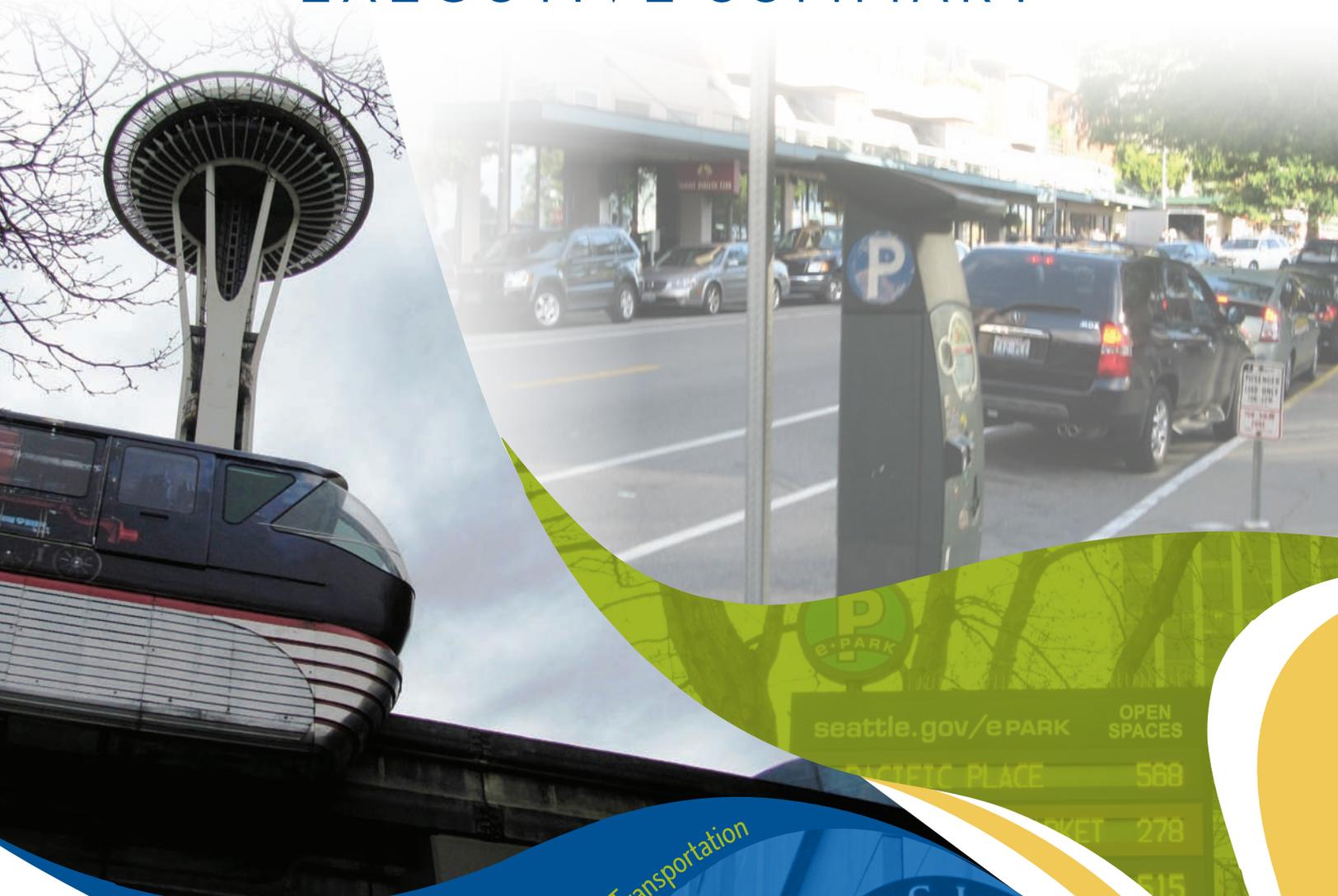


EXECUTIVE SUMMARY



Seattle Department of Transportation

AUGUST 2011

Kimley-Horn and Associates, Inc.

