Management

Parking ^ Made Easy:

A GUIDE TO TAMING THE DOWNTOWN PARKING BEAST

June 2001

Parking Management Made Easy: A guide to taming the downtown parking beast

TGM Program Staff

Pamela Kambur, TGM Outreach Coordinator
c/o DLCD Urban Division
635 Capitol St. NE, Suite 150
Salem, OR 97301
Tel: (503) 373-0050 ext. 286
Email: Pamela.Kambur@state.or.us

Consultants

Oregon Downtown Development Association
161 High St. SE, Suite 236
Salem, OR 97308
Tel: (503) 587-0574
Email: info@odda.org

Carol Landsman
Nelson\Nygaard Consulting Associates

Karen Swirsky & Nils Eddy
Main street consultants
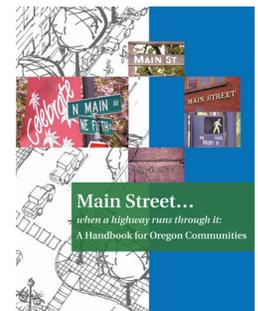
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How to Assess if You Have a Downtown Parking Problem

You can analyze your downtown parking situation—it's not rocket science, it's not even traffic engineering. It's mostly interviewing and counting. However, if you'd like to hire a consultant, talk with your city engineer or public works department to see if they can recommend someone, or with another community that solved its downtown parking issues. Some consultants will just collect the data for you; other firms will conduct the entire parking study. These firms will likely be either engineering or land use/transportation planning consultants.

The cost of a parking study can range from a couple of thousand dollars for data collection to determine parking supply and demand, to upwards of $25,000 for a complete study that includes parking management recommendations and implementation strategies, as well as projections for future needs. If you are considering adding more parking to your existing inventory, the study can get even more expensive. But remember, you can do all or part of this study yourself—especially if you have one or two people to help gather information.

Follow the steps in this handbook to achieve:

- An understanding of people's concerns about downtown parking.
- A mapped and listed inventory of existing on-street and off-street parking, both public and private.
- Parking inventory by block and block face at specific times of day. (A block face is one of the sides of a block. A square block has four block faces. A triangular block has three block faces. Every street has two block faces.)

- (Optional) An inventory of how long cars stay in parking spaces. This piece is more difficult without technical assistance.


Step One:

Find out what people (you can call them stakeholders) think is the downtown parking problem.

This is important because it will help you design the rest of the study. Interview:

- Employers and employees, professional, retail and service.
- Downtown residents and those who live next to the downtown.
- Commercial realtors.
- Downtown shoppers.
- City officials and staff.
- Chamber or downtown business association groups.
- ODOT regional planner or district staff, especially if the downtown area includes a state highway.

Ask them:

- Is there a parking problem downtown?
- Where is the biggest problem?
- What times of day is parking most limited?
- If there is parking enforcement, how well is it working? You will want to talk to the parking enforcement program staff to find out all about the program.
- What ideas do they have for solutions?
- Is one particular group contributing more than others to the parking problem?

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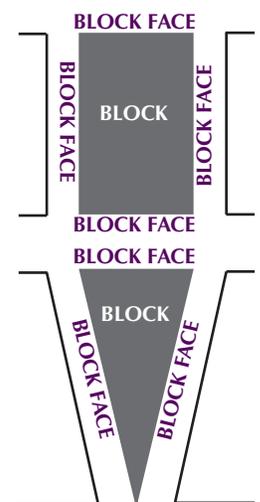
- Are there conflicts between residential and business or retail parkers?
- What about long-term parkers, employees and employers; do they park on the street all day in front of or near downtown businesses?

Analyze the results of the interviews. List the primary issues that emerge.

## Step Two:

Define the parking study area.

The study area should include all of the downtown business area plus at least one or two blocks on all sides of this area. If stakeholders noted parking in neighboring residential areas is a problem, these areas, or at least the first block of these areas, should be included.

