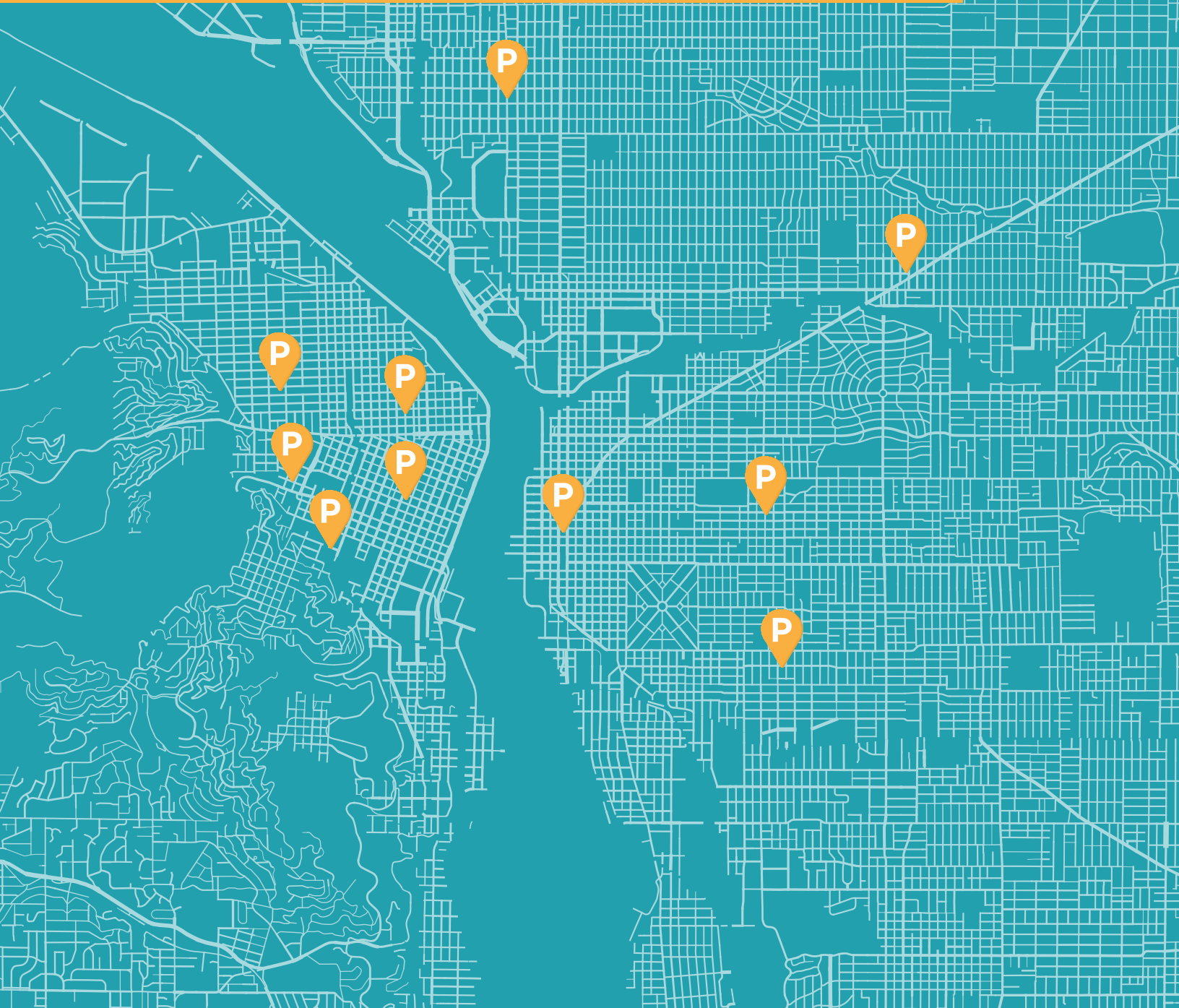


STATE OF

PARKING



STATE OF PARKING

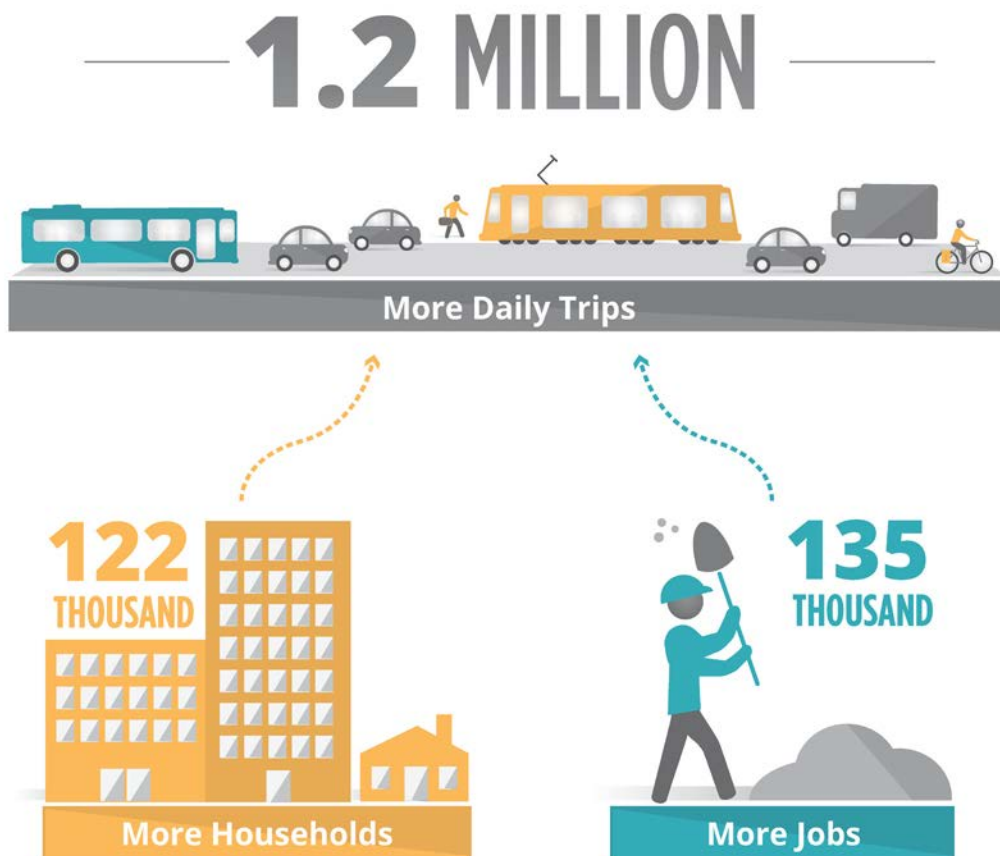
Welcome to the City of Portland State of Parking Report. This report summarizes findings from the *Central City Parking Policy Update* and the *Centers and Corridors Parking Study and Toolkit* about parking conditions across the city. It highlights key facts and opportunities to improve parking management. This includes identifying practices from other cities that could be a good fit for Portland's Central City, neighborhood centers, and commercial corridors. This report is a first step in developing a citywide parking strategy to guide how we manage and operate parking in Portland.

WHY DEVELOP A CITYWIDE PARKING STRATEGY NOW?

As the City of Portland grows, parking has become a source of tension and opportunity. Parking use is affected by changes in land use and travel patterns. Some Portland neighborhoods have experienced rapid development in the past few years, leading to increased demand for curbside parking. As residents and businesses adjust to growth and change, so too must the City's approach to the supply, management, and pricing of parking.

Portland's parking policy was last overhauled in 1996. The city has grown significantly since then, and our parking and transportation needs have changed. By 2035, we expect to have 122,000 more households, 135,000 more jobs, and 1.2 million more daily trips. To maintain Portland's quality of life, we must find ways to grow gracefully. That means finding new ways to manage parking and its effects on air quality, traffic congestion, housing and real estate development, equity, and economic vitality.

In **2035**, Portland will have more jobs and housing that will increase daily trips



In this document you'll find information about the various parking planning projects underway, data on neighborhood parking occupancies and issues, existing policies, survey data from new residents, and how you can get involved with forming the Portland Parking Strategy.

For more information visit www.portlandoregon.gov/transportation/plans or email pdxparking@portlandoregon.gov.