The City of Seattle Department of Transportation

Performance-Based PARKING —PRICING STUDY—



A Performance-Based Parking Program for Seattle

During adoption of the 2011 budget, City Council directed the Seattle Department of Transportation (SDOT) to set paid parking rates by neighborhood to achieve the policy objective of providing an average of one or two open spaces per block face throughout the day. As a result of this policy change in late 2010, SDOT conducted a citywide parking study and established 2011 on-street parking rates, ranging from \$1.00 per hour to \$4.00 per hour, in twenty-three paid parking areas. In the spring/summer of 2011, SDOT conducted the Performance-Based Parking Pricing study, including a large data collection effort, to evaluate new pricing programs. This report is the result of that effort.

The study developed performance-based parking pricing recommendations for implementation in Seattle's many neighborhoods. Performance-based pricing is envisioned as an on-street parking management system responsive to fluctuations in demand and compatible with existing parking technologies (primarily parking pay stations). This study included citywide paid parking data collection and analysis, economic analysis, identification of demonstration projects, and public engagement components. Included in the public engagement process was a Parking Sounding Board made up of a wide variety of community stakeholders. The Sounding Board provided valuable input that helped define and shape the study's final recommendations.

The study's outcomes included a phased plan for implementing performance-based parking pricing policies, including strategies and demonstration programs for downtown Seattle and neighborhood business districts.

The study also included an Expert Advisory Panel to provide insight and guidance for best management practices and the development of innovative parking strategies. The panel was comprised of a team of former and current parking professionals and downtown leaders with varying backgrounds in parking demand management, technology innovation, communications strategies, sustainability, and downtown development. The Panel's purpose was to provide insight into real world experiences related to the implementation of performance-based pricing strategies, analyze parking management alternatives, and help develop solutions for Seattle.

Successful implementation of this study will result in improved management systems for on-street parking that will provide better access, a more vibrant business climate, and greater customer satisfaction.



Project Goals and Objectives

PRICE AND MANAGE ON-STREET PARKING TO:

- ☑ Enable customers to find parking within easy walking distance of their destination, while balancing parking needs with other important curb lane uses (e.g., transit stops, loading, etc.)

- ☑ Conserve fuel, reduce greenhouse gas emissions and lessen traffic congestion from drivers circling and looking for parking

- ☑ Increase access to businesses by ensuring on-street parking space turnover

- ☑ Develop new technology and communication tools to improve parking ease of use and to enhance the customer experience



▶ **DATA DRIVEN POLICY:** Efficient and timely collection of data used to adjust pricing and time limits based on actual occupancy data.



▶ **IMPROVED ACCESS:** Performance-based parking pricing strategies are being implemented to create one to two open spaces per block face, to ensure convenient access to users.



▶ **EASE OF USE:** Enhance the parking experience with improved technology, new parking payment options and improved communication tools.

HOW PARKING CAN CONTRIBUTE TO A HEALTHY CITY

A healthy city has the qualities you see in the boxes. Parking plays a significant role in helping to build a walkable, bikable and transit-friendly city.



Neighborhood Vitality: Parking policies promote short-term parking turnover for customers and limit spillover impacts onto residential streets. This improves neighborhood vitality while supporting walking, biking and transit use.

Economic Vitality: Businesses see parking as critical to their success. Businesses need loading and dependable customer parking access. Through improved parking management, the goal is to improve parking availability and reduce congestion caused by people circling for that last open on-street parking spot.

Healthy Environment: Research shows that free parking is one of the biggest determinants for people's mode choice. Managing parking therefore is critical to addressing greenhouse gas emissions.

Equity: SDOT is committed to ensuring that parking solutions are implemented in an equitable fashion.



What is Performance-Based Parking Pricing?

Performance-based parking pricing uses parking occupancy and turnover data to set parking rates and rules that drive demand patterns in a way that achieves a clearly stated policy objective. A performance-based parking pricing program can grow over time to include new data sets, expanded demand management strategies, and more sophisticated technology. As articulated by the City Council, performance-based parking pricing in Seattle is intended to achieve an objective of meeting the target occupancy of one to two on-street spaces available, on average, per blockface throughout the day. Pricing strategies include:



▶ **NEIGHBORHOOD SUBAREA PRICING** – In neighborhoods where areas of high and low parking demand can be geographically delineated, tailor rates and time-limits to smaller subareas to address distinct differences in parking patterns.