Figure 1 shows part of a study area for a downtown in a small Oregon city. Blocks one and two are outside the downtown but are included in the study area to fully understand parking use and patterns. Note that the blocks are numbered. This helps in identification and analysis and is much easier than calling something the Spruce Street, Elm Street, North Street, Main Street block.

List the blocks in a table where you will total the spaces in a later step.

Figure 1. *Study Area*

Parking Inventory by Block

	Block	On-Street Capacity	Off-Street Capacity	Total Capacity
	1	24	26	50
Between Florida and Montana Avenue	1A	15	0	15
	2	20	29	49
	3	11	23	34
Between Montana and Connecticut Avenues	4	20	50	70
	5	22	37	59
	6	2	25	27
	7	29	70	99
Between Connecticut and California Avenues	8	32	58	90
	9	26	36	62
	10	18	52	70
	11	26	2	28
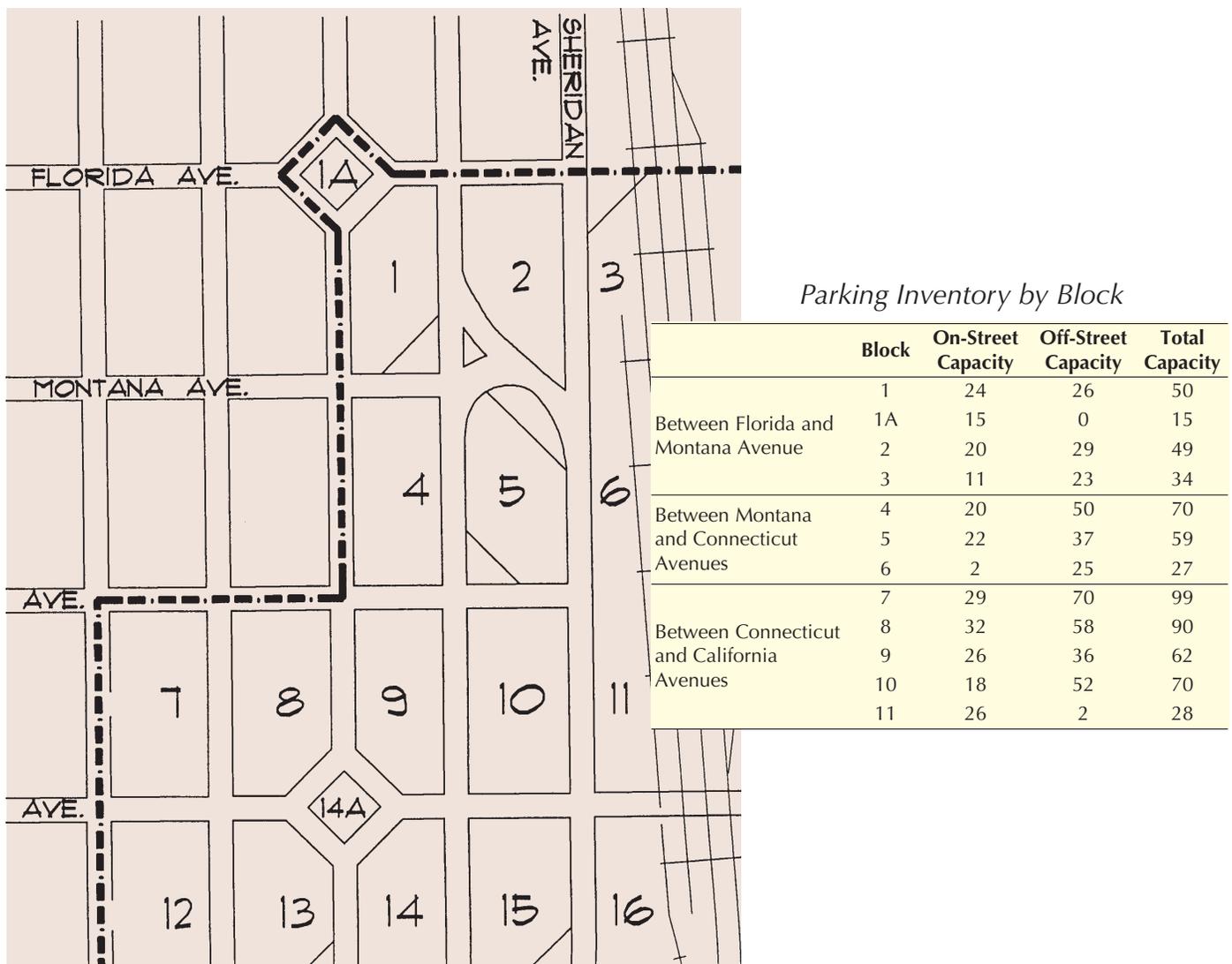
Step Three:

Count and map the number of parking spaces in the study area.

This inventory includes on-street and off-street parking, both public and private.

Why, you wonder, should this inventory include private parking? The answer is that these private spaces can be an important part of the available parking in an area. It does not mean that someone is going to demand they be opened up for public use. However, an owner of underutilized parking may be willing to lease some of those spaces. More about that later.

How do you count parking spaces? If curbside parking (also called block face parking) has been striped, it is pretty easy; if not, measure the block face (exclude driveways) and apply the criteria in Figure 2, or other criteria your city public works department may use. This only applies to parallel parking; diagonal (angle) parking will most likely be striped. A measuring wheel is useful to measure block faces.

Figure 2. *How to Measure On-Street Parking Spaces*

| Distance as Measured Along Curb (feet)	Number of Parking Spaces
<15	0
15-35	1
35-60	2
60-85	3
85-110	4
110-135	5
135-160	6
160-185	7
185-210	8
210-235	9
235-260	10
260-285	11
285-310	12

Criteria for parallel parking length can differ; compact-sized spaces were common in the seventies and early eighties. More people are driving large vehicles again, increasing the need for standard-sized spaces.

Off-street spaces may be more difficult to count. Again, if they are striped, it will be easy. If not, estimate how many parked cars can be accommodated. Remember that unless the parking area has an attendant or everybody works in the building next door, parkers cannot block one another and must have room to pull in and out. Your estimates should be fairly accurate. In these unstriped lots, some parkers use space more efficiently than others so it will vary in reality anyway. Analyze public and large private interior block lots individually. However, you don't have to track small lots of less than 10–15 spaces separately; these can be grouped together.

Step Four:

Gather information about parking as you conduct the inventory.

- Note areas that have parking restrictions such as two-hour parking or no-overnight parking.
- Locate disabled parking and loading areas (see page 10).
- Locate bicycle parking (see page 10).
- Identify diagonal parking, public parking lots and signage for those public-parking facilities.
- Keep an eye out for any potential problems and issues. Did a stakeholder note that crossing the street to a parking area is difficult for customers? Look at that crossing and see if it has a striped crosswalk or traffic signal. Do cars park on the sidewalk or block driveways?

130 ft = 5 spaces

DRIVEWAY

80 ft = 3 spaces
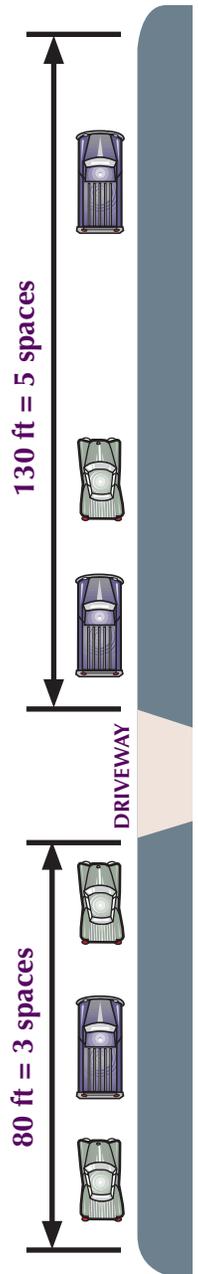
Step Five:

Determine the times and days when you will check parking use.

