# *ASTORIA DOWNTOWN PARKING STUDY FINAL REPORT*

June 14, 2006

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# Astoria Downtown Parking Study
# Final Report
## June 14, 2006

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# Astoria Downtown Parking Study
## Executive Summary

In 2004 the Community Development Department began studying parking issues in downtown Astoria in response to several complaints about insufficient parking for customers and employees. As part of their 2003-2007 Council Goals, the Astoria City Council listed a parking analysis for the Safeway block. For 2005-2006 Council adopted a goal that identified development of a parking plan that could be used in decision making. For 2006-2007 Council adopted a goal of completing a downtown parking assessment.

Community Development Staff began collecting information in 2004 for this study. Study area (roughly 6$^{th}$ to 17$^{th}$, Franklin to River). The primary purpose was to evaluate the existing parking and to investigate potential improvements. The methodology included using the publication "Parking Management Made Easy: A Guide to Taming the Downtown Parking Beast". Staff also reviewed various parking plans and studies conducted over the years, beginning in 1963.

Initially, downtown merchants and property owners were surveyed to determine what parking issues were problematic. The results were tabulated and 90% said there was a parking problem, primarily on Commercial Street during regular business hours. However, 61% felt that employers, employees, and long term parkers contributed significantly to the problem. Existing parking spaces both on street and off were inventoried. A total of 2,824 were included within the study area. Spaces were identified as either 2 hour "customer" parking, on-street "free" spaces, off-street spaces, or other.

Sample blocks were then counted over a period of several months to ascertain the occupancy rates for each type of parking space and to identify potential problem areas. Occupancy rates indicated the highest overall usage was during the lunch hour, in all three major parking space categories, but that the overall occupance never rose above 72%. There was also a higher occupancy for "free" parking spaces than either those limited to 2 hours or off-street. This could indicate that there is a greater demand for employee parking than customer parking. However, according to the publication utilized for evaluation, these numbers are well within the range associated with adequate parking.

As an alternative way of verifying the occupancy rates, data was collected indicating the number of parking spaces that would be required if the downtown area were subject to parking requirements. This entailed assigning a use and square footage to each building, or portion of building, and calculating the number of spaces that would be required if it were built outside the downtown. The count indicated that the number of spaces required at peak times (regular business hours) was less than 2,000. This would indicate an average occupancy of 68%, roughly corresponding with the occupancy rate from the previous counts that were conducted. As part of this verification, vehicles were observed on the former Safeway parking lots to determine if they were long term parkers (likely employees) or short term parkers (likely customers). This observation indicated that 77% of those parking in these lots were long term parkers.

This data has been reviewed to determine how best to incorporate the information into options to improve the parking situation in Downtown Astoria. There appear to be several physical, operational, and communicative suggestions to enhance the parking experience for both customers and employees. Staff has considered these various activities and is recommending

several for further development.  It was generally determined that while there is currently adequate parking downtown, the perception of a parking problem is perhaps the larger issue. Several physical options were considered, including parking structures and new parking lots. However, the highest priority action item should be to better inform the citizens and visitors of their parking options downtown, and direct them to appropriate parking places.  An equally important item is to create a downtown parking committee to serve as a sounding board for parking issues, and to assist the Council in updating parking policy.  This committee could be a completely new group of individuals, or could be served by the existing Traffic Safety Advisory Committee (currently the Astoria Planning Commission).  Other improvements can be developed over time, including amending the Parking Section of the Astoria Development Code to allow for more efficient parking lots, and the sharing of various private lots for uses that do not conflict with one another.

This draft document will be presented to City Council for their consideration and recommendations on a final report.

# INTRODUCTION

## STUDY OBJECTIVES
The primary objectives of this study were to 1) evaluate existing parking in Astoria's core downtown area and 2) investigate potential improvements. The Astoria City Council had received various complaints in recent years about inadequate parking for customers and employees. As part of their 2003-2007 Council Goals, the Astoria City Council listed a parking analysis for the Safeway block. For 2005-2006 Council adopted a goal that identified development of a parking plan that could be used in decision making. For 2006-2007 Council adopted a goal of completing a downtown parking assessment. The Community Development Department was charged with developing the study.

## PROJECT APPROACH
Staff is using "Parking Management Made Easy: A Guide To Taming The Downtown Parking Beast" as the methodology for evaluating Astoria's downtown parking problems. This publication was prepared by Oregon Department of Transportation (ODOT) and Oregon Department of Land Conservation and Development (DLCD), in June, 2001. This document uses a series of steps to analyze the situation, then helps come to conclusion on whether there is truly a parking problem, or just the perception of one. The Community Development Department will be the preparer of the report. No outside consultants were used.

# BACKGROUND INFORMATION

## CHRONOLOGY
Staff reviewed various planning documents and information that has developed in downtown for the last 40 years. Interestingly enough, the Chamber of Commerce determined there was a parking problem in the Central Business District as early as 1963, and by 1968 a Downtown Plan recommended the wholesale destruction of numerous downtown buildings and urged that parking lots should have first priority for use. Years of study nationwide has shown that this approach has a devastating effect on historic downtown business districts. Fortunately this plan was not implemented. For more information on the previous parking history in Astoria, see Appendix A.

## GUIDE & COMPONENTS
Utilizing the ODOT publication, staff developed each component of the process. For the full publication, see Appendix B.

### Step 1 – Find out what people think is the downtown parking problem.
This item was accomplished by developing a user questionnaire that was prepared by staff and delivered to downtown businesses and property owners. More than 200 questionnaires were distributed, and 135 responded. The questionnaire addressed issues of where parking problems were, when they were occurring, and who was contributing to them. The respondents were also asked to offer suggestions for improving the parking situation. For a full copy of the questionnaire form, see Appendix C.

### Step 2 – Define the parking study area.

We have defined the area as approximately one block past the existing Parking Area as defined by City Code. That Parking Area is used to determine parking enforcement issues downtown. It is currently bounded by 8$^{th}$ Street on the west, 16$^{th}$ Street on the east, Exchange Avenue on the south and the Columbia River on the north. Because there are additional downtown businesses outside the area, and because many employees and customers park outside the area, staff felt it was appropriate to define the study area as roughly being bound by 6$^{th}$ Street to 17$^{th}$ Street, Franklin to the river. As a point of clarification, one Councilmember had asked about the number of residential versus commercial spaces in the study area, so a sub-category was created to give an approximation of those spaces considered primarily residential.

**Step 3 – Count and map the number of parking spaces within the study area.**
All existing parking spaces were counted in each block. For the sake of clarity we have divided parking spaces into three categories; off-street, on-street 2-hour, and on-street no limit. There are a few other types of spaces, but they are relatively few in number compared to these three categories. And while they are not specifically designated as such, the majority of likely users for the two hour spaces are customers and the majority of likely users for the no limit spaces are employees.

The City Code-defined Parking Area contains 1,691 parking spaces, both on and off street. The current parking inventory within the study area contains 196 residential spaces and 2,628 commercial spaces for a total of 2,824 spaces.
1. Two hour customer spaces on-street. Currently there are 447.
2. Free employee spaces on-street. Currently there are 723 including the 196 residential listed above.
3. Off-street spaces in private and public lots. Currently there are 1,496.
4. Other includes 15 minute, ADA, and a few miscellaneous designations. Currently there are 158.

