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SUBJECT: Final Right-Size Parking Technical Policy Memo – Work Order # 2, Task 4
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EXECUTIVE SUMMARY

This report documents the principal technical policy issues pertinent to achieving right size parking (RSP) in multifamily residential buildings. It is one component of the Right Size Parking (RSP) Project being conducted by King County Metro Transit, and funded through a grant from the Federal Highway Administration. The purpose of the RSP Project is to expand the knowledge base for parking supply, demand, and pricing. This information will enable more efficient allocation of parking resources and reduced parking in multifamily housing developments, which will help promote the broader goal of creating livable communities. The intended use of this memo is to provide project staff with recommendations for local action to achieve RSP.

The memo consists of an assessment of known barriers and potential solutions for RSP, followed by a set of policy and action recommendations. The purpose of the recommendations is twofold:

- To provide general guidance for RSP stakeholders who are considering policy change or program implementation; and
- To inform the focus of RSP demonstration projects to be pursued by the project team at a future date.

Recommendations were vetted and prioritized based on input from a series of stakeholder meetings that engaged members of the development community and municipal planners. **The final recommendations are grouped into the following three categories:**

1. Generate Supporting Data *These recommendations address the need for better information on parking supply and demand, as well as on the role of parking in the development and operation of multifamily projects.* The data collection efforts of the RSP project itself will provide a significant advance in multifamily parking information for King County, but there are additional opportunities to support this dataset with case studies and more focused analysis of utilization and pricing. These are the highest priority recommendations because they provide critical information that supports and enables the recommendations in each of the other two categories.

2. Optimize Regulations *These recommendations are intended to promote the adoption of policies and land use code that align parking regulations and management with RSP utilization data.* Targeted strategies include not only optimizing parking minimums, but also transportation demand management (TDM), innovative parking management, and land use policies that appropriately respond to the role of transit. Ideally, regional standards would be adopted to facilitate regulatory changes.

3. Improve Utilization Efficiency *These recommendations are intended to help create a more efficient parking market, and in particular, to address situations in which there is unmet parking demand and/or underutilized parking supply.* Key strategies include shared parking, unbundled

pricing, and new technologies for parking management, such as an Internet-based service that connects consumers with a flexible pool of available parking.

Lastly, the report presents preliminary recommendations for outreach and education, reflecting the consensus among the stakeholder groups and RSP project team that outreach and education will be critical to the successful implementation of the project's recommendations. Approaches are proposed for each of the three main RSP stakeholder groups: (1) residents; (2) policy makers; (3) the development community.

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1 Introduction

1.1 *Project Overview*

The overarching goal of the Right Size Parking (RSP) project is to foster livable communities by optimizing the allocation of parking resources. More specifically, the purpose of the RSP project is to impart data and strategies to help developers, jurisdictions, and neighborhoods accurately estimate the optimum amount of parking for new multifamily developments. The amount of parking is optimized—i.e. right sized—when it strikes a balance between supply and demand, and the challenge lies in determining the correct balance with confidence.

Today, multifamily buildings often provide too much parking, which can be an impediment to achieving a wide range of community goals, as described in Section 1.2. However, providing too little parking can also be a significant risk in terms of real estate marketability and neighborhood impacts.

A key impediment to right sized parking is a distorted market caused by lack of clear pricing signals, or by regulations that are not aligned with actual market demand. The RSP project seeks to correct for these shortcomings by collecting new data, analyzing trends, disseminating parking demand information, and providing strategies for establishing an efficient, transparent market for parking.

Overall, the RSP project is well-aligned with the mission of King County Metro Transit. Public transit is often most successful in markets where parking is priced and supplied to reflect the actual demand. Right-sizing parking in locations where an oversupply of parking exists can be expected to help promote transit ridership and service efficiency.

1.2 *Project Motivation*

The desire to achieve right sized parking is motivated by its potential to promote the following positive outcomes:

- Alleviate the potential cost barrier to multifamily development that can be caused by excessive requirements for parking
- Increase housing affordability by reducing costs associated with the construction of parking
- Enhance livability and efficient land use by reducing the negative impacts of parking on walkability, urban form, and architecture
- Help transit agencies deliver better service by fostering transit-supportive neighborhoods that enhance the utilization, service levels, and efficiency of transit
- Encourage the use of alternatives to the single-occupant vehicle (SOV), thereby reducing congestion, vehicle miles traveled (VMT), and associated environmental impacts, including greenhouse gas emissions

The factors motivating RSP listed above are validated and reinforced by a wide range of economic, demographic, and cultural trends, including:

- Unmet consumer demand for walkable, transit-rich neighborhoods¹

¹ <http://www.brookings.edu/research/articles/2010/11/real-estate-leinberger>

- Ongoing regional transit investments, e.g. Sound Transit LINK light rail, King County Metro RapidRide (bus rapid transit)
- An aging population that will continue to increase the numbers of people who don't drive²
- Decrease in driving and car ownership among younger people (Gen Y, Millennials)³
- Leveling off or decline of per capita VMTs nationwide and locally over the past decade⁴
- Rising immigrant populations in King County that are likely to increase demand for transit and reduce car ownership and driving⁵
- Increasing recognition of the true costs of auto transportation, as demonstrated by the Center for Neighborhood Technology's Housing+Transportation Affordability Index, for example⁶
- Escalating affordable housing shortage across much of King County, which makes car-free living a more attractive option for reducing household expenses⁷
- Rising construction costs for multifamily housing that make it more desirable to reduce those costs by not including parking in buildings⁸

1.3 **Project Components**

The first phase of the RSP project consists of two main components: (1) data collection and analysis; and (2) recommendations for strategies to achieve right-sized parking. The future second phase of the RSP project will develop, test, or apply selected recommendations through project-funded demonstration projects.

The goal of the (1) *data collection and analysis* effort is to provide easy access to defensible, context-sensitive estimates of parking utilization in multifamily buildings. These estimates will be based on parking utilization inventories of 228 existing multifamily sites in King County, combined with a predictive statistical model that estimates parking utilization based on a set of contextual variables. Estimated parking utilization data will be made easily accessible on a user-friendly, map-based web site developed for the project.

The goal of the (2) *recommendations for strategies to achieve right-sized parking* effort is to increase the likelihood of successfully implementing multifamily development with right sized parking. As such, this document assesses barriers and proposes solutions, with the intention of creating an enhanced level of understanding that will help enable the real-world application of the parking estimates derived from the data model. These topics are addressed in the three sections that follow: **Barriers** (Section 2), **Solutions** (Section 3), and **Recommendations** (Section 4).

1.4 **Project Stakeholders**

The stakeholders that play a role in RSP can be divided into four distinct groups: (1) residents; (2) policymakers; (3) the development community, and (4) King County Metro Transit. The

² <http://www.ssti.us/wp/wp-content/uploads/2012/02/The-Case-for-Moderate-Growth-in-VMT-2006-Final.pdf>

³ <http://www.frontiergroup.org/reports/fg/transportation-and-new-generation>

⁴ <http://daily.sightline.org/2011/06/08/where-are-my-cars-king-county/>

⁵ http://transportationfortomorrow.com/final_report/volume_3_html/technical_issues_papers/papera539.htm

⁶ <http://www.cnt.org/repository/pwfp.pdf>

⁷ <http://your.kingcounty.gov/budget/agr/agr07/07AGRCh2all.pdf>

⁸ <http://multifamilyexecutive.com/construction/no-relief.aspx>

information presented in this document is framed by the unique concerns and impacts associated with each these stakeholder groups.

Given that each stakeholder group has a unique set of factors that are affected by, and play a role in achieving RSP, the most successful strategies must address them all in a balanced fashion. The potential negative impacts of too much or too little parking on each of the stakeholder groups are summarized in the table below:

Stakeholder Group	Impact of Parking Oversupply	Impact of Parking Undersupply
Residents	Increases housing cost; degrades pedestrian environment	Creates more competition for on-street parking
Policy Makers	Degrades pedestrian environment; compromises community goals to increase transportation choices and provide more affordable housing	Creates management challenges for on-street parking
Development Community	Increases development and operating costs	Complicates financing; reduces marketability of housing
King County Metro	Reduces ridership and system efficiency; impedes non-motorized access to transit	Potential minor impact of increased traffic caused by motorists searching for available parking

Direct input from the representatives of the policymaker and development community groups was obtained through a stakeholder engagement process. In the next phase of the RSP project, when draft materials are available, neighborhood groups will also be directly engaged.

2 Barriers to Right Size Parking

This section provides descriptions and assessments of the most important barriers to implementing RSP. The barriers are divided into three categories (1) Policy; (2) Economics; and (3) Community. These three categories are conceptually aligned with three of the four main stakeholder groups (1) policy makers; (2) the development community; and (3) residents, respectively, though all three categories are interrelated. A summary table of all the barriers is shown below:

Policy Barriers	Economic Barriers	Community Barriers
Parking Minimums	Lack of Pricing Transparency	Lack of Travel Alternatives
Lack of Flexibility	Unproven Market for Reduced Parking	Spillover Parking
Lack of Regional Consistency	Parking Management Complexity	Lack of Stakeholder Outreach and Education on Parking Issues
Lack of Certainty About Transit Service		

2.1 Policy Barriers

The barriers in this category are related to parking policy, codes, and regulations that impede RSP, and primarily relevant to the *policy maker* stakeholder group.

2.1.1 Parking Minimums

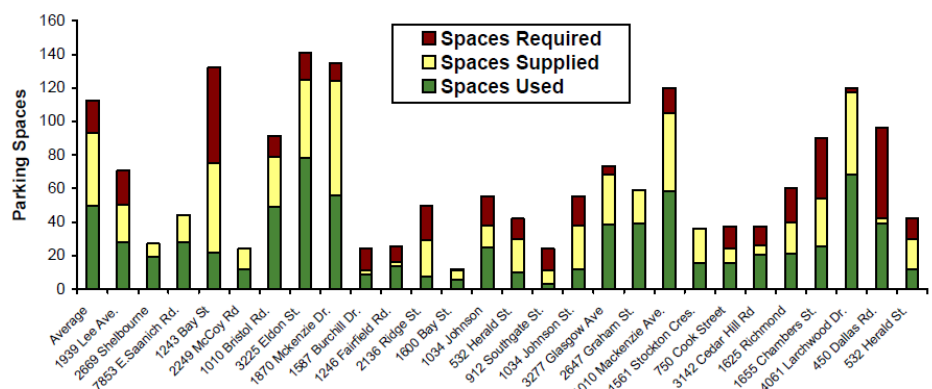
Summary: Codified parking minimums that require more parking than is needed can be a significant barrier to RSP. As a general rule, minimums for multifamily buildings should be eliminated. If eliminating minimums is not politically possible, then setting minimums below market demand is the next best alternative, since developers will provide what the market demands to make

their projects feasible. Parking requirements often lag behind changing land use and consumer preferences that reduce the need for parking over time.

Assessment:

Ensuring that parking requirements are not too high is one of the most important first steps to achieving RSP. The overhaul of codes can be procedurally difficult and resource intensive for municipal planning departments that often have limited operating budgets. Furthermore, proposed reductions of parking minimums can encounter resistance from residents and business owners

Figure 15 Parking Utilization Versus Supply and Requirements



This figure shows the number of parking spaces used, currently supplied, and required for new construction at various multi-family residential buildings in Victoria, British Columbia. Source: **Parking Requirement Impacts on Housing Affordability, Victoria Transport Policy Institute**

concerned about potential parking spillover and its negative impacts (see Barrier 2.3.2). One approach is to incrementally reduce parking minimums over time. Education about the relationships between excess parking, livability, and transit could help reduce opposition.

Importance: Parking minimums often require developers to provide more parking than the market demands.

2.1.2 Lack of Flexibility

Summary: Parking minimums sometimes ignore the varying parking needs of different multifamily product types and contexts. For example, it can be expected that more parking will be demanded by high end condo owners than by renters of affordable housing. Similarly, minimum parking ratios that are defined by the number of units do not take into account that large, multi-bedroom units designed for families typically need more parking than do small units designed for singles. Proximity to frequent transit is another possible trigger for reduced minimums.

Assessment: The most flexible solution would be to eliminate minimums altogether. Some municipalities have adopted flexible minimums for relatively simple cases, most notably senior housing (see Best Practices summary in the Appendix). Customized minimums for the other variations noted above are uncommon, and would require defensible supporting data. The multifamily parking utilization data being collected for the RSP project may prove to be a good resource for proposing flexible minimums based on multiple criteria.

