

PARKING STUDY

SOCIETY TURN PARCEL



Prepared by



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LICENSE NO. 29799

8/17/20



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1.0 Introduction

This study provides an estimate for parking generation for the Society Turn Parcel (STP) development in San Miguel County, Colorado. The property owner, Genesee Properties, Inc., is submitting certain land use development applications with San Miguel County seeking approval to develop a certain mixed-use development on the property. In connection with the application, the owner is seeking an adjustment to the number of parking spaces that is required under the County Land Use Code (LUC). Such an adjustment is contemplated and allowed by the LUC. The purpose of this study is to determine the actual off-street parking requirement for the overall mixed-use development site, based upon pertinent factors and considerations, to support the request for a reduction in the number of required parking spaces.

The San Miguel County Land Use Article 5 defines the requirements for submittal and determination of off-street parking. Section 5-1404 C. Off-street Parking; reads as follows;

Off-street parking standards (see Section 5-702) may be increased or decreased based upon consideration of the following criteria:

- I. The estimated number of cars owned by future occupants of dwellings in a Planned Unit Development (PUD);
- II. The parking needs of any non-residential uses;
- III. The varying time periods of use, whenever joint use of common parking is proposed; and
- IV. Available or proposed transportation system.

Section 5-702 provides a definition of County standards for determination of necessary parking spaces by land use type and size. The Code also provide a description of location of available parking spaces; *In all cases, parking shall be provided within convenient walking distance of the principal use for which parking is required, unless adequate ground transportation is provided.*

The planned mixed-use development is at a scale that affords easy walking distance between uses and potential parking areas. This will provide an opportunity to resourcefully implement the required parking while minimizing the need for a vast expanse of asphalt and/or structure for parking. The strategic parking layout will maintain accessibility while providing for the possibility of added open space, gathering space and building space within the development.

The parking need determination is based upon the Time of Day Distribution for Parking Demand from the ITE Parking Generation Manual, 5th Edition, for the proposed land use mix.

The project is shown in the Vicinity Map in Figure 1.

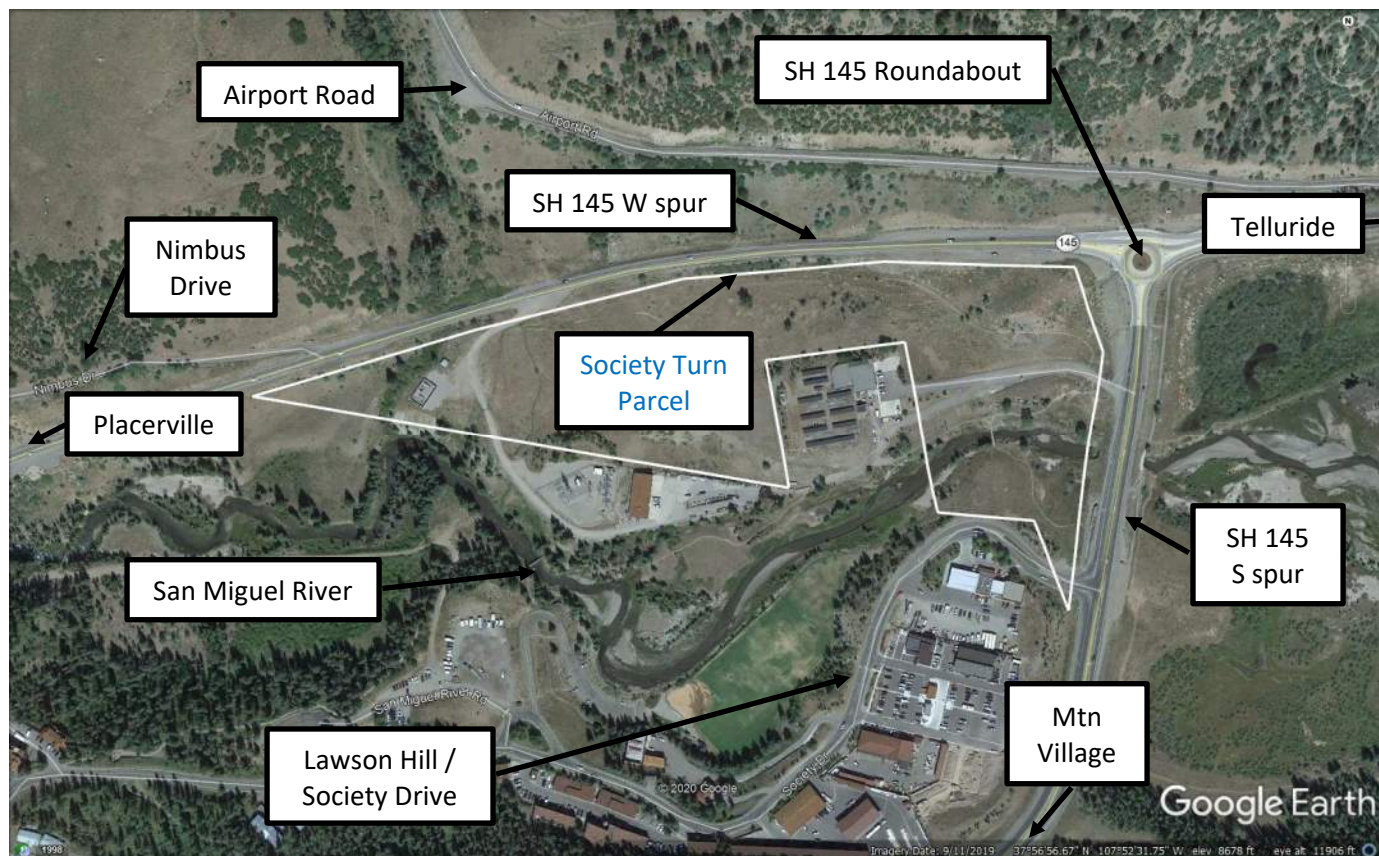


Figure 1 - Vicinity Map

1.1 Project Description

The proposed STP mixed-use development is shown in the Conceptual Site Plan provided in Figure 2.