Here is an instance when talking to stakeholders will come in handy. If parking on Saturday is considered a problem, you will want to count use on that day. If weekday parking is considered the problem, count on a Tuesday, Wednesday, or Thursday of a typical week. Don't count parking during spring break or the week before Thanksgiving or Christmas; obviously trip and parking patterns are different then. Try to count when school is in session UNLESS summertime parking is the problem.

The times of the day you choose to count parking use will depend on two things: the times that people have identified as potential problems and the amount of energy and money available. Some studies count parking use every hour for a 12-hour or greater period. Unless there is a specific problem, such as overnight parking or special events in the evenings, or significant fluctuations during the day, counting three times a day will be adequate: 8 AM to 10 AM, 11:30 AM to 1:30 PM and 3 PM to 5 PM.

Step Six:

Count occupied parking spaces.

This step is exactly what it sounds like. First, make several copies of your inventory map or list. (A map may be most useful.) Then go out at the designated times and count occupied spaces. If you have chosen to count three times during the sample day, you will end up with three maps, each one showing how many of the inventoried spaces are filled during that time period. See Figure 3.

Figure 3. *Occupied Parking Spaces*
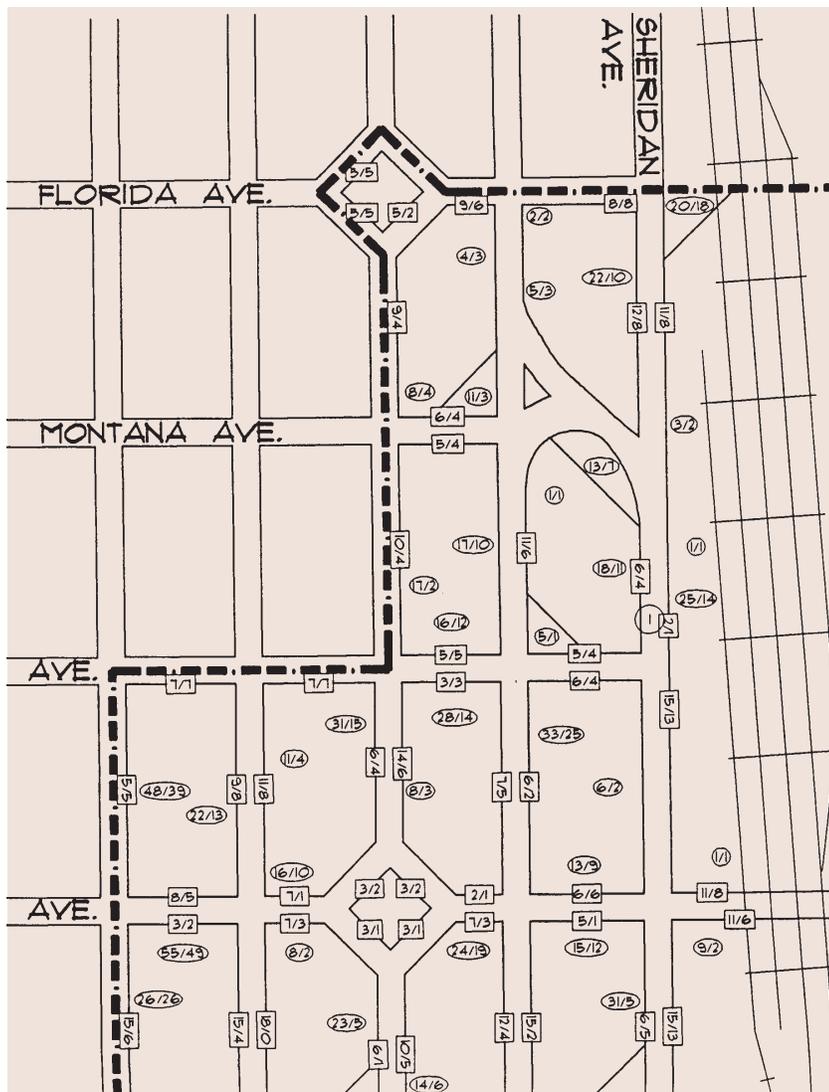
Notations in the figure use squares for on-street parking and ovals for off-street parking. The numbers are spaces available followed by vehicles parked. There should be one of these figures for each time period.