Importance: Fine-tuning parking requirements to match specific user demand is a simple but effective means to achieving RSP in a variety of contexts.

2.1.3 Lack of Regional Consistency

Summary: Jurisdictions typically develop parking code based on a focus within their jurisdictional boundaries, addressing unique conditions and constituencies within their community. In King County there is no regional standard for parking requirements. However, commonly shared parking standards among neighboring jurisdictions within a region would offer the following benefits:

- A level playing field on parking requirements for developers;
- A unified regional awareness and commitment to right sizing parking supply in multi-family developments;
- A widely accepted and tested reference that municipalities could use to justify updating their standards

Assessment: Addressing this barrier would require organized cooperation between municipalities, ideally led by a regional agency such as the Puget Sound Regional Council. Achieving consensus would likely be a challenge, although the RSP data analysis could help support the process.

Importance: A regional standard could make it easier for more municipalities to adopt code that right sizes parking due to a level playing field for new development.

2.1.4 Lack of Certainty about Transit Service

Summary: Stakeholders are sometimes reluctant to make parking policy change or development decisions based on existing bus transit service levels considering the network flexibility and recent funding struggles. Although flexibility provides the benefit of quickly responding to land use, infrastructure, and population changes, its detriment is its inability to offer a permanent capital

investment that developers can leverage. In addition, the uncertainty of a permanent funding source for bus transit service is a legitimate cause for concern. Despite these concerns, high quality bus service already exists in King County and further investments in bus rapid transit provide ample opportunities for transit-oriented development (TOD).

Assessment: Although TOD and associated parking policy changes are often discussed with reference to light rail transit, it is fact that buses carry most transit passengers in King County. To alleviate fears of bus transit service certainty, transit providers could articulate their commitment to providing high quality service along established corridors that connect activity centers. To achieve this goal, transit agencies could partner with regional and local government to establish areas where transit service will be focused long-term (for example, PSRC Transit Overlay Zones or an identification of transit emphasis corridors). In addition, transit providers could be transparent with their methods used to allocate transit operating resources, especially if they're tied to land use and population demands (for example, Metro Transit Service Guidelines). Finally, transit agencies could work to communicate the benefits of their service in supporting TOD and associated parking policy by providing metrics that quantify the mobility benefits.

Importance: Articulating the value and long-range investments made in high quality bus transit service is important to attract new TOD and associated RSP policy change.

2.2 Economic Barriers

The barriers to right sized parking in this category are related to economic factors, including investment risk and financing strategies involved with building and leasing multifamily parking. These barriers are primarily relevant to the *development community* stakeholder group.

2.2.1 Lack of Pricing Transparency

Summary: The cost of parking in multifamily buildings is often not clearly communicated to consumers, who therefore may not be aware of the high cost they are actually paying for the convenience of a personal parking space(s) in their building. In some cases, parking stalls are sold or rented together with multifamily housing units, in which case the price of the parking itself is completely hidden. Separating out the costs and allowing optional purchase or rental of a stall—known as “unbundling”—promotes more rational cost assessment of parking, and can be expected to help correct inflated demand. A select few U.S. cities have mandated unbundling in certain circumstances. Even in cases where parking is unbundled, however, the price of parking stalls is often set below the actual cost to produce it.

Assessment: Eliminating any code requirements for bundling is a relatively simple step for municipalities to implement, while requiring unbundling is a more complex and potentially controversial approach. In any case, over the past several years unbundling is becoming more common in urban multifamily developments, a trend that is likely to expand across King County. From the developer perspective, one potential disincentive to unbundling is that lenders often do not include parking revenue in

The Costs of Owning and Operating Parking

	Surface Lot	Above-Grade Structure	Underground Structure
Capacity (spaces)	500	500	500
Levels	1	6	3
Footprint of Parking Area	240 x 660 ft.	120 x 240 ft.	240 x 240 ft.
Incremental Site Area (acres)	4.0	0.7	None
Construction Cost/Space	\$3,000	\$15,000	\$30,000
Estimated Construction Cost	\$1,500,000	\$7,500,000	\$15,000,000
Project Cost (Construction + 15%)	\$1,725,000	\$8,625,000	\$17,250,000
Land Cost per Acre to Equal Total Underground Cost	\$3,375,000	\$10,803,571	
Land Cost per Acre to Equal Total Above-Grade Cost	\$1,815,000		
Annual Cost to Own per Space Excluding Land	\$277	\$1,384	\$2,768
Basic Operating Cost per Space	\$75	\$300	\$365
Revenue Collection per Space	—	\$300	\$300
Security Cost per Space	\$38	\$75	\$150
Total Cost to Own and Operate per Space per Year	\$389	\$2,059	\$3,583
Monthly Revenue per Space Required to Break Even	\$32	\$178	\$299
Total Cost to Own and Operate per Year	\$94,668	\$1,029,592	\$1,791,685

Source: *Shared Parking, Mary S. Smith*

their assessment of a project's financial feasibility. Thus, if the parking cost is kept hidden within the unit cost, the project may end up with a more favorable pro forma.

Importance: By having an accurate measure of parking stall costs, consumers can judge the value of one or more stalls against other potential investments.

2.2.2 Unproven Market for Reduced Parking

Summary: Parking availability is one factor used by lenders to assess a multifamily building's projected financial viability, and shifting away from proven norms increases financial risk. In most contexts, under-building parking is usually perceived as a bigger risk than overbuilding it, because if a low availability of parking reduces the marketability of a project it will be difficult to compensate for after the fact. Assessments of financial feasibility may be distorted by outdated or inaccurate market assumptions leading to overestimates of parking demand. Lastly, perceived competition for tenants from nearby projects with high parking ratios may compel developers to produce higher quantities of parking.

Assessment: This barrier is one of the most critical, because without financing, projects don't happen. Shifting the mindset of lenders requires defensible data demonstrating that projects with reduced parking can be viable. Financial risk can also be mitigated through pre-identified methods for adding parking resources if required at a future time. In some cases, out-of-town bankers may mistakenly apply national standards that are not relevant to local conditions, a problem that could be addressed by better availability of local data.

Importance: Modification of multifamily financing practices is necessary to help support new projects with RSP.

2.2.3 Parking Management Complexity

Summary: The perceived financial risk of multifamily developments can be exacerbated by unconventional right size parking strategies—examples include shared parking, transit passes for residents, car share programs, future transit service allocations, or even land use changes. These strategies are often relatively unproven, and may require long-term commitments, administration, monitoring, and operational expense, all of which are complicated by the potential involvement of multiple owners, agencies, municipalities, and community stakeholders. The implementation of shared parking agreements in a residential environment can be a particularly challenging. Furthermore, typical multifamily development projects are designed for relatively short term return on investment. The economic benefits provided by strategies that involve longer-term commitments such as shared parking or car share programs can fall outside the standard proforma that often requires a positive cash flow within three-years.

Assessment: Municipalities, agencies, and developers should collaborate to ensure that alternative solutions are mutually beneficial, financially feasible, and do not create undue development risk. While there are examples of successful shared parking arrangements in many cities, they are still relatively uncommon in the multifamily market. There are few precedents for policy that encourage or enable the sharing of parking resources between different owners and/or uses, particularly between commercial or commuters and residential users. There is a need for innovative new policy solutions and incentives, as well as for performance data on real-world shared parking examples.

Importance: RSP management strategies must be carefully implemented so as not introduce undue real estate development risk.

2.3 Community Barriers

The barriers in this category are related to cultural preferences and neighborhood issues that can influence RSP, and are primarily relevant to the resident stakeholder group. These barriers tend to arise from a lack of transparent information on the impacts of parking, possibilities for innovative parking solutions, and the potential for more transportation choices.

2.3.1 Lack of Travel Alternatives

Summary: The more people who decide they can live without a car, the more demand for parking in multifamily buildings will drop. This transition depends on the availability of safe, affordable, effective, and convenient transportation alternatives, as well as local access to a range of daily services and destinations within walking distance. The efficient utilization of parking resources that is at the core of RSP strategies depends on the availability of travel modes that reduce the need for a parking space, including options for parking once and making subsequent trips without a car.

Assessment: A broad array of public policy supporting a transition away from reliance on the SOV has become prevalent at federal, State, regional, county, city, and neighborhood levels. Most municipalities have already adopted “smart growth” policies of one form or another that promote walkable, mixed-used neighborhoods, and some have already made great progress. Reduction of parking demand will depend on continued, complementary efforts to reform existing land uses that require driving, and enhance options to bike, walk or ride. Further research and education on the relationship between parking policy and car dependence will help accelerate efforts that create alternatives.

Importance: Public acceptance of RSP will strongly depend on the availability of transportation choices.

2.3.2 Spillover Parking

Summary: Multifamily residents who own cars but don’t have reserved stalls inside their buildings typically end up parking on the street, leaving fewer open on-street spaces for surrounding residents and businesses. This scenario can also be a source of increased traffic caused by cruising for open street parking spaces. The potential of parking spillover tends to incite very strong reactions from those who believe that they may be impacted—residents fear losing convenience, and business owners fear losing customers. If local stakeholders decide to fight a proposed project because they believe it doesn’t provide sufficient parking and will cause spillover, the developer is likely to be motivated to provide excess parking and/or the local jurisdiction will require more .

Assessment: Limited on-street parking is a fact of life in urban areas with levels of density that support walkable neighborhoods with viable transit. Residential Parking Zones (RPZ) are one form of mitigation that can help keep on-street parking available for residents and business patrons. The longer-term solution is an environment in which residents can meet their daily needs without a car, and patrons arriving on foot support the local businesses. Spillover controversy could be ameliorated through community outreach to learn about resident and business owner concerns and to provide education about the tradeoff between on-street parking convenience and walkable access to an economically vibrant mixed-use neighborhood center.

Importance: Spillover is the most common factor causing some stakeholders (e.g., residents and policy makers) to oppose reducing parking requirements.

2.3.3 Lack of Stakeholder Outreach and Education on Parking Issues

Summary: An important common thread among barriers to RSP is the need for better outreach and education. This applies to all stakeholders, including policymakers, developers/lenders, and community members, as noted in many of the sections above. It is important to have transparent and balanced information between all stakeholder groups in order to achieve the delicate political consensus necessary to implement parking policy changes. This process must work both ways: it is just as important for policy makers to learn about local concerns and conditions as it is for them to disseminate information and education to community members.

Assessment: One common neighborhood concern about new multi-family development is the potential effect on access to on-street parking. Outreach and education can address neighbors' need for transparent information on a project's expected impact on parking, and assurance that parking will be responsibly managed. To this end, the tools being developed for the RSP project will be a valuable outreach resource for local, contextual data for right sizing parking. On the flip side, outreach and education that improves public understanding of how parking can be a significant impediment to livability, affordability, alternative mobility options, and sustainability in general, could likely lead to more widespread success of RSP.

Importance: Outreach and education are essential to the success of most RSP strategies.

3 SOLUTIONS

This section describes potential solutions for strategies and actions to get past barriers and promote RSP. The solutions are divided into three main sections: (3.1) Standard Reform; (3.2) Establishing an Efficient, Transparent Parking Market; and (3.3) Complementary Strategies. Most of the strategies in Sections 3.1 are relatively straightforward and well-established, while Section 3.2 attempts to break new ground, focusing on how transparent pricing and an efficient market for parking has the potential to be a transformational solution for achieving RSP. Section 3.3 provides guidance on strategies that don't have a direct connection to RSP, but are nevertheless important to consider because of the role they play in supporting the strategies described in Sections 3.1 and 3.2.

The potential solutions presented here in Section 3 are intended to provide a general survey of the possibilities. See Section 4 for a prioritized set of recommendations derived from these solutions. A summary table of all the solutions is shown below:

Standard Reform	Establishing an Efficient, Transparent Parking Market	Complementary Strategies
Optimize Parking Minimums Reduce parking minimums in exchange for supporting SOV-alternatives Implement Parking Maximums Where Appropriate Promote regional coordination of standards	Augment data on parking supply, demand, and price Prove the market for reduced parking Unbundle the parking cost from the residential unit cost Implement shared parking Leverage technology for efficient parking utilization	Implement Transportation Demand Management Employ on-street parking management Adopt policy that promotes transit-supportive community design Leverage the relationships between parking and transit

3.1 *Standard Reform*

Setting realistic, appropriate, and flexible standards for parking requirements in multifamily buildings is the most straightforward strategy for promoting RSP. Most of the optimized parking standards described below have been already been implemented in select cities, so the key is to promote more widespread adoption.