Based on the Site Plan from DOWL and CCY Architects (June 2020), the proposed development of the Society Turn Parcel will consist of a land use mix comprised of the following and summarized in Table 1.

- a) Employee Housing mitigation
- b) Hotel / Lodging
- c) Office Park
- d) Retail
- e) *Medical Center*

TABLE 1 - PROPOSED DEVELOPMENT LAND USE

Use	Amount	Units
Employee Housing	88	Units
Hotel	150	Rooms
Office Park	111,075	sf
Retail	9,659	sf
<i>Medical Center</i>	<i>40,000</i>	<i>sf</i>

The plan contemplates that there will be overall maximum uses and densities and that the particular classifications of uses and densities noted in Table 1 may be shifted between uses, provided that the overall density does not exceed the maximum cap approved by the County in the pending land use development plans. For example, the development could end up with less hotel rooms, with the associated density used for retail uses. This Parking Plan assumes certain levels of uses and densities for purposes of allowing calculations and discussions.

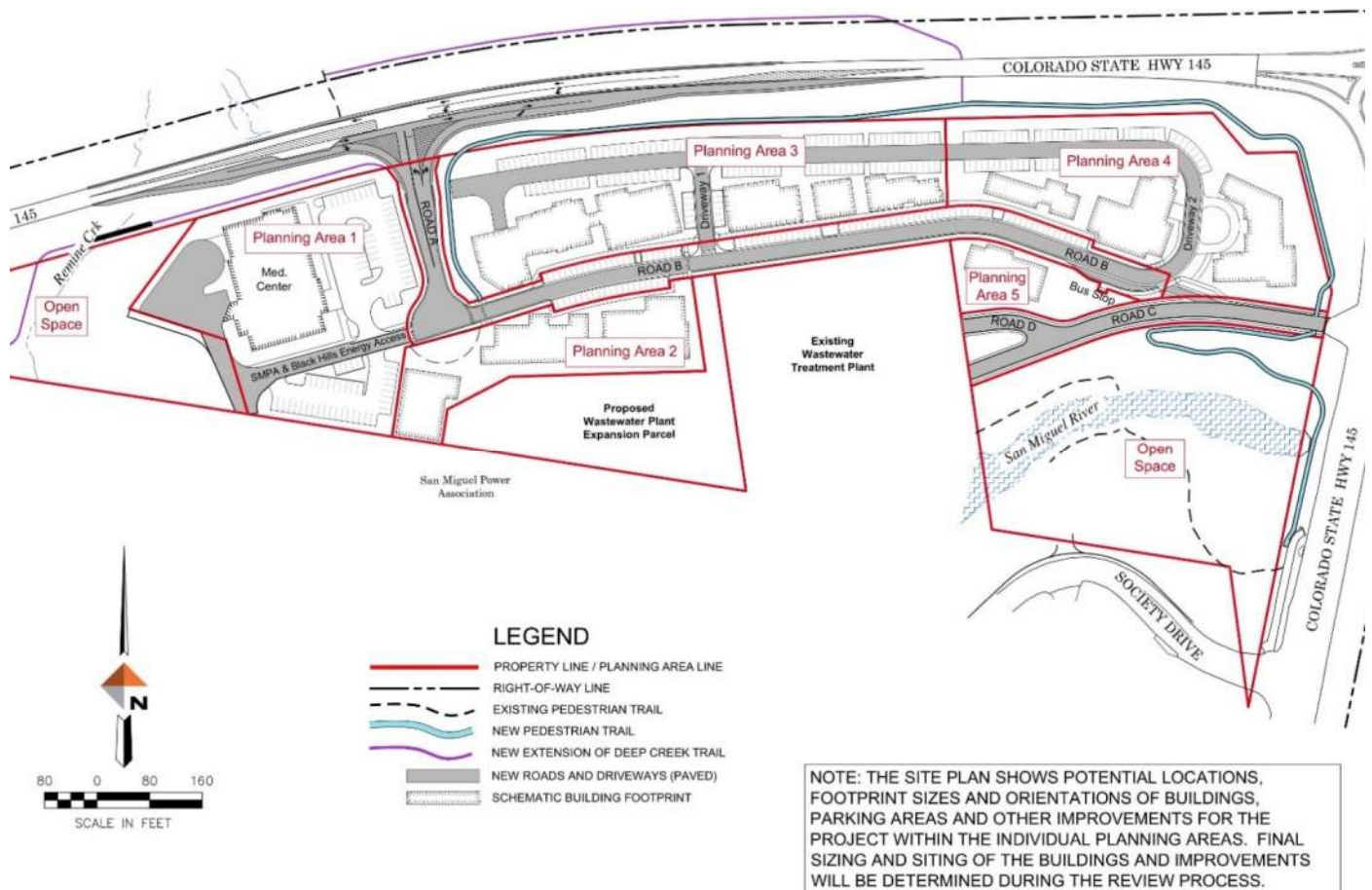


Figure 2 - Conceptual Site Plan

The Medical Center is not considered in the shared use parking analysis. Because of the timing for the provision of water and sewer service to project, as offered by the Town of Telluride, the project will develop in phases. Initially, the Medical Center is being developed alone, as the first phase of the development. Other phases on development would occur in the future, at least 7-10 years in the future based upon the water/sewer service schedule offered by the Town of Telluride. Therefore, there will not be opportunities for shared parking with other development occurring in the project for some time. Furthermore, the Medical Center is located on the west side of the development and location does not provide a prime prospect for shared parking consideration, although this option would be evaluated when development of immediately adjacent parcels is under consideration. The Medical Center will provide its own on-site parking.

1.2 Parking Requirement by LUC

The calculated parking required by the County LUC is provided below in Table 2.

TABLE 2 - PARKING REQUIRED BY COUNTY LUC

<u>County LUC / Description</u>	<u>Code Requirement</u>	<u>Area / Units</u>	<u>Employee</u>	<u>Parking Spaces</u>
Dwellings	2 Per Unit	88		176
Hotels & Motels	One space per Unit + 1 per 3 Employees	150	34	161
Retail Store, Office, Personal Service	One space per 400sf	111.014		278
Eating and Drinking	One Space per 4-seats + 1 per 3	9.720	4	62
		Total Parking Spaces		677

Per the LUC with the conceptual development program, the number of parking spaces required by the LUC would be 677 based upon a single use calculation that assume the uses that generate the higher number of parking spaces are maximized and other uses that generate the need for fewer parking spaces.

2.0 Methodology

This parking study has been prepared in accordance with The San Miguel County Land Use Code and ITE Parking Generation Manual, 5th Edition. The parking distribution is based on the Time of Day Distribution for Parking Demand from the ITE Parking Generation Manual for Multi-Family housing, Hotel, Office Park and Shopping Center.