**Step 4 – Gather information about parking as you conduct the inventory.**
Staff has prepared an evaluation sheet of each block identifying the types of spaces, location of driveways, and other issues relative to parking. A form was developed and then keyed to individual blocks from a master map. Each block was given a corresponding code using the first initial of an adjacent street, and the number of the corresponding cross street. This indicated where the block was located. For consistency, the streets used for determining the block number were always located at the northwest corner. For example, the block where City Hall is currently located is called Block D10, because the intersection at the northwest corner of the block is Duane and 10$^{th}$ Street. The block that includes the Liberty Theater would be Block C12 (northwest intersection is Commercial and 12$^{th}$ Street. Blocks with either the Trolley line or Columbia River on the north side were given the letters RR (for railroad) or RF (for riverfront) and the corresponding western cross street. There are 68 blocks in the study area. For a block by block evaluation see Appendix D.

**Step 5 – Determine the times and days when you will check parking use.**
After reviewing the study publication and discussing options with ODOT, staff followed the publications guidelines of counting parking three times per day during the shoulder tourist season. Counts were made in the morning (before 10 am), at lunch (11:30 to 1:00), and in the afternoon (after 2:30). It is best to count cars on Tuesday, Wednesday, and Thursday, and when school is in session in order to get an accurate count and not one that is skewed toward the busiest time or the lightest time of the year. Counts were made in September, March, and April.

A couple of additional counts were made in August to see if the heavier tourist season had a significant impact on the numbers. No significant change was shown.

**Step 6 – Count occupied parking spaces.**
As a matter of course over a period of months staff would physically go out and count vehicles in spaces. Every single block was not counted. Approximately one-half of the 68 blocks were counted, giving a good representation from all areas considered to be problematic. Staff would walk through the entire study area in the morning, at lunch, and in the afternoon, marking the occupancy levels of each block being counted. This took place over a total of seven days, again, scattered during the three months the counts were done. Full discussion of the occupancy rates is below, and sample counts can be found in Appendix E.

**Step 7 – Figure out what it all means.**
According to the study publication, occupancy rates of 90 percent indicate that parking spaces become difficult to spot and drivers either circle around looking or get frustrated and give up. The study also recommends determining not only the overall occupancy rate, but also the rate by time of day, and by particular area. The results of this analysis are discussed later in this report.

# SUMMARY OF RESULTS

## QUESTIONNAIRE RESULTS
These were handed out by the police department and recollected to gain insight into specific issues. There were 135 respondents. Complete results can be found in Appendix C.
1. Is there a parking problem downtown? Yes (90%)
2. Where is the biggest problem? Commercial Street (53%), entire downtown (19%)
3. What time of day is parking most limited? Regular business hours (64%), afternoon (13%)
4. How well is parking enforcement working? Good (41%)
5. Do you have an idea for solving the parking problem? Build parking garage (34%), use old Safeway lot for parking (29%), create additional parking lots (14%)
6. Is one particular group contributing more than other to the problem? No (37%), employees (22%)
7. Are there conflicts between residential parkers and business parkers? No (51%), not sure (27%)
8. Do long term parkers, employees, and employers park in front of or near downtown businesses all day? Yes (61%), no (24%)

## OCCUPANCY RATES
Spaces were counted 3 times a day for a number of days during the shoulder seasons (March-April, and September). Overall downtown occupancy rate is shown below.

| Space Type | Morning | Lunch | Afternoon |
|---|---|---|---|
| 2-Hr. Limit | 38% | 59% | 55% |
| No Limit | 67% | 72% | 67% |
| Off-Street | 46% | 60% | 57% |

**Customer spaces on-street**.
Clearly there is a heavier demand for customer parking between the hours of 10 am and 5 pm, Monday through Friday. This is slightly heavier during the lunch hour, but overall parking in customer spaces downtown only approaches a 60% occupancy, which demonstrates adequate customer parking.

**Employee parking on-street.**
While these spaces (unlimited parking) are not specifically designated for employees, it appears that the majority of them are used by employees who work in the downtown area. The heaviest demand is between the hours of 8 am and 5 pm, Monday through Friday. Again, this is slightly heavier during the lunch hour, but overall parking in the unlimited spaces is around 70% occupancy, demonstrating adequate employee parking.

**Off-street parking.**
The heaviest demand for off-street parking is primarily during lunch and afternoon hours, Monday through Friday. Overall occupancy rates are near 60%, demonstrating adequate capacity with these lots.

## PROBLEM AREAS
The following table shows the blocks with the highest occupancy rates.

| Space Type | Location of Heaviest Use | Daily Occupancy |
|---|---|---|
| 2-Hr. Limit | Commercial (between $12^{th}$ & $14^{th}$) $12^{th}$ & $14^{th}$ (between Marine & Commercial) | 70% |
| No Limit | Exchange (between $10^{th}$ & $13^{th}$) $11^{th}$ & $12^{th}$ (between Duane & Exchange) | 94% |
| Off-Street | Former Safeway Parking Lot | 71% |

**Customer parking**
Heaviest near the 100% corner of downtown ($12^{th}$ & Commercial). Even at the heaviest times, the occupancy rate is only 70%, demonstrating an adequate capacity for customers.

**Employee parking**
Heaviest all around the former Safeway block. This demonstrates many employees are parking as close to their place of business as possible, as these areas are the closest unlimited parking spaces to many of the employee generators downtown; i.e. banks, restaurants, and beauty college. Occupancy for these blocks is over 90% indicating a shortage of employee parking in these areas.

**Off street parking**
Highest in the same area, particularly on the former Safeway parking lots. Since the City acquired this block, parking rates in these lots have increased and there is a lower occupancy rate for on-street parking adjacent to the block.

## PARKING REQUIREMENT
Staff also completed additional analysis that compared the number of parking spaces required for specific uses downtown versus the number presently located there. The City's Development Code currently exempts the downtown core from any parking requirements. This is a standard practice in downtown areas where there is a higher level of foot traffic and where municipalities want to encourage a higher density of uses. But for comparison purposes, staff is using the code

requirements for other parts of town. Astoria's parking requirements are comparable to other communities in Oregon, with a minimum requirement for any new development based on the proposed use of the development. For example, new residential properties are required to provide 2 spaces per dwelling unit, hotels are required to provide 1.1 spaces for each guest room plus 2 for management, and restaurants are required to provide 1 space for every 250 square feet of floor area.

Minimum parking requirements are not intended to meet the need of every vehicle every day of the year, but to meet the need for most of the users most of the time. It would be difficult to meet the demand on the heaviest holiday shopping days, or during significant festivals, without other transportation assistance such as satellite parking areas. The primary purpose is to provide adequate parking while allowing room for sufficient economic development. Some municipalities in Oregon have gone to a maximum allowable parking spaces per development, in order to maximize the amount of developable space, but these are generally Portland and surrounding suburbs. For a breakdown of parking requirements by use category and the number that could be required, see Appendix F.