Step Seven:

Figure out what it all means.

After this study is complete, you will have all these maps with numbers. Now what?

First, add up all the avialable spaces and all the occupied spaces for each time period. Divide the number of occupied spaces by the number of available spaces to calculate the average occupancy rate. Figure 4 shows the results for one time period.

If the occupany rate is more than 90 percent, you have parking congestion and have likely used up all your parking capacity. The standard of 90 percent is used because at around this occupancy rate parking spaces become difficult to spot and drivers either circle around looking or get frustrated and give up. Most likely the occupancy rate will be much less than 90 percent.

The next step is to look at parking rate by block or by block face for a particular street. It can be very useful to graph occupancy rate by time of day for each street. Figure 5 shows an example of a study that counted parking occupancy for each hour of the day. You will likely discover that certain areas have a higher occupancy rate than others. You may also find that on-street parking is more utilized than off-street parking.

You may discover that overall, one time of day has the highest parking rate, but certain areas have a higher parking rate at different times of day. For example, the afternoon time may have the highest average parking rate, but parking near several favorite restaurants may have the greatest occupancy rate during lunchtime.

You may see that parking on residential streets increases during the day from the morning count to the afternoon count. This suggests that people going downtown, not living in the residential area, are using this parking. Understanding your downtown parking patterns will help you determine the best solutions.

Figure 4. *Parking Occupancy by Block*

	Block	On-Street % Full	Off-Street % Full	Total % Full
Between Florida and Montana Avenue	1	41.7	42.3	42.0
	1A	20.0	0.0	20.0
	2	20.0	48.3	36.7
	3	27.3	13.0	17.6
Between Montana and Connecticut Avenues	4	35.0	52.0	47.1
	5	36.4	45.9	42.4
	6	50.0	44.0	44.4
Between Connecticut and California Avenues	7	13.8	25.7	22.2
	8	37.5	50.0	45.6
	9	42.3	52.8	48.4
	10	33.3	20.8	31.4
	11	19.2	100.0	25.0
Totals		**43.2**	**44.7**	**44.6**

Figure 5. *Parking At or Near Capacity by Time of Day and Street Segment*

Street	Location	9AM	10AM	11AM	12AM	1PM	2PM	3PM	4PM	5PM
Second	Vine to Ash	◆	◆	◆						
Second	Ash to Sherman			◆						
Second	Sherman to Grant							◆		◆
Second	Grant to Maple				◆	◆	◆	◆		
Second	Maple to Oak						◆			
Second	Oak to A				◆	◆				
Main	Ash to Sherman						◆	◆		◆
Main	Sherman to Grant		◆				◆			
Park	Sherman to Grant	◆	◆		◆	◆		◆		◆
Maple	3rd to 2nd	◆		◆				◆	◆	
Maple	2nd to Main			◆	◆	◆		◆		
Maple	Park to Grove	◆	◆		◆	◆	◆	◆		

Parking Turnover Study

If you are concerned that long-term parkers—namely downtown workers, business owners and employees—are parking on-street in spaces best used by shoppers, customers and clients, you may want to conduct a parking turnover rate study.

In this data collection process, you record the license plates of all cars parked on street or in public off-street parking every hour during the day. You then compare the license plate numbers to see how long a vehicle remains parked in a particular space. You can also use this information to see if parkers move their cars from one on-street space to another to avoid getting a ticket.