3.1.1 **Optimize parking minimums**

Ideally, parking minimums should be removed entirely, which would enable the market to efficiently and flexibly determine the optimum amount of parking. If removing minimums isn't feasible, then minimums shouldn't require more parking than the market demands.

Codes also should be periodically updated to reflect prevailing market conditions and evolving trends. Minimum parking requirements for multifamily housing is typically designated according to the number of housing units or bedrooms, but the methodology for designating these requirements can be arbitrary and may not be monitored over time.

Many cities in King County already have place-based and/or special use parking variances in their codes, some of which require complimentary investments that support walking, cycling or transit use (see Best Practices Appendix). Several cities in King County have adopted flexible parking minimum standards that account for specific user groups such as seniors and low-income households.

To optimize for RSP, some cities need only modest modifications to their minimum regulations, while others may require major overhauls.

Relevance to stakeholder groups:

- > *Residents:* Neighbors often object to proposed reductions in parking minimums due to spillover concerns (see Barrier 2.3.2). Community outreach can be employed to gain understanding of the concerns of residents and business owners, and to provide education on the relationship between parking, urban livability, and sustainability. Assurance that there will be viable alternatives to driving is particularly helpful. Demonstrating that there is a direct relationship between parking reductions and the achievement of other community goals such as housing affordability, public amenities, and pedestrian infrastructure improvements can also help build consensus.
- > *Policy Makers:* Updating codes can be a resource intensive task, often requiring complicated code rewrites and approval of new ordinances. Politics and lack of staff resources are potential obstacles. Parking reduction variances can involve a costly and time consuming process for developers to navigate.
- > *Development Community:* When the market demands more than the minimum, most developers will voluntarily build parking that exceeds minimum requirements. On the other hand, if required minimums are set too high they can render a project financially unfeasible in some cases. Reduced parking can enable the production of more housing units at lower cost.

Precedents:

Many cities have made incremental reductions over time to parking minimums focused on increasing residential densities. Shoup (2011) reviewed national newspaper articles discussing the removal of downtown off-street parking requirements and noted that:

"A search of newspaper articles found 129 reports of cities that have removed off-street parking requirements in their downtowns since 2005. Although newspaper articles don't represent what all cities are doing, they do include many comments on why cities are changing their policies. At least in downtown business districts, some elected officials think that parking requirements put the brakes on what they want to happen and accelerate what they want to prevent. Some of the reasons given for removing parking requirements are "to promote the creation of downtown apartments" (Greenfield, Massachusetts), "to see more affordable housing" (Miami), "to meet the needs of smaller businesses" (Muskegon, Michigan), "to give business owners more flexibility while creating a vibrant downtown" (Sandpoint, Idaho), and "to prevent ugly, auto-oriented townhouses" (Seattle)."⁹

Cities that have implemented reduced parking minimums for affordable housing include: **Los Angeles** (50% reduction), **Denver** (25% reduction), and **Eugene, OR** (33% reduction). **Seattle** allows a 20% reduction if adjacent to a transit station in designated areas of the City.

⁹ Shoup, Donald, 2011. "Free Parking or Free Markets," [Access Magazine](#).

Examples of cities that have implemented reductions in parking requirements for senior housing include **Berkeley, CA** (75% reduction), and **San Leandro, CA** (50% reduction).

Seattle does not require any off-street parking in urban centers and transit station overlay zones, and is considering eliminating off-street parking requirements for locations within a quarter mile of frequent transit service. **Portland, OR** eliminated minimum parking in the central city district and for sites located with 500 feet of a high-capacity transit. In Portland, two mixed used projects, Buckman Heights and Buckman Terrace, were able to keep development costs low and increase the number of affordable housing units by utilizing the city's reduced parking requirements.

In **Renton**, a recent code update allows reductions in minimums for smaller multifamily buildings, primarily intended to address townhouse units on small lots. The exemption allows 1 parking space per dwelling unit for developments of less than 5 dwelling units with 2 bedrooms or less per unit, provided adequate on-street parking is available in the vicinity of the development.

Recommendations:

1. Eliminate parking minimums
2. Streamline the process for parking reduction variances.
3. Adopt a plan for routine updates to parking regulations.
4. Revise minimum parking requirements to accurately reflect reduced parking demand in multifamily housing for special populations, including transitional, affordable, and senior housing
5. Use the RSP parking demand model to help set optimal minimums
6. Apply state-of-the-art research and precedents from other cities to justify setting minimums as low as possible.
7. Reduce parking minimums for projects within walking distance of high capacity transit. Consider coupling these reductions to complementary design requirements that support pedestrian mobility.
8. Reduce parking minimums for projects that involve renovation or adaptive reuse of historic buildings.
9. Establish "fee-in-lieu" option for reductions in parking; fee is typically used to help fund nearby replacement parking that can serve the building (see Section 4.3).
10. Create special parking minimum reductions for small-scale infill development (to be defined). Providing parking can be particularly onerous for small lot projects that do not have much space. Also, the process of pursuing a parking reduction variance may place an undue financial burden on smaller development projects. Large-scale developers usually have the financial resources to navigate the process, but smaller property owners may avoid the process altogether and simply follow standard code. Consider including a provision that triggers the reduction only if rates of existing on-street parking utilization are below a certain level.

3.1.2 Reduce parking minimums in exchange for supporting alternatives to SOVs

There are a variety of amenities that can be included in multifamily buildings that can help enable lower rates of car ownership and less need for parking. This strategy creates a direct link between reducing parking *supply* and reducing parking *demand*.

Relevance to stakeholder groups:

- > *Residents:* Spillover concerns similar to 4.1.1, but the direct link to reducing parking demand should help foster acceptance.
- > *Policy Makers:* There are limited precedents, and creating new code would require breaking new ground for most municipalities.
- > *Development Community:* Gives developers options for alternatives to building parking, which may help project viability in certain cases.

Precedents:

Portland, OR allows reductions in parking minimums for developments that include car sharing, transit access, and bicycle parking. **Arlington County Virginia** allows parking reductions for bicycle facilities, pedestrian facilities, and resident fare subsidies.

The Van Ness and Turk development in **San Francisco** was granted an almost two-thirds parking reduction in exchange (in part) for the provision of two stalls for car-sharing. This allowance enabled the developer to avoid an extra below-grade parking deck, saving the 141-unit project an estimated \$1.3 to \$8 million.

The GreenTrip certification program based in the Bay Area ties reductions in residential parking to unbundling parking costs, the provision of long term transit passes, and car share spaces for residents. Buildings must be located within close proximity to high frequency transit to qualify. The first five pilot projects provide the equivalent of 80,000 years of free transit passes and 24,000 years of CarShare for residents of GreenTRIP buildings.

Recommendations:

1. Modify parking minimum regulations to allow reductions in exchange for:
 - Transit passes for all residents paid for by the building owner or condo association
 - Bicycle parking/storage (private and/or public)
 - Reserved stalls for car share company
 - Building-owned car for sharing among residents
 - Designated shared parking stalls for use by non-residents
2. Consider a fee-in lieu program in which the fees are used to fund to walk/bike/transit infrastructure rather than remote replacement parking (fees could also be set aside to help ameliorate spillover problems if they arise)
3. Consider adding float spaces with permission granted for other uses if not used by site residents.

3.1.3 Implement Parking Maximums Where Appropriate

Though far less common than minimums, parking maximums are by definition the most direct method for ensuring that parking isn't overbuilt. Maximums are most commonly applied in highly urbanized locations (such as downtown San Francisco or Portland), but also may be effective in less urban areas as part of an integrated program to limit a disproportionate amount of investment in parking supply, encourage use of alternative travel modes to combat congestion, enable compact development, create better streetscapes, and/or preserve historic buildings.

Maximums are typically applied in downtowns or neighborhood mixed-use centers where there is high transit accessibility and where land is both scarce and expensive. Maximums are most appropriate:

- where building parking is in high demand;
- where a generous parking supply exists and the community seeks to diversify land uses;

- as a transitional strategy where there is a significant change in transit accessibility;
- to reduce developer investment in parking and improve housing affordability.

Maximums can be more successful when applied in combination with other policy and infrastructure measures (such as a parking district, on-street residential permit parking and strategic transit and bike infrastructure planning).

Relevance to stakeholder groups:

- > *Residents:* Congestion and the loss of free parking are major concerns. Ideally parking maximums should only be applied when parking management programs are in place to help alleviate spillover.
- > *Policy Makers:* In appropriate circumstances maximums can be an effective tool achieve community goals to reduce car-dependence, especially in high-density, transit-rich areas.
- Development Community:* Developers tend to oppose maximums because they reduce flexibility, and may preclude their ability to satisfy market demand for parking. On the other hand, maximums could be seen as a helpful justification for reducing parking to lower development costs.

Precedents:

In the Mission Bay area of San Francisco, parking maximums were introduced to maximize the amount of new housing, make the most of the new Third Street Light Rail line, and minimize traffic impacts on congested streets and the nearby freeway. Maximums were set at one space per unit. With fewer parking spaces, Rich Sorro Commons, a 100-unit affordable housing project, was able to make space available for a childcare center and retail at ground level that is expected to generate revenues of \$132,000 annually.

Locally, suburban communities seeking to urbanize downtown areas have made use of maximums. Bellevue applied a parking maximum in its downtown districts of 2 per unit, downtown Renton has a maximum of 1.75 per dwelling unit, while in Redmond there is a 2.25 stall per unit maximum in downtown zones.

Recommendations:

1. Apply parking maximums in carefully selected locations
2. Prioritize locations based on adjacencies to shared or district parking options and alternative mode infrastructure.
3. Couple maximums with management plans for on-street parking such as residential permit zones or on-street pay parking
4. Consider including a variance to the maximum for extenuating circumstances

3.1.4 Promote regional coordination of standards

Achieving RSP across King County could be facilitated by a sanctioned, standardized set of parking requirements made available for use by municipalities across the region. Such a standard would provide technical guidance for setting parking requirements, eliminate potentially troublesome inconsistencies between municipalities, and provide policymakers' with justification and official backup for proposed changes to parking requirements.

Relevance:

- > *Residents:* Residents may like or dislike the idea of a regional standard being applied in their local area

- > *Policy Makers:* It would be a long-term, challenging effort for policy makers to create a brand new set of region-wide parking standards and then get jurisdictions to adopt them.
- > *Development Community:* Would likely benefit from the certainty associated with a widely accepted parking requirement standard

Precedents:

Some regional planning agencies have adopted regional parking policy or published reports that provide guidance. **Portland Metro** has a current Parking Management Policy with objectives to establish appropriate parking ratios, promote the use of shared parking, and support market-based strategies such as parking pricing and parking-cash outs. In addition, Metro's Regional Transportation Plan, 2035, calls for maximum parking ratios tied to various levels of transit service.

In the **San Francisco Bay Area**, the Metropolitan Transportation Commission has published two reports that provide regional guidance on parking policy: (1) "Regional Parking Strategies for Climate Protection" and (2) "Reforming Parking Policies to Support Smart Growth." These guidebooks present parking strategies for areas ranging from urban or regional centers to rural and small towns.

In the **Chicago** area, the Metropolitan Agency for Planning's "GO TO 2040" regional plan "takes a close look at parking pricing and management strategies," and the agency recently published a report called, "Parking Strategies to Support Livable Communities." The Regional Transportation Authority has created a guidebook called "Access & Parking Strategies for Transit-Oriented Development," which notes that "excess parking can drive up development costs lowering the return on investment for developers and ultimately impacting the affordability of housing and commercial space."

In the **Boston** area, the Metropolitan Area Planning Council has created a Parking Toolkit "designed to help local officials, developers, citizen board members, and advocates understand the sources of parking issues in their communities and identify potential solutions."