Development Parking Generation Rates and Distribution

The analysis of the STP was completed using parking generation rates from the ITE Parking Generation Manual, 5th Edition. The land use type and units provided in Table 1 were input into the ITE web-based Parking Generation Manual resulting in the individual design hour parking generation rates for weekday and weekend shown in Table 3.

TABLE 3 - ITE PARKING SPACE CALCULATION AND GENERATION RATE BY LAND USE

<u>ITE Land Use Code / Description</u>	<u>Area / Units</u>	<u>Parking Spaces</u>		<u>Parking Rate (per unit)</u>
		Weekday	Weekend	Weekday
Code 220 Multi-Family (Low-rise)	88	98	115	1.11
Code 310 Hotel	150	115	101	0.77
Code 750 Office Park	111.075	260	31	2.34
Code 820 Shopping Center (Retail)	9.659	115	66	11.88
	Total Parking Spaces	587	313	

The values in Table 3 consist of the overall parking need without consideration of reductions based upon time of day or multi-modal factors. The table shows that the weekday will be the basis of design.

The Time of Day Distribution for Parking Demand by percentage for the corresponding land uses are shown in Table 4. Time distribution is shown for the peak parking need from 9 AM through 4 PM. Full day distributions are provided for each Land Use in Appendix C.

TABLE 4 - TIME OF DAY DISTRIBUTION FOR PARKING DEMAND BY LAND USE (%)

Weekday Parking Distribution	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM
Code 220 MultiFamily (Low-rise)	45%	40%	37%	36%	36%	37%	43%	45%
Code 310 Hotel	100%	98%	89%	85%	75%	81%	70%	74%
Code 750 Office Park	88%	100%	100%	81%	93%	92%	91%	79%
Code 820 Shopping Center (Retail)	32%	54%	71%	99%	100%	90%	83%	81%

The Time of Day Distribution for Parking Demand by required number of shared parking spaces for the corresponding land uses are shown in Table 5. Time distribution is shown for the peak parking need from 9 AM through 4 PM. Full day distributions are provided for each and the combined Land Uses in Appendix B.

TABLE 5 - TIME OF DAY DISTRIBUTION FOR PARKING DEMAND BY LAND USE (SPACES)

Weekday Parking Distribution								
ITE Code / Description	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM
Code 220 MultiFamily (Low-rise)	44	39	36	35	35	36	42	44
Code 310 Hotel	115	113	102	98	86	93	80	85
Code 750 Office Park	229	260	260	210	242	239	236	205
Code 820 Shopping Center (Retail)	37	62	81	114	115	103	95	93
	424	473	480	457	478	471	454	427

The peak period of need occurs during a weekday 11 AM hour, with a shared parking need of 480 spaces.

Multi-modal

Reference is made to the Transit Plan and Traffic Impact Study for the Society Turn Parcel and the Project dated August 2020 prepared by SGM which is being submitted by the Owner as part of its land use development applications, which carefully studies diverse opportunities for vehicular trip reductions coming to and from the site, based upon multi-modal alternatives, such as walking, biking, car-pooling and transit options. The development site near the roundabout separating the east-west and north-south legs of SH 145 provide a mid-valley location that is convenient for all transportation modes.