How to Handle Parking Demand
Without Building More Parking
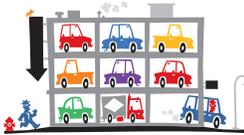
You've done your homework; now you know what actually is going on with your downtown parking. Most likely, you have discovered that while parking is not at capacity overall, you have some areas, or times, where demand is greater than others. You may have discovered that parking occupancy is at, or above, 90 percent at the peak time of the day.

Even if all your parking, both on-street and off-street is being used, you have some options that are less expensive than building either new off-street parking lots that cost about $2,000–$3,000 a space or a parking structure that costs $12,000–$15,000 a space, not including land costs and lost opportunities to develop that parcel of land for something else. You can:

- Negotiate opportunities for use of underutilized private lots (for example: is there a local church lot that could be used by downtown employees during typical weekday office hours?).

- Develop satellite parking lots with shuttle service for downtown workers.
- Work with employers and the city to provide incentives for carpooling, biking, walking and riding transit (if you have transit to your downtown).
- Develop diagonal (angle) parking on one side of the street if the pavement is at least 52 feet wide and not very busy, or on both sides of a 60-foot street; again, if it's not very busy or not a state highway. If it is a state highway, talk to ODOT about any planned changes. Diagonal parking will provide more spaces than standard parallel parking—potentially more than double. On the negative side, it takes road width that might be used for other purposes and can create safety problems, as cars have to back out into traffic. If you think adding diagonal parking is a viable option, check with the city engineer or a consulting engineer to move this idea forward.

- Convert existing untended parking lots into attended or valet parking lots for short-term parkers. This will automatically increase the capacity of the parking lot because more cars can be packed in less space.

Most downtowns will have available parking but it may not be where it is needed such as close to stores or other businesses. There are specific strategies that make better use of the existing parking supply:

1. ***Convenient short-term parking.*** Ensure that on-street downtown parking is available for short-term parkers. Short-term parkers-customers, clients, visitors-are more sensitive to walking distance than are long-term parkers-employees and business owners. Implement two- or three-hour parking zones.

2. ***Options for long-term parking.*** Complement short-term parking restrictions with lots or areas for long-term parkers on the outskirts of the downtown area. Protect long-term parking from use by short-term parkers. You must enforce these restrictions with both frequent patrols and tickets that cost enough to make someone not want to get one.

   Some, but probably not all, of cost of the parking enforcement program can be recovered from ticket fees. Some communities look to downtown businesses to cover the remaining costs. This strategy makes convenient on-street parking available for shoppers, customers and clients and will instantly increase downtown parking capacity. This program should be complemented by employee incentives to carpool, bike, walk or use transit if available.

Some downtown parking programs require that employers register the names and license plate numbers of all those who work at their business. These vehicles are not allowed to park in the core downtown area during business hours.

3. ***Special parking.*** If you limit parking time in the downtown, make sure to supply 15 and 30 minute spaces as well as loading zones. Disabled parking and bicycle parking (discussed below) are also part of the mix.

4. ***Good signage.*** Make sure you have good signage pointing to public parking areas. Check pedestrian crossings near public off-street parking to ensure that people can cross streets easily and safely after they park their vehicles.

5. ***Better use of existing off-street spaces.*** Make better use of off-street spaces. This includes public and institutional buildings (such as churches and fraternal lodges) that may have excess parking as well as private businesses that may be willing to lease extra parking to the city to provide additional public parking. These spaces are best used for long-term parking (business owners, employees, etc.). Private businesses may be concerned about liability; check with your City Attorney to see if these spaces are, or can be, covered by the city's liability insurance.

6. ***Anticipate customer needs.*** Make sure you meet special needs. One community on the coast provided no parking for RVs, so these vehicles used regular parking spaces. If your downtown attracts RVs or tour buses, or would like to, make sure you provide appropriately sized parking for them.