Staff counted square footages for all downtown properties and calculated the parking requirement for each based on our current parking code. The count was divided into three categories, 1) primary daytime use, 2) primary evening use, and 3) long term vacancy. The primary daytime use was intended for those businesses that are generally open 8 am to 5 pm throughout the week. This category included offices, retail shops, and restaurants. The primary evening uses were those that have most of their business after 5 pm or on weekends. This included lounges, theaters, churches, residences, and restaurants. The third category, long term vacancy, dealt with those properties that have been vacant for a number of years and have no current specific use. For purposes of this analysis, these properties were counted based on either their historic use, or their most likely use if they were to be redeveloped. The results shown below include a 5% contingency to account for various changing uses:

| Category | Parking Spaces Required |
|---|---|
| Primary Daytime Use | 1935 |
| Primary Evening Use | 1168 |
| Long Term Vacancies | 93 |

The result of this count shows the minimum requirement for all downtown parking is 1935 spaces. This compares with the 2824 spaces previously counted, demonstrating an adequate supply both during the day and evening. This could also be calculated as a 68% occupancy rate. To double check these figures we compare this number with the actual occupancy rates collected in previous parts of the study. Those numbers indicated an overall average downtown occupancy rate at 63%, roughly corresponding with the minimum number of spaces required if downtown had a parking requirement.

A more precise count was also conducted for the former Safeway lots, to help ascertain whether the lot is currently being used for customers or employees. The count indicated that approximately 83 of 108 spaces (77%) on average, are being used by long-term parkers during a regular business day. These are generally employees of various downtown establishments. This count also supports previous indications that the majority of users around the former Safeway site are downtown employees.

## CONCLUSIONS

1. The publication used in this study indicates that numbers above 90% occupancy show there is parking congestion and that capacity has been reached. The results in Astoria are not surprising, showing that the highest occupancy for customers is near the center of downtown, and that the highest occupancy for long-term users is at the edge of the Parking District closest to the center.
2. There is a demonstrated need for additional employee parking at the central edge of the parking district (near the City Plaza).
3. The occupancy rates for spaces used by employees changes dramatically for bank and government holidays. Recent surveys of parking on various holidays indicates that a large number of on-street no-limit parking spaces are available when the government and bank employee base is not at work.
4. If Council decides to pursue the development of a downtown streetscape plan, one or two parking spaces per block face could be lost, based on the current design. This will have the biggest impact on 2-hr. spaces. While there is some room in 2-hr. areas to take up the difference, it is unlikely that most would be made up without developing additional public parking areas.


## *PARKING ALTERNATIVES*

This section is intended to determine how best to use the information collected and to review other parking issues that may not be directly related to the space occupancies. We can generally consider there are two approaches to improving the current parking conditions. These can be accomplished physically, with new or better parking spaces and lots; or operationally, with shared parking facilities and better communication about the parking available or issues that have arisen. The study publication indicates specific strategies that make better use of the existing parking supply:

1. Convenient short term parking. Ensure that on-street parking is available for short term parkers. They are more sensitive to walking distance than long term parkers.
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.
3. Special parking. If you limit parking time in the downtown, make sure to supply 15 & 30 minute spaces as well as loading zones. Disabled parking and bicycle parking are also part of the mix.
4. Good signage. Make sure you have good signage pointing to public parking areas.
5. Better use of existing 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.
6. Anticipate customer needs. Make sure you meet special needs, including RV parking and tour buses.


## PHYSICAL IMPROVEMENTS

### Parking Structure
This is generally considered infeasible due to the cost of construction. Most experts are now saying that we can expect to pay $25,000 or more per space, a cost that would likely never be recovered.

**New parking lots**
This could include several options both public and private.
1. Old auto shops (Les Schwab & C&C Auto) on Exchange between 13$^{th}$ & 14$^{th}$ are likely to become parking lots as new owners have indicated they intend to develop parking there without utilizing the buildings.
2. Former Safeway lot has been used extensively for parking since the building was demolished. Council had indicated an interest in doing customer parking there, but the study shows there is a greater demand for employee parking.
3. Former auto dealerships (Ocean Crest & Lum's) have moved out of downtown or will within the next 24 months. This will potentially open up additional lot space as the new cars on display will no longer be on the lots. While it is likely the Ocean Crest and Lum's buildings will be redeveloped, the Lum's used lot between 5$^{th}$ & 6$^{th}$ could be acquired as a public parking lot if they intend to move that business. Additionally, both of the buildings used by these dealerships could function as parking structures with 2 or 3 floors of covered parking available for lease.
4. Additional lot on City property at 9$^{th}$ & Franklin. This could provide a few spaces, depending on how much of the slope would need to be graded.
5. Some satellite parking lots could be designated for times when special events bring a large number of people downtown. These satellite lots would all be located outside the downtown district, and could include lots adjacent to the Columbia River Maritime Museum and State Office Building.

**Driveway parking**
This could take a few spaces in front of inactive driveways and return those spaces to parking use. Staff has already contacted the adjacent property owner to determine the usage of the space and allow the owner to designate the space as an inactive drive if desired.

**Remove L's and T's**
Currently there are white painted 'L' marks and 'T' marks on the street and white painted squares on the curb to facilitate parking on the street. These parking spaces are quite large and can easily accommodate large vehicles. Removal of these could increase the number of parking spaces on the street in many blocks downtown. Without creating specific parking areas for recreational vehicles and vehicles with trailers, eliminating the L's & T's would allow for them to park in much of the downtown.

**Diagonal parking**
The Traffic Safety Advisory Committee recommended looking into possible diagonal parking on the north-south streets in the downtown area. The hope was that this could create additional spaces in each block. After review, staff determined that this could be accomplished by eliminating one lane of traffic in those blocks, but that the overall number of spaces did not increase significantly. It is possible to add some parking spaces by creating diagonal parking in some of the east-west blocks, but only if a portion of the sidewalk is converted. Further study into the street width and chair wall location is needed to verify locations where this might occur.

**Physical Improvements Funding**
This could be accomplished through an LID or some other mechanism, depending on the location of the improvements. Further review of funding mechanisms is needed.

## OPERATIONAL IMPROVEMENTS

**More efficient use of existing off-street lots.**
This will likely be the most effective way to increase parking availability.
1. Modify parking lot standards. Currently the City uses parking lot standards for lane width and stall size that are among the highest (most space required) in Oregon. This section of the development code should be modified to allow for smaller spaces, lane width, and possibly a reduction in the number of spaces required. It would be beneficial to also review the landscaping requirements for downtown parking lots.
2. Re-configure existing lots. There are a variety of public and private lots that could be re-configured to provide more parking spaces. It would be in the City's interest to assist these owners in resurfacing and restriping these lots. These lots include the bowling alley and various lots along Marine Drive.
3. Manage existing lots so they could be shared. Better management of the existing public and private lots could also increase the number of cars that could be parked there. Existing lots such as First Methodist, various banks, and the City's lots could be more effectively managed so that vehicles are not stored there for long periods of time, or the lots could be utilized during those times when not needed by the owners. As local banks and governments are big generators of employee parking, it is recommended that these institutions work together to develop parking areas for their employees. It would likely be easier for these institutions to coordinate shared parking than a large number of individual businesses.

**Disabled Parking**
The Americans with Disabilities Act does not require striped on-street disabled parking, but it does require a parking program to meet the needs of ADA-eligible parkers. Some cities provide a designated disabled space on the corner of every block. Actual mapping and distribution of designated spaces has not been done, but should be accomplished as part of the continuing update of information.

