independent Living Facility	The purpose of the PD-32 zone is to allow development of a senior independent living facility.	Parking shall be provided at the rate of 0.7 parking stalls per apartment unit. All parking areas shall comply with Article 22-15 (Off-Street Parking) of the Orem City Code.
PD-33 zone (Transit Oriented Development – 800 South Geneva Road)	The purpose of the PD-33 zone is to allow development of a transit oriented development.	Parking for apartments or condominiums shall be provided at the rate of (0.65) parking spaces per bedroom. The parking requirements shall be met for each phase of construction. The term bedroom shall include all areas suitable as a private sleeping area such as a studio, den, etc. No parking shall be allowed to the east of the building(s) in Area A, and there shall be no parking between Geneva Road and the buildings on the west side of Area B. Parking for commercial uses in Area B shall be provided at the rate of one (1) parking stall per 500 square feet of gross floor area.
PD-34 zone (University Place – 1300 South State Street)	The purpose of the PD-34 zone is to allow development of a regional shopping center and mixed use development.	Parking shall be provided and maintained as required below. The provisions of Article 22-15 (Off-Street Parking) of the City Code shall not apply to the PD-34 zone except as otherwise provided herein. The parking standards set forth below are less than normally required because development in the PD-34 zone will consist of a mix of uses with shared parking. Parking Standard. The following standards are the minimum amount of parking that is required in the PD-34 zone: · Retail space. Three and six tenths (3.6) parking stalls shall be provided for every one thousand (1000) square feet of gross leaseable area (as defined in Section 22-15-2) of retail space. · Office and other nonretail commercial space. Two and four tenths (2.4) parking stalls shall be provided for every one thousand (1000) square feet of gross leasable floor area of office space and other nonretail commercial space. · Residential. One and forty-nine hundredths (1.49) parking stalls shall be provided for each residential dwelling unit. · Hotels and Houses of Worship. Notwithstanding anything herein to the contrary, one stall per room shall be required

Zone	Definition	Parking Requirement
		for hotels and one stall shall be required for every four fixed seats for a house of worship (churches, synagogues, mosques, etc.). · Senior Independent Living Facility. One parking stall shall be provided per dwelling unit.
PD-35 zone (Windsor Court, 320 West 1360 North)	The purpose of the PD-35 zone is to provide a planned development of twin homes.	A minimum of two (2) parking spaces shall be provided for each dwelling, one of which shall be covered. A minimum of one-quarter (1/4) additional parking space shall be provided for each unit for guest parking within the area designated in the concept plan as "two-story twin home development." Driveways shall not be counted toward the guest parking requirement.
PD-36 zone (Orem Falls Business Park, 1200 North Geneva Road)	The purpose of the PD-36 zone is to allow the development of a light industrial business or technology park that will accommodate a variety of commercial and light industrial uses	The standards and requirements of Article 22-15 of the Orem City Code shall apply to all parking in the PD-36 zone except as expressly modified herein. One parking stall per 750 square feet shall be required for the first 50,000 square feet of building area or portion thereof. One parking stall per 1,000 square feet shall be required for the second 50,000 square feet of building area or portion thereof. One parking stall per 1,500 square feet of building area shall be required for building space in excess of 100,000 square feet. Notwithstanding the foregoing, the parking requirement for office and retail space is one (1) parking stall per 250 square feet regardless of the size of the building. The parking standards for the specific use exceptions described in Orem City Code section 22-15-4(G) shall also apply in the PD-36 zone.
PD-37 zone (Legacy at Orem--1450 South State Street)	To promote the redevelopment and beautification of properties in the vicinity of 1450 South and State Street. To allow for the creation of a new housing alternative that will provide individuals with the opportunity to live in proximity to employment opportunities, retail shopping and public transportation thereby reducing traffic generation.	At least one and one-quarter (1.25) parking stalls shall be provided for each one bedroom unit and at least two (2) parking stalls shall be provided for each unit having two or more bedrooms. At least one covered parking stall shall be provided for each unit.

Zone	Definition	Parking Requirement
PD-38 Zone (Summit Ridge Apartments)- 1697 South 400 East	The purpose of the PD-38 zone is to allow development of a high-density residential apartment complex.	At least one and one-quarter (1.25) parking stalls shall be provided for each one bedroom unit and at least two (2) parking stalls shall be provided for each unit containing more than one bedroom.
PD-30 zone, Centennial Plaza	To promote the beautification of properties in the vicinity of Orem Boulevard and Center Street by integrating a mix of commercial and residential uses. To allow for the creation of a new housing alternative that will provide individuals with the opportunity to live in proximity to employment opportunities, retail shopping and public transportation thereby reducing traffic generation.	Parking shall be provided as per the Concept Plan. At least one and one-quarter (1.25) parking stalls shall be provided for each one bedroom unit and at least two (2) parking stalls shall be provided for each unit having two or more bedrooms.
PD-39 Zone (Cascade Village) 920 North and State Street)	The purpose of the PD-39 zone is to allow development of a high-density residential apartment complex.	At least one and one-half (1.5) parking stalls shall be provided for each one bedroom unit and at least two (2) parking stalls shall be provided for each unit having two or more bedrooms.
PD-40 Zone, 460 South State Street	The purpose of the PD-40 zone is to allow development of a high-density residential apartment complex and mixed use development which maintains the street-level commercial character of State Street.	At least two and one-quarter (2.25) parking spaces shall be provided for each dwelling unit with at least one covered stall per unit. The parking requirements shall be met for each phase of construction. Parking for commercial uses in Area B shall be provided at the rate required in Article 22-15 of the Orem City Code. Parking for commercial uses in Area B shall be located between the commercial uses and State Street as shown in the Concept Plan.
PD-41 Zone, 1200 West Center	The purpose of the PD-41 zone is to allow for the development of a mixed use project including high-density residential apartments and retail pads.	At least two (2) parking stalls shall be provided for every residential unit with at least one covered stall per unit. Parking for Area B shall be the same as required in the C3 zone.
PD-43 (Auburn Meadows) 2000 South Geneva	The purpose of the PD-43 zone is to allow for a medium density development of attached residential units consisting of townhouses and twin-homes.	At least two and one-half (2.5) parking stalls, two of which must be covered, shall be provided for each dwelling unit. Driveways shall not count towards the parking requirement.

