

15 May 2014

<b>To</b>	<b>Ashland Downtown Parking Advisory Committee</b>
<b>CC</b>	<b>Michael Faught and Bill Molnar, City of Ashland</b>
<b>From</b>	<b>Robert Parker, Nick Meltzer, and CPW Team</b>
<b>SUBJECT</b>	<b>DOWNTOWN PARKING GENERATION ESTIMATES AND ANALYSIS</b>

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## BACKGROUND

Community Planning Workshop is working with the City of Ashland to conduct a downtown parking and multimodal circulation study. The study is intended to evaluate the effectiveness of existing downtown parking management, truck loading zones, and travel demand management strategies in order to improve the overall accessibility of downtown for all visitors.

To better understand the parking management problem in downtown Ashland, CPW conducted a parking generation analysis to estimate demand for parking spaces in the downtown study area based on the Institute of Transportation Engineer's (ITE) guidelines. The ITE guidelines are produced from information submitted to the organization from transportation engineers, planners and other professionals who work for public agencies involved in transportation planning throughout the United States and Canada. The ITE manual for parking generation serves as the standard for determining the total number of parking spaces utilized by planning professionals.<sup>1</sup>

This memorandum presents the results of CPW's parking generation analysis, presents key findings of the analysis, and notes similarities with other information we have collected so far. The broad over-arching finding is that, based on the ITE figures, the downtown area has an inadequate supply of parking to support demand. This is further supported by survey results and original concerns listed in the scope of work for the project.

## METHODS

The broad method used for this analysis is relatively simple: parking generation units (typically in square feet of built space) are multiplied by a parking generation factor to develop a demand estimate. In practice, this requires (1) an inventory of built space by use, (2) the ITE categories, and (3) a method to match the uses with the ITE categories.

To determine the demand for parking we categorized the downtown businesses into the ITE classifications. We then utilized Google Streetview in combination with ArcGIS to determine the square footage and ITE category of all the properties located in the downtown study area. Some buildings were not visible from Google Street view and were consequently deleted from the dataset. Additionally, ITE uses categories that do not perfectly match the actual use of the

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<sup>1</sup> <http://ecommerce.ite.org/IMIS/ItemDetail?iProductCode=IR-034C>

property (for example, Art Gallery is not used in ITE) and were thereby classified according to the most similar use listed within ITE classes.

Due to this limitation, the results of this analysis are presented within a range of +/- 10%. The number of spaces estimated by this analysis are meant to guide discussion of parking management in Ashland, and do not represent a comprehensive analysis.

## KEY FINDINGS

In February, the CPW team conducted a private parking inventory of the downtown study area by analyzing aerial imagery provided by the city of Ashland and counting all private parking spaces within the study area (see Appendix A). Through this analysis we found that the downtown study area contains a total of 3,580 parking spaces (see Table 1). While the inventory includes all private (off-street) spaces, and all public (both on-street and off-street) spaces, ITE does not differentiate between the two, and therefore the results are presented in aggregate.

**Table 1: Parking Spaces within Study Area**

<b>Total Parking Spaces Available in Downtown</b>	
Private	1,148
Public	2,432
<b>Total</b>	<b>3,580</b>

Source: Downtown Ashland parking inventory, Community Planning Workshop, 2014

The limitations of ITE listed above required us to ‘lump’ uses into categories which we believe best fit the ‘use’ in terms of what ITE has identified. Appendix B shows the final spreadsheet which we used to calculate the number of spaces ITE predicts would be needed to support the uses downtown. For purposes of conceptualizing the problem of parking in Ashland we chose to display this data as a range to account for some of the inaccuracies of ITE figures.

We used the number of parking spaces in Table 1 along with the parking generation results in Appendix B to determine whether there is a surplus or deficiency of parking spaces within the downtown area (see Table 2). The results in this table are presented within a 10% range of the raw number derived from subtracting the number of spaces that exist downtown (3,580) from the number of spaces generated by uses downtown according to ITE’s manual. The results indicate that there are not enough parking spaces in downtown *to meet demand during the week* at 85% occupancy.

**Table 2: ITE Parking Generation Results**

Difference in Available Parking Supply (Negative numbers indicate deficiency in supply)					
Average			85th Percentile		
Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
Between -1,050 and -860	Between -950 and -780	Between 2,340 and 1,900	Between -1,070 and -870	Between 1,420 and 1,160	Between 3,350 and 2,740

Source: Downtown Ashland parking inventory, Community Planning Workshop, 2014

The results of the parking generation analysis validate the following findings from the first survey conducted in February:

- **“Parking capacity is an issue during peak periods.** While a large majority of respondents reported visiting downtown frequently (86% indicate they visit two or more times per week), 39% of respondents indicated that difficulty in locating downtown parking deters them from visiting, and 44% indicated they have trouble finding parking on more than 40% of their visits. Moreover, 65% of respondents report it takes longer than 5 minutes to find a parking space.”
- **Downtown visitors alter their parking habits during the Oregon Shakespeare Festival.** Seventy-one percent of respondents indicate their parking habits vary with the OSF season.
- **Business owners frequently get complaints from downtown patrons.** Over 70 percent of business owners surveyed said that their patrons have complained about parking. Moreover, half of the responding business owners indicate that availability of parking has negative effects on their business during peak periods.