Given the central location of the development, the nature of the valley and existing use of public transportation and other modes, this study includes a conservatively selected multi-modal trip reduction rate of 5% for the STP development applied to all external trips. This is comparable to recent traffic studies in the area as well as rates used for similar projects in other mountain communities with similar transit systems (Aspen, Crested Butte, Steamboat). A reduction in trips will result in a direct reduction of parking spaces needed. Reference the Traffic Impact Study and Transit Plan for further justification of the multi-modal reduction.

Application of the 5% multi-modal trip reduction results in a need for 456 shared parking spaces, as shown in Table 6.

TABLE 6 - SHARED PARKING SPACE NEED AND RATE BY LAND USE WITH 5% REDUCTION

ITE Land Use Code / Description	Area / Units	Shared Parking Spaces	Shared Parking Rate (per unit)
		Weekday	Weekday
Code 220 Multi-Family (Low-rise)	88	34	0.39
Code 310 Hotel	150	97	0.65
Code 750 Office Park	111.075	247	2.22
Code 820 Shopping Center (Retail)	9.659	77	8.01
	Total Shared Parking Spaces	456	

Land Use Density, Parking Need and Parking Calculation

Per the LUC with the conceptual development program, the number of parking spaces required by the LUC would be 677 based upon a single use calculation that assume the uses that generate the higher number of parking spaces are maximized and other uses that generate the need for fewer parking spaces. Based upon the analysis performed in this Parking Study, we believe that the number of parking spaces that would be required is 456 spaces. The proposed site plan for the development contemplates 602 spaces (382 surface and 220 sub-grade), so there is a surplus of 146 parking spaces beyond what this Parking Study supports. In the event that the project develops in a manner that the actual uses are higher generators of parking spaces, which require more parking, the uses would have some ability to call upon the surplus parking spaces noted above as allocated by the developer to each lot/parcel. Should this not be sufficient, parking would need to be further accommodated within the individual building design itself and/or on-site within a structured parking program.

The nature of the development application and project contemplates that each of the uses and allocated densities in the project (except the Medical Center), could develop in whole or part as another use. The size and number of rooms in the hotel could decrease and that density could be reallocated to other uses. This Parking Study and the Transit Plan demonstrate that the uses contemplated in the project, given the factors discussed in these studies would support an anticipated lower number of parking spaces than would be required by the application of the parking standards contained in the LUC.

Given the potential variability of uses as described in the preceding paragraph, Table 6 provides a Shared Parking Rate which can be used to determine Shared Parking Need that applies the Time of Day and Multi-Modal reductions.

3.0 Conclusions

3.1 Summary of Conclusions

- The San Miguel County Land Use Code allows independent calculation of parking and consideration of shared use parking based on Time of Day calculation per Section 5-1404 C. Off-street Parking.
- Based upon the ITE Parking Generation Manual, 5th Edition, the weekday peak shared use parking space requirement is 480 spaces.