Zone	Definition	Parking Requirement
PD-46 Zone (Irving) – 200 East 1200 South	The purpose of the PD-46 zone is to allow a planned development of attached residential dwelling units on property located at 1200 South 200 East.	At least 2.25 parking stalls shall be provided for each dwelling unit, at least one of which must be covered.
PD-47 Zone - Flying Horse Condos - 1672 South Sandhill Road	The purpose of the PD-47 zone is to allow development of high-density residential units.	At least 2.3 parking stalls shall be provided and maintained for each residential unit in the development. At least one covered parking stall shall be provided and assigned for the use of each residential unit.
REGULATIONS GOVERNING PARTICULAR USES – RESIDENTIAL ZONES (Article 22-6-9):		
Accessory Apartments		A single family dwelling with an accessory apartment shall provide at least three (3) off-street parking stalls,
Residential Facilities for Disabled Persons	a dwelling that houses only disabled persons and staff members serving disabled persons, which is licensed or certified as such by the Utah Department of Human Services. A Sober Living Home shall not be considered a Residential Facility for Disabled Persons.	At least three off-street parking stalls are provided to serve the needs of residents, visitors, and staff members.
Assisted Living Facility for Elderly Persons	an assisted living facility occupied exclusively by persons 60 years of age or older and paid professional staff members.	At least three off-street parking stalls are provided to serve the needs of residents, visitors, and staff members.
Residential Facilities for Elderly Persons	a single-family or multiple-family dwelling unit housing elderly persons (age 60 or older) who desire or need to live with other elderly persons in a group setting, but who are capable of living independently.	At least three off-street parking stalls are provided to serve the needs of residents, visitors, and staff members. Additional parking may be required based on the number of residents occupying the facility, the number of residents who are reasonably expected to maintain a vehicle at the facility, the reasonably anticipated number of visitors and the number of staff members who will be serving the residents.
Sober Living Homes	a residential dwelling that is operated pursuant to a program designed to provide a stable environment of clean and sober living conditions for individuals who are recovering from alcohol and/or drug addiction who do not require	At least four off-street parking stalls shall be provided to serve the needs of residents, visitors and staff members.

Zone	Definition	Parking Requirement
	twenty-four hour supervision or therapeutic services on the premises.	
Youth Transitional Homes	a residential facility licensed by the State of Utah that provides twenty-four hour staff supervision and a peer support structure to help individuals under the age of 18 acquire and strengthen the social and behavioral skills necessary to live independently in the community.	At least three off-street parking stalls are provided to serve the needs of residents, visitors, and staff members.
Home Day Care Services-Child & Adult	Adult Day Care; Home Child Day Care, Small; Home Child Day Care Medium; and Home Child Day Care, Large.	All residents, visitors and employees who arrive at the home in connection with the Home Day Care Service shall be legally parked on the lot occupied by the residence or on that part of the street which immediately abuts the lot. At least one off street parking space shall be provided for no more than one non-resident employee. The residential driveway (including garage) may be used for this purpose provided that each of the provider's own vehicles and those of family members can be parked in the driveway and not on the street.
Private Schools and Commercial Day Care Services		Parking shall be provided at the ratio of two (2) stalls for every teaching station and one (1) stall for every six (6) students age sixteen (16) or older.
OVERLAY ZONES (Article 22-12)		
Student Housing		at least eight-tenths (0.8) parking spaces per occupancy unit.
Hospital Overlay Zoning		at least one (1) stall per two hundred fifty (250) square feet of gross floor area. The City Council may modify the parking requirement if any interested party submits a certified parking study and the Council is convinced that the modification will provide sufficient on-site parking for the development. Medical or dental offices or clinics shall have at least one (1) parking stall for each two hundred fifty (250) square feet of gross floor area.

Zone	Definition	Parking Requirement
Urban Mixed-Use Overlay Zone		shall be based on the commercial floor space parking requirements in accordance with Section 22-15 of this Chapter. All of the required parking may be shared between the residential and commercial uses of a development.
Affordable Senior Housing (ASH) Overlay Zone		Each dwelling unit shall be provided no less than one and one-half (1.5) parking stalls. One (1) covered stall shall be required for each unit.
COMMERCIAL AND PROFESSIONAL OFFICE ZONES (Article 22-15)		
Professional Office (PO)	The PO zone is established to create a buffering effect between residential uses and traffic associated with arterial and collector streets; and to promote nonretail professional and service uses that are compatible with adjacent residential uses.	One stall shall be required for every 250 square feet of gross leaseable floor area. No building may have less than five parking stalls. (Article 22-15-4)
Commercial Zone (C1)	The C1 zone is established to promote nonretail commercial uses, such as offices and financial institutions, as the primary use and to encourage development in such a manner so as to be compatible with adjacent residential uses.	One stall shall be required for every 250 square feet of gross leaseable floor area. No building may have less than five parking stalls. (Article 22-15-4)
Business Park Zone (BP)	The BP zone is established to provide areas for scientific research, development and training, offices, and manufacturing incidental and accessory to such uses.	One stall shall be required for every 250 square feet of gross leaseable floor area. No building may have less than five parking stalls. (Article 22-15-4)
Commercial Zone (C2)	The purpose of the C2 zone is to: Allow a wide range of commercial and retail development including offices, business and personal services, public spaces, and general community shopping;	One stall shall be required for every 250 square feet of gross leaseable floor area. No building may have less than five parking stalls. (Article 22-15-4)
Commercial Zone (C3)	The purpose of the C3 zone is to: Encourage and enhance the development of commercial complexes with multiple tenants in a way that contributes to the positive character of the City of Orem and the surrounding region; and Provide	One stall shall be required for every 250 square feet of gross leaseable floor area. No building may have less than five parking stalls. (Article 22-15-4)