▶ **TIME-OF-DAY PRICING** – For neighborhoods with varying occupancy patterns over the course of the day, such as high lunchtime and late afternoon peaks and low morning demand, create different parking rates for each of these “time band” periods.

▶ **SEASONAL ADJUSTMENTS** – Implement higher parking rates during the peak season for neighborhoods where the demands area dramatically different based on the time of year.



▶ **EVENT OVERLAY** – In business districts where major events (e.g., sports or concerts) create parking dynamics that are very different than a typical day, assess the area parking goals to determine whether to create more event parking by increasing on-street rates and eliminating time limits to accommodate event-goers, or to keep time limits to retain on-street spaces for other businesses during event days.

▶ **PROGRESSIVE PRICING** – For neighborhoods where longer on-street parking stays are desired (e.g., for dinner and a show) charge a premium for additional hours. This strategy could be in combination with time limit elimination or extension.



▶ **TIME LIMIT EXTENSION** – In areas with greater availability than one to two spaces per block and where land uses do not support short-term retail parking, lengthen the time limit to invite longer stays.

This study posits that “people don’t park just to park” – parking is part of the experience in reaching a desired destination. Data collected as part of this study demonstrated that lowering parking rates does not always result in increased parking demand. Therefore, although rate changes are the primary driver in performance-based pricing, they are not the only strategy to encourage open spaces. Adjusting time limits, addressing use and abuse of disabled parking permits, and adopting new technologies, such as payment by cell phone, can maximize use of limited parking and enhance the customer experience.

Many North American cities are pursuing performance-based pricing programs to address their parking issues. While eyes have been focused on San Francisco and Los Angeles, Seattle’s project can break new ground for the vast majority of cities that will not receive large federal grants.



Parking Programs in Other Cities

The research elements of this study included an extensive literature review as well as in-depth reviews of other programs around the country that include performance-based parking pricing programs.

SF park

“SFMTA established SFpark to use new technologies and policies to improve parking in San Francisco. Reducing traffic by helping drivers find parking benefits everyone. More parking availability makes streets less congested and safer. Meters that accept credit and debit cards reduce frustration and parking citations. With SFpark, we can all circle less and live more. SFpark works by collecting and distributing real-time information about where parking is available so drivers can quickly find open spaces.”



LA EXPRESS PARK

“ExpressPark™, the Downtown Intelligent Parking Management (IPM) Project is proposed as a comprehensive strategy to relieve traffic congestion, reduce air pollution, and improve transit efficiency in Downtown Los Angeles through the implementation of demand-based parking pricing and operational policies.



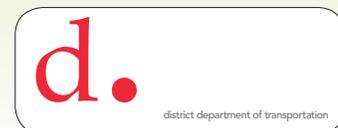
PARK SMART - NEW YORK CITY

“PARK Smart is a program to make parking easier while reducing congestion and improving safety. DOT is conducting six-month pilots in neighborhoods across the City to evaluate how the program works in different settings. The agency works closely with community boards, merchants, BIDs and other local stakeholders when developing the pilots.



WASHINGTON, D.C.

DDOT will test out multiple systems from a variety of vendors, including pay-by-space, pay-by-license plate and pay-by-phone parking. The goal is to identify the best technology and solutions to improve the parking experience for motorists in the District. The pilot project is targeted to last two years.





Study Recommendations

Neighborhood Engagement

1. Partner with neighborhood business districts to better understand customer needs, experiences and program impacts. Sustain relationships and implement strategies. Engage with businesses on strategic communications.

Data Collection and Analysis

2. A robust data collection, analysis and reporting effort is critical to success. Performance-based on-street parking pricing that is “data driven” requires an ongoing investment in data collection and analysis.

While “real-time” data systems are the ideal, they are not financially feasible for Seattle at this time. It is recommended that SDOT continue to conduct annual comprehensive parking occupancy surveys and quarterly or bi-annual surveys of high demand areas. The City is currently developing advanced statistical parking data analysis programs and the in-house development of predictive algorithms using pay station and other data sources. The consultant team recommends continuing these efforts in conjunction with evaluating private sector collaboration options.