Recommendations:

1. Establish policy framework for regional parking standards that can be adopted by jurisdictions across King County
2. Invite jurisdictions to participate in a process of developing a package of RSP code
3. Offer assistance from RSP parking management and code development experts to participating jurisdictions that commit to recommending the regional parking management code changes
4. Engage the PSRC or King County to get commitment for supporting and perhaps being the official keeper of the regional parking standards

3.2 *Establishing an Efficient, Transparent Parking Market*

Today, the market for off-street parking in most communities is typically distorted and inefficient. Consumers receive inconsistent pricing signals, and in most cases, neither supply nor demand is well-documented or understood. These dysfunctional market conditions hinder the prospects for achieving RSP. The following sections describe strategies and provide recommendations that can help correct this situation by promoting the creation of an efficient, transparent parking market. The transformational power of the free market has the potential to be perhaps the single most effective catalyst for RSP.

3.2.1 Augment data on parking supply, demand, and price

Lack of data on the supply, demand, and price of off-street parking is a fundamental impediment to an efficient market. While the common perception of parking can be one of scarcity, particularly in urban centers, many locations actually possess excess off-street parking supply, though no one really knows exactly how much, where it is located, or during what times it is available. There is currently no in-depth source of data on off-street parking demand, and in particular how demand varies depending land use and user context (data on multifamily parking collected for the RSP project will address this deficiency). There is also a lack of publicly available data on the price of unbundled parking spaces in multifamily buildings. Absent a competitive parking market, prices may not reflect realistic costs, and price setting often appears to be arbitrary. This lack of critical information should be addressed by municipalities, agencies, non-profits, and parking providers engaging in cooperative efforts to collect and share parking data.

Relevance to stakeholder groups:

- > *Residents:* Building residents would benefit from an option to buy parking that is priced rationally. Neighborhood residents and businesses would benefit if better and more readily available parking data led to more efficient utilization of local parking.
- > *Policy Makers:* Accurate data on parking supply and demand would help municipalities set appropriate parking minimums for specific contexts and provide justification to the public.
- > *Development Community:* Better data would help developers understand the value of the parking they may build, and make rational decisions on whether or not to build it.

Precedents:

The Puget Sound Regional Council collects parking data, but only for commercial parking. As far as we know, the RSP project is the first intensive, large-scale effort to collect data on parking utilization in multifamily buildings.

Recommendations:

1. Engage national REITs as a potential data source on pricing of unbundled parking stalls.
2. Engage commercial parking lot operators (e.g. Diamond Parking) as a potential source of data on parking demand
3. Conduct parking inventories to help inform appropriate parking policy (ideally this would include not only off-street parking, but also on-street parking to help assess the potential impact of spillover)
4. Analyze spatial distribution of supply and demand to identify gaps, opportunities, and areas that should be targeted for policy updates
5. Conduct periodic updates and expand the scope of the RSP multifamily parking utilization data

3.2.2 Prove the market for reduced parking

In some locations reduced parking or alternative parking arrangements for multifamily are an untested market, which increases real estate development risk and perpetuates the status quo that often results in the construction of excess parking. To justify taking on projects that would break out of the parking status quo to achieve RSP, developers and lenders need market comparables that prove there is a viable market.

Strategies that municipalities can pursue to catalyze projects that push the envelope on parking reductions and help prove the market include public-private partnerships for demonstration projects, and developer incentives to manage associated marketplace risk. The realization of

market comparables could also be encouraged more indirectly by promoting reduced parking as a sustainability solution that supports community goals. If these strategies lead to trail-blazer projects with reduced parking ratios or innovative parking arrangements that are financially successful, it will start to create a pool of market comparables by which developers can justify future projects with similar parking reductions.

Relevance to stakeholder groups:

- > *Residents:* In residential locations undergoing densification there are concerns about congestion and parking as well as broader fears about change to their neighborhoods. Developer incentives could be perceived as an unnecessary subsidy that also may create spillover impacts. Education would help ease the above concerns.
- > *Policy Makers:* Effective communication of the public benefits of less parking is key to justifying public investment in programs that incentivize developments with reduced parking. Programs could be fine-tuned to apply only to specific project types that are supportive of transit ridership and are in line with other community goals.
- > *Development Community:* Incentives and public-private partnerships can help increase the feasibility of projects with reduced parking. Awards that recognize sustainable design have marketing value for housing projects.

Precedents:

San Francisco's Green TRIP Program is one example of a rewards program that recognizes buildings that take measures to reduce travel by SOV. Green TRIP is designed to help developers provide features that reduce resident vehicle miles traveled, such as activated ground floors, pedestrian improvements, and car share or transit passes. These features can also help build neighborhood support for new multifamily projects. LEED and other green building rating systems award points toward certification for the inclusion of a variety of design features intended to reduce travel by SOV, although it typically a relatively small component in the rating.

Reduced parking requirements are often seen as an incentive for development, but no precedents were found for developer incentivizes for reduced parking ratios. Such incentives would only be applicable in highly unique circumstances where no minimums exist and developers still tend to build excess parking.

One possible strategy for *de-incentivizing* parking is a tax on residential off-street parking spaces. Though potentially controversial, the concept—technically known as a transportation utility fee, and popularly known as a “driveway tax”—has been tried in cities in Oregon and Kansas.¹⁰

Recommendations:

1. Establish awards and/or design competitions that recognize the sustainability of projects with reduced parking.
2. Explore possible developer incentives for reduced parking such as fast-track permitting, FAR bonuses, tax exemptions, loan assistance, etc.
3. Pursue public-private partnerships to help implement catalyst projects and offset the perceived risk associated with reduced parking and alternative parking arrangements.
4. Consider applying a tax or impact fee to private, off-street parking spaces.

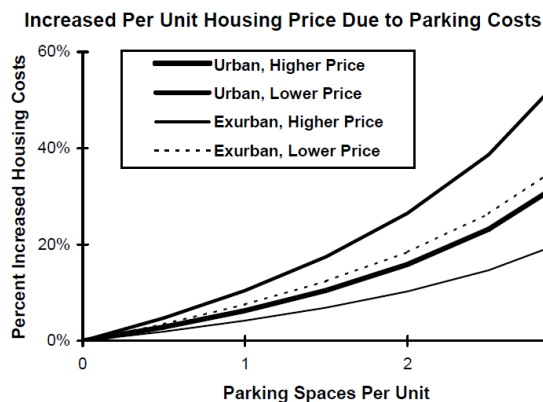
¹⁰ <http://blogs.reuters.com/felix-salmon/2010/08/26/the-driveway-tax/>

3.2.3 Unbundle the parking cost from the residential unit cost

As discussed in Section 3.2.1, unbundling the cost of parking from the cost of a housing unit is a relatively simple step that has the potential to reduce demand for parking by sending transparent pricing signals to consumers. Unbundling increases overall equity and choice by allowing future and existing occupants to pay only for the parking spaces they need. Unbundling can also help a developer deliver a better product by providing the means by which the specific needs of a neighborhood context or population group can be better met.

Relevance to stakeholder groups:

- > **Residents:** Most residents, particularly special populations such as low-income households and seniors, will see this as an option that is both efficient and fair, since people are given the choice to save money if they don't need parking. When spaces are leased instead of sold, residents also have the flexibility to add or drop parking stalls if their needs change.
- > **Policy Makers:** Unbundling should be complemented with a parking management program that will regulate nearby on-street parking to avoid spillover problems that could result if residents use on-street parking to avoid paying rents for parking spaces.
- > **Development Community:** Building owners and managers may be initially uncomfortable with a change in how their units are rented/sold, as unbundling is likely to complicate real estate transactions. In addition, building owners might fear a loss in revenue if the parking is unbundled and residents choose to not lease parking. Unbundling could create a new business opportunity for owners who can lease out parking spaces.



Source: *Parking Requirement Impacts on Housing Affordability*, Victoria Transport Policy Institute

Precedents:

San Francisco was the first city in North America to mandate unbundling complemented by a privately managed city carshare in large developments. As San Francisco's Metropolitan Transportation Commission explains: "Unbundling parking is an essential first step towards getting people to understand the economic cost of parking and providing users with the opportunity to opt out of parking and make alternative travel decisions. Without unbundled parking, tenants experience parking as free, while transit costs them money."¹¹

Previously implemented on an ad-hoc basis, as of 2009, the City of San Francisco's parking ordinances now requires all new or converted structures of ten dwelling units or more to lease or sell parking separately from the rental or purchase fees for the life of the dwelling unit. This ordinance is coupled with both mandatory carshare spaces, and parking maximums. It applies to downtown and transit-oriented districts.

Located adjacent to Metro rail stations, the mixed-use Market Common in **Arlington, VA** unbundles parking costs from rents, charges a graduated rate for parking (the second space is 3-4 times the price of the first), and employs shared parking between uses. It was constructed with 25% less parking than the County code, and studies of parking use indicate that up to 20% of the available parking remains unused at peak times.

¹¹ Metropolitan Transportation Commission, 2007. "Reforming Parking Policies to Support Smart Growth."

The City of **Berkeley** allows unbundled parking spaces within their downtown on an ad hoc basis. This is coupled with a 0.3 spaces per unit minimum in their downtown, a city car share program, and pricing for on-street spaces. Unbundling is a policy goal specified in the **Seattle** Transportation Strategic Plan.

Recommendations:

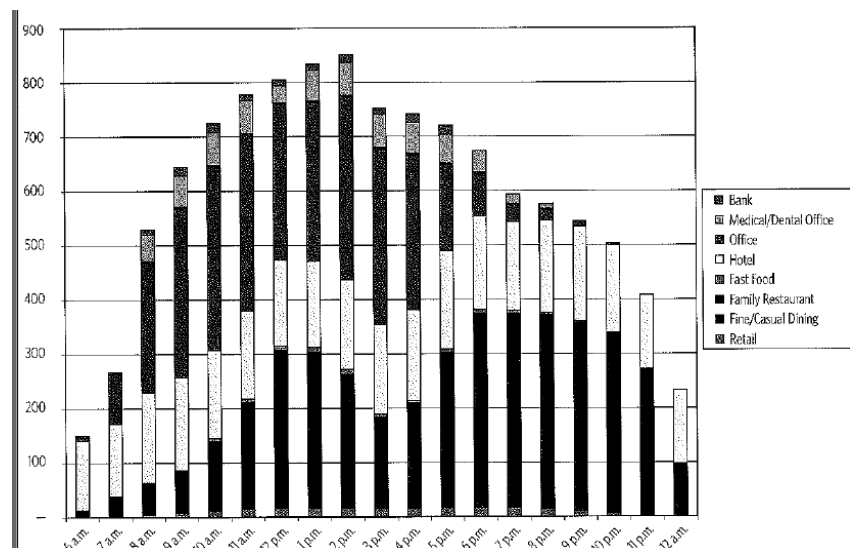
1. Implement unbundled parking
2. Consider combining the implementation of unbundled parking with a comprehensive package of residential parking strategies including reduced or eliminated minimums, car share programs, on-street parking permit zones and parking pricing.
3. For condos, implement bundling on a for-sale basis, allowing owners to choose the number of spaces they wish to purchase. As an option for condos, offer unbundled spaces on a month-to-month lease basis, which provides better flexibility for changes in tenancy and occupant need.
4. Conduct public outreach to communicate the benefits and inherent fairness of unbundling.
5. Modify development pro forma so they don't ignore the potential revenue from parking

3.2.4 Implement shared parking

Because different types of users need parking at different times of the day or week, parking often goes unused for a large fraction of the time. This inefficient allocation of parking resources distorts the market for parking and can lead to the construction of more parking than is necessary. By enabling more efficient utilization of existing parking, shared parking agreements can help create a more functional parking market that promotes RSP.

More specifically, parking in multifamily buildings can be reduced if residents can satisfy their parking needs by sharing nearby spaces during times when they are unoccupied. Similarly, if a mixed-use building has commercial uses, it may be possible for businesses and residents to time-share the parking within the building, depending on the use and its time demands. (Note also that multifamily buildings could make shared spaces available to nearby complimentary uses, though this is not a mechanism to reduce parking within the multifamily building itself.)

Shared parking arrangements can also be designed to respond to changing parking needs over time. As suburban areas urbanize and gain transit service, demand for parking will typically decline. For example, a public parking garage that is currently serving Park & Ride commuters arriving by car could be transitioned over time to a shared parking resource for new multifamily buildings in the immediate vicinity, allowing these new projects to be built with less parking. This type of phased



Variations in Parking Requirements by Time of Day Source: **Shared Parking**, Mary S. Smith

parking management strategy is particularly relevant to new high-capacity transit stations sited in car-oriented locations, because as the station area is built out, the number of Park & Ride commuters will be replaced by resident commuters arriving by foot or bicycle.