Zone	Definition	Parking Requirement
	appropriate buffering between large-scale commercial development and adjacent residential development.	
Highway Services (HS)	The HS zone is established to promote uses most commonly associated with the traveling public and general community shopping.	One stall shall be required for every 250 square feet of gross leaseable floor area. No building may have less than five parking stalls. (Article 22-15-4)
NON-RESIDENTIAL USES IN RESIDENTIAL ZONES (Article 22-15-4(F))		
Public Primary & Secondary Schools		Two stalls per teaching station and one stall for every six students over the age of 16.
Private Primary & Secondary Schools		Section 22-6-9(H.11): Parking shall be provided at the ratio of two (2) stalls for every teaching station and one (1) stall for every six (6) students age sixteen (16) or older.
http://online.encodeplus.com/regs/orem-ut/doc-viewer.aspx?ajax=0&tocid=001.022.006.009 All other nonresidential primary uses in residential zones that are not listed in Section 22-15-4(G)		shall have the same parking requirements as Section 22-15-4(A): One stall shall be required for every 250 square feet of gross leaseable floor area. No building may have less than five parking stalls.
SPECIFIC USE EXCEPTIONS (Article 22-15-4(G))		
Group Quarters		1 stall for every 2.5 beds in the facility
Hotel/Motel		1 stall per room
Restaurant		1 stall for every 3 seats, or if no fixed seating then one stall for every three persons based on maximum occupancy
Auto Related Uses		4 stalls per auto bay, plus one stall per employee. (In no circumstance shall the

Zone	Definition	Parking Requirement
		number of parking stalls required by this Section be less than that required by the zone in which the use is located.) Automobile wash uses (SLU 6411) shall have the following parking requirements: Full service and automatic automobile wash uses shall have at least one (1) parking stall per 600 square feet of gross floor area (excluding bay areas). Each bay shall have at least two (2) stacking spaces in front of the bay in addition to the bay. Self-service automobile wash uses shall have at least two (2) parking stalls. Each bay shall have at least two (2) stacking space in front of the bay in addition to the bay.
Church		1 stall for every four fixed seats
Occupancy Based Uses		The maximum occupancy of these uses shall be limited to three and one-half (3 ½) persons per parking stall provided. All sites used for these purposes must provide the minimum parking stalls required by this Article based on the Gross Floor Area (GFA) of all buildings associated with that site.
Movie Theatre		1 stall for every 4 seats
Personal Storage Units		Parking for personal storage units shall be provided on the driving lanes adjacent to the personal storage units. Driving lanes shall be at least twenty (20) feet in width. Additional and separate parking stalls shall be located adjacent to the manager's office in the minimum amount of one parking space for every two hundred (200) storage units or fraction thereof with a minimum of two (2) parking spaces to be provided. Driving lanes and required parking spaces may not be rented as, or used for vehicular storage.
Barber and Beauty Schools		A minimum of 1.5 parking stalls shall be required per operator/teaching station or 4 stalls per 1,000 square feet; whichever is greater.

Zone	Definition	Parking Requirement
Veterinary Hospital/Clinic		A minimum of one (1) parking space per 325 square feet
OVERLAY ZONES (Article 22-12):		
Student Housing District (SH)	The student housing overlay zone (SH) is created for the purpose of providing student housing in the immediate vicinity of Utah Valley State College on undeveloped parcels where the impact of student housing on existing single-family residential neighborhoods can be minimized. The student housing overlay zone is designed to preserve the values of family, quiet seclusion and clean air. At least 90% of the occupants of any student housing project in the student housing overlay zone shall be students and their spouses and dependent children.	at least eight-tenths (0.8) parking spaces per occupancy unit. Covered bicycle parking spaces shall be required for each site. The number of bicycle parking spaces to be provided shall be ten (10) or a number equal to twenty-five percent (25%) of the required on-site automobile parking spaces, whichever is greater.
High Rise District (HR)	The high rise overlay zone (HR) was formerly designed to allow vertical construction above the height permitted in the underlying zone with a corresponding increase in meaningful open space. … However, effective February 1, 2003, the HR zoning designation shall not be applied to any additional property within the City.	All zone development standards and site plan requirements of this Section and the underlying zone shall apply. When there is a conflict between varying standards, the more restrictive requirements shall apply
Infill Overlay (IO)	The Infill Overlay Zone was formerly designed to provide flexibility in development standards for small residential parcels that are hard to develop under standard residential requirements, allowing them to be developed with modified standards while maintaining the general character of the underlying zone. … However, effective May 1, 2004, the Infill Overlay zoning designation shall not be applied to any additional property within the City.	-
Agriculture Overlay (AG)	The agriculture overlay zone is designed to encourage the preservation of	Except as expressly modified in this Section 22-12-6, all development standards applicable in

Zone	Definition	Parking Requirement
	agricultural uses, especially orchards, within the City.	the underlying zone shall apply in the agriculture overlay zone.
Hospital Overlay (HO)	The hospital overlay zone (HO) may be applied to property in any zone except the OS5 Zone, M1 Zone, M2 Zone, CM Zone and BP Zone.	Hospitals shall have at least one (1) stall per two hundred fifty (250) square feet of gross floor area. Medical or dental offices or clinics shall have at least one (1) parking stall for each two hundred fifty (250) square feet of gross floor area.
Urban Mixed-Use Overlay (UX)	The urban mixed-use overlay zone (UX) was formerly intended to promote traditional urban development by allowing residential units to be located in commercial zones while maintaining the street-level commercial character of the underlying zone. … However, effective February 1, 2003, the UX zoning designation shall not be applied to any additional property within the City.	The amount of parking required in an urban mixed-use development shall be based on the commercial floor space parking requirements in accordance with Section 22-15 (Off-Street Parking) of this Chapter. All of the required parking may be shared between the residential and commercial uses of a development.
Affordable Senior Housing (AS)	Affordable Senior Housing is defined as housing designed and used exclusively for elderly persons whose income is at or below eighty percent (80%) of the median income for the Provo-Orem Metropolitan Statistical Area as published by the United States Department of Housing and Urban Development (HUD).	Each dwelling unit shall be provided no less than one and one-half (1.5) parking stalls. One (1) covered stall shall be required for each unit.
MANUFACTURING AND RESEARCH & DEVELOPMENT ZONES (Article 22-9)		
Controlled Manufacturing Zone (CM)	The CM zone is established to provide areas where planned manufacturing parks may be developed. The zone is designed to provide for such uses on well-landscaped sites such that they can be located in proximity to residential uses.	One parking stall per 500 square feet shall be required for the first 50,000 square feet of building area or portion thereof. One parking stall per 750 square feet shall be required for the second 50,000 square feet of building area or portion thereof. One parking stall per 1,000 square feet of building area shall be required for the third 50,000 square feet or portion thereof. Building(s) larger than 150,000 square feet shall require 217 parking stalls plus one parking stall per 2,250 square feet of building area in excess of 150,000 square feet. The parking requirement for office spaces is one (1)

