

2017/18 Bend Parking Demand Evaluation Summary Supplemental

Purpose

For the past two and a half decades, with a few exceptions, Bend has been experiencing rapid and sustained growth – population, new development, real estate values, and traffic congestion. The City has managed growth with the tools available to them including parking development requirements. Over the years, Bend has revised those requirements several times by reviewing code language. However, the City has not previously collected data or evaluated how parking supplies are being utilized during peak periods. Periodic recalibration is an effective tool to ensure parking is being supplied in a manner that reflects actual demand, resulting in more efficient land use patterns and ‘right-sized’ parking resources. As the community welcomes more employment and residents, it is important that the City is prepared for future growth by understanding development opportunities and setting expectations for future parking needs.



Rick Williams Consulting (RWC) was hired to assess parking demand for a select number of properties in the Bend study area. This parking assessment is focused on the land use category of restaurants citywide, and looks at existing parking requirements for new or redeveloped restaurants (minimum parking ratios), the number of built parking stalls, and the number of occupied stalls during each

land uses’ peak hour utilization. **The purpose of this analysis is to evaluate whether or not Bend’s minimum parking standards for restaurants result in the appropriate amount of off-street parking.**

The findings from this assessment can be used to adjust parking development ratios in the Bend Development Code. The intent is to allow the City to ‘right-size’ the parking supply by directing developers to build the number of parking stalls needed to meet parking demand while maximizing the land use and building area devoted to commercial, industrial or residential use. If the analysis shows that the City’s current parking requirements are different than what’s actually needed, then refinements to parking development ratios may be desirable. If the parking requirements are *higher* than needed, refinements can help spur development by reducing the onus of building unnecessary and costly parking, while maximizing leasable building area, which can result in more compact developments and provides a more attractive, pedestrian-friendly environment for the City and patrons of Bend. If the parking requirements are *lower* than needed, then adjustments will reduce the strain on adjacent land uses or on-street parking.

Methodology



The City provided the consultant team with a number of restaurant locations to observe parking demand utilization. Twenty sample sites were chosen from a broad geographic area to provide a cross section of restaurant types from around the City—cafes, breakfast/brunch, fast food, bar/taverns, breweries with restaurants, and sit-down dining. The majority of the sites were chosen because they were built in the last 10 years, following the City's most recent parking development code adjustment (mid 2000s), so that City staff could evaluate the effects of the code change on recent development.

Each site's parking supply was inventoried in advance of the demand analysis; quantifying the numbers of stalls serving each location (visitor and employee parking). Surveyors counted occupied parking stalls during peak periods for each property to determine the uses' highest individual parking demand ('peak'). In several cases, vehicles parked on-street were also included as part of the demand counts because it was evident drivers were patronizing or employed at the sample property. In the instances where additional parking demand (aside from those counted in adjacent off-street lots) was added to the overall demand figures, surveyors made real-time observations of patrons/employees walking to and/or from the establishments while conducting the vehicle counts.

Parking development requirements are expressed as ratios of stalls per 1,000 square feet of building area. The analysis requires information specific to the total building square footage for each survey site. Bend staff provided commercial real estate information (building square footage and vacancy information) to derive the most accurate information possible. During the data collection process, surveyors were careful to note any tenant vacancy observations that may not have been reflected in the information provided by the City. Calculating 'true' parking demand ratios required factoring out any tenant vacancies, so total parked cars were correlated only to occupied building square footage.

This is the same methodology employed by the Institute of Transportation Engineers (ITE) to calculate parking demand by land use category. The ITE manual is the de facto source of parking data for most jurisdictions. However, while the ITE information is a good starting point, it draws samples from across America, includes



demand figures that date back as far as the 1980s, and contains data from extremely small samples. By comparison, the approach followed by this study, exclusively utilizes Bend data gathered in April (2018) provides a superior result compared to relying on published ITE tables. The methodology used for this study provides the most accurate representation of local existing conditions.