As a more proactive phased strategy, parking structures could be designed for adaptive re-use as residential or office. Conversion from parking to other uses could be implemented as evolving economics and demand dictate. This strategy would involve additional upfront expense to build a parking garage that would be suitable for habitation and could be converted without onerous expense.

Relevance to stakeholder groups:

- > *Residents:* Some tenants/homeowners may be reluctant to accept the idea of sharing stalls, or using shared stalls outside their building. Acceptance can be fostered through education and direct demonstration of positive user experiences, in addition to the option of fall-back strategies available if needed.
- > *Policy Makers:* Shared parking can be enabled in Land Use Code, often requiring the use of an agreed upon methodology such as the ULI Shared Parking Model, or a professional transportation planning study. Agreements between private owners may need to be sanctioned by the jurisdiction.
- > *Development Community:* The parking reductions enabled by shared parking can help to offset the increased management complexity and risk associated with shared parking; Shared parking should be coupled with “unbundling” (see Section 3.2.3).

Precedents:

Shared parking is generally not widely used with residential parking, but it can be used in projects with a variety of uses with peak parking demand during complementary times, and in conjunction with other elements such as unbundling. One residential project to use shared parking for residential uses is Market Commons in Arlington, VA.

As noted in the Best Practices appendix, many municipalities in King County (and elsewhere in the U.S.) have Land Use Code that allows for shared parking, with some differences in the amount of reduction allowed, and the maximum distance from the use to the parking. However, implemented examples of shared parking arrangements are uncommon, mainly because it is a relatively new concept and adds complexity to project development and management (see Barrier 2.1.5).

In King County, most large-scale examples of multifamily shared parking have involved Park & Ride facilities, including:

- Thornton Place: Five-acre development with 50,000 sf of retail, a 14 screen cinema, 387 market-rate apartments, and 350 below-grade parking stalls, which, along with an adjacent 280 stall above-grade garage, are shared with King County Metro to serve the transit center across the street. Thornton Place provided traffic models to help select complementary uses and to prove out the shared parking model to the City of Seattle.
- Overlake: 536 total stalls shared with 308 affordable housing units (residents currently have 0.6 cars/unit)
- Renton: 30 of 150 Park & Ride stalls are shared with residents in 90 housing units; also has additional 90 stalls dedicated to the housing

TriMet, the transit agency serving the Portland metro region, also encourages shared use of their Park & Ride facilities. For example, at the Beaverton Creek MAX station a TriMet Park & Ride

garage provides overflow visitor parking for the 554-unit Lasalle Apartments. Other notable multifamily shared parking examples from the Portland metro region include:

- Hollywood Library/Bookmark Apartments: Mixed-use development with 47 affordable and market-rate housing units, a small retail space, and a public library; 17 parking stalls are reserved for residents at all times, 11 stalls are reserved for library patrons during operating hours, and nine stalls are reserved for an adjacent business.
- Belmont Dairy: 85 dwelling units above 26,000 sf of retail (including a grocery store); 30 of the 64 on-site stalls are reserved for the grocery store between 9am – 9 pm, and available to residents at other times

Recommendations:

1. Adopt land use code that is as flexible as possible with respect to factors such as allowed reductions, time overlap of uses, and maximum allowed distance between the use and the shared parking site
2. Base regulation metrics on the most recent shared parking data available or nationally recognized standards such as the Urban Land Institute's Shared Parking Model
3. Expand the knowledge base on shared parking with through the collection of new data and case study analysis
4. Create policy that facilitates shared parking agreements between private owners; provide model shared parking agreements; provide mechanisms for municipal approval of shared parking agreements
5. Consider developer incentives for implementing shared parking, such as increased FAR or exemption from the commercial parking tax
6. Create policy that encourages transit agencies to implement shared parking at their facilities
7. Design phased shared parking schemes that can be adapted over time in response to changing parking demand
8. Encourage parking structures designed for adaptive reuse

3.2.5 Leverage technology for efficient parking utilization

Networked computers have tremendous potential to provide convenient, real-time information that would help create a more efficiently utilized market for parking. One example that is becoming more common in larger cities is a system that communicates how much capacity is available in public parking garages in real time, such as Seattle's e-Park. To enhance on-street utilization, New York City and San Francisco¹² are experimenting with networked sensors in on-street parking spaces that identify open spaces for motorists seeking parking. An iPhone app is available for New York City that allows motorists leaving an on-street space to alert those who may be seeking a space.¹³

A potentially transformative approach with more direct relevance to RSP is an online system designed to create and manage a shared parking pool. In many urban areas there are ample unused parking stalls, but there is no method to connect parking consumers with this supply. On the consumer side, an online parking pool functions similarly to carshare systems—users search for and reserve available parking stalls when they need them. On the supply side, the parking pool is generated by private owners of parking who add their stalls to the pool when they're available. The system acts as the broker.

¹² <http://sfpark.org/>

¹³ <http://spotswitch.com/SSWeb/mobile.aspx>

Relevance to stakeholder groups:

- > *Residents:* Would likely be supportive, especially if they felt the system would work for them, and if they could use it to derive revenue from parking they own
- > *Policy Makers:* Could require new policy/regulations to enable establishment of new business model
- > *Development Community:* Potential for new revenue stream for building owners with surplus parking; also a justification for building less parking because it would enable more efficient shared parking

Precedents:

There are actually several examples of online parking pools systems in various stages of implementation in the U.S, Canada, and the United Kingdom, including:

- Your Parking Space (U.K.): <http://www.yourparkingspace.co.uk/>
- ParkingSpots.com (U.S. and Canada): <http://www.parkingspots.com/>
- ParkLet (U.K.): <http://www.parklet.co.uk/>
- Park at My House (San Francisco-based): <http://www.parkatmyhouse.com/>
- Parking Panda (Baltimore and Washington DC): <https://www.parkingpanda.com/>

Recommendations:

1. Policy makers should publicize their interest in online parking pool systems
2. Policymakers should engage firms that have developed online parking pool systems to explore the potential for implementation
3. Partner with web/app developers to explore technical solutions (e.g. Walkscore)
4. Establish a pilot project in a neighborhood or city

3.3 Complementary Strategies

Many of the solutions described above in both the *Standard Reform* and *Establishing a Parking Market* sections are likely to be more feasible and successful if they are supported by complementary policies and strategies, as described below. These strategies do not have a direct connection to RSP in multifamily buildings, but they can be important ingredients for achieving holistic solutions.

3.3.1 Implement Transportation Demand Management

TDM is a broad term that includes range of strategies designed to reduce the number of SOV trips taken by building occupants. The implementation of TDM has a direct impact on the reduction of car trips and potentially car ownership, which could lead to a corresponding decrease in the need for parking. Thus, when TDM measures are in place, it becomes more defensible to propose a reduction in parking requirements, and such a proposal is more likely to gain community and political support.

Relevance to stakeholder groups:

- > *Residents:* TDM measures are typically well-liked by tenants and community residents
- > *Policy Makers:* Most TDM measures are relatively straightforward for policy makers to enable; long-term monitoring could be burdensome for municipalities.
- > *Development Community:* TDM strategies can be relatively inexpensive and are likely to be a good investment if it helps the project bottom line by enabling a reduction of parking. TDM may require on-going operating expenses (e.g. resident transit passes), which could require adjustments in development proformas to capture their costs and benefits.

Precedents:

In Washington State, different types of TDM have been implemented by State, regional, county, and local jurisdictions, as well as by individual employers or institutions. Examples of implemented TDM applicable to residential buildings include:

- Providing residents with subsidies for transit and/or other non-drive-alone modes
- Providing easy and prominent access to a range of information on transportation, such as conditions, transit services and facilities, ride-sharing opportunities, and bicycle services and facilities (routes, parking, bike station, bike-buddy matching)
- Providing a resident “ride-board” where residents can offer or request car pools
- Providing residents with a membership to the local car-sharing organization and, if demand is sufficient, providing a car-sharing vehicle on-site
- Providing bike storage, a bike repair station, or shared bikes

Recommendations:

1. Educate all stakeholders about the availability and value of TDM measures
2. Collect and disseminate performance data on existing TDM efforts
3. Establish incentives in exchange for TDM commitments from developers or building owners
4. Link the implementation of specified TDM measures to reductions in parking requirements

3.3.2 Employ on-street parking management

As noted above (see Barrier 2.3.2), spillover parking that may be caused by reducing parking in multifamily buildings is typically a major community concern. Proactive management of on-street parking has the potential to play an important role in assuaging those concerns and thereby

facilitating the adoption of standard reform and other policies that promote RSP. Ideally, parking management programs also address off-street parking to enable more efficient co-utilization of both resources.

Relevance to stakeholder groups:

- > *Residents:* Many may welcome programs that enhance their access to on-street parking, but some residents and business owners may object to measures that increase their parking costs, such as parking meters or permits.
- > *Policy Makers:* Policy precedents are widely available.
- > *Development Community:* In general, on-street parking management is likely to be seen as a positive in the development community, especially if it helps create conditions for more flexibility in parking requirements.

Precedents:

Implemented examples of a wide variety of on-street parking management strategies can be found in cities across King County and nationwide; they are most common in larger cities.

Recommendations:

Appropriate parking management strategies vary widely depending on context, and may include:

1. Residential parking zone (RPZ) permit programs that prevent non-locals from using on-street spaces for extended periods
2. Metering to keep cars circulating in and out of on-street spaces, though this is typically only feasible in urban areas with relatively high-intensity development
3. Parking Districts or Management Associations that coordinate pricing of on-street parking and off-street municipal parking to achieve desired on-street vacancy rates
4. Parking Benefit Districts in which municipal street parking fees are used to fund parking facilities or other community amenities
5. Verification of on-street parking utilization rates to ascertain the extent of excess capacity
6. Identification of places where on-street spaces can be added to ensure capacity is maximized
7. A real-time system that identifies vacant on-street spaces

3.3.3 Adopt policies that promote transit-supportive community design

Urban design, transportation choices, and land use patterns are all important determinants of the share of trips taken by SOV versus other modes. With the goal of increasing transportation choices, most cities in King County have policy of one form or another that supports pedestrian-oriented design, transit access, and a compact mix of uses. Such policies demonstrate a long-term commitment to less reliance on cars, and provide justification for incremental reductions in requirements for off-street parking in multifamily buildings.

Relevance to stakeholder groups:

- > *Residents:* Most residents are generally in favor of community design that supports travel by walking, biking and transit.
- > *Policy Makers:* In most locations, policies are already moving in this direction.
- > *Development Community:* There is strong demand for housing in walkable, transit-rich communities.

Precedents:

A wide range of policies that promote transit-supportive community design have been adopted throughout King County and nationwide.

Recommendations:

1. Augment and strengthen policies and regulations that support transit-supportive community design
2. Offer reduced parking requirements in exchange for specific urban design features such as pedestrian connections through the development site and bus shelters integrated into the building facade

3.3.4 Leverage the relationships between parking and transit

As a general rule, the less parking there is in an urban area, the more suited that area will be for transit. At the same time, the more transit service there is in an urban area, the less need there is for parking. To leverage this synergy, municipalities and transit agencies should collaborate to: (1) ensure that transit-supportive land use regulations (including but not limited to parking) are implemented in station areas, and (2) establish as much of a commitment as possible for transit service provision to places that have adopted policy and code intended to foster a transit-supportive community. This collaboration is essential to avoid a Catch-22 situation in which parking requirements can't be reduced because there is no guarantee of transit service, but transit service can't be guaranteed until the area becomes more transit-ready.

Relevance to stakeholder groups:

- > *Residents:* Tend to be more comfortable with parking reductions when they know that there are viable alternatives to travel by car.
- > *Policy Makers:* Collaboration between municipalities and transit agencies can support long-range planning for land use and transit service that supports TOD.
- > *Development Community:* Transit service commitments—especially fixed rail—are typically seen as a value enhancement for adjacent multifamily development.

Precedents:

One recent local example of an attempt to leverage the interdependence of transit service and land use regulation was a State funded project at the Puget Sound Regional Council to explore concepts for a “Transit Service Corridor Overlay Zone.” This overlay zone would designate areas along transit corridors where transit-supportive land use regulations would be adopted and transit service allocation would be focused.