Zone	Definition	Parking Requirement
		parking stall per 250 square feet regardless of the size of the building.
Light Manufacturing Zone (M1)	The M1 zone is established to provide areas where light intensity industrial activities and uses can be developed.	One parking stall per 500 square feet shall be required for the first 50,000 square feet of building area or portion thereof. One parking stall per 750 square feet shall be required for the second 50,000 square feet of building area or portion thereof. One parking stall per 1,000 square feet of building area shall be required for the third 50,000 square feet or portion thereof. Building(s) larger than 150,000 square feet shall require 217 parking stalls plus one parking stall per 2,250 square feet of building area in excess of 150,000 square feet. The parking requirement for office spaces is one (1) parking stall per 250 square feet regardless of the size of the building.
Heavy Manufacturing Zone (M2)	The M2 zone is established to provide areas where heavy intensity industrial activities and uses can be developed.	One parking stall per 750 square feet shall be required for the first 100,000 square feet of building area or portion thereof. One parking stall per 1,000 square feet shall be required for the next 50,000 square feet of building area or portion thereof. Building(s) larger than 150,000 square feet shall require 184 parking stalls plus one parking stall per 2,250 square feet of building area excess of 150,000 square feet. The parking requirement for office spaces is one (1) parking stall per 250 square feet regardless of the size of the building.
OPEN SPACE ZONE		
Open Space Zone (OS5)	The OS5 Zone is established to promote large lot developments at a density not to exceed one (1) dwelling unit per five (5) acres and to promote the preservation of open space by allowing clustered developments.	-
Residential Open Space Zone (ROS)	The ROS Zone is established to promote large lot developments at a density not to exceed one (1) dwelling unit per one (1) acre and to promote the preservation of	-

Zone	Definition	Parking Requirement
	open space by allowing clustered developments.	

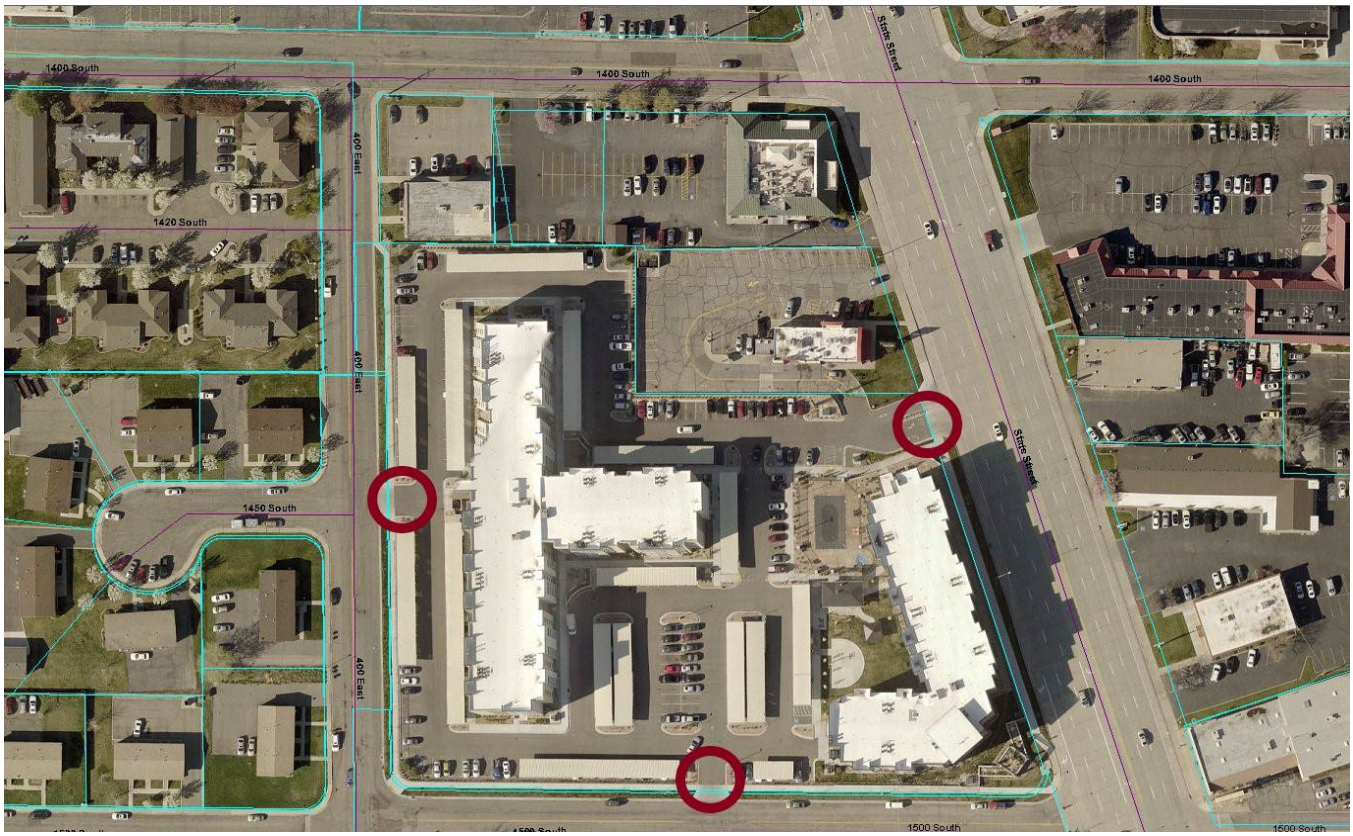
Source: Orem City Code, http://online.encodeplus.com/regs/orem-ut/

APPENDIX B - PARKING COUNT SITES

The sites selected were all relatively high-density land uses for Orem and include residential, commercial, and office land uses. The following site maps show the layout of each development. Red circles in the image mark the location of site entrances that were be monitored by the study team.