**Parking Coordination Committee/Parking District Board**
There is a need to develop a better organizational body for review and management of parking downtown. This will likely need to be handled by the City as the downtown association does not currently have the capacity to manage this.

**Contractor Parking Permits**
Consider limiting the number of contractor parking spaces allowed on any one block face. Loading and unloading can be accomplished before or after regular business hours.

**Parking Map**
This is a key element which could help both customers and employees determine where they may park. These maps could include additional information about downtown such as the location of City Hall, public restrooms, and Sunday Market location. Additional signage would complement this map, encouraging better use of existing areas.

**Alternative Transportation**
Work with businesses to increase alternative modes of transportation or carpooling. A number of downtown employees live within walking or biking distance of downtown. A program to assist owners in developing these options should be explored.

*IMPLEMENTATION PLAN*

## SHORT TERM ACTIONS (12 MONTHS)

**Improve former Safeway lots**
Immediate action should be taken to repair potholes, re-stripe, and re-light the existing lots on either side of the former Safeway site. Consideration should be given for making a portion of one or both lots income generating to support the improvement of the entire block. Several businesses in the vicinity would likely participate in the purchase of daily, weekly, or monthly passes for these lots. RESPONSIBILITY: City Public Works and Finance Departments.

**Develop downtown parking map**
A simple map that identifies short term & long term parking options, as well as public restrooms and other community facilities in the downtown district would benefit a variety of businesses, citizens, and visitors. The Downtown Historic District Association has been working on a map that could identify parking as well as other amenities. The maps could be distributed through downtown businesses, City Hall, and the Chamber of Commerce. RESPONSIBILITY: ADHDA Design Committee and City Community Development Department.

**Create Parking District Board**
A new committee could be established to periodically review parking issues, generate additional information, and provide assistance to City Council. Normally a downtown association would be the organization that handled this item, but the Astoria Historic District Downtown Association is currently very short on volunteers. It is recommended that for now the Traffic Safety Advisory Committee serve in this capacity. They have already seen the data from the Parking Study, and have commented on it. RESPONSIBILITY: City Public Works Department.

**Amend existing parking space and lot standards**
There are a variety of modifications that can be made to the Parking & Loading Section of the Development Code. It is recommended that staff begin researching aspects of this code to encourage more efficient use of existing off-street parking lots downtown, with the anticipation that the Code be modified within 12 months. RESPONSIBILITY: City Community Development Department.

**Coordinate shared parking facilities with churches and banks**
Initiate a discussion with major downtown employers and lot owners to determine if several of the underutilized lots could be shared. This would entail identification of the lots and the most likely users, and would require some legal assistance to determine liability and other issues. RESPONSIBILITY: ADHDA and City Community Development Department.

## LONG TERM ACTIONS (36 MONTHS)

**Remove L's & T's when there is an opportunity**
This has been a controversial option and is not favored by parking enforcement. However, it makes parking on the street more flexible for a variety of vehicles, and it reduces the customer frustrations from getting tickets when they're over the line. These would not be removed wholesale, just not replaced when they wear away or are covered with new asphalt. RESPONSIBILITY: City Public Works Department

**Review contractor permits**

This issue should be reviewed by the Parking District Board, once established, in conjunction with the Downtown Association.  RESPONSIBILITY:  Parking District Board/Traffic Safety Advisory Committee.

**Work with current lot owners to reconfigure lots**
Once the amendments have been made to the Development Code regarding lot and space size and configuration, then several private lots should be identified that would most benefit from a reconfiguration.  City staff could work with the owner to identify the most effective configuration.  RESPONSIBILITY:  City Community Development, Building, and Public Works Departments.

**Work with businesses to encourage carpooling and alternative transportation modes**
Initiate discussions on methods of encouraging alternative transportation.  Identify possible incentives and target 3 major employer participants.  RESPONSIBILITY:  City Parks and Public Works Departments and Sunset Empire Transportation District.

**Update data**
Periodically update the information that has been developed thus far.  Maintain counts when there are significant changes.  Provide additional information as needed.  RESPONSIBILITY: Parking District Board.

# APPENDICES

Appendix A – Past Chronology of Parking in Astoria

Appendix B - "Parking Management Made Easy: A Guide To Taming The Downtown Parking Beast", published by ODOT & DLCD, June 2001

Appendix C – Downtown Parking Questionnaire & Results

Appendix D – Parking Study Area, Space Count, & Block Evaluations

Appendix E – Occupancy Count Sample

Appendix F – Parking Requirements by Use & Downtown Total

**Past Chronology**

A. January 2, 1963 – Chamber informs Planning Commission they have a committee working on parking problem in and near the CBD.
B. February 3, 1964 – Chamber requests Council initiate a parking study of CBD for $9,000. Council refers matter to Planning Commission.
  A. May 6, 1964 – Planning Commission recommends not initiating a study, but recommends City purchase south side of Marine between 11$^{th}$ and 12$^{th}$.
  B. November 10, 1964 – Planning Commission tables purchase of Marine parcel.
  C. August 1968 – CH2M completes Downtown Plan for Astoria. At the time there were 816 metered spaces, 559 private spaces, 120 off street public spaces. The plan recommended parking lots have first priority, entailing wholesale destruction of historic buildings.
  D. July 2, 1969 – 80 citizens appointed to Downtown Plan Committee.
  E. 1970 – Downtown Plan Committee recommends hiring consultant to determine number and location for off-street parking, city to take lead in promoting and coordinating, and that city, downtown merchants, and property owners must share costs.
  F. August 16, 1971 – City Council retains Patterson, Langford, and Stewart to conduct off-street parking study.
  G. April 1972 – Study completed with the following recommendations; 1) increase parking from current 834 spaces to 1412, 2) build parking structures at a cost of $3344 per space, 3) utilize business license assessment and an assessment district/revenue bonds to retire debt. The closer a business is to the parking, the more they pay.
  H. 1973 – Downtown merchants endorse parking plan.
  I. July 15, 1974 – Council abandons proposed assessment district after property owners were polled and voted 2 to 1 to oppose the plan based on cost or lack of need.
  J. September 3, 1974 – Council resolves to set election for g.o. bond for a parking facility, not to exceed $260,000. Voters reject proposal on November 15.
  K. May 7, 1979 – Mayor appoints Downtown Parking Committee. At their final meeting on November 20, they recommend 1) citing "meter feeders", and 2) hiring more enforcement personnel.
  L. January 1985 – Downtown Retail Market Study found 1925 spaces, 245 short of recommended number. Study also concluded that structured parking would need to be heavily subsidized and that managing existing downtown parking would be most cost-effective. Results led to parking district, stricter enforcement, different time limits to encourage turnover, and working with owners to achieve full lot utilization.
  M. 1986 – Council's second highest priority is adoption of a downtown off-street parking plan.
    1. Downtown Plan (1968) advocated parking lots have first priority and recommended destruction of many buildings.
    2. Downtown Plan Committee (1970) recommended city, downtown merchants, and property owners share costs of developing new parking.
    3. Parking Facility GO Bond defeated (1974).
    4. Parking Study (1987) led to current parking district.