Glossary of Terms

Built Parking Ratio – the number of stalls built/constructed for a specific building or property. A 15,000 square foot building built with 30 parking spaces would have a built parking ratio of 2.0. Ratios are shown as stalls per 1,000 square feet of building area.

Code Minimum (Parking Requirement) – the minimum amount of parking that must be built for a specific land use type as required by city code.

Delta – the difference between the built supply and the Market Calibrated Ratio.

Demand Buffer – is a flexibility ‘cushion’ typically added to True Demand to allow for the ebb and flow of parking activity for a land use over the course of the day. Traditional commercial buffers (for land uses with high turnover) are 15% - which is the basis for the 85% Rule for on-street parking. Providing a 15% buffer for mixed use, retail, and office land uses is considered ideal.

Market Calibrated Ratio – is True Demand plus the Demand Buffer – the true need for built parking based on measured ‘real’ parking demand (including supporting demand buffer).

Peak Hour – the period of day when the highest number of vehicles are observed parking for a given land use.

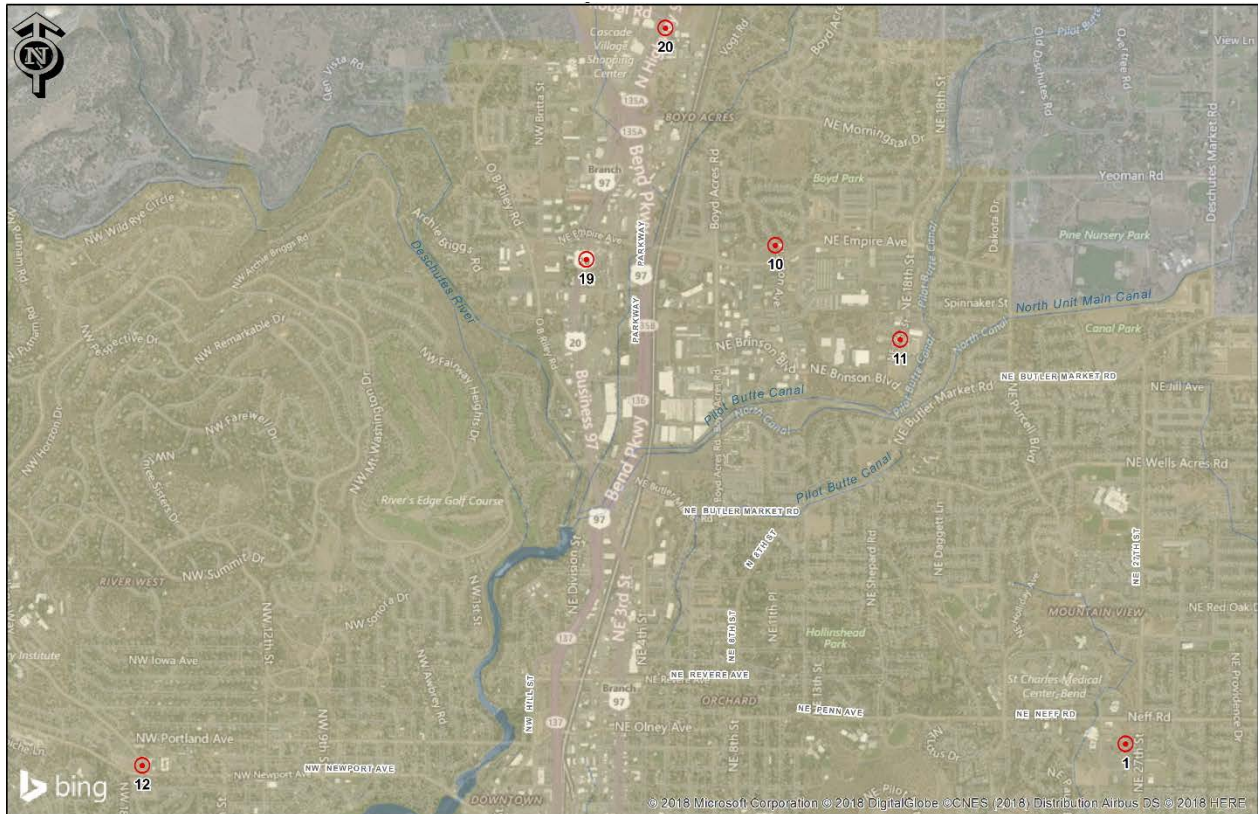
Parking Development Ratio – the amount of parking provided for a given land use development. The ratio is usually shown as stalls per 1,000 square feet of building area (e.g., 2.5 stalls per 1,000 SF) or as stalls per unit or stalls per hotel room.