CRAFTING A PARKING STRATEGY FOR PORTLAND

The Bureau of Transportation has worked in the past year on developing a cohesive, collaborative and comprehensive Citywide Parking Strategy. Recent efforts include:

- **The Central City Parking Policy Update**, which guides both on- and off-street parking in the Central City.
- **The Centers and Corridors Parking Study and Toolkit**, a neighborhood parking study and toolkit planning project.
- **The Citywide Parking Strategy**, which ties together all of the various on- and off-street parking regulations including zoning and permit and meter district policies.
- **The Comprehensive Plan Update**, which guides future development of the entire city for the next 20 years.
- **The Transportation System Plan Update**, which provides updated policies and projects to manage the whole transportation system for the next 20 years.
- **The Truck Loading and Unloading Strategy**, which guides truck parking and loading management in the Central City.
- **The Bike Parking Policy Update**, updates to off-street bike parking policies and requirements in the zoning code.

CURRENT POLICY GUIDANCE FOR ON-STREET MANAGEMENT

Portland currently manages on-street parking through a complex set of use restrictions, time limits, meter rates, and permit requirements. The Portland Bureau of Transportation (PBOT) manages this system with policy guidance from the City Code and Charter (Title 16¹), the Comprehensive Plan and associated Transportation System Plan (TSP), the Central City Transportation Management Plan (CCTMP²), and the Bureau Rules and Procedures Manual.

These documents direct PBOT to manage parking in order to meet specific objectives, including (1) facilitating turnover of parking spaces (e.g. multiple users per space per day), (2) reducing vehicle travel, and (3) increasing the use of non-auto travel choices. These documents also provide guidance for prioritizing users of curb-space, and establish how and when to change parking rates/fees.

REDUCING VEHICLE TRAVEL AND PROMOTING NON-AUTO CHOICES

Parking-related policies in the Draft Comprehensive Plan 2035 and the CCTMP direct Portland to reduce vehicle travel and increase the share of trips made by alternatives to driving alone:

- **Area Parking Permit Programs (APPP)** may be established in unmetered areas where on-street parking occupancy regularly exceeds 75 percent, **to increase access to residences/businesses and reduce commuter traffic** (City code 16.20.801-16.20.806).³
- The Recommended Draft Comprehensive Plan 2035:
 - » Defines “**a hierarchy of modes** for people movement,”... with “walking and cycling at the top of the list,” and private vehicles at the bottom (Policy 9.6)
 - » Encourage[s] the **shared use of parking and vehicles** to maximize the efficient use of limited urban space (Policy 9.52)
- The CCTMP (1995 Update) specifies “policy concepts ...intended to **‘pinch’ the parking supply to encourage use of alternative modes** of travel.”

FACILITATING TURNOVER

The Draft Comprehensive Plan 2035 directs PBOT to “**manage on-street parking and loading**...in a manner that **achieves the highest and best use of this public space** in support of broad City policy goals and local land use context” (Policy 9.50).

Title 16 of the zoning code (16.20.401) authorizes the **use of parking meters to “increase vehicle turnover in parking spaces, to encourage short-term parking** in the metered area, and to improve safety in the public right of way.”

PBOT is authorized to **set time limits** for on-street parking (enforced Monday-Saturday, 8 am-6 pm, unless otherwise noted) **to encourage turnover** and discourage commuter parking and resident vehicle storage on-street (City Code 16.20.260).

PRIORITIZATION OF CURB USERS

Within the Central City, on-street **parking should be available first for short-term parking, then for carpool vehicles, and last for long-term parking** (CCTMP Objective 4.1.1). On-street loading should be prioritized to support business activity (CCTMP Obj. 4.1.4).

Parking spaces may be reserved for specific uses, such as “No Stopping or Parking,” “Truck loading,” “Bus” “Taxi,” “Carpool,” and “ADA Permit Parking” zones by the City Traffic Engineer, upon request.⁴

RATE SETTING AND ADJUSTMENT

The City manages each meter district, including implementation of other parking management plans. City Council sets parking rates and hours of operation. Adjustments are guided by a committee of local businesses, residents, and property owners based on a periodic review of on-street and off-street parking occupancy, availability of travel options, rate comparisons with other cities, and other factors (Binding City policy TRN-3.102).

Similarly, each Area Parking Permit Program area is guided by a committee of local businesses, residents, and property owners. APPP permit fees are governed by City Policy FIN-2.06, which requires that **fees for services benefitting specific users** must be set to **recover full cost**.

See reference number 1 on reference list on page 33 for the complete policies for on-street parking management.



Parking Meter Districts

Portland has parking meter districts in Downtown, Marquam Hill, the Lloyd District, and the Central Eastside (The NW will be metered in 2015). Per City Code (16.10.420) and PBOT practice, new meter districts are considered based on criteria that include:

- On- and off-street parking occupancy and turnover trends
- Short-term parking rates (off-street)
- Existing and planned access alternatives
- Potential spillover impacts
- Traffic congestion and safety
- Economic conditions and expected impacts of metering
- Costs of meter district operations

Meter rates and hours of operation vary by district, based on broad measures of difference in demand.