Community Transit in Snohomish County recently conducted a collaborative partnership with Snohomish County jurisdictions on a long range plan that focuses planning, development, and service implementation efforts into a series of “Transit Emphasis Corridors.” These are corridors identified via a set of stakeholder approved performance metrics are a priority for multi-modal transportation, including reduced parking. The Community Transit Long Range Plan states:

“Limiting parking helps to incentivize other modes of access like walk, bike or riding local feeder service to major transit centers... Further, by preserving land for high-density development around transit centers, reduced emphasis on parking helps to create vibrant urban centers that enable a true think transit first lifestyle.”

In 2006, 19 cities, counties, and local and regional agencies in the California Bay Area began a collaboration to revitalize the El Camino Real corridor in San Mateo and Santa Clara Counties. With extensive bus service and BART and Caltrain stations, the corridor is an exceptional opportunity for

integrating transit and land use. One result of this process was that many cities along the route altered their parking and access standards for housing within the corridor by introducing maximums, and reducing requirements to accommodate a more pedestrian-oriented streetscape.

Recommendations:

1. Establish regional standards for transit supportive land use that municipalities can apply to station areas, and that transit agencies can use to prioritize transit service allocation.
2. Pursue further development of the PSRC's Transit Service Corridor Overlay Zone concept
3. Explore possibilities for how transit agencies could improve coordination and communication around the planning for future service
4. Implement strategies to solidify high quality transit service in high density corridors with low levels of parking

4 RECOMMENDATIONS

Through a collaborative stakeholder process, the solutions described in Section 3 were synthesized and prioritized to create a final set of recommendations. These recommendations address two purposes: (1) they provide general guidance to all stakeholders on a hierarchy of potential actions, and (2) they create a framework from which to determine the most productive demonstration projects to be pursued in the next phase of the RSP project.

4.1 *The Prioritization Process*

The graphic shown on the following page was created to help inform the prioritization of recommendations. It illustrates the relationships between the barriers and solutions, and provides a quick visual reference for which solutions are likely to be most effective for overcoming the barriers. The black squares indicate a very strong connection between the barrier and solution, and the gray squares indicate a medium-strong connection. In general, solutions with more black and gray squares are those that should be prioritized.

The RSP project convened two groups of stakeholders to provide insight and guidance on prioritization. One group consisted of people involved in the development community represented by the Northwest Chapter of the Urban Land Institute, and the other group consisted of municipal planners and policy makers from King County jurisdictions. These groups participated in a series of meetings intended to inform the RSP team's assessment of barriers and solutions, and most importantly, to help distill the findings down into a focused set of high-priority recommendations.

To help guide their prioritization of solutions, the stakeholder groups were asked to consider the following criteria:

1. *Effectiveness*: Potential impact on achieving RSP, if implemented
2. *Practicality*: Technical difficulty and complexity, compared to resources required (ROI)
3. *Political Viability*: Required political effort; expected level of controversy
4. *Geographic Applicability*: Applicability to urban, suburban or both locations
5. *Time Horizon*: Timeframe for realizing RSP (short or long term solution)
6. *Demonstration Potential*: Suitability to be pursued as a RSP demonstration project

4.2 *Prioritized Recommendations*

Based on a combination of stakeholder input and internal project team discussions, the RSP team formulated a hierarchy of recommendations based on both priority and logical sequence of implementation. The final recommendations were separated into the following three categories, in order of priority: (1) Generate Supporting Data, (2) Optimize Regulations; and (3) Improve Utilization Efficiency.

The recommendations described above suggest numerous possible avenues of pursuit for the demonstration phase of the RSP project, some of which are noted below for reference.

	2.1.1. Parking Minimums									
	2.1.2. Lack of Flexibility									
	2.1.3. Lack of Regional Consistency									
	2.1.4. Lack of Certainty About Transit Service									
	2.2.1. Lack of Pricing Transparency									
	2.2.2. Unproven Market for Reduced Parking									
	2.2.3. Parking Management Complexity									
	2.3.1. Lack of Travel Alternatives									
	2.3.2. Spillover Parking									
	2.3.3. Lack of Stakeholder Outreach and Education on Parking Issues									
3.1.1. Optimize Parking Minimums										
3.1.2. Reduce parking minimums in exchange for supporting SOV alts.										
3.1.3. Implement Parking Maximums Where Appropriate										
3.1.4. Promote regional coordination of standards										
3.2.1. Augment data on parking supply, demand, and price										
3.2.2. Prove the market for reduced parking										
3.2.3. Unbundle the parking cost from the residential unit cost										
3.2.4. Implement shared parking										
3.2.5. Leverage technology for efficient parking utilization										
3.3.1. Implement Transportation Demand Management										
3.3.2. Employ on-street parking management										
3.3.3. Adopt policy to promote transit-supportive community design										
3.3.4. Leverage the relationships between parking and transit										

Graphic illustrating the relationships between the barriers and solutions. The black squares indicate a very strong connection between the barrier and solution, and the gray squares indicate a medium-strong connection. In general, solutions with more black and gray squares are those that should be prioritized. Note that Lack of Outreach and Education (2.3.3) is a barrier to all solutions.

4.2.1 Generate Supporting Data

Data is the highest priority category of recommendations, and encompasses the following solutions, listed in order of relative importance:

- *Augment data on parking supply, demand, and price (see 3.2.1)*
- *Prove the market for reduced parking (see 3.2.2)*

Data is at the top of the recommendations hierarchy because robust data is the critical enabling ingredient, both for justifying changes to parking regulations, and for informing efficient parking utilization. In addition, transformation of the multifamily marketplace towards right size parking hinges on data that proves the financial feasibility of projects that are outside currently established parking norms.

Potential demonstration projects related to the data recommendations include:

1. Expansion of the RSP utilization data set to include a wider range of contexts, e.g. time of day, location, etc.
2. Compilation and analysis of data on the supply of off parking in places other than multifamily buildings, e.g. off-street lots, on-street.
3. Case studies on the real estate development economics of existing multifamily projects with reduced parking compared to those with excess parking
4. Research on how parking factors into multifamily project pro formas; development of new approaches to feasibility analysis that could help promote RSP
5. Analysis of the impact of residential transit passes, car sharing, and other TDM measures on multifamily residents' car ownership and use
6. Surveys of multifamily residents' opinions and attitudes on parking, car ownership, transit use, TDM, etc

4.2.2 Optimize Regulations

Regulation is the second highest priority category of recommendations, and encompasses the following solutions to varying degrees, listed in order of relative importance:

- *Optimize parking minimums (see 3.1; also incorporate 3.1.2)*
- *Promote regional coordination of standards (see 3.1.4)*
- *Leverage the relationships between transit and parking (see 3.3.4)*
- *Implement Transportation Demand Management (see 3.3.1)*
- *Employ on-street parking management (see 3.3.2)*

The primary goal of this recommendation category is the adoption of code changes that align parking standards with right size parking utilization data. This recommendation builds off the first by implementing the new data sources in order to change policy. Ideally, regional standards would be adopted to facilitate these changes. The last three “complementary” solutions are key strategies for helping to ensure the most successful code change outcomes.

Potential demonstration projects related to the regulation recommendations include:

1. Gap analysis between existing parking regulations and the RSP parking utilization data
2. Development of schemes for creating regional parking code standards
3. Formulation of a parking typology to inform the specification of context-appropriate parking requirements

4. Analysis of the degree to which built multifamily projects deviate from parking requirements, e.g. what happens in practice when minimums are set to zero, or how often do projects exceed minimums?
5. Study of multifamily parking utilization before and after the allocation of new transit service to help establish appropriate parking requirements in proximity to transit
6. Evaluation of existing TDM programs; model code or pilot projects that link TDM to reduced parking requirements

4.2.3 Improve Utilization Efficiency

Efficient utilization of parking is the third highest priority category of recommendations, and encompasses the following solutions, listed in order of relative importance:

- *Leverage technology for efficient utilization (see 3.2.5)*
- *Implement shared parking (see 3.2.4)*
- *Unbundle the parking cost from the residential unit cost (see 3.2.3)*

If data and regulation can be addressed, then the key remaining opportunity is improving the utilization efficiency of parking resources. In areas where there is both unmet demand and underutilized supply, an Internet-based service that connects consumers with parking could relieve parking demand, increase parking convenience, and create a new income stream for parking owners. In general, shared parking agreements will be more attractive when supported by robust data on utilization and market comparables. Lastly, unbundling is already becoming more common in many areas, but again, better data and potentially modest incentives will help move the market.

Potential demonstration projects related to the efficiency recommendations include:

1. Conceptual development and pilot of a web-based shared parking service that inventories available parking from a variety of sources, and administers convenient paid access to parking consumers
2. Shared parking case studies; shared parking pilot projects
3. Investigation of methods to facilitate and promote shared parking, e.g. development of guidelines and model agreements; removal of the tax on shared parking
4. Design study of garages that facilitate shared parking or enable efficient storage for seldom-used cars
5. Development of phased parking management strategies for locations where uses and parking demand are expected to evolve significantly over time, e.g. a new high-capacity transit station located in an existing car-oriented environment
6. Investigation of how shared parking affects project pro forma, and how pro forma could be modified to encourage shared parking
7. Case studies on projects with unbundled parking; analysis of unbundled parking pricing; investigation of lending practices regarding parking revenue

4.3 Outreach and Education

Throughout the RSP project process there has been agreement among both the stakeholder groups and the RSP project team that outreach and education will be critical to achieving project goals. For all the recommendations, successful implementation will be more likely if all stakeholders understand and support the proposed actions. To support this outcome, outreach and education will be addressed in a separate RSP project initiative.

The user-friendly, map-based parking utilization web site that is to be developed as part of the RSP project will play a central role in providing project exposure and information to all stakeholders.

Additional RSP outreach and education efforts must be tailored to engage and inform each of the three main RSP stakeholder groups: (1) residents; (2) policy makers; (3) the development community.

4.3.1 Resident Outreach

As described above in Community Barriers (see Section 2.3), residents and other members of the community surrounding a proposed multifamily project often have strong opinions and influence on parking decisions. Outreach and education efforts should be focused on addressing concerns that residents can be expected to have regarding the impacts of parking supply, as noted previously in Section 1.4:

- *Oversupply*: increases housing cost; degrades pedestrian environment
- *Undersupply*: creates more competition for on-street parking

To develop an effective outreach strategy, the RSP team should engage community stakeholders to further elucidate their perspectives, such as:

- Key concerns about setting multifamily parking supply, e.g. how does over/under supply affect their interests?
- What unknowns make it difficult to make decisions or take positions on parking?
- What concerns revolve around the policy recommendations and other RSP tools being developed?
- What are useful ways to make community stakeholders aware of RSP tools?

Incorporating this feedback, outreach efforts should emphasize that the RSP tools are meant to be a means for reaching consensus and best meeting the needs of all stakeholders. Potential outreach and education approaches include:

1. Meet with existing neighborhood groups
2. Create focus groups for neighborhood individuals or groups to collaborate and comment on RSP project deliverables
3. Establish a neighborhood parking ambassador program
4. Work with advocacy and interest groups to spread the word
5. Utilize social media and blogs
6. Develop a process for neighborhood stakeholders and developers to jointly explore and test RSP solutions
7. Provide an RSP training module

4.3.2 Policy Maker Outreach

Outreach efforts for policy makers should be focused on addressing their unique perspectives on the impacts of parking supply, as summarized previously in Section 1.4:

- *Oversupply*: degrades pedestrian environment; compromises community goals to increase transportation choices and provide more affordable housing
- *Undersupply*: creates management challenges for on-street parking

The RSP team should pursue a variety of communication methods to generate awareness and enthusiasm among planners and elected officials for the RSP tools and demonstration projects.