COMMUNITY DEVELOPMENT                *APPENDIX C*
CITY OF ASTORIA
DOWNTOWN PARKING QUESTIONNAIRE

We are conducting a study of downtown parking issues.  Please take a few minutes to complete the following questionnaire and return it to Astoria Community Development, 3rd Floor, 1095 Duane Street.  Or fax it to us at 338-6538, or email them to tscott@astoria.or.us, or call 338-5183 and we'll stop by and pick them up.  Feel free to make copies to distribute to your customers.

1.  Is there a parking problem downtown?

2.  If so, where is the biggest problem?

3.  What time of day is parking most limited?

4.  How well is parking enforcement working?

5.  Do you have an idea for solving the parking problem?

6.  Is one particular group contributing more than others to the problem?

7.  Are there conflicts between residential parkers and business parkers?

8.  Do long term parkers, employees, and employers, park in front of or near downtown businesses all day?

# COMMUNITY DEVELOPMENT
# CITY OF ASTORIA
# DOWNTOWN PARKING QUESTIONNAIRE

Results of the survey of downtown parking issues.  Numbers indicate the number of responses for each item.  There were a total of 135 respondents.

## 1.  Is there a parking problem downtown?
Yes – 122                                          Not Sure – 3
No – 10

## 2.  If so, where is the biggest problem?
Commercial Street – 44                             County & State Buildings – 3
Entire Downtown – 16                               14th Street – 2
Marine Drive – 10                                  Behind buildings along RiverWalk – 2
Intermodal Center Block – 5                        No RV or tourist parking – 1

## 3.  What time of day is parking most limited?
Regular business hours – 87                        Saturday – 8
Afternoon – 17                                     Sunday – 6
Lunch – 12                                         Evening – 5
Morning – 9

## 4.  How well is parking enforcement working?
Good – 53                                          RV/trucks take 2 spaces w/o tickets – 2
Not good – 16                                      Care about revenue not resolving issue
OK, but could be better – 14                       Warnings should be given before tickets
Tickets when emp. isn't working – 12               No enforcement of compact cars rule
Parking officer is rude, harassing – 11            Tickets doesn't mean more parking
Some get special treatment/no ticket – 7           Don't ticket customers over 2-hr limit
Downtown emp. not being ticketed - 4               Unfair to limit vans or SUVs
Delivery trucks that double park – 3

## 5.  Do you have an idea for solving the parking problem?
Build parking garage – 46
Use Safeway lot for parking – 39
Additional parking lots – 19
No reply – 15

                                                   Consistent, stricter enforcement – 4
Intermodal should have been 2-level – 3            Increase fines – 3
Replace a Flavel building with lot – 2             Full time parking officer 7 days/wk – 2
Remove front 1/3 of some buildings                 Place a 15 min. meter in each block
Use Ocean Crest as garage                          Employees pay to park in a parking garage
Visitor center & parking near depot                Detour/bypass – 2
Pay per use parking/reinstall meters – 5           Narrow sidewalks

Diagonal parking
Remove planters on Marine
Color code curbs as to duration
More handicap spaces
Encourage walking
Eliminate taxi stands
Bike racks

Issue passes for employees – 6

Limit time contractors can park – 3
Public and employee education – 3
Designated employee parking – 2
Provide permits to residents – 2
Central loading/construction parking
Issue 1 loading permit for each business
Expand parking district
Passes for customers/employees in extreme conditions

Don't attract more tourists – 2
Move parking out of downtown core
Less restrictions on parking
Take back parking City gave to fish processing at foot of 9$^{th}$ street.
Three hour parking in Safeway lot
Give a large hotel chain the Safeway lot for a convention center with parking.
Continue as is

Lot at Astor Hotel where there are half a dozen abandoned cars.
Restrict vehicles using more than one space.
Affordable employee parking lot with public bus service, reward users with a random weekly drawing of the vehicles present that day and occasionally have a jackpot drawing.

**6. Is one particular group contributing more than others to the problem?**

No – 43
Employees – 25
Not sure – 8
Beauty College – 8
City Hall – 7
Customers – 6
Contractors – 3
Businesses parking on sidewalk – 3
Unfair to give passes to businesses – 2

People don't understand value of space – 2
People that hog rental spaces
Cannery has special treatment w/closed st.
Outdated hair salon courtesy permits
City leasing spots on riverfront
Lack of thinking by city officials
No RV or tourist parking
Employees parking downtown on Saturday
Safeway, do city employees park there?

**7. Are there conflicts between residential parkers and business parkers?**

No – 48
Not Sure – 25
Yes – 19

Business to business conflicts
Some residents park cars for weeks without moving them

**8. Do long term parkers, employees, and employers, park in front of or near downtown businesses all day?**

Yes – 69
No – 27
Not Sure – 13
Renting spaces sucks, it's BS
Not all register their cars
Dog crap on sidewalk
Higher ticket because I own a business is BS
Why handicap spot on 12$^{th}$?  No drug store.

# Downtown Astoria Parking Study
## Parking Spaces Available by Block
## September, 2004

| Block | 2-hr | 1-hr | Meter | ADA | 15 min | No limit | Other | Total on-street | Off-street | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| RF5 | | | | | | | | 0 | 0 | 0 |
| RF6 | | | | | | | | 0 | 0 | 0 |
| RF7 | | | | | | | | 0 | 0 | 0 |
| RF8 | | | | | | | | 0 | 0 | 0 |
| RF9 | | | | | | | | 0 | 0 | 0 |
| RF10 | | | | | | | | 0 | 15 | 15 |
| RF11 | | | | | | | | 0 | 34 | 34 |
| RF12 | | | | | | | | 0 | 12 | 12 |
| RF14 | | | | | | 2 | | 2 | 34 | 36 |
| RF15 | | | | | | | | 0 | 26 | 26 |
| RF16 | | | | 1 | | 10 | | 11 | 11 | 22 |
| | | | | | | | | | | |
| RR5 | | | | | | 22 | | 22 | 10 | 32 |
| RR6 | | | | | | 15 | | 15 | 98 | 113 |
| RR7 | | | | | | 12 | | 12 | 27 | 39 |
| RR8 | | | | | | 10 | 3 | 13 | 4 | 17 |
| RR9 | 7 | | | | | 8 | | 15 | 16 | 31 |
| RR10 | 18 | | | 2 | | 3 | | 23 | 2 | 25 |
| RR11 | 22 | | | | | | 23 | 45 | 0 | 45 |
| RR12 | 10 | | | 1 | | 23 | | 34 | 10 | 44 |
| RR15 | 5 | 3 | | | | 11 | | 19 | 0 | 19 |
| RR16 | | 10 | | | | | | 10 | 32 | 42 |
| | | | | | | | | | | |
| M5 | | 5 | | | | 12 | | 17 | 85 | 102 |
| M6 | | | | | | 15 | 3 | 18 | 40 | 58 |
| M7 | | | | | | 10 | | 10 | 8 | 18 |
| M8 | 20 | 1 | | | | | | 21 | 37 | 58 |
| M9 | 27 | | | 1 | | | | 28 | 16 | 44 |
| M10 | 27 | | | | | | | 27 | 0 | 27 |
| M11 | 35 | | 3 | 1 | | | | 39 | 46 | 85 |
| M12 | 31 | | 2 | | | | | 33 | 21 | 54 |
| M14 | 12 | | 2 | | | 10 | | 24 | 14 | 38 |
| M15 | | | | | | | | 0 | 0 | 0 |
| M16 | | 4 | | | | 13 | | 17 | 53 | 70 |
| | | | | | | | | | | |
| A7 | | | | | | 12 | | 12 | 10 | 22 |
| A8 | 7 | 5 | | | | 13 | | 25 | 24 | 49 |
| A9 | 15 | | | | | 8 | 2 | 25 | 38 | 63 |