Multifamily Residential (Not Student-Oriented) – Canyon Crossing

Figure 4: 1460 S. State Street, Canyon Crossing



1460 S. State Street. Canyon Crossing required three counters - one at each entrance - plus one surveyor to circulate among them for a total of four people over the study period.

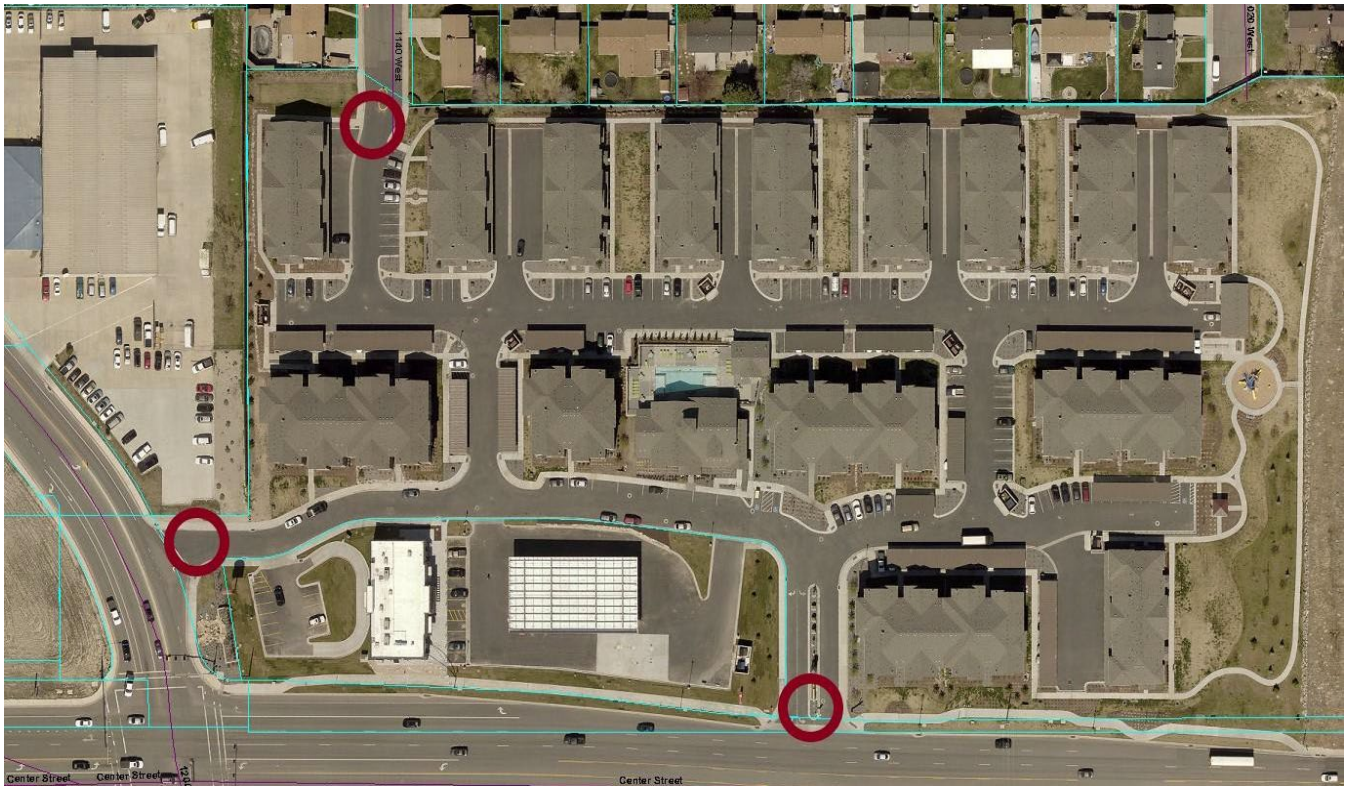
Multifamily Residential (Not Student-Oriented) - Monteval

Figure 5: 355 W. 920 North, Monteval

355 W. 920 North. Monteval required three counters - one each at the two driveway entrances to the development plus one at the pedestrian entrances off State Street - and one surveyor for a total of four people over the study period.