True Demand – the observed peak hour parking demand for a specific land use. This would include vehicles parked in the property’s parking lot and could include vehicles parked on-street in proximity to the property. True Demand must be a measured of parking demand correlated to occupied building area. Ratios are expressed as stalls per 1,000 square feet.

Study Sites

Figures A & B, below, shows the locations of the restaurants site chosen for this parking demand analysis, and more specifically the broad geographic distribution of those sites from across the city.

Figure A: Study Sites - North



Restaurant Demand Analysis

2018

North of Newport Ave

RICK WILLIAMS CONSULTING
Parking & Transportation

● Restaurant Locations

0 460920 1,840 2,760 Feet

Figure B: Study Sites - South



Restaurant Demand Analysis
South of Newport Ave
RICK WILLIAMS CONSULTING
Parking & Transportation

● Restaurant Locations

0 500,000 2,000 3,000 Feet

2018

Findings

The findings summarized below are shown as demand ratios for individual restaurant properties, both graphically (charts) and in tabular format (tables). At the end of the section, an aggregated table depicts average parking demand ratios across the restaurant land use group.

Restaurant Land Uses

Twenty sites were selected to represent restaurant land uses. Figure C illustrates the data findings for this land use category.

Figure C: Parking Demand Ratios – Restaurant

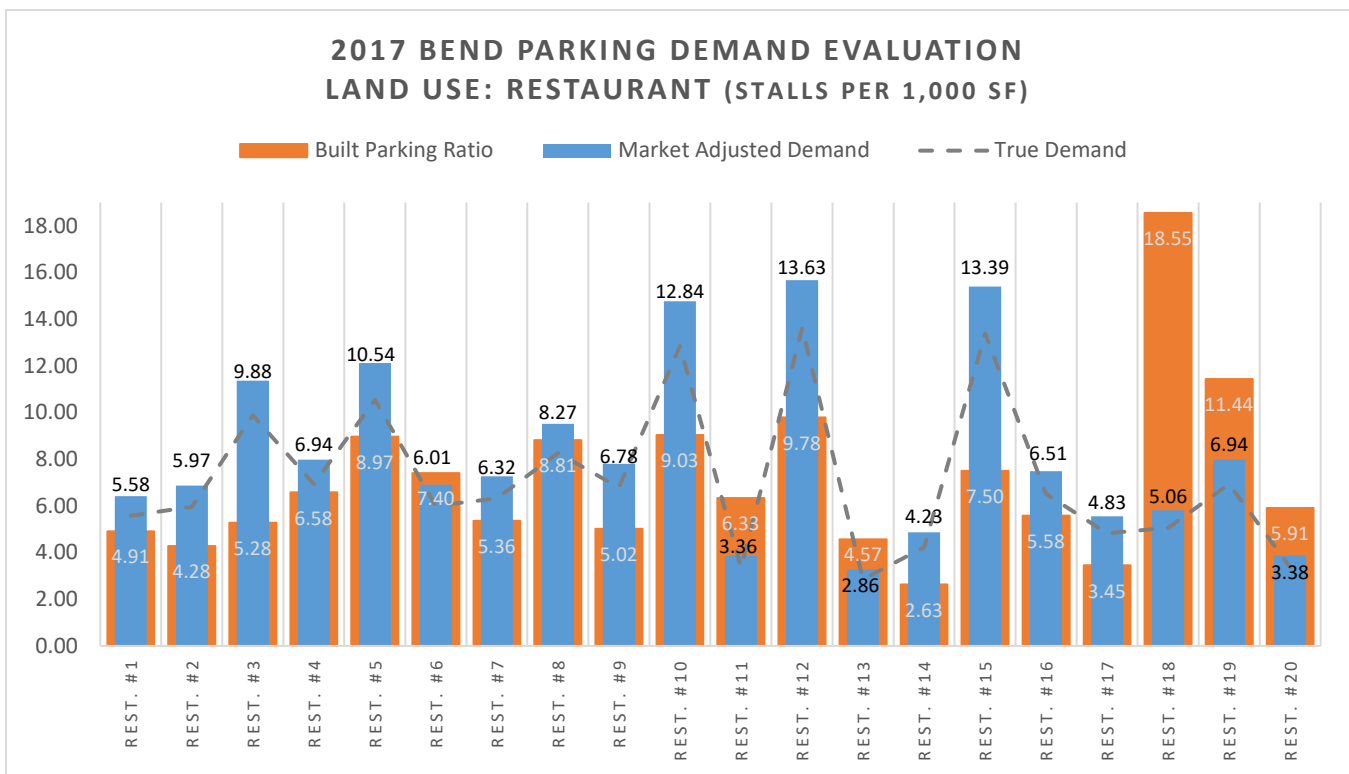


Table 1 and 2 below, provides a comparative summary of findings for restaurant land uses. Key findings include:

- *Built parking ratios* vary broadly in the restaurant category from as little as 2.63 stalls per 1,000 square feet (Rest. #14) to as much as 18.55 stalls per 1,000 square feet (Rest. #18).