# Downtown Astoria Parking Study
## Parking Spaces Available by Block
## September, 2004

| Block | 2-hr | 1-hr | Meter | ADA | 15 min | No limit | Other | Total on-street | Off-street | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| B5 |  | 11 |  |  |  | 22 |  | 33 | 25 | 58 |
| B6 |  |  |  |  |  | 21 |  | 21 | 49 | 70 |
| B7 |  |  |  | 1 | 13 | 3 |  | 17 | 34 | 51 |
| C5 |  | 10 |  |  |  | 5 | 1 | 16 | 0 | 16 |
| C6 |  |  |  |  |  | 25 | 1 | 26 | 16 | 42 |
| C7 |  | 12 |  | 1 |  |  | 5 | 18 | 29 | 47 |
| C8 | 4 | 2 |  |  |  | 8 |  | 14 | 41 | 55 |
| C9 | 23 |  | 2 | 1 |  |  |  | 26 | 26 | 52 |
| C10 | 22 |  | 2 |  |  |  |  | 24 | 25 | 49 |
| C11 | 32 |  |  | 1 | 1 |  | 2 | 36 | 16 | 52 |
| C12 | 34 |  |  |  |  |  |  | 34 | 0 | 34 |
| C14 | 9 |  |  | 1 |  | 17 | 1 | 28 | 42 | 70 |
| C15 |  | 4 |  |  |  | 14 |  | 18 | 23 | 41 |
| D5 |  |  |  |  |  | 8 |  | 8 | 0 | 8 |
| D6 |  |  |  |  |  | 21 |  | 21 | 0 | 21 |
| D7 |  | 14 |  |  |  | 12 |  | 26 | 0 | 26 |
| D8 |  |  |  | 2 |  | 26 |  | 28 | 36 | 64 |
| D9 | 5 | 6 |  |  |  | 15 |  | 26 | 67 | 93 |
| D10 | 11 | 7 |  | 1 | 2 | 7 |  | 28 | 16 | 44 |
| D11 | 8 |  |  |  |  | 26 | 1 | 35 | 105 | 140 |
| D12 | 12 |  |  | 1 |  | 9 |  | 22 | 27 | 49 |
| D13 | 21 |  |  |  |  |  |  | 21 | 14 | 35 |
| D14 | 8 |  |  |  |  | 16 |  | 24 | 14 | 38 |
| D15 |  |  |  | 1 |  | 29 |  | 30 | 29 | 59 |
| D16 |  |  |  | 1 |  | 29 |  | 30 | 4 | 34 |
| E8 |  |  |  |  |  | 23 |  | 23 | 12 | 35 |
| E9 |  |  |  |  |  | 32 |  | 32 | 30 | 62 |
| E10 |  |  |  |  | 1 | 15 |  | 16 | 7 | 23 |
| E11 | 13 |  |  | 1 | 1 | 23 |  | 38 | 49 | 87 |
| E12 | 9 |  |  |  |  | 33 |  | 42 | 36 | 78 |
| E14 |  |  |  |  |  | 43 |  | 43 | 24 | 67 |
| E15 |  |  |  |  |  | 42 |  | 42 | 7 | 49 |
| E16 |  |  |  |  |  | 35 |  | 35 | 90 | 125 |
| Totals | 447 | 94 | 11 | 18 | 18 | 768 | 42 | 1398 | 1616 | 3014 |

# Downtown Astoria Parking Study
## Individual Block Assessment

D-10 Block No.

Duane

On Street

3-2hr.  1-2hr.  1-ADA  1-2hr.  2-15min

North
Property/Building Line

10th  6-1hr.

11th  6-2hr.

15-public
1-ADA
1-1hr.

3-free  4-free

On Street

Exchange
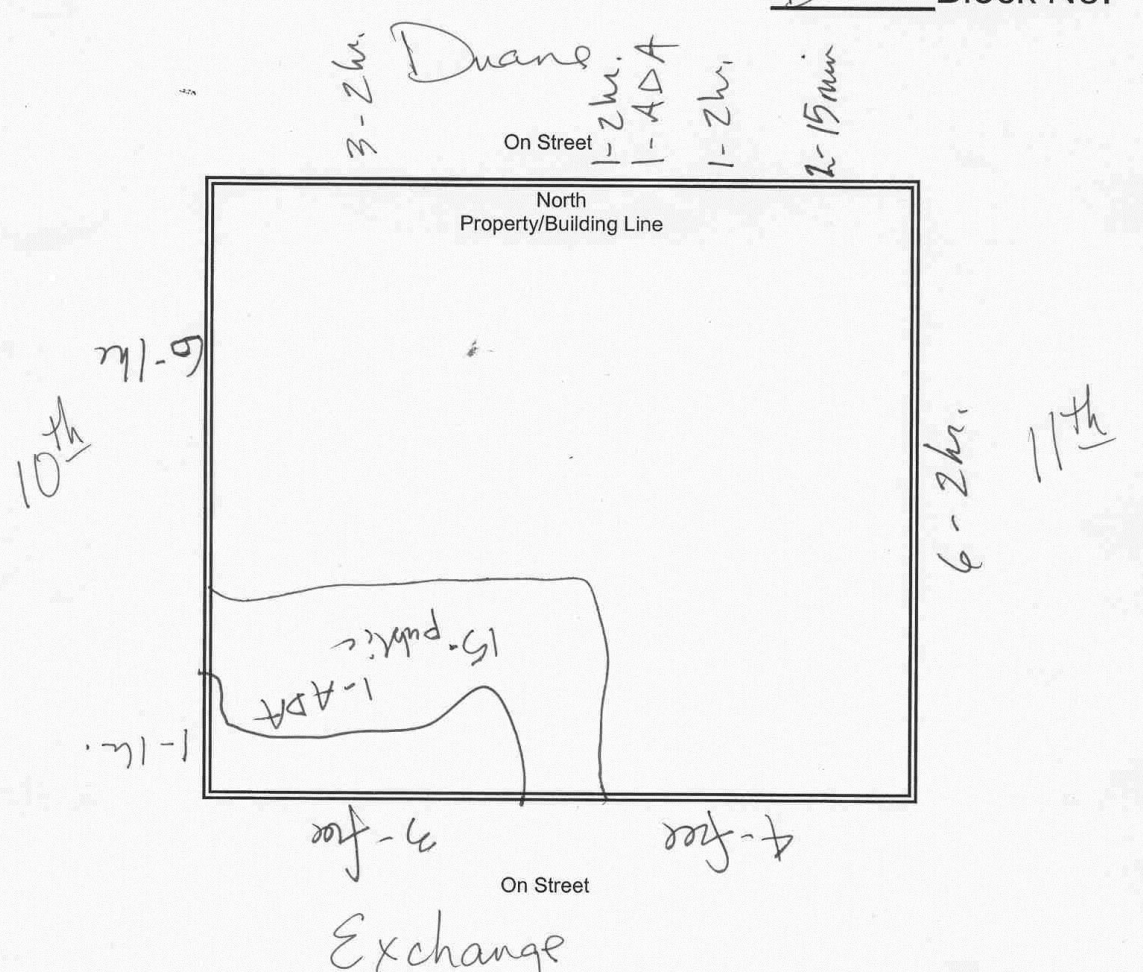
| | 2 hour | 1 hour | Meter | ADA | 15 min. | No limit | Other | Total |
|---|---|---|---|---|---|---|---|---|
| On Street | 11 | 7 | | 1 | 2 | 7 | | 28 |
| Off Street | | | | 1 | | 15 | | 16 |
| Grand Total | | | | | | | | 44 |