Multifamily Residential (Not Student-Oriented) – Parc on Center

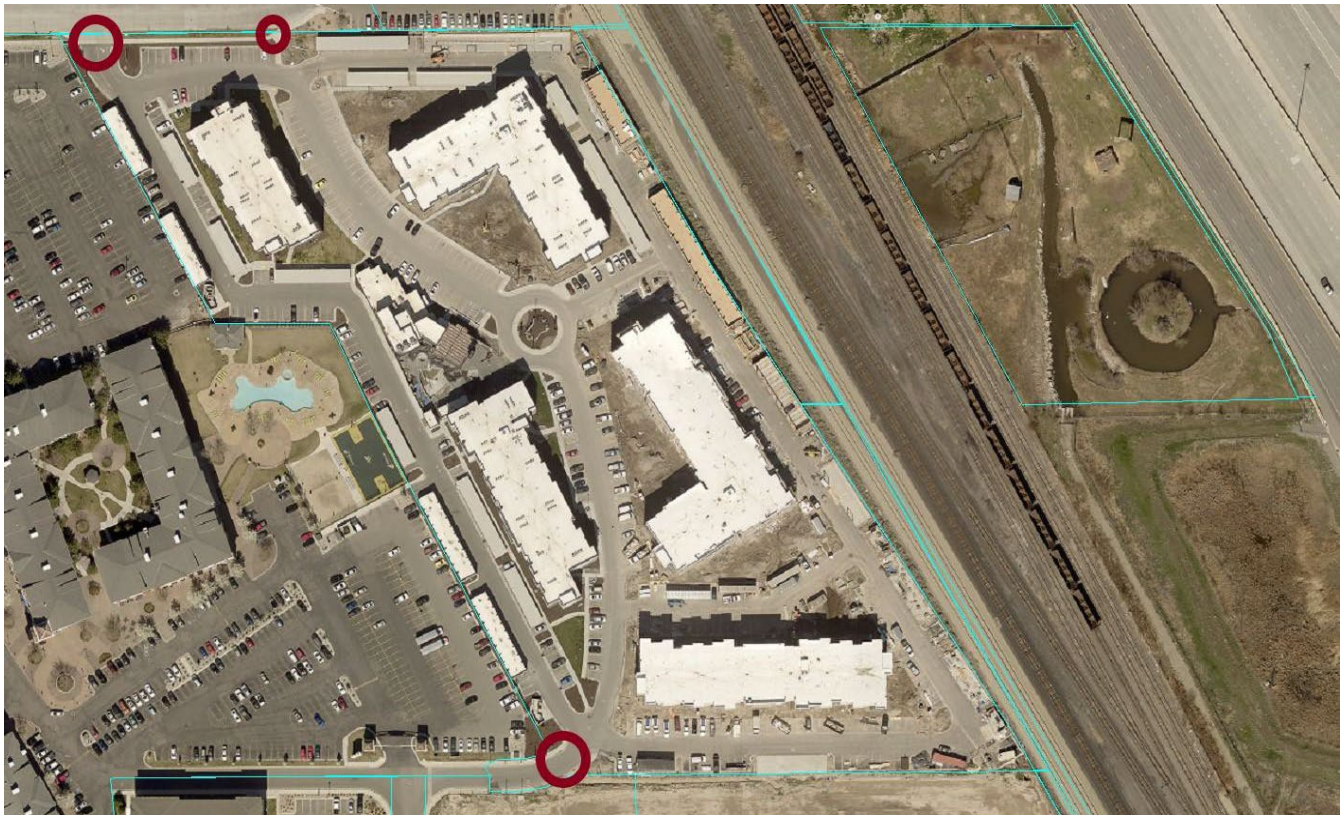
Figure 6: 1042 W. Center St, Parc on Center



1042 W. Center Street. Parc on Center required three counters - one at each driveway entrance to the development - plus one surveyor to circulate among them for a total of four people over the study period

Multifamily Residential (Student-Oriented) – Parkway Lofts

Figure 7: 1225 W. 1000 South, Parkway Lofts



1225 W. 1000 South. Parkway Lofts required two counters and two surveyors - one team at each of the two driveway entrances to the development - for a total of four people over the study period.

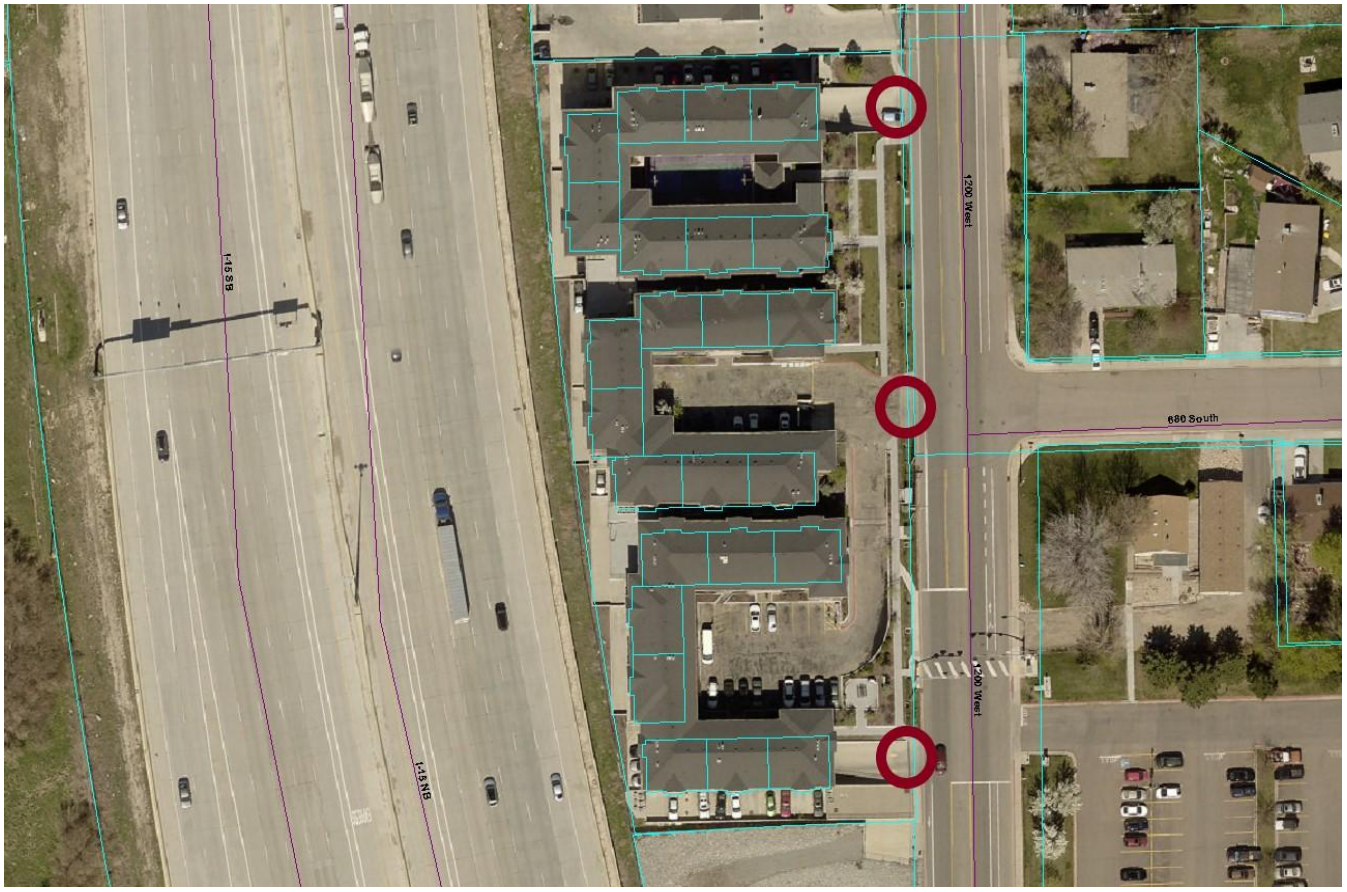
Multifamily Residential (Student-Oriented) - Promenade

Figure 8: 875 S. Geneva Road, Promenade

875 S. Geneva Road. Promenade required two counters plus one surveyor to cover the two driveway entrances to the development for a total of three people over the study period.