Evaluate mobile license plate recognition as a possible alternative data collection methodology. The implementation of on-street parking rate changes based on documented parking utilization data is at the heart of performance-based pricing. Explore the most effective way to measure and document the impacts of parking rate adjustments.

Open Access to Data

3. “So do you have an app for that?” That’s a common question, and the study recommends

that the City continue to push out parking data for private sector computer program software developers to use. The data that the City has from several sources (pay station transaction data, parking utilization survey data, etc.) is a valuable asset that could be leveraged to create interest and potential investment by the private sector.

Pay-by-Cell

4. Pay-by-cell phone is an exciting new parking payment option being recommended for implementation in conjunction with the new Performance-Based Parking Pricing Initiatives. Providing this alternative payment method as a new option enhances the ease and convenience of parking and provides other tangible customer benefits.

An initial, one-time setup to link a credit card number with a phone number is required. After the initial setup, the system then uses caller ID to match the user with the account or another type of account ID.

Pay-by cell phone provides a new payment option that will bring real and tangible customer benefits related to the ease of parking and improved customer convenience. Apply city-wide.

Neighborhood Sub-Area Rates

5. A geographical/demand-based approach would better use parking occupancy data to define and cluster sub-areas with higher demand, then price those high demand accordingly. This approach would “let the data decide” the boundaries and pricing, in contrast to a general district approach. Creating demand-based sub-areas is a natural evolution from the City’s current rate-setting efforts.



Progressive Pricing

6. This recommendation merges two cutting-edge on-street parking management strategies to provide more flexibility in on-street parking options to accommodate the wide variety of customer trip purposes. The elimination or extension of time limits would be combined with “progressive pricing” (e.g., where hours 3 and 4 cost more than hours 1 and 2.) to provide a balance between creating more flexibility of time stays with the need for turnover.

It will be important to find willing neighborhood partners for this demonstration to fully understand parking dynamics prior to changing time-limits and creating sub-area rates. The consultant team’s recommendations for areas to implement this concept, based on the data, are either the Pike/Pine District or the Commercial Core District.

Seasonal Adjustment

7. Adjust rates based on demand patterns throughout year, likely with two seasons – winter/summer. Ballard Locks is a preferred candidate for this demonstration.

Event Overlay

8. Major events can significantly impact neighborhood districts and create parking dynamics that are very different than a typical day. Evaluate how parking might be managed differently during events. An event overlay approach could be tailored to specific areas impacted by major events (such as Pioneer Square and Chinatown/International District near the stadiums, or Uptown near the Seattle Center).

Time-of-Day

9. Peak demand periods may occur for only a few hours during the day. This strategy would adjust rates based on patterns of parking demand throughout the day. It would be important to find a willing partner for this strategy, as it was considered to be “difficult to communicate” by members of the Parking Sounding Board.

This recommendation will implement a time-of-day pricing pilot program, which will change pricing by common time bands (morning, afternoon, evening) based on actual demand patterns that are measured in each neighborhood.

For example, an area with high demand after lunch peaks would have higher prices during the afternoon period, but potentially lower prices in the morning and evening periods. The benefit of this strategy is better management of parking through pricing, but only in the periods that it is truly needed.

The following areas were observed to have significant changes in demand over the course of the survey day and would technically be good candidates for this pilot: Roosevelt, 12th Avenue, Chinatown International District, Ballard Locks & Fremont.

Disabled Parking

10. Changes in Regulation of Disabled Parking — Use and abuse of disabled parking privileges can greatly impact a city’s parking dynamics. In studies over the last ten years, the city has found that the tremendous amount of abuse of these permits limits access to legitimate permit holders and other parkers. Abuse, e.g. use of disabled permit by non-disabled persons, as well as legal use of permits and plates to obtain free all-day on-street parking for persons working in the immediate area effectively tie up large amounts of on-street parking for the entire day, prohibiting any short-term use by both disabled and non-disabled persons. This can be particularly true under a performance-based approach in which rates are increased in high-demand areas, adding to the incentive to use and abuse the disabled privileges.