- The average and median built parking ratios for restaurant uses are 7.07 and 6.12 stalls per 1,000 square feet of building area, respectively.
- *True parking demand* ratios range from 2.86 vehicles per 1,000 square feet (Rest. #13) to 13.63 vehicles per 1,000 square feet (Rest. #12).

- The average and median true demand for parking for restaurant uses (all sites combined) are 7.17 and 6.42 vehicles per 1,000 square feet of occupied building area, respectively.
- A 15% buffer was added to true demand numbers to allow for the ebb and flow of customers/visitors within the off-street parking supply.¹ This supports the concept of an 85% occupancy threshold (industry standard) for a customer or visitor parking supply.
 - Adding a 15% buffer to the average true demand figure (7.17) results in a *market-calibrated* ratio of 8.24 stalls per 1,000 square feet of restaurant space (i.e., average actual demand for parking).
 - Adding a 15% buffer to the median true demand figure (6.42) results in a *market-calibrated* ratio of 7.38 stalls per 1,000 square feet of restaurant space.
- The *current code minimum requirement* is 5.00 stalls per 1,000 square feet of building area (*Bend Development Code Chapter 3.3, Vehicle Parking, Loading and Bicycle Parking*), which is 65% less the market-calibrated rate of 8.24.
- The recalibrated restaurant parking demand ratio of 8.24 is 17% higher than the existing average built supply (7.07) and 21% higher than the corresponding median demand (7.38) and built ratios (6.12).
- Based on these findings, many of these developments (15 out of 20) have parking demands (*market-calibrated ratio*) that exceed their built parking supply. In most cases where demand exceeds supply, the surplus spills over into adjacent 'shared' parking environments (i.e., mixed use commercial centers).