Multifamily Residential (Student-Oriented) – Summerwood Condos

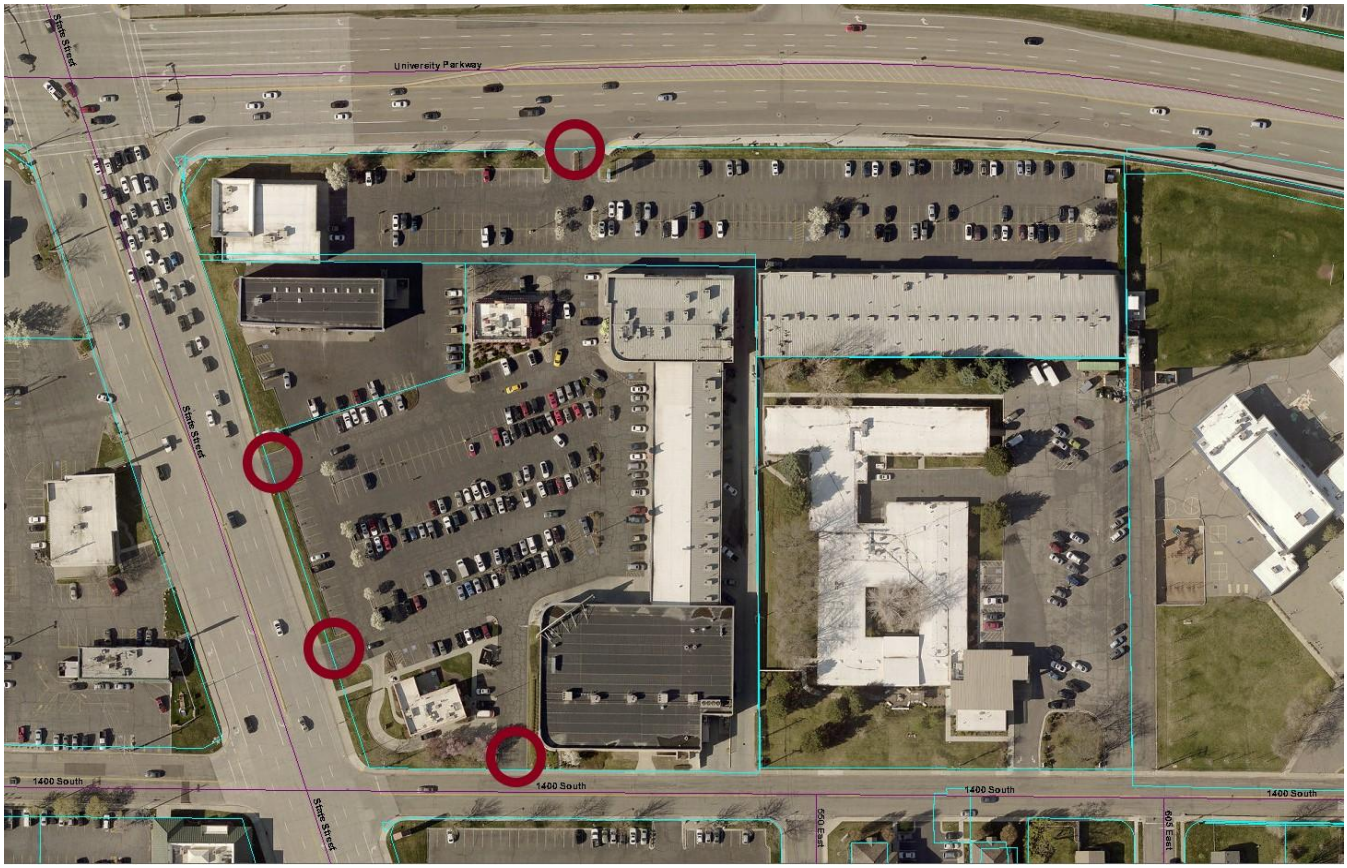
Figure 9: 720 S. 1200 West, Summerwood Condos



720 S. 1200 West. Summerwood Condos required two counters - one to cover the two driveway entrances on the north end and one to cover the driveway and pedestrian entrances on the south end - plus one surveyor to circulate among them for a total of three people over the study period.

Commercial/Shopping Centers – Festival Center

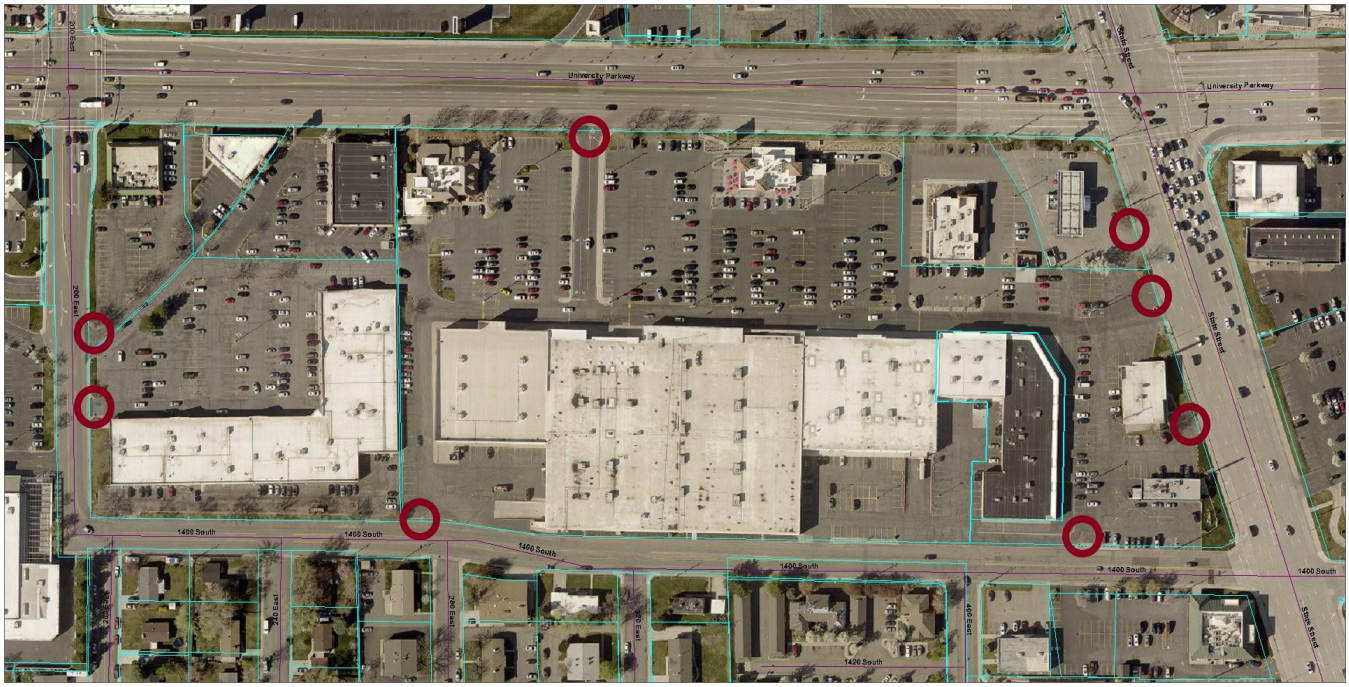
Figure 10: 1345 S. State Street, Festival Center