Based on the June 2011 data, disabled permit usage was highest around the medical campuses in those areas, with use around 30-40%. In the Commercial Core, usage was typically around 20-25%.

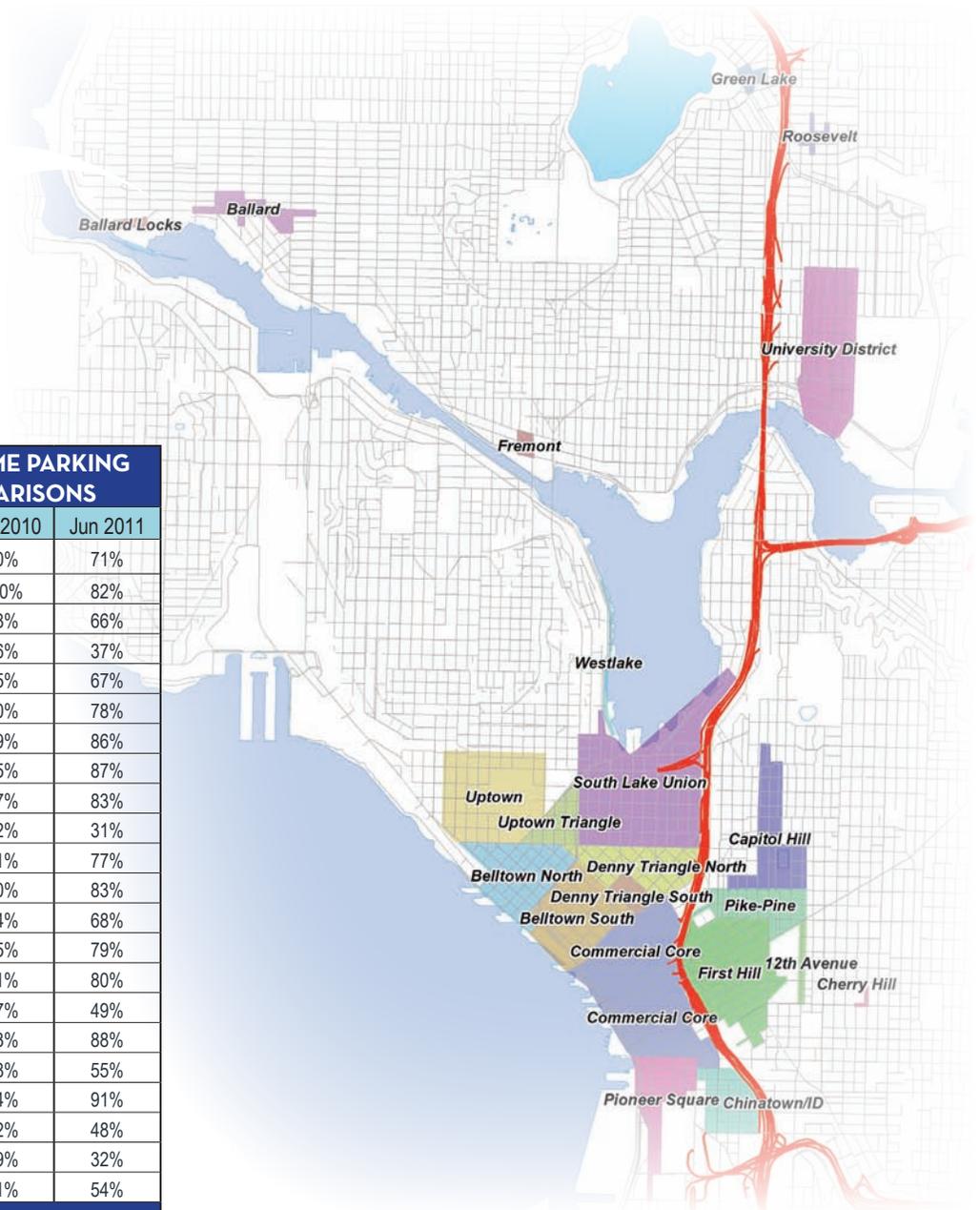
It is recommended that the city implement 4-hour time limits in paid parking areas for vehicles with disabled parking permits (as authorized under state law). Proactive engagement with the disabled community should be continued and enhanced if this recommendation is acted upon. The city should also continue to pursue changes in state law to strengthen regulations for accountability within permit distribution and the role of doctors in approving permit.