Table 1: 2018 Bend Parking Demand Evaluation – Restaurant Land Use

Property ID	Building SF	Stalls	Built Parking Ratio	Code Minimum	True Demand	Market Calibrated (TD + buffer)	Delta +/-	% Diff
Rest. #1	8,242	61	7.40	5.00	5.58	6.42	0.98	13%
Rest. #2	11,391	61	5.36	5.00	5.97	6.87	-1.51	-28%
Rest. #3	3,744	33	8.81	5.00	9.88	11.36	-2.55	-29%
Rest. #4	2,592	13	5.02	5.00	6.94	7.99	-2.97	-59%

¹ For purposes of “market” calibration, buffers are frequently used to account for a range of possible variations and factors that could influence the true demand calculation data derived from a single survey day. This can include seasonality, employment growth, sample size and other factors affecting parking. For the most part, buffers provide a more conservative approach to true demand. Also, the size of the buffer generally varies from 5% to 15% based on the land use, with retail/restaurant/office land uses (with higher customer traffic volumes) trending higher and more fully employment-focused land uses (e.g., industrial), trending lower. In situations where data collection is more frequent, the use of buffers can be minimized. In the case of Bend, RWC uses buffers for all of the surveyed land uses to reflect a conservative approach to true demand.

Property ID	Building SF	Stalls	Built Parking Ratio	Code Minimum	True Demand	Market Calibrated (TD + buffer)	Delta +/-	% Diff
Rest. #5	3,321	30	9.03	5.00	10.54	12.12	-3.09	-34%
Rest. #6	3,160	20	6.33	5.00	6.01	6.91	-0.59	-9%
Rest. #7	2,850	14	4.91	5.00	6.32	7.26	-2.35	-48%
Rest. #8	6,768	29	4.28	5.00	8.27	9.52	-5.23	-122%
Rest. #9	1,327	7	5.28	5.00	6.78	7.80	-2.52	-48%
Rest. #10	6,386	42	6.58	5.00	12.84	14.77	-8.19	-125%
Rest. #11	2,675	24	8.97	5.00	3.36	3.87	5.10	57%
Rest. #12	2,862	28	9.78	5.00	13.63	15.67	-5.89	-60%
Rest. #13	14,006	64	4.57	5.00	2.86	3.28	1.29	28%
Rest. #14	4,460	23	5.16	5.00	8.30	9.54	-4.38	-85%
Rest. #15	3,735	28	7.50	5.00	13.39	15.39	-7.90	-105%
Rest. #16	6,447	36	5.58	5.00	6.51	7.49	-1.91	-34%
Rest. #17	4,349	15	3.45	5.00	4.83	5.55	-2.10	-61%
Rest. #18	1,779	33	18.55	5.00	5.06	5.82	12.73	69%
Rest. #19	2,448	28	11.44	5.00	6.94	7.99	3.45	30%
Rest. #20	2,370	14	5.91	5.00	3.38	3.88	2.03	34%

- 4 of the 20 sites have a lower built parking ratio than the code minimum of 5.00 (Rest. #7, 8, 13, and 17). This could be for a number of reasons such as, 1) the restaurant was built before the existing minimum parking code was in place, 2) some sites may include activities other restaurant uses (e.g., manufacturing, retail, etc.) the square footages of which would not count toward the minimum parking requirement for restaurant use. Three of the 4 cases shown here have market calibrated parking demands that exceed the code minimum (Rest. #7, 8, and 17).
- 6 of the 20 sites are standalone uses (Rest. #5, 6, 7, 8, 18, 20) with no other shared parking supply or adjacent land uses (i.e., not part of a strip mall or shopping center). Only 2 of the sites have built parking supplies less than the parking code minimum² (Rest. #7 and 8). Four of the 6

² Both of these sites were built before the most recent changes to the required parking minimum code.

have market calibrated demands that exceed the code minimum and the built supply (Rest. #5, 6, 7, 8).

- 14 of the 20 sites have peak period demand that exceed the onsite built parking supply (Rest. #2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 15, 16, 17). In these cases, additional demand spills over onto the on-street parking supply, or onto an adjacent off-street parking supply that has availability³. In 10 of the 14 sites, the built ratio exceeds the code minimum (4 of the 14 sites built below the minimum).