## Block **Morning 3/9**

| Block | onstreet Limited | | NoLimit | | Other | | offstreet | | total | usage |
|---|---|---|---|---|---|---|---|---|---|---|
| RF7 | | | | | | | 1 | 50% | 1 | 50% |
| RF11 | | | | | | | 10 | 29% | 10 | 29% |
| RF15 | | | | | | | 19 | 73% | 19 | 73% |
| | | | | | | | | | | |
| RR7 | 2 | 33% | 5 | 83% | | | 13 | 48% | 20 | 51% |
| RR11 | 7 | 32% | | | 11 | 48% | | | 18 | 40% |
| RR15 | 2 | 25% | 6 | 55% | | | | | 8 | 42% |
| RR16 | 4 | 40% | | | | | 15 | 47% | 19 | 45% |
| | | | | | | | | | | |
| M7 | | | 8 | 80% | | | 0 | 0% | 8 | 44% |
| M8 | 2 | 10% | | | | | 6 | 16% | 8 | 14% |
| M9 | 8 | 30% | | | | | 11 | 69% | 19 | 43% |
| M10 | 19 | 70% | | | | | | | 19 | 70% |
| M11 | 23 | 61% | | | | | 18 | 39% | 41 | 48% |
| M12 | 15 | 45% | | | | | 11 | 52% | 26 | 48% |
| M14 | 4 | 29% | 7 | 70% | | | 4 | 29% | 15 | 39% |
| | | | | | | | | | | |
| A7 | | | 6 | 50% | | | 0 | 0% | 6 | 27% |
| | | | | | | | | | | |
| B5 | 5 | 45% | 8 | 36% | | | 7 | 28% | 20 | 34% |
| B6 | | | 16 | 76% | | | 31 | 63% | 47 | 67% |
| B7 | 6 | 46% | 2 | 67% | | | 19 | 56% | 27 | 53% |
| | | | | | | | | | | |
| C7 | 13 | 76% | | | | | 22 | 76% | 35 | 74% |
| C11 | 13 | 37% | | | | | 9 | 56% | 22 | 42% |
| C15 | 0 | 0% | 6 | 43% | | | 8 | 35% | 14 | 34% |
| | | | | | | | | | | |
| D5 | | | 2 | 25% | | | | | 2 | 25% |
| D6 | | | 15 | 71% | | | | | 15 | 71% |
| D7 | 2 | 14% | 7 | 58% | | | | | 9 | 35% |
| D8 | | | 22 | 85% | | | 18 | 50% | 40 | 63% |
| D9 | 2 | 18% | 13 | 87% | | | 33 | 49% | 48 | 52% |
| D10 | 9 | 45% | 7 | 100% | | | 3 | 19% | 19 | 43% |
| D11 | 3 | 33% | 26 | 100% | | | 40 | 38% | 69 | 49% |
| D12 | 5 | 42% | 9 | 100% | | | 17 | 63% | 31 | 63% |
| D13 | 8 | 38% | | | | | | | 8 | 23% |
| D14 | 4 | 50% | 11 | 69% | | | 11 | 79% | 26 | 68% |
| D15 | | | 11 | 38% | | | 15 | 52% | 26 | 44% |
| D16 | | | 11 | 38% | | | 2 | 50% | 13 | 38% |
| | | | | | | | | | | |
| Totals | 156 | | 198 | | 11 | | 343 | | 708 | |
| | | 41% | | 64% | | | | 45% | | 48% |

7.080.     CLASSIFICATION OF USES FOR PURPOSES OF JOINT USE PARKING.
A.     The following uses are considered daytime uses for purposes of Section 7.070:
      1.     Bank or other financial institution.
      2.     Business service establishment.
      3.     Clothing, shoe repair, or service establishment.
      4.     Household equipment or furniture store.
      5.     Manufacturing or wholesale building.
      6.     Personal service establishment.
      7.     Retail store.
      8.     Other similar primarily daytime uses as determined by the Community
Development Director.

B.     The following uses are considered nighttime or Sunday uses for purposes of Section 7.070:
      1.     Auditoriums incidental to a public or private school.
      2.     Church.
      3.     Eating and drinking establishment, only open after 5:00 p.m.
      4.     Night Club.
      5.     Theater.
      6.     Other similar primarily night uses as determined by the Community
Development Director.

7.090.     OFF-STREET LOADING.
A.     Except as otherwise specifically provided in this ordinance, off-street loading shall be provided in amounts not less than those set forth in Section 7.160.
B.     A parking area meeting the requirements of Sections 7.100 through 7.110 may also be used for loading when the use does not require a delivery vehicle which exceeds a combined vehicle and load rating of 20,000 pounds, and when the parking area is within 25 feet of the building or use which it serves.

7.100.     MINIMUM PARKING SPACE REQUIREMENTS.

| USE | MINIMUM NO. OF SPACES |
|---|---|
| A.  Amusement. | |
| Indoor amusement and recreation services, amusement park, ball field, motion picture theater, stadium | One space per 400 square feet of gross floor area, or one space per five seats or ten ten feet of bench length |
| Golf course | One space per green |
| Library and information center | One space per 500 square feet of gross floor area |
| Meeting room | One space per five seats |
| Mixed use retail/indoor amusement | One space per 400 square feet of gross floor area, plus |

|  |  | one space per two employees |
|---|---|---|
|  | Museum, art gallery | One space per 600 square feet of gross floor area |
|  | Tennis court, racquetball court, or handball court | One space per court plus one space per ten feet of bench length or five seats |
| B. | Automotive Services.<br>Automotive and Recreational Vehicle/Manufactured Home dealer | One space per 1,500 square feet of gross floor area |
|  | Automotive repair, service, gasoline service, and garage | One space per 1,500 square feet of gross floor area |
| C. | Business and Professional Services.<br>Business office or services, public office or services, professional office or services, financial services, real estate services, insurance services, repair services, educational services not elsewhere classified | One space per 500 square feet of gross area |
| D. | Churches and Institutions.<br>Correctional institution | One space per 2,000 square feet of gross floor area |
|  | General meeting facility | One space per three seats, or six feet of bench length, or 100 square feet of gross floor area |
|  | Membership organization, club or lodge | Spaces to meet the combined requirements of the uses being conducted, such as hotel, restaurant, auditorium, etc. |
|  | Religious organization | One space per five seats, or ten feet of bench length, or 100 square feet of floor area not containing fixed seats in the sanctuary |
| E. | Health Services<br>Health services | One space per 500 square feet of gross floor area |

|   |   |
|---|---|
| Hospital | 1.5 spaces per bed |
| Nursing and personal care facility | One space per three beds |