June 2011 - Annual Parking Occupancy.....

The June 2011 data collection effort covered all of the city neighborhoods with paid on-street parking. The 23 study areas were nearly identical to the areas for which data was collected in the November 2010 parking study, providing the opportunity to examine the effects of the 2011 parking rate changes. Each study area has a distinctive blend of commercial and residential development, parking supply and demand patterns, and hourly rates. The on-street data collection was completed over a three-week period in June and covered the areas shown in the map below:

- Each of the 23 neighborhood parking districts was surveyed.
- In areas where rates were increased, there was a slight reduction in occupancy; in areas where rate didn't change, results were mixed, with minor fluctuation in occupancy up and down; and, in areas where rates were lowered, there was not a dramatic increase in occupancy.



| OVERALL PEAK DAYTIME PARKING UTILIZATION COMPARISONS | | |
|--|----------|----------|
| Neighborhood District | Nov 2010 | Jun 2011 |
| 12th | 80% | 71% |
| 1st Hill | 100% | 82% |
| Ballard/Ballard Locks | 68% | 66% |
| Belltown North | 46% | 37% |
| Belltown South | 65% | 67% |
| Chinatown/International District | 80% | 78% |
| Capitol Hill | 89% | 86% |
| Cherry Hill | 85% | 87% |
| Commercial Core | 97% | 83% |
| Denny Triangle North | 42% | 31% |
| Denny Triangle South | 71% | 77% |
| Fremont | 80% | 83% |
| Greenlake | 64% | 68% |
| Pike-Pine | 85% | 79% |
| Pioneer Square | 91% | 80% |
| Roosevelt | 67% | 49% |
| South Lake Union Long Term | 73% | 88% |
| South Lake Union Short Term | 58% | 55% |
| U-District | 64% | 91% |
| Uptown | 52% | 48% |
| Uptown Triangle | 29% | 32% |
| Westlake Ave. North | 61% | 54% |



| JUNE 2011 PARKING OCCUPANCY SURVEY | | | | | |
|--|-----------------------------------|--------------|-------------|-------------|---------------|
| Neighborhood District | Overall Peak Parking Utilizations | | | | |
| | 8 AM – 12 PM | 12 PM – 3 PM | 3 PM – 6 PM | 6 PM – 8 PM | Saturday Peak |
| 12th Avenue | 45% | 71% | 62% | 96% | 67% |
| Ballard | 43% | 53% | 50% | 109% | 115% |
| Ballard Locks | 31% | 69% | 60% | 44% | 105% |
| Belltown North and South | 43% | 49% | 64% | 98% | 75% |
| Capitol Hill (Broadway) | 49% | 58% | 87% | 116% | 114% |
| Cherry Hill | 87% | 80% | 68% | N/D | N/D |
| Chinatown/International District | 59% | 78% | 56% | 89% | 129% |
| Commercial Core | 78% | 83% | 82% | 70% | 91% |
| Denny Triangle North | 32% | 33% | 51% | 82% | N/D |
| Denny Triangle South | 78% | 79% | 91% | 108% | N/D |
| First Hill | 82% | 76% | 72% | 71% | N/D |
| Fremont | 44% | 71% | 66% | 97% | 89% |
| Green Lake | 48% | 52% | 105% | 119% | 109% |
| Pike/Pine | 63% | 78% | 90% | 120% | 113% |
| Pioneer Square | 56% | 70% | 58% | 46% | 118% |
| Roosevelt | 41% | 50% | 75% | 79% | 77% |
| South Lake Union (Short and Long Term) | 65% | 68% | 67% | 71% | 48% |
| University District | 47% | 65% | 66% | 102% | 83% |
| Uptown | 38% | 48% | 48% | 86% | 94% |
| Uptown Triangle | 28% | 33% | 44% | N/D | 44% |
| Westlake Ave. North | 52% | 53% | 52% | N/D | 49% |

Future Data Collection Efforts

The City of Seattle has invested in extensive parking data collection and analysis efforts in 2010 and 2011 creating the required baseline data needed to inform performance based parking pricing strategies. In order to maintain and expand the program, the City must be committed to the level of data collection necessary to maintain annual metrics and build a library of data that can inform rate setting decisions and management strategies, and forecast demand elasticities by neighborhood of the Seattle parking system on an on-going basis.