Potential outreach and education approaches include:

1. Engage planners of local jurisdictions to identify codes that are outdated or do not match RSP estimated utilization data; work with the planners to update the codes, perhaps as part of a RSP demonstration project
2. Present at planning conferences, publish in planning publications

3. Give focused presentations, e.g. brown bags for city staff, presentations to planning commissions, workshops for multiple municipalities
4. Invite national expert speakers
5. Engage the planning departments of local colleges and universities
6. Provide an RSP training module

4.3.3 Development Community Outreach

Outreach efforts for the development community should be focused on addressing their unique perspectives on the impacts of parking supply, as summarized previously in Section 1.4:

- Oversupply: increases development and operating costs
- Undersupply: complicates financing; reduces marketability of housing

Educating the real estate development and lending community can be expected to require a relatively targeted approach. Potential outreach approaches include:

1. Interviews, one-on-one meetings, small workshops
2. Collaborate with industry organizations, e.g. ULI
3. Present at developer conferences; publish articles in trade publications
4. Hold a RSP-focused event to notify the development community of new RSP tools and information
5. Develop a process for developers and financiers to evaluate alternative pro forma models that incorporate RSP concepts
6. Partner with developers willing to test or pilot an RSP concept, potentially through an RSP demonstration project
7. Provide an RSP training module

5 Appendix

5.1 *Best Practices Manual*

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Multifamily Residential Parking Policy Best Practices

I. Introduction

This document presents a survey of best practices for multi-family residential parking policies, with a focus on King County. The survey covers regulations and codes, as well as broader strategies that apply to a wide variety of multifamily housing contexts, such as transit proximity, specific populations or user groups. Best practices include improved transit and pedestrian access, elimination of minimum parking requirements, flexible parking regulations, and management and pricing strategies.

In assessing these best practices, it is important to keep in mind that every location has unique existing conditions, nuances, and key criteria, and every development proforma will be examined and weighted based on many variables. Ideally, the establishment of parking supply for developments should be market driven. Overall, it should be recognized that the successful implantation of right size parking will require careful consideration of many factors, and that the optimum solutions will vary depending on context.

The document is organized by the following subject areas in Section II: Supporting Alternative Modes; Flexible, Context-sensitive Parking Requirements; Parking Management; Parking Pricing; and Parking Financing. Each policy approach is defined, and supplemented by local examples of implementation are provided if available (the local cases are not intended to be comprehensive).

The menu of parking policies is based on a review of academic literature and recent parking policy work in North America. In December of 2011, each jurisdiction within the Right Size Parking Project study boundary was sent a brief survey asking about their current parking policies. For jurisdictions that did not return surveys, King County staff researched the city zoning code and filled out the survey to the best of their ability. Section III summarizes the results of this survey with a matrix identifying where each policy is used in King County jurisdictions.

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II. Menu of Parking Policy Approaches

Supporting Alternative Modes Travel by walking, biking, and transit is influenced by land use patterns and urban design. Policy that fosters pedestrian-friendly environments, a well-connected street grid, bicycle infrastructure, a compact mix of uses, and convenient transit access can reduce trips taken by car, and thereby reduce the need for parking. In less urban areas that are developing over time, these environments can also support “park once” systems, in which walking and bicycling are viable alternatives for many secondary trips after users first arrive by car.		
Pedestrian Friendly Parking Design	Parking lots can severely degrade the pedestrian environment. Many cities include requirements for pedestrian friendly treatments to parking garages and surface lots, including moving parking behind buildings, buffering lots, visible walkways, and buffering a minimum of space with active or leasable space.	Mercer Island Town Center Master Plan adopted 20 years ago and implementing regulations encourage Transit Friendly Parking Design. Kent: Multifamily Requirements & Downtown Design Review – connect to transit, provide convenient pedestrian circulation, screen parking facilities, create transit-oriented development (TOD), retail-oriented facades. Also Public Utility District (PUD) requirements and Midway Design Guidelines
Transit Supportive Land Use Regulations	A transit overlay zone modifies the underlying land use regulations in response to existing or planned high-capacity transit. Modifications often allow new development types that leverage the proximity of transit. Regulations may apply to a building’s physical attributes, such as its floor area ratio, distance between entrances, mix of uses, or incentives for desired uses such as affordable or senior housing. Reduced or eliminated parking minimums or	Mercer Island’s current regulations support transit; opportunities for more aggressive measures may present themselves when East Link opens. Kent: Downtown Commercial Enterprise (DCE), Mixed-Use (MU), Midway Transit Community; PUD density bonus when 50% parking is in small landscaped 16-stall groups. Seattle: There is no minimum parking requirement in urban centers and no minimum parking extended to residential uses in commercially and multi-family zoned areas in urban villages where frequent transit service exists with ¼ mile. A new proposal would extend that to <i>any location</i> where frequent transit exists within ¼ mile. Sammamish: Large-scale uses that are located on existing transit routes may be required to provide transit shelters, bus turnout lanes or other transit access improvements. Also, off-street parking requirements may be

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	density bonuses may be granted if alternative mobility strategies are implemented, such as Transportation Demand Management (TDM).	reduced, depending on peak-hour transit service.
Transit Incentive Programs	<p>Transit pass programs encourage the choice of transit over driving by reducing cost and increasing convenience.</p> <p>Within King County, the implementation of transit incentive programs varies from passive and indirect, to planned and mandated through local ordinance, law or promulgated rulemaking; programs are often employer based.</p>	<p>Kenmore requires preferential parking for rideshare for some non-residential uses (KMC 18.40.040.090A)</p> <p>Many cities in King County have Commute Trip Reduction programs that promote transit use.</p> <p>Private Residential Developments: Some developers have partnered with King County Metro to offer residential transit passes to residents. Some developers have used the transit passes as incentive rewards for those who opt to not use parking.</p> <p>GreenTRIP Certification: GreenTRIP is a certification program in California that rewards multi-family, mixed-use, in-fill projects that apply comprehensive strategies to reduce traffic and greenhouse gas emissions. Projects meeting GreenTRIP certification criteria provide appropriate amounts of parking and incentives, including transit passes, for new residents to drive less and own fewer vehicles. In addition to saving money from building less parking, developers benefit from the certification by streamlining the permit approval process, customizing the trip-generation estimates to match their transportation demand management (TDM) strategies, and receiving recognition and marketing opportunities.</p>
Design for Bike and Pedestrian Comfort, Safety and Accessibility	<p>The application of physical design improvements can enhance a street's aesthetics, and ensure broad user safety and comfort for pedestrians. These improvements reinforce a positive perception of the physical environment which, in turn, influences travel choices, making it easier to create a "park once" environment.</p> <p>Furthermore, multiple studies have shown</p>	<p>Burien's new Complete Streets Ordinance accommodates pedestrians, cyclists and transit users.</p> <p>Kenmore requires multifamily developments of five or more units to include pedestrian circulation.</p> <p>Mercer Island: Walkability is a core element of the Town Center Plan; and has recently adopted a Bike/Ped plan.</p> <p>Kent: Downtown Design Review – 8-foot sidewalks, pedestrian amenities; reduced transportation impact fees in downtown.</p> <p>Seattle: The City's Design Review program often promotes wayfinding and transit-oriented features in multifamily developments.</p>

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	<p>that people living and working in areas with better connected street networks are more likely to use transit or walk, and drive less.</p> <p>Research in King County found that residents in the most “interconnected” areas travel 26 percent fewer vehicle miles per day compared to those that live in the least connected areas of the county, and that a 10% increase in intersections per square mile reduces Vehicle Miles Traveled (VMT) by about 0.5.</p>	<p>Sammamish: Residential uses of five or more units shall provide for non-motorized circulation between cul-de-sacs or groups of buildings to allow pedestrian and bicycle access within and through the development to certain adjacent uses.</p> <p>Bellevue: Frontage improvements required with new development citywide. More extensive requirements apply in Downtown, Bel-Red, & Factoria. Projects in Downtown may be required to build out segments of mid-block pedestrian routes (see, e.g., BCC 20.25A.060.C). Pedestrian wayfinding in place in Downtown.</p> <p>SeaTac’s Transportation Management Plan (TMP) includes walkability component – planned sidewalks where deficient; initiated installation of new wayfinding signs as a pilot project.</p> <p>Des Moines: Marked walkways, separated from traffic lanes and vehicle overhangs, shall be provided from parking areas to the entrances of establishments and from parking areas to right-of-way sidewalks/ walkways. [Ord. 695 § 10(K), 1987.]</p>
Bicycle Parking	<p>Support of non-motorized modes of transportation such as cycling can help reduce the demand for parking.</p> <p>Cities can impose minimum bike parking standards similar to those for automobile parking.</p>	<p>Kenmore requires 1 bike parking slot for every 12 motor vehicle parking stalls in <i>any</i> development with 6+ required car parking stalls (KMC 18.40.030E).</p> <p>Mercer Island’s Town Center Design Standards support bike parking, storage, lockers and showers.</p> <p>Kent: Through design review or Commute Trip Reduction (CTR) program.</p> <p>Renton requires 0.5 bicycle parking space per one (attached) dwelling unit. (F11) The code also includes detailed design standards for bicycle parking.</p> <p>Bellevue: Current requirements and actual supply are very minimal.</p>

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Flexible, Context-sensitive Parking Requirements

Exploring how to eliminate or reduce multifamily parking requirements according to a site's unique context is one of the primary goals of the Right Sized Parking project. When applied appropriately in areas with development opportunities, the following strategies may enable better use of parking resources, especially in locations with shared parking opportunities, or in communities with high levels of transit service. In lower density car-dependent areas, these changes can be incrementally introduced over time as the areas redevelop.

Reduced / Eliminated Parking Requirements	<p>Cities can reduce or eliminate parking requirements to avoid overbuilding and allow the market to determine the correct amount of parking.</p> <p>The reduction or elimination of parking requirements is most appropriate for areas that can provide workable mobility options for a variety of trips, and are often tied to the provision of high-quality transit service, parking pricing, parking management and an existing compact, walkable environment. These characteristics reduce the demand for parking, and spillover parking becomes less of a problem.</p> <p>Parking codes can eliminate or reduce parking requirements outright, or require a developer to conduct a transportation study to justify reductions. Other codes provide reductions for meeting a set of pre-determined criteria, such as the provision of bike parking/shower rooms, or pedestrian improvements.</p>	<p>Burien allows applicants to request modifications to standards by submitting a study of anticipated parking demand (BMC 19.20.040.3).</p> <p>Kenmore City Manager may allow reduction of up to 50% (KMC 18.40.040.030B) upon demonstration by applicant or due to nearby frequent peak period transit service (KMC 18.40.040.090B)</p> <p>Federal Way allows any project to propose project-specific parking requirements based on parking analysis, considering proximity of transit, types of usage, etc.</p> <p>Kent: Reduction allowed if in proximity to transit; if shared parking; also through CTR program; further reduced in Midway Transit Community.</p> <p>Renton: TMP guaranteeing the required reduction in vehicle trips may be substituted in part or in whole for the parking spaces required. (E3 and F10c(ii))</p> <p>Bellevue: Parking requirements for Downtown and Bel-Red are lower than general, citywide requirements for multifamily residential, as well as other types of development. The Factoria area also has different requirements intended to calibrate supply to demand and are lower than general requirements.</p> <p>Redmond may allow reductions based on parking study by qualified expert.</p> <p>SeaTac allows up to fifty percent (50%) reduction of off-street parking for uses meeting the definition of "small, resident-oriented uses."</p> <p>Shoreline: Up to 20% reduction when multiple parcels are treated as one development w/binding agreement to share; and primarily nighttime uses. Up to 50% reduction through proximity to transit routes, commuter trip</p>
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	Other strategies include shared parking, parking pricing, and residential permit parking zones to limit spill over impacts.	reduction programs, on-site non-motorized and high occupancy vehicle facilities, or shared parking agreement.
Parking Maximums	<p>Parking Maximums establish limits or “caps” on the quantity of parking that can be provided for a given development. Typically they are only appropriate for relatively high density, transit rich urban areas, in which car ownership levels are low. They can also be applied in lower density areas to limit surface parking.</p> <p>Parking maximums have the potential to help developers negotiate lower parking ratios with conservative financiers, and can provide a policy basis to shift capital investments towards non-motorized transportation.</p>	<p>Renton stipulates both minimum and maximum parking requirements for all land uses.</p> <p>Bellevue has parking maximum for multifamily development in three areas:</p> <ul style="list-style-type: none"> • Downtown (BCC 20.25A.050) • Bel-Red (BCC 20.25D.120). • Factoria (BCC 20.25F1.060, 20.25K.020). <p>Seattle: Limited use of parking maximums, (23.54.015.C), most notably a 145-space per lot limit for surface parking lots in commercial zones, & Downtown zones (23.49.019.C) at 1 space/1,000 sq ft of non-residential uses.</p> <p>Issaquah: Rowley Development Agreement, Urban Village Zone applied a parking maximum for a mixed-use development at the end of a thirty year term.</p>
Shared Parking	<p>Rather than reserving each space for one user per day, an off-street shared parking policy allows a percentage of spaces to service multiple users, effectively reducing the parking requirement.</p> <p>Cities can incorporate language in local ordinances to permit and encourage shared parking. Shared parking arrangements permit off-site shared parking to meet on-site parking requirements for</p>	<p>Enumclaw allows shared use parking agreements.</p> <p>Burien encourages shared parking between sites and different uses. (BMC 19.20.050) Shared parking is handled through a covenant, easement, or contract that is recorded with King County Records to ensure long term availability of the shared parking.</p> <p>Kenmore allows limited shared parking with approval of City Manager (KMC 18.40.040)</p> <p>Mercer Island allows for 25% reduction in “cooperative” parking (MICC 19.05.020 (E))</p> <p>Lake Forest Park: Off street parking may be reduced when common parking facilities for two or more buildings or uses are designed and developed as one</p>