F.  Industrial and Utilities.

| | |
|---|---|
| Mining, manufacturing, transportation communications, electric, gas, and sanitary services | The greater of the following: |

1)   .75 spaces per employee
2)   0 - 49,999 square feet of gross floor area - one space per 5,000 square feet
3)   50,000 - 99,999 square feet of gross floor area - one space per 10,000 square feet
4)   100,000 or greater square feet of gross floor area - one space per 15,000 square feet

| | |
|---|---|
| Marina | One space per boat berth or docking space |
| Wholesale, warehousing, and similar use | One space per 1,500 square feet gross floor area |

G.  Personal Services.

| | |
|---|---|
| Funeral service or crematory | One space per three seats or six feet of bench length in chapels |
| Laundry, cleaning and garment service | One space per 1,000 square feet of gross floor area |
| Personal services | One space per 500 square feet of gross floor area |
| Veterinary and animal services | One space per 500 square feet of gross floor area |

H.  Residential and Dwellings.

| | |
|---|---|
| Single-family dwelling unit, duplex, or triplex | Two spaces per dwelling unit |
| Multi-family dwelling containing | One and one-half spaces per |

| | |
|---|---|
| four or more dwelling units | dwelling unit |
| Multi-family dwelling restricted to one bedroom units | 1.25 spaces per dwelling |
| Bed and breakfast or home stay lodging | One space per bedroom plus two spaces for owner/manager unit |
| Hotel, or motel | 1.1 spaces per guest room or suite, plus two for the manager |
| Inn | One space per bedroom plus two spaces for owner/manager unit, plus one space per three seats or six feet of bench length or 100 square feet of gross floor area used for conduct of associated business activity |
| Housing designed for and used by elderly or special needs groups, congregate care | One space per four dwelling units |
| Retirement center | One space per two dwelling units |

I. <u>Retail</u>.

| | |
|---|---|
| Building material, hardware, garden supply, furniture, home furnishings or home equipment store | One space per 1,000 square feet of gross floor area |
| Eating and drinking establishment | One space per 250 square feet of gross floor area |
| General merchandise store, food store, apparel and accessory store, and miscellaneous retail | One space per 500 square feet of gross floor area |

J. <u>Schools</u>.

| | |
|---|---|
| College, university, professional school and junior college | One space per four students for which the school is designed to accommodate |
| Day care, preschool, or nursery | One space per employee |
| Elementary school | Two spaces per classroom |
| Secondary school | One space per six students |

|  | for which the school is designed to accommodate |
| Vocational and correspondence school, and educational services not elsewhere classified | One space per 500 square feet of gross floor area |

For any uses not listed above, the Community Development Director shall make an interpretation of the parking space requirements as per Section 7.060.

7.180.          <u>PARKING IN THE DOWNTOWN AREA</u>.

Uses in the C-4 Zone (Central Commercial) and uses between 8th and 14th Streets in the A-2 (Aquatic Two Development) and S-2A Zones (Tourist Oriented Shoreland) are not required to provide off-street parking or loading.

# Downtown Astoria Parking Study
## Parking Requirements by Block
## March, 2006

| Block | Daytime | Night & Weekend | Vacant | Residential Adjustment (just outside district) | Evening Dining | | |
|-------|---------|-----------------|--------|------------------------------------------------|----------------|---|---|
| | | | | | | | |
| | | | | | | | |
| RF5 | 14 | | | | 14 | | |
| RF6 | 64 | | | | | | |
| RF7 | 12 | | | | | | |
| RF8 | 6 | | | | | | |
| RF9 | | | | | | | |
| RF10 | 34 | | | | 32 | | |
| RF11 | 28 | | 5 | | 14 | | |
| RF12 | 9 | 3 | 5 | | | | |
| RF14 | 7 | 2 | 3 | | | | |
| RF15 | | | 13 | | | | |
| RF16 | 4 | | | | | | |
| | | | | | | | |
| RR5 | 3 | | | | | | |
| RR6 | | | 6 | | | | |
| RR7 | 28 | | | | | | |
| RR8 | 3 | | | | | | |
| RR9 | 5 | | | | | | |
| RR10 | 36 | | | | | | |
| RR11 | 71 | 50 | | | 50 | | |
| RR12 | 24 | | | | | | |
| RR15 | | | | | | | |
| RR16 | 6 | | | | | | |
| | | | | | | | |
| M5 | 4 | | | | | | |
| M6 | 17 | | | | 10 | | |
| M7 | 4 | | | | | | |
| M8 | 31 | 30 | 36 | | 19 | | |
| M9 | 38 | | 16 | | 18 | | |
| M10 | 52 | | | | | | |
| M11 | 84 | 14 | | | | | |
| M12 | 94 | 5 | | | 24 | | |
| M14 | 40 | 5 | | | | | |
| M15 | | | | | | | |
| M16 | 3 | | | | | | |
| | | | | | | | |
| A7 | 7 | | | | | | |
| A8 | 14 | 35 | | | 7 | | |
| A9 | 7 | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| B5 | 15 | 10 | | 8 | 10 | | |
| B6 | 10 | | | | | | |
| B7 | 74 | | | | | | |
| | | | | | | | |
| C5 | | 20 | | 20 | | | |
| C6 | 15 | 9 | | | | | |
| C7 | 89 | | | | | | |
| C8 | 57 | | | | | | |
| C9 | 55 | | | | 27 | | |
| C10 | 56 | | | | | | |
| C11 | 112 | 44 | | | 28 | | |
| C12 | 79 | 120 | | | 12 | | |
| C14 | 2 | 20 | | | | | |
| C15 | 16 | | 2 | | | | |
| | | | | | | | |
| D5 | | 4 | | 6 | | | |
| D6 | 6 | 8 | | | | | |
| D7 | 17 | | | | | | |
| D8 | 55 | | | | | | |
| D9 | 14 | | | | | | |
| D10 | 51 | 65 | 15 | | | | |
| D11 | 19 | 35 | | | 14 | | |
| D12 | 26 | 5 | | | | | |
| D13 | 20 | 10 | | | | | |
| D14 | | | 22 | | | | |
| D15 | | 15 | | | | | |
| D16 | 36 | | | | | | |
| | | | | | | | |
| E8 | 5 | 14 | | 8 | | | |
| E9 | 14 | 4 | | 4 | | | |
| E10 | 4 | 74 | | 8 | | | |
| E11 | 30 | 46 | | | | | |
| E12 | 46 | 21 | 6 | 21 | | | |
| E14 | 15 | 29 | | 27 | | | |
| E15 | | 76 | | 6 | | | |
| E16 | 27 | 60 | | 10 | | | |
| | | | | | | | |
| | | | | | | | |
| Totals | 1714 | 833 | 129 | 118 | 279 | | |
| | | | | | | | |
| Grand Total | | | 2676 | | | | |

| | | | |
|---|---|---|---|
| Grant Total Day | 1843 | Plus 5% | 1935.15 |
| Grant Total Night | 1112 | | 1167.6 |