With the data report and comparison completed, a foundation has been built for a data-driven parking pricing system. The on-street parking occupancy data, along with paid parking transactions and other tools, can be used to inform and refine future year rate-setting processes. In order to build on this foundation, an annual data collection inventory is necessary to assess how these changes have impacted the existing parking conditions. This annual data collection inventory should be planned for the same months (May-June) each year to promote a more efficient and realistic comparison of annual data results. The City should continue to monitor and collect data for the same locations, to better understand how parking pricing decisions are affecting parking behavior throughout the community. Additionally, the City should continue to collect Saturday and Sunday data, as well as incorporate the weekend data into the annual rate setting analysis.

The City should also consider adding turnover and duration data collection to its annual roster of data collection tasks. As the City moves into the various realms of performance based pricing, the measurement and understanding of turnover will be critical to the development of future policies and the maintenance of the overall system. As a subset of this data, the City should consider measuring disabled permit occupancy and turnover, to better understand the impacts of the long-term disabled placard use and abuse within the community.



Parking Expert Advisory Panel

The panel included a team of former and current parking professionals and downtown leaders with varying backgrounds in innovative parking management, technology, sustainability and downtown management. The purpose of this panel was to provide insight through “real world experience” related to the implementation of performance based pricing strategies, analysis of specific parking management alternatives, and the development of unique solutions for the City of Seattle.

The following issues were key focus areas:

- Appropriate occupancy ranges
- Data needs
- Rate setting methodologies
- Dynamic pricing experiences and strategies
- Strategies on revenue forecasting
- Communication strategies
- Methodologies for implementation (pilot programs)
- Evaluation of other parking technologies



Parking Sounding Board

To inform the parking strategy development process, SDOT assembled a Parking Sounding Board, representing businesses and community, as well as other organizations in the city. The Sounding Board began meeting in June 2011, and will continue to meet after completion of the Performance-Based Parking Pricing Study.

The primary purpose of the Sounding Board was to provide a forum for two-way information exchange. The key goals for the Sounding Board included:

- Providing perspective on the effects of paid parking policies
- Representing constituency perspectives
- Reviewing and commenting on potential performance-based pricing strategies and implementation options

The Sounding Board met 4 times from June – August, 2011. The meetings kept Sounding Board participants informed of study progress. Data results were reviewed and discussed. The Board was engaged in discussions regarding performance-based pricing strategies and what strategies might make sense in their districts. There were lively discussions of potential enabling technologies, as well as larger parking and transportation issues and concerns.

PERFORMANCE BASED PARKING PRICING STUDY PARKING SOUNDING BOARD PARTICIPANTS

| | |
|---------------------|--|
| Katherine MacKinnon | Downtown Seattle Association (DSA) |
| Francine Fielding | Wright-Runstad |
| Laura Larson | Republic Parking |
| Ed Danyluk | Imperial Parking Corporation (IMPARK) |
| Mike Fuda | Diamond Parking Service |
| Josh McDonald | Washington Restaurant Association |
| Leslie Smith | Alliance for Pioneer Square |
| Chip Wall | Pike/Pine Urban Neighborhood Council |
| Doug Campbell | University District Business Owner, Bulldog News |
| Beth Miller | Ballard Chamber of Commerce |
| Don Blakeney | Chinatown/International District BIA |
| Jessica Vets | Fremont Chamber of Commerce |
| Susan Ranf | Seattle Mariners |
| Eric de Place | Sightline Institute |
| Erica Sekins | Seattle Commission for People with Disabilities |
| Jerry Everard | Seattle Nightlife and Music Association |



FOR MORE INFO

FOR MORE INFORMATION:
www.seattle.gov/transportation/parking