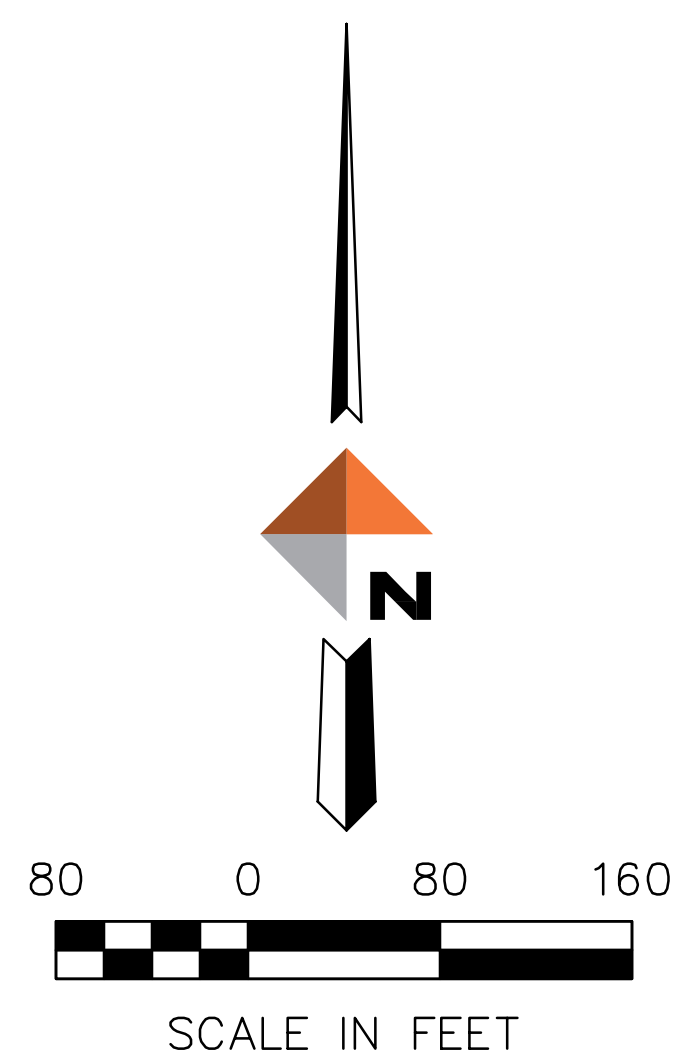
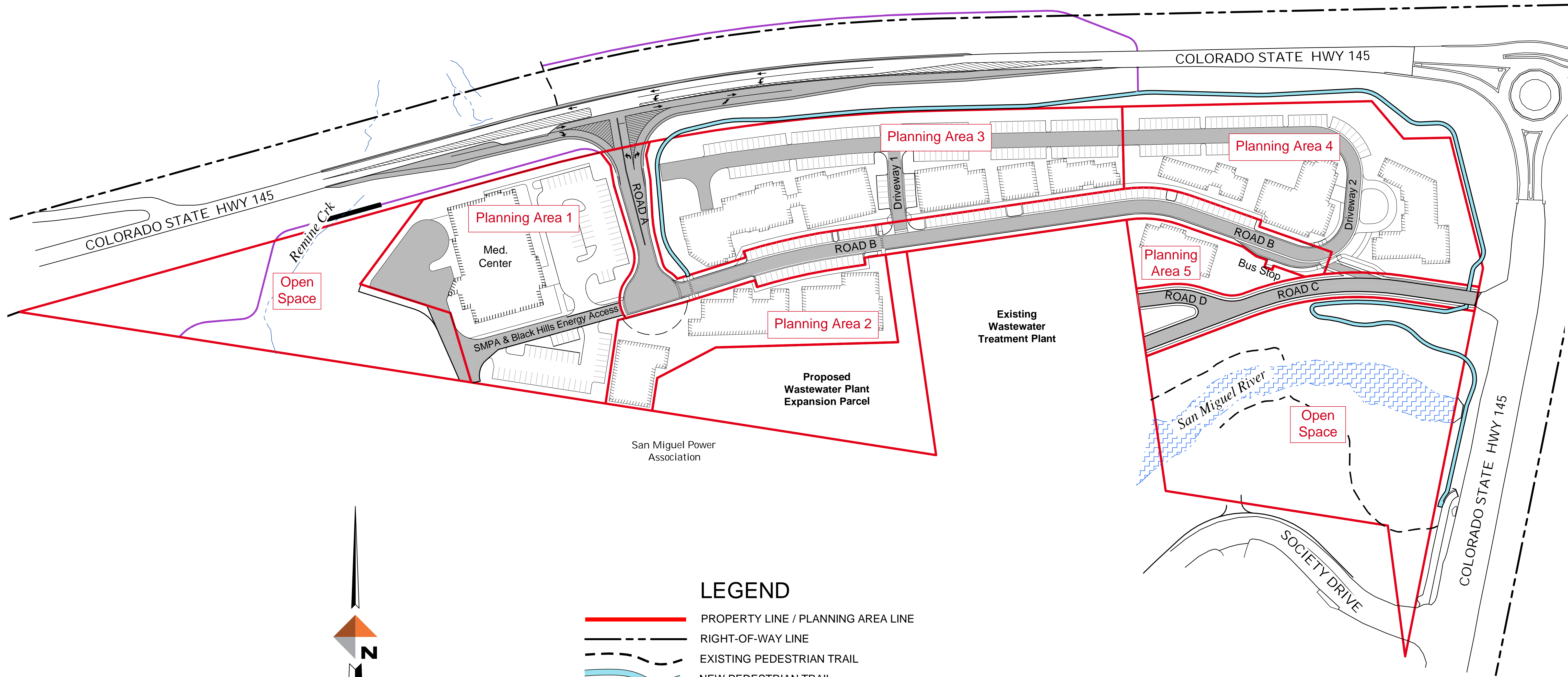
- The SMART fixed route transit system currently provides service to the SH 145 corridor and areas surrounding the STP development. A 5% reduction in traffic volume based on this transit service is justified in both the Traffic Impact Study and Transit Plan.
- **Application of the 5% multi-modal reduction results in a weekday peak shared use parking space requirement is 480 spaces.**

Appendix A






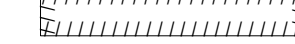
Conceptual Site Plan



G:\22\74614-01\65CAD\Civil\Dwg4-CDOT_Access_Permit\CDOT_CONCEPTUAL_SITE_PLAN.dwg PLOT DATE 2020-06-23 14:04 SAVED DATE 2020-06-16 07:59 USER: dcoastillo



LEGEND

-  PROPERTY LINE / PLANNING AREA LINE
-  RIGHT-OF-WAY LINE
-  EXISTING PEDESTRIAN TRAIL
-  NEW PEDESTRIAN TRAIL
-  NEW EXTENSION OF DEEP CREEK TRAIL
-  NEW ROADS AND DRIVEWAYS (PAVED)
-  SCHEMATIC BUILDING FOOTPRINT

NOTE: THE SITE PLAN SHOWS POTENTIAL LOCATIONS, FOOTPRINT SIZES AND ORIENTATIONS OF BUILDINGS, PARKING AREAS AND OTHER IMPROVEMENTS FOR THE PROJECT WITHIN THE INDIVIDUAL PLANNING AREAS. FINAL SIZING AND SITING OF THE BUILDINGS AND IMPROVEMENTS WILL BE DETERMINED DURING THE REVIEW PROCESS.