Inadequate supply of parking in the study area would additionally support the survey finding that visitors report it takes longer than 5 minutes to find a parking space. This is further supported by the average occupancy of parking spaces in Table 2, which suggest a deficiency of spaces on all days except Sunday. This would indicate that downtown users may encounter difficulty when looking for a parking space due to a supply deficiency.

## CONCLUSION/IMPLICATIONS

The parking generation analysis indicates that parking supply in downtown Ashland is inadequate to support existing uses. This deficiency is exacerbated during the Oregon Shakespeare Festival season when increased pressure on parking supply exists. The results of the parking generation study support previous findings, as well as concerns voiced to CPW by the committee that parking supply may be an issue in the downtown area. In short, the findings validate the following issues identified at the start of this study:

- Concern that the existing supply is currently “at capacity” during peak days and seasons.

- ITE parking generation study supports this concern by indicating there is an inadequate supply of parking in the downtown area.
- First tier survey results indicated that visitors to the downtown have difficulty finding parking spaces and alter their parking habits during the OSF season and also indicated business owners frequently get complaints from patrons about parking .
- Suspicion that employees are using core area short-term parking, thereby reducing “capacity” for customers and visitors.
  - ITE accounts for parking generated by patrons and employees, and the analysis indicates an inadequate supply.
  - First tier survey indicates that downtown employees use on-street parking but would be willing to park further away and use other modes to access their place of employment.
- A desire to make best use of off-street facilities both in and outside of the core area.
  - To alleviate the deficit in parking indicated by the ITE parking generation analysis, the city will need to find ways to utilize parking facilities outside of the core area. In addition the city may consider addressing strategies that work to decrease the demand for parking within the core to alleviate pressure on the existing supply (through TDM strategies).
- The need for a plan that assures maximum utilization of the supply to meet intended uses.
  - The ITE parking generation analysis indicates there is a supply deficiency, but improving way finding to direct users to parking in the downtown could increase efficiency of utilization of parking downtown, in addition signage could direct users to parking that exists outside the study area to alleviate demand within the downtown.

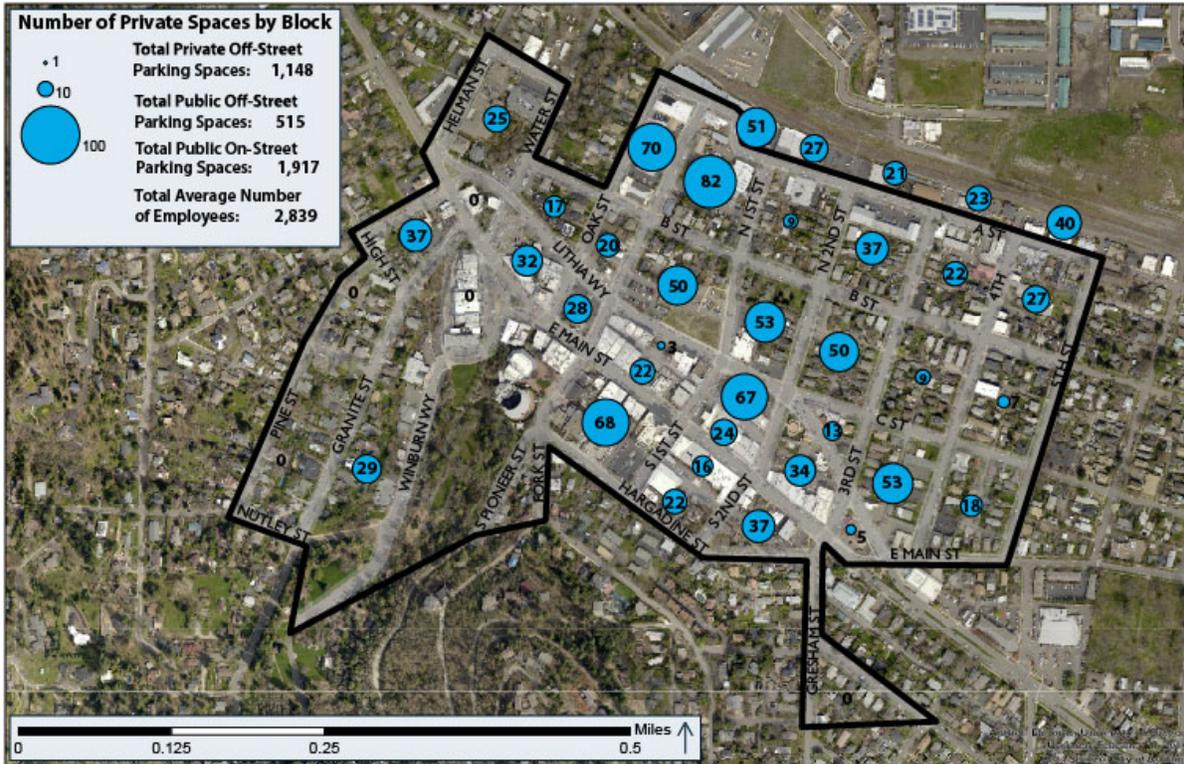
Lastly, ITE results suggest that Ashland has a quite large deficit of parking spaces, yet the perceived problem, supported through survey results, monitoring and committee perceptions don't seem to be as severe as ITE figures would suggest. This can be due to the following explanations, or a mix thereof:

- People may behave differently than the ITE data suggest.
  - Alternative modes of transportation may be more popular in Ashland than in areas ITE based their figures on.
- Spillover into residential parking areas outside of the study Area may account for excess supply.
  - ITE figures assume the study exists within a finite contained space; users of downtown may park outside the study area (not taken in to account with parking space figures in Table 1).

# Appendix A: Parking Inventory Map

## Ashland Downtown Parking and Multi-Modal Circulation Study

### Private Parking Space Inventory



## Appendix B: ITE Trip Generation Table

Description/ITE Code	Units	Expected Units	Total Stalls Occupied in Peak Period					
			Average			85th Percentile		
			Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
Warehousing	KSF	5.88	3.0	NA	NA	4.8	NA	NA
Single-Family Detached Housing	Dwelling Units	263	481.3	NA	NA	562.8	NA	NA
Low/Mid-Rise Apartment, Urban	Dwelling Units	78	93.6	80.3	81.9	125.6	88.9	NA
Hotel, Urban	Occupied Rooms	180	115.2	162.0	NA	NA	NA	NA
City Park	Acres	93	NA	390.6	260.4	NA	NA	NA
Live Theater, Rural	Seats	2290	572.5	NA	NA	732.8	NA	NA
Multiplex Movie Theater	Screens	5	181.0	NA	NA	225.0	NA	NA
Health/Fitness Club	KSF	9.69	51.1	28.0	NA	82.0	32.8	NA
Church	KSF	33.16	125.7	NA	277.6	NA	NA	476.9
Clinic	KSF	12.38	61.2	NA	NA	61.4	NA	NA
Office Building, Urban	KSF	114.39	282.5	NA	NA	340.9	NA	NA
Medical-Dental Office building	KSF	5.90	18.9	NA	NA	25.2	NA	NA
Government Office Building	KSF	26.42	109.6	NA	NA	162.0	NA	NA
United States Post Office	KSF	9.15	303.8	NA	NA	NA	NA	NA
Building Materials and Lumber Store, Urban	KSF	18.59	19.7	NA	NA	NA	NA	NA
Hardware/Paint Store	KSF	6.83	13.0	15.0	NA	NA	NA	NA
Automobile Parts Sales	KSF	4.30	9.2	9.7	NA	10.6	11.8	NA

Description/ITE Code	Units	Expected Units	Total Stalls Occupied in Peak Period					
			Average			85th Percentile		
			Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
Supermarket, Urban	KSF	31.39	71.3	72.8	49.3	88.8	NA	NA
Sporting Goods Superstore	KSF	2.91	5.2	12.7	9.7	7.0	NA	NA
Apparel Store	KSF	214.85	242.8	2058.3	186.9	NA	NA	NA
Furniture Store	KSF	10.95	13.4	11.4	15.7	NA	14.7	NA
Quality Restaurant	KSF	74.45	1221.8	1221.0	529.4	1414.6	1690.1	NA
High-Turnover (Sit-Down) Restaurant w/o Bar or Lounge, Urban	KSF	21.16	117.4	NA	NA	134.8	NA	NA
Fast-Food Restaurant w/o Drive-Through Window, Non-Hamburger	KSF	2.19	18.0	NA	NA	27.0	NA	NA
Coffee/Donut Shop w/o Drive-Through Window	KSF	12.93	175.3	186.7	NA	224.0	189.7	NA
Gasoline/Service Station w/ convenience Market	Fueling Positions	17	12.8	NA	NA	17.5	NA	NA
Dry Cleaners, Urban	KSF	4.70	6.6	NA	NA	11.5	NA	NA
Drive-in Bank, Suburban	KSF	41.76	167.0	144.9	NA	236.8	194.6	NA
Shopping Center	KSF	10.53	41.7	49.2	46.4	55.1	62.2	61.5
<b>Totals</b>			4,534	4,443	1,457	4,550	2,285	538