Disabled Parking

While the Americans with Disabilities Act (ADA) does not require striped on-street disabled parking, it does require a parking program to meet the needs of ADA-eligible parkers. Different cities meet this requirement in different ways. Some provide a designated disabled parking space on the corner of every block or next to shopping and other daily services. For additional information about parking and ADA you can call the Federal Transit Administration Office of Civil Rights at 888-446-5411 or email them at <ada.assistance@fta.dor.gov>.

ADA requires that off-street private and public parking facilities provide a set number of handicapped spaces that are both marked and designed to allow people with disabilities to access them, as detailed in Figure 6.

Figure 6.

Minimum Number of Accessible Parking Spaces ADA Standards for Accessible Design 4.1.2(5)

Total Number of Parking Spaces Provided (per lot)	Total Minimum Number of Accessible Parking Spaces (60" & 96" aisles)	Van Accessible Parking Spaces with min. 96" wide access aisle	Accessible Parking Spaces with min. 60" wide access aisle
	Column A		
1 to 25	1	1	0
26 to 50	2	1	1
51 to 75	3	1	2
76 to 100	4	1	3
101 to 150	5	1	4
151 to 200	6	1	5
201 to 300	7	1	6
301 to 400	8	1	7
401 to 500	9	2	7
501 to 1000	2% of total parking provided in each lot	1/8 of Column A	*7/8 of Column A**
1001 and over	20 plus 1 for each 100 over 100	1/8 of Column A	*7/8 of Column A**
*one out of every 8 accessible spaces **7 out of every 8 accessible parking spaces			

Bicycle Parking

The same consideration should be given to bicyclists as to motorists, who expect convenient and secure parking at all destinations. Downtown areas should generally have a bicycle rack within view of every building entrance. Racks are often shared by adjacent businesses. Popular destinations such as a library or park may have multiple racks.

Many cities specify the number, type and location of bicycle parking. Refer to your city's code or see the Oregon Bicycle and Pedestrian Plan, Oregon Department of Transportation for details (available at <http://www.odot.state.or.us/techserv/bikewalk/planimag/parking.htm>. You can count bicycle parking in the study area at the same time you count automobile parking or as a separate field trip with local bicyclists. Compare the total spaces in each block with the city requirements or state recommendations to determine how and where bicycle parking could be improved.

How to do All This and Pay for It

Some downtown groups, working with city officials, have developed formal downtown parking districts to manage parking use and creation. Some questions to consider when forming this district include:

- How should the city define the parking district?
- What are the board's responsibilities?
- Who should serve on the parking district board?

- What is the role of the downtown association in regards to the parking district?
- Should the city require downtown workers to register and prohibit them from parking downtown?
- Should the city charge for downtown long-term parking permits?
- How should this program be financed?

Conclusion

In most cases, communities will find they have adequate downtown parking capacity if they make the best possible use of that parking. That is where parking management programs come in; they are an inexpensive way to add parking opportunities to the downtown.

The first step is gaining a solid understanding of the use of the existing parking stock. This understanding of parking issues will enable a community to better use its available parking for downtown customers clients and workers. This is always a key element in comprehensive and thoughtful downtown revitalization.

You've heard it! We've all heard it.

"My customers have no place to park."

"Some people park downtown all day."

"There just is not enough parking downtown."

"I could sell-lease more property if there were more parking downtown."

"I could sell-lease more property if the city didn't require so much off-street parking."

"We can't expect our shoppers, employees, clients, visitors to walk more than a few yards in this weather."

"I won't locate my business downtown because there's no parking."

"I can never find a parking space on my street because employees park there."

You've heard you have a downtown parking problem. Now you can find out what to do and it won't cost a lot of money.

Sound too good to be true? Read on!

This guide tells you:
- How to analyze your downtown parking to see if you have a parking problem.
- How to analyze what, where, and when the problem(s) occur.
- How you can add to your parking supply through better management of the total space that you currently have (not always the individual number of spaces).