DATE: 06-23-2020

 **DOWL**
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GENESEE PROPERTIES, INC.
SOCIETY TURN PARCEL
CONCEPTUAL SITE PLAN

Appendix B

Parking Generation Spreadsheet

Parking Generation Society Turn Parcel

Institute of Transportation Engineers Parking Generation Manual 5th Ed.

<u>ITE Land Use Code / Description</u>	<u>Area / Units</u>	<u>Parking Spaces</u>		<u>Parking Rate (per unit)</u>	<u>Shared Parking Spaces</u>	<u>Shared Parking Rate (per unit)</u>
		Weekday	Weekend	Weekday	Weekday	Weekday
Code 220 Multi-Family (Low-rise)	88	98	115	1.11	34	0.39
Code 310 Hotel	150	115	101	0.77	97	0.65
Code 750 Office Park	111.075	260	31	2.34	247	2.22
Code 820 Shopping Center (Retail)	9.659	115	66	11.88	77	8.01
Total Parking Spaces		587	313	Total Shared Parking Spaces	456	

<u>County LUC / Description</u>	<u>Code Requirement</u>	<u>Area / Units</u>	<u>Employee</u>	<u>Parking Spaces</u>
Dwellings	2 Per Unit	88		176
Hotels & Motels	One space per Unit + 1 per 3 Employees	150	34	161
Retail Store, Office, Personal Service	One space per 400sf	111.075		278
Eating and Drinking	One Space per 4-seats + 1 per 3	9.659	4	62
Total Parking Spaces				677

WEEKDAY PARKING DISTRIBUTION

<u>ITE Land Use Code / Description</u>	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
Code 220 Multi-Family (Low-rise)	98	98	98	98	98	95	88	75	55	44	39	36	35	35	36	42	44	54	64	71	75	84	90	95
Code 310 Hotel	110	110	110	110	110	110	105	102	103	115	113	102	98	86	93	80	85	75	84	90	107	110	109	109
Code 750 Office Park	0	0	0	0	0	0	0	70	195	229	260	260	210	242	239	236	205	153	0	0	0	0	0	0
Code 820 Shopping Center (Retail)	0	0	0	0	0	0	0	0	17	37	62	81	114	115	103	95	93	96	99	92	72	48	17	0
	208	208	208	208	208	205	192	248	370	424	473	480	457	478	471	454	427	378	247	253	254	242	216	204

Weekday Parking Distribution

	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM							
Code 220 MultiFamily (Low-rise)	100%	100%	100%	100%	100%	97%	90%	77%	56%	45%	40%	37%	36%	36%	37%	43%	45%	55%	66%	73%	77%	86%	92%	97%
Code 310 Hotel	96%	96%	96%	96%	96%	96%	91%	89%	90%	100%	98%	89%	85%	75%	81%	70%	74%	65%	73%	78%	93%	96%	95%	95%
Code 750 Office Park	0%	0%	0%	0%	0%	0%	0%	27%	75%	88%	100%	100%	81%	93%	92%	91%	79%	59%	0%					0%
Code 820 Shopping Center (Retail)	0%	0%	0%	0%	0%	0%	0%	0%	15%	32%	54%	71%	99%	100%	90%	83%	81%	84%	86%	80%	63%	42%	15%	0%

		WEEKEND PARKING DISTRIBUTION																							
Weekend		12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
115	Code 220 MultiFamily (Low-rise)	91	91	91	91	91	98	96	94	90	78	76	69	66	64	63	66	68	71	75	79	80	84	85	90
101	Code 310 Hotel	85	85	85	85	85	85	71	71	83	85	87	88	91	90	77	73	77	84	95	106	111	115	105	95
31	Code 750 Office Park	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
66	Code 820 Shopping Center (Retail)	0	0	0	0	0	0	0	0	31	53	77	98	109	115	112	106	99	91	81	79	69	59	44	0
313	TOTAL	176	176	176	176	176	183	167	165	203	216	240	255	266	269	253	245	244	246	252	264	260	257	233	185

WEEKEND PARKING DISTRIBUTION

Code 220 MultiFamily (Low-rise)	93%	93%	93%	93%	93%	100%	98%	96%	92%	80%	78%	71%	68%	66%	65%	68%	70%	73%	77%	81%	82%	86%	87%	92%
Code 310 Hotel	74%	74%	74%	74%	74%	74%	62%	62%	72%	74%	76%	77%	79%	78%	67%	64%	67%	73%	83%	92%	97%	100%	91%	83%
Code 750 Office Park	0%	0%	0%	0%	0%	0%	0%	0%	27%	46%	67%	85%	95%	100%	98%	92%	86%	79%	71%	69%	60%	51%	38%	0%
Code 820 Shopping Center (Retail)	0%	0%	0%	0%	0%	0%	10%	25%	68%	72%	77%	83%	100%	91%	56%	42%	42%	64%	87%	79%	65%	42%	21%	0%

Appendix C

ITE Parking Generation Land Use Data

Land Use: 220 Multifamily Housing (Low-Rise)

Description

Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and with one or two levels (floors) of residence. Multifamily housing (mid-rise) (Land Use 221), multifamily housing (high-rise) (Land Use 222), and affordable housing (Land Use 223) are related land uses.

Time of Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand (1) on a weekday (10 study sites) and a Saturday (11 study sites) in a general urban/suburban setting and (2) on a weekday (three study sites) and a Saturday (three study sites) in a dense multi-use urban setting.