Table 2: 2018 Bend Parking Demand Summary – Restaurant Land Use

Metric	Code Minimum	Built Parking Ratio	True Demand Ratio	Market-Calibrated Ratio
Average	5.0	7.07	7.17	8.24
Median	5.0	6.12	6.42	7.38
Minimum	5.0	2.63	2.86	3.28
Maximum	5.0	18.55	13.63	15.67

- **Table 2** summarizes average, median, minimum, and maximum demand for all sites. While 75% of restaurants’ true demand exceeds the minimum code requirement, most provide a built parking ratio that exceeds the average minimum requirement. Additionally, 30% of them have peak hour demands with a surplus of parking available. With an average demand ratio of 7.07 and a median ratio of 6.42, the city could choose to increase the required minimum parking ratio to 6.00, but this would result in the overprovision of parking on 6 of the 20 sites.

Restaurant minimum parking code summary recommendation

Restaurant uses are generally under-supplying built parking by a combined average of 15% (average built ratio / average market calibrated demand). Though parking is being under-built in some cases, the majority of the excess demand is being absorbed into adjacent available parking supplies – stalls in the same commercial development (mixed use), or into the on-street system. The current minimum parking code (5.00 stalls/1,000 SF, BDC Chapter 3.3) is not requiring parking to be built in excess of true demand. In the cases where the off-street parking was under-supplied for the specific restaurant use, there was sufficient parking on-site (shared with other uses in a commercial mixed-use environment) or on-street adjacent to the restaurant to accommodate the demand. However, due to the fact that parking is being under supplied by 15 percent, with the average market-calibrated demand ratio for

³ In a couple of instances where demand exceeded supply adjacent properties have signs posted stating parking is for their patrons only during business hours, which also implies the parking can be used by patrons of other businesses after hours – functioning as an informal shared parking agreement.

parking at 8.24 (and median at 7.38) the city may want to consider increasing the minimum to 6.00, except for uses that are part of a mixed-use development or have a drive-through component.

It is important to take incremental steps when choosing to increase a parking development minimum to avoid an 'over correction'. Best practices would suggest a transition into a higher (or lower) minimum ratios coupled with follow-up parking demand monitoring, usually 12 to 18 months after the most recent recalibration. This check and balance process creates less disruption to the on-going development process and allows for smoother and less erratic changes to the status quo.

Based on the analysis above we propose the following for consideration:

- Increase the minimum parking ratio for free-standing restaurants from 5.00 to 6.00, except for uses that have a drive-through window.
- Restaurants that are part of a mixed-use development would continue to be able to build at a ratio of 5.00 stalls per 1,000 square feet.

Summary

Parking being developed for restaurant uses are being provided at varying levels, some as much as 18.55 stalls per 1,000 square feet (in this instance the design of the restaurant caters to short-term vehicle trips) and some as few as 2.63 stalls per 1,000 square feet. Market-calibrated demand for restaurant uses can also vary widely depending on the business – some have very low demand (with many contributing factors), while others with very high demand function more like a tourist destination rather than a simple eating establishment.

The City's current parking code minimums allow for prospective developments to be built with "right-sized" parking supplies that reflect true demand. Continued data collection efforts, coupled with educating developers on the relationship of built supply to market-calibrated demand may be required to more accurately determine the appropriate amount of parking within developments. Based on the findings in this report, the City's code minimums are not contributing to parking surpluses. However, in the majority of cases the current minimum parking requirement does not reflect true demand and can result in deficient or undersupplied parking. The recommendations contained in this report effectively increase the minimum requirement for standalone restaurants by 20%, but the real onus is on the developer to "right-size" the parking supply appropriate to their project.

A key finding in this analysis is the high variability in how restaurants function individually, and how they function in relationship to their adjacent surroundings (e.g., able to share or spillover into adjacent supplies). This is also displayed in the relationship of free-standing uses to those that function in mixed use environments. The recommendation in this report to increase the minimum is an attempt to reflect

this, but also a caution to be more cognizant at development approval of the nature of the use and its context to adjacent uses in the future.