1345 S. State Street. Festival Center required four counters and one surveyor to circulate among them for a total of five people over the study period.

Commercial/Shopping Centers – University Crossing

Figure 11: 304 E. 1300 South, University Crossing



304 E. 1300 South. University Crossing was the largest of the study sites. It required eight counters plus three surveyors to circulate among them for a total of eleven people over the study period.

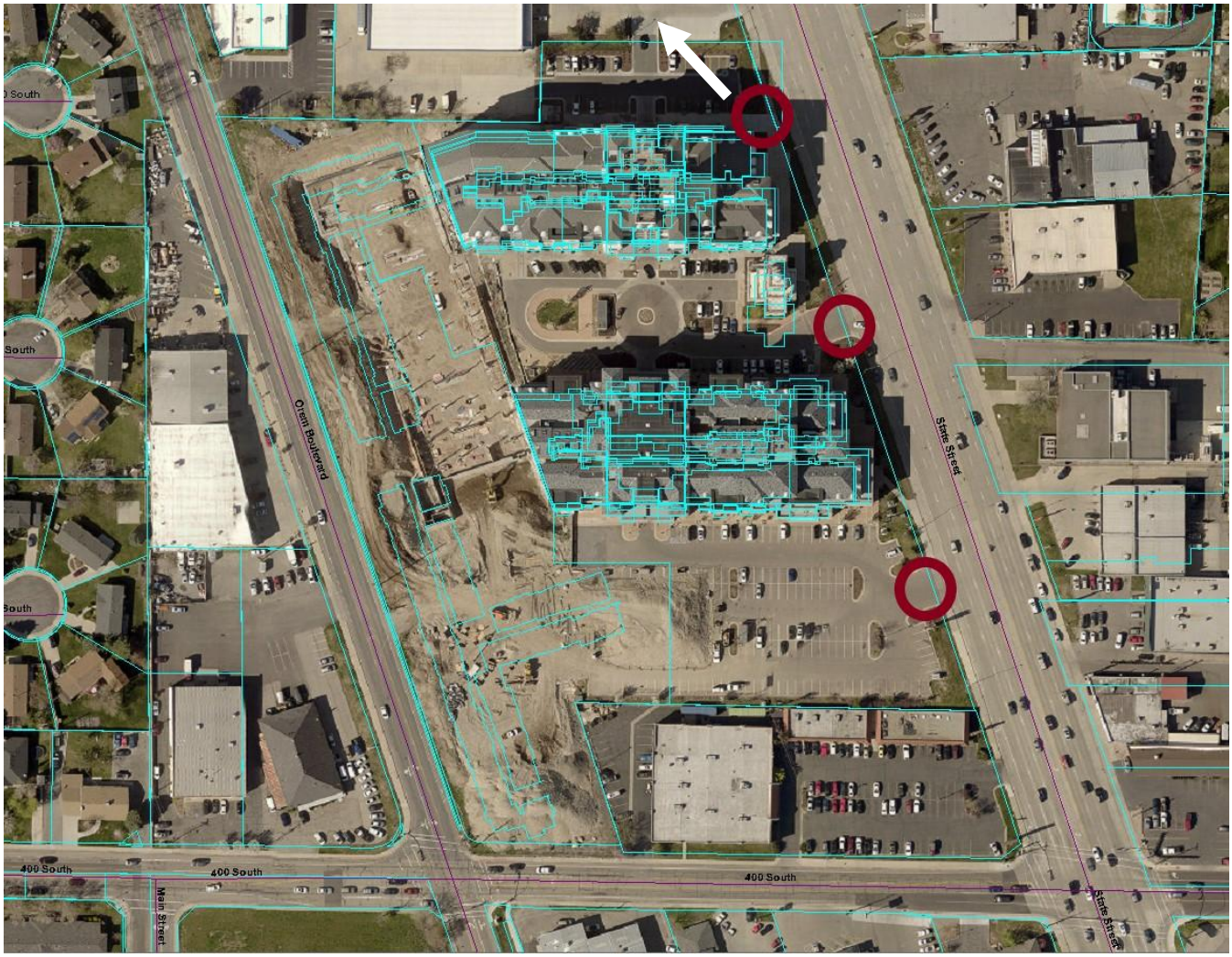
Office – Temple View Terrace

Figure 12: 1325 S. 800 East, Temple View Terrace

1325 S. 800 East. Temple View Terrace required one counter and one surveyor at its one entrance for a total of two people over the study period.

Mixed-Use (Residential & Commercial) – Midtown 360

Figure 13: 360 S. State Street, Midtown 360



360 S. State Street. Midtown 360 required four counters plus one surveyor to circulate among them for a total of five people over the study period.