Hour Beginning	Percent of Peak Parking Demand			
	General Urban/Suburban		Dense Multi-Use Urban	
	Weekday	Saturday	Weekday	Saturday
12:00–4:00 a.m.	100	93	86	100
5:00 a.m.	97	100	100	94
6:00 a.m.	90	98	94	91
7:00 a.m.	77	96	81	85
8:00 a.m.	56	92	58	79
9:00 a.m.	45	80	56	76
10:00 a.m.	40	78	53	71
11:00 a.m.	37	71	58	74
12:00 p.m.	36	68	56	68
1:00 p.m.	36	66	53	68
2:00 p.m.	37	65	47	68
3:00 p.m.	43	68	56	56
4:00 p.m.	45	70	53	59
5:00 p.m.	55	73	61	53
6:00 p.m.	66	77	81	50
7:00 p.m.	73	81	67	56
8:00 p.m.	77	82	61	65
9:00 p.m.	86	86	64	74
10:00 p.m.	92	87	75	85
11:00 p.m.	97	92	86	91

Additional Data

In prior editions of *Parking Generation*, the low-rise multifamily housing sites were further divided into rental and condominium categories. An investigation of parking demand data found no clear differences in parking demand between the rental and condominium sites within the ITE database. As more data are compiled for future editions, this land use classification can be reinvestigated.

The average parking supply ratios for the study sites with parking supply information are shown in the table below.

Setting	Proximity to Rail Transit	Parking Supply Ratio	
		Per Dwelling Unit	Per Bedroom
Dense Multi-Use Urban	Within ½ mile of rail transit	0.6 (12 sites)	0.4 (10 sites)
	Not within ½ mile of rail transit	0.9 (18 sites)	0.6 (18 sites)
General Urban/Suburban	Within ½ mile of rail transit	1.5 (10 sites)	0.9 (10 sites)
	Not within ½ mile of rail transit	1.7 (52 sites)	1.0 (52 sites)

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Colorado, District of Columbia, Maryland, Massachusetts, Oregon, Pennsylvania, Texas, Washington, and Wisconsin.

It is expected that the number of bedrooms and number of residents are likely correlated to the parking demand generated by a residential site. Parking studies of multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e. number of units by number of bedrooms at the site complex). Future parking studies should also indicate the number of levels contained in the residential building.

Source Numbers

72, 124, 152, 154, 209, 215, 216, 218, 219, 255, 257, 314, 414, 419, 432, 437, 505, 512, 533, 535, 536, 537, 544, 545, 577, 578, 579, 580, 584, 585, 587

Land Use: 310 Hotel

Description

A hotel is a place of lodging that provides sleeping accommodations and supporting facilities such as a full-service restaurant, cocktail lounge, meeting rooms, banquet room, and convention facilities. It typically provides a swimming pool or another recreational facility such as a fitness room. All suites hotel (Land Use 311), business hotel (Land Use 312), motel (Land Use 320), and resort hotel (Land Use 330) are related uses.

Time of Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand (1) on a weekday (four study sites) and a Saturday (five study sites) in a general urban/suburban setting and (2) on a weekday (one study site) and a Saturday (one study site) in a dense multi-use urban setting.

Hour Beginning	Percent of Peak Parking Demand			
	General Urban/Suburban		Dense Multi-Use Urban	
	Weekday	Saturday	Weekday	Saturday
12:00–4:00 a.m.	96	74	93	100
5:00 a.m.	–	–	–	–
6:00 a.m.	91	62	97	95
7:00 a.m.	89	62	100	95
8:00 a.m.	90	72	93	89
9:00 a.m.	100	74	72	85
10:00 a.m.	98	76	69	74
11:00 a.m.	89	77	65	61
12:00 p.m.	85	79	78	47
1:00 p.m.	75	78	78	42
2:00 p.m.	81	67	63	41
3:00 p.m.	70	64	59	43
4:00 p.m.	74	67	58	48
5:00 p.m.	65	73	52	53
6:00 p.m.	73	83	63	64
7:00 p.m.	78	92	74	67
8:00 p.m.	93	97	78	78
9:00 p.m.	96	100	72	81
10:00 p.m.	95	91	84	93
11:00 p.m.	95	83	92	98

Additional Data

Some properties contained in this land use provide guest transportation services such as airport shuttles, limousine service, or golf course shuttle service, which may have an impact on the overall parking generation rates.

The average parking supply ratios for both the 17 study sites located in a general urban/suburban setting and the two study sites in a dense multi-use urban setting are 1.1 spaces per room.

The sites were surveyed in the 1980s, the 1990s, and the 2000s in Arizona, California, Connecticut, Florida, Illinois, New York, Texas, and Washington.

For all lodging uses, it is important to collect data on occupied rooms as well as total rooms.

Parking demand at a hotel may be related to the presence of supporting facilities such as convention facilities, restaurants, meeting/banquet space, and other retail. Future data submissions should indicate the presence of these amenities and specify their size. Reporting the level of activity at the supporting facilities (such as full, empty, partially active, number of people attending a meeting/banquet) during observation may also be useful in further analysis of this land use.