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	<p>complementary uses within a defined area. Shared parking improves the land use efficiency and economics of new parking by providing greater utilization per space.</p> <p>Allowed off-site, shared parking locations are typically based on acceptable walking distances. Detailed analysis from qualified transportation & parking consultants are often helpful or required to rationalize the percentage and day/night use assumptions.</p>	<p>parking facility (LFPMC 18.58.040)</p> <p>Kent: If within 500 feet; 10% reduction for joint use; also through CTR program.</p> <p>Renton: Joint use of parking facilities may be authorized for those uses that have dissimilar peak-hour demands or when it can be demonstrated that the parking facilities to be shared are underutilized. (4-4-080 E. 3.)</p> <p>Seattle: Shared, cooperative, tandem parking and similar parking opportunities are indicated in 23.54.020.</p> <p>Auburn: Allowed, up to a 25% reduction from the original requirements.</p> <p>Bellevue: Shared and off-site accessory parking is broadly permissible. Conditions and limitations apply and vary by sub- area.</p> <p>Redmond: Cooperative parking facilities may be provided subject to the approval of the Technical Committee where two or more land uses can be joined or coordinated to achieve efficiency of vehicular and pedestrian circulation, economy of space, and a superior grouping of buildings or uses.</p> <p>Shoreline: In commercial zones w/evidence of agreement. Up to 20% when multiple parcels are treated as one development w/binding agreement to share; and primarily nighttime uses.</p>
Reductions For Special Populations	<p>Cities can reduce or eliminate parking requirements for senior or low-income populations to avoid overbuilding and allow the market to determine the correct amount of parking.</p>	<p>Kenmore allows parking reductions for community residential facilities (CRF) and senior citizen assisted living (KMC 18.40.050).</p> <p>Lake Forest Park: Senior housing overlay zone requires one parking space per senior housing unit or 0.5 spaces per unit plus other appropriate reductions with shared parking arrangement for common facilities (LFPMC 18.44A.080).</p> <p>Kent: 1 space/2 dwelling unit for senior MFR if close to transit; further reduced in Midway Transit Community.</p> <p>Renton: Reduced parking is required for low income, congregate care, and assisted living facilities.</p> <p>Sammamish: The minimum requirement for senior citizen assisted housing units may be reduced by up to 50 percent.</p> <p>Issaquah: 0.5 stalls per unit for senior, assisted living and residential care facilities.</p>

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		<p>Seattle: Assisted living: 1 parking space for every 4 senior apartments plus 1 space for every 2 employees at peak staffing.</p> <p>Kirkland: The required parking may be reduced to 1.0 space per affordable housing unit plus no additional guest parking is required. (Chapter 112.20)</p>
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<p>Parking Management</p> <p>Long-term strategies that apply at the district scale or beyond can help promote reduction in the need for parking by enabling more efficient resource utilization. Although many of the strategies apply to on-street parking, they also have application or influence on residential off-street parking. These strategies have the potential to integrate well with shared parking programs; some may require community commitments or capital investment strategies.</p>		
<p>Residential Permit Programs</p>	<p>In order to ensure on-street parking spaces for local residents, cities can require a permit to park in designated areas at designated times. Residential permit programs can address spillover concerns when parking minimums are reduced.</p> <p>Permit revenue can be applied to local transportation improvements.</p>	<p>Kent: Option adjacent to ShoWare Center.</p> <p>Seattle: Residential permit programs used extensively in 31 neighborhoods near light rail stations and major institutions.</p> <p>Bellevue: Residential permit parking zones are established where needed, typically near high schools and adjacent to major commercial areas in 15 zones.</p> <p>Redmond charges \$50/month for daily parking in residential parking zones (RPZ).</p>
<p>Parking Access/Paymen</p>	<p>Installing automated access/payment technology can allow property managers to</p>	<p>Seattle's E-Park program provides parking guidance and real-time space availability for over 4,500 spaces located in six downtown garages. The</p>

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t Technology	employ more sophisticated management and pricing programs. This can allow for better tracking and enforcement and promote shared/flexible use of the parking supply.	system is promoted to motorists through bus ads, coasters and java jackets. Negotiations with garages are underway to expand the program in Pioneer Square, the Central Waterfront and in other parts of downtown Seattle. A new pay by cell phone program for all parking pay stations will allow people an additional payment option. Many newer garages in Seattle and Bellevue feature automated systems.
Car sharing	<p>Car sharing programs provide participants with access to a fleet of centrally owned and maintained vehicles located near residences, workplaces, or transit hubs. By increasing the number of users per vehicle and amount of use per day, car sharing programs reduce parking demand while preserving the convenience and flexibility of travel by car.</p> <p>Private car sharing programs currently have specific location criteria and are found only in relatively dense urban locations. City support would be needed to bring car sharing to less dense locations.</p> <p>One potential variation is shared cars that are owned by the building owner and used by residents.</p>	<p>Kent: allows through CTR Program and in Midway Design Guidelines</p> <p>Seattle: Parking quantity exception in 23.54.020.J provides incentive to provide car-sharing and thereby reduce required amounts of parking.</p> <p>Bellevue: Comprehensive Plan policy TR-18: "Evaluate and promote a car-sharing program in Downtown Bellevue". Currently, there are 9 Zipcars in Downtown.</p>

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Transferable Parking Rights	Developers can choose between constructing required parking spaces on site or transferring parking spaces to another development site. This approach is most applicable in areas where parking maximums limit the amount of parking that can be built.	Mercer Island: Doesn't require parking space to be tied to the unit and spaces may be used for other uses including commercial.
Land Banking	Land banking addresses the uncertainty of future parking demand and is especially applicable to phased developments. The strategy reserves unpaved space for anticipated future parking demands. Meanwhile, the space can be used for amenities such as playgrounds or parks.	Kent: For senior housing in CBD – reserve 1.8/DU but require 1/DU, and can be reduced to 0.5/DU if certain conditions are met.
Parking Benefit Districts	Parking Benefit Districts assess charges for on-street parking (residents can be excluded) that can be used to fund neighborhood improvements. They are most relevant as a solution for parking spillover.	Pasadena, CA returns all parking revenue to the district that generates it. San Diego returns 45 percent. Portland, OR: Recently proposed for the Portland State University area.
Parking Redeployment	When areas become urbanized, properties with large parking capacity can be redeployed for new buildings, open spaces or parks	<i>No examples available at the time of printing. This is a potential best practice that could warrant more exploration.</i>

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Parking Pricing Parking pricing is an integral part of any comprehensive parking policy approach. Parking pricing is most effective when it is combined with support for alternative modes, such as transit service and pedestrian and bicycle amenities.		
Coordinated Off-street and On-street Pricing	Off-street and on-street parking prices should be coordinated. This encourages commuters to use alternative modes while still providing short term parking for customers.	Mercer Island: Time limits for on-street parking are coordinated with property owners and businesses in the Town Center. Kent: Considered in parking reductions. Seattle: In 2011, the City Council directed SDOT to set paid parking rates by neighborhood to achieve the policy objective of providing an average of one or two open spaces per blockface throughout the day, with rates ranging from \$1 to \$4 per hour, in twenty-three paid parking areas.
Unbundled Parking	Typically, parking is bundled or absorbed into tenant leases, hiding the true cost of parking. Unbundling parking is an essential first step towards getting people to understand the true cost of parking and providing the opportunity to opt out of parking and make alternative travel choices. When parking is bundled, tenants experience parking as free, as compared to transit which costs them money. Unbundled parking provides a foundation for additional parking pricing strategies.	Seattle's TMP Director's rule (9-2010) highly recommends unbundling parking from building leases as a TMP element. San Francisco: A 2008 ordinance requires the unbundling of parking spaces in condo developments of 10 or more units; the City also encourages unbundling in apartments.
Parking Tax	Taxes on paid parking increase the cost of travel by car and encourage the use of other modes, which reduces parking demand as well as the economic value of keeping land in a parking use. This strategy can further reduce parking demand if the tax revenues are invested in transit or non-motorized transportation.	Seattle: Parking tax (currently at 12.5%.) is imposed Downtown. The tax is levied as a percentage of all parking transactions and for any parking stalls where a fee is charged to motorists for the act of parking a motor vehicle. (Taxes on non-revenue generating parking is prohibited by state law.) Des Moines has a commercial parking tax collected as 25% of short term parking gross proceeds and 10% of long term parking gross proceeds. Revenues contribute to the Capital Improvement Plan (CIP).

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Parking Financing Financing parking can be one of the most challenging parts of parking development. Cities can incorporate policies that provide financing alternatives to the status quo. Public sector ownership and financing of public parking spaces is sometimes thought of as one measure jurisdictions can take to create a business friendly environment (although ensuring the private market this same opportunity could yield the same result).		
In-Lieu Fees	In some cities, developers are allowed to buy out of minimum parking requirements. The in-lieu fee is set at a level below the cost of constructing parking spaces and can be used to fund future parking facilities or other transportation improvements in the project area, including shared parking facilities. These fees can be good alternatives to minimum parking requirements for the redevelopment of older and historic properties that cannot incorporate parking.	Burien allows in-lieu fee of \$7,000 per parking space to fund purchase of land/ build a lot or structure for shared parking. (BMC 19.20.030.3.) Kirkland: Applicants may meet all or a portion of the parking obligation by paying a \$20,000 (in 2006 dollars) fee-in-lieu of parking for each required parking stall or fraction of a stall into a special fund that will be used to provide and upgrade municipal off-street parking. (KMC 50.60 4) Redmond has a fund created by its Comprehensive Parking Plan.
Developer Built, Financed & Owned Public Parking	In environments where parking is not adequate to make local businesses competitive, the developer can build extra spaces that are available to the public, paid for by the jurisdiction.	<i>No examples available at the time of printing. This is a potential best practice that could warrant more exploration.</i>

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III. Summary Table of RSP Best Practices Utilized in King County, WA

	Auburn	Bellevue	Burien	Des Moines	Enumclaw	Federal Way	Issaquah	Kenmore	Kent	Kirkland	Lake Forest Park	Mercer Island	Redmond	Renton	Sammamish	SeaTac	Seattle	Shoreline	Tukwila
Supporting Alternative Modes																			
Pedestrian-Friendly Parking Design				•					•	•		•	•	•		•	•		•
Transit Supportive Land Use Regulations		•	•			•	•	•	•	•		•	•	•	•	•	•		•
Transit Incentive Programs																	•		
Design for Bikes and Pedestrians		•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•
Bicycle Parking		•	•				•	•	•	•		•	•	•	•	•	•	•	
Parking Requirements																			
Reduced Parking Requirements	•	•	•	•		•	•	•	•	•		•	•	•	•	•	•	•	•
Parking Maximums		•					•						•	•		•	•		
Shared Parking	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Reductions for Special Populations	•	•				•	•	•	•	•	•		•	•	•	•	•	•	•
Parking Management																			
Residential Permit Programs		•							•			•	•				•	•	
Parking Access/Payment Technology										•				•			•		
Carsharing		•							•								•		
Transferable Parking Rights												•							
Land Banking									•										
Parking Benefit Districts																			
Parking Redeployment																			
Parking Pricing																			
Coordinated Off-street and On-street Pricing									•	•		•	•	•			•		
Unbundled Parking																	•		
Parking Tax				•													•		
Parking Financing																			
In-Lieu Fees			•							•			•						
Developer Financed Public Parking																			

** This table reflects code or policy utilized as of December 2011. Information was compiled from a brief survey to jurisdictions and supplemental research from King County staff. The table may contain inaccuracies due to lack of information.*