Source Numbers

1, 117, 124, 152, 154, 157, 159, 201, 215, 217, 245, 315, 401, 438

Land Use: 750 Office Park

Description

An office park is usually a suburban subdivision or planned unit development containing general office buildings and support services, such as banks, restaurants, and service stations, arranged in a park- or campus-like atmosphere. General office building (Land Use 710), corporate headquarters building (Land Use 714), single tenant office building (Land Use 714), and research and development center (Land Use 760) are related land uses.

Time of Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand on a weekday at two study sites in a general urban/suburban setting.

Hour Beginning	Percent of Weekday Peak Parking Demand
12:00–4:00 a.m.	–
5:00 a.m.	–
6:00 a.m.	–
7:00 a.m.	27
8:00 a.m.	75
9:00 a.m.	88
10:00 a.m.	100
11:00 a.m.	100
12:00 p.m.	81
1:00 p.m.	93
2:00 p.m.	92
3:00 p.m.	91
4:00 p.m.	79
5:00 p.m.	59
6:00 p.m.	–
7:00 p.m.	–
8:00 p.m.	–
9:00 p.m.	–
10:00 p.m.	–
11:00 p.m.	–

Additional Data

The average parking supply ratios for the study sites with parking supply information are 4.4 spaces per 1,000 square feet GFA (five sites) and 1.5 spaces per employee (two sites).

The sites were surveyed in the 1980s and the 1990s in Arizona, California, Colorado, Florida, Illinois, New York, Pennsylvania, Texas, and Utah.

Source Numbers

36, 172, 202, 239, 243

Land Use: 820 Shopping Center

Description

A shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. A shopping center's composition is related to its market area in terms of size, location, and type of store. A shopping center also provides on-site parking facilities sufficient to serve its own parking demands.

Time of Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand **during the month of December** on a weekday (seven study sites), a Friday (eight study sites), and a Saturday (19 study sites).

Hour Beginning	Percent of Peak Parking Demand during December		
	Weekday	Friday	Saturday
12:00–4:00 a.m.	–	–	–
5:00 a.m.	–	–	–
6:00 a.m.	–	–	–
7:00 a.m.	–	–	–
8:00 a.m.	–	–	–
9:00 a.m.	–	–	–
10:00 a.m.	–	74	–
11:00 a.m.	–	87	85
12:00 p.m.	77	97	97
1:00 p.m.	100	100	98
2:00 p.m.	98	92	100
3:00 p.m.	90	85	97
4:00 p.m.	76	84	88
5:00 p.m.	82	78	77
6:00 p.m.	89	75	64
7:00 p.m.	90	63	–
8:00 p.m.	84	–	–
9:00 p.m.	–	–	–
10:00 p.m.	–	–	–
11:00 p.m.	–	–	–

The following table presents a time-of-day distribution of parking demand **during a non-December month** on a weekday (18 study sites), a Friday (seven study sites), and a Saturday (13 study sites).

Hour Beginning	Percent of Non-December Peak Parking Demand		
	Weekday	Friday	Saturday
12:00–4:00 a.m.	–	–	–
5:00 a.m.	–	–	–
6:00 a.m.	–	–	–
7:00 a.m.	–	–	–
8:00 a.m.	15	32	27
9:00 a.m.	32	50	46
10:00 a.m.	54	67	67
11:00 a.m.	71	80	85
12:00 p.m.	99	100	95
1:00 p.m.	100	98	100
2:00 p.m.	90	90	98
3:00 p.m.	83	78	92
4:00 p.m.	81	81	86
5:00 p.m.	84	86	79
6:00 p.m.	86	84	71
7:00 p.m.	80	79	69
8:00 p.m.	63	70	60
9:00 p.m.	42	–	51
10:00 p.m.	15	–	38
11:00 p.m.	–	–	–

Additional Data

The parking demand database includes data from strip, neighborhood, community, town center, and regional shopping centers. Some of the centers contain non-merchandising facilities, such as office buildings, movie theaters, restaurants, post offices, banks, health clubs, and recreational facilities.

Many shopping centers, in addition to the integrated unit of shops in one building or enclosed around a mall, include outparcels (peripheral buildings or pads located on the perimeter of the center adjacent to the streets and major access points). These buildings are typically drive-in banks, retail stores, restaurants, or small offices. Although the data herein do not indicate which of the centers studied included peripheral buildings, it can be assumed that some of the data show their effect.

The parking demand data plots and analysis are based on the total gross leasable area (GLA) of the center. In cases of smaller centers without an enclosed mall or peripheral buildings, the GLA could be the same as the gross floor area (GFA) of the center.

The average parking supply ratios for the study sites with parking supply information are the following:

- 5.1 spaces per 1,000 square feet GFA (137 sites) in a general urban/suburban setting
- 4.7 spaces per 1,000 square feet GFA (five sites) in a dense multi-use urban setting

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alabama, Alberta (CAN), Arizona, California, Colorado, Delaware, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, North Carolina, New Jersey, New York, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Virginia, and Washington.

Future data submissions should attempt to provide information on the composition of each study site (types and number of stores, restaurants, or other tenants within the shopping center).

Source Numbers

3, 18, 21, 32, 39, 47, 87, 88, 89, 103, 142, 145, 152, 153, 154, 174, 175, 176, 179, 202, 203, 204, 205, 209, 215, 219, 224, 241, 265, 274, 313, 314, 315, 431, 432, 433, 436, 438, 441, 511, 525, 527, 531, 533, 542, 556, 558, 565