Use of Parking Meter Revenue

Per Policy BCP-TRN-3.102, meter revenues must be spent on the following (in order):

- Payback on bonds for City-owned parking facilities
- Capital and operating costs of the meter system
- Mitigation of spillover parking impacts to adjacent neighborhoods

Remaining funds can be spent on transportation and parking services (with a majority of net revenue to be used within the district in which it is raised), including:

- Transportation demand management (TDM) and economic development programs
- Maintaining and improving the right-of-way (including bike/ped facilities)
- Building short-term off-street parking



CURRENT POLICY GUIDANCE FOR OFF-STREET MANAGEMENT

Within neighborhoods across the Portland, on-street and off-street parking are complementary resources providing access for people and goods and a balance of short-term and long-term vehicle storage capacity. City policies and practices affecting the supply and management of off-street parking can affect these functions and influence how people travel around the City. Policies in the Comprehensive Plan and the Transportation System Plan and other PBOT principles provide guidance managing the supply of off-street parking to reduce vehicle travel, serve different types of users, and achieve City targets for the share of trips made by non-auto modes.

CURRENT POLICY GUIDANCE FOR CENTRAL CITY OFF-STREET PARKING

The Central City Transportation Management Plan included and updated policies first established in the Downtown Parking and Circulation Policy (DPCP) in 1975, **which are located in the City's zoning code (title 33.510)**. This includes maximum limits on the total supply of off-street parking that can be supplied with new developments, restrictions on shared parking agreements, and restrictions on surface parking lots. This code is long and complex with 26 sub-districts in the Central City, all with different parking maximum ratios and operational restrictions differing by land use type and location. (Note: There are no minimum off-street parking requirements for any use or site in the Central City).

There are currently six types of parking:

- Residential/hotel parking
- Visitor parking (short term, under 4 hours)
- Preservation parking (for historic buildings)
- Growth parking (for new commercial buildings)
- RX (exclusive residential) zone parking
- Undedicated general parking (not associated with any particular use, typically surface parking lots)

REDUCING VEHICLE TRAVEL AND PROMOTING NON-AUTO CHOICES

Consistent with the state Transportation Planning Rule (TPR), the Comprehensive Plan and the Transportation System Plan aim to reduce vehicle travel by 10 percent over 20 years, and promote non-auto access with the following policies and practices:

- Increase the share of trips made using active and low-carbon transportation modes and reduce VMT (Comp Plan Policy 9.5)
- Regulate off-street parking to achieve mode share objectives, promote **compact and walkable urban form**, encourage **lower rates of car ownership**, and **promote the vitality** of commercial areas (Comp Plan Policy 9.51)
- Manage the parking supply to achieve...neighborhood and business district vitality, **auto trip reduction**, and improved air quality (TSP Policy 6.25)
- Develop parking management programs and strategies that ...**reduce congestion**, [and] **promote alternatives** to the drive-alone commute...(TSP Policy 6.25)

LIMITING AND MANAGING OFF-STREET PARKING

To reduce vehicle travel and parking spaces per capita (per the TPR), promote desired compact development and use of non-auto travel choices, Portland's municipal zoning code (Title 33.266) and Comprehensive Plan limit the supply of off-street parking outside the Central City, with policies such as:

- **Limit the growth of off-street parking spaces** (Comp Plan Policy 9.49)
- **Limit the development of new parking spaces** to achieve land use, transportation and environmental goals (Comp Plan Policy 9.51)
- **Manage [the] parking supply** to achieve transportation policy objectives for neighborhood **livability, safety, business district vitality**, VMT reduction and improved air quality (Comp Plan Policy 9.48)

See reference number 1 on reference list on page 33 for the complete policies for on-street parking management.



SERVING DIFFERENT USERS

Policies in the Comprehensive Plan and the Central City Transportation Management Plan (CCTMP) define how off-street parking should be supplied and prioritized for different users:

- The CCTMP prioritizes (1) short-term parking, (2) carpool parking, and “lastly” (3) long-term parking, and “encourages multiple-use off-street parking.”
- The TSP “require[s] institutions to **regulate parking facilities**, first to provide short-term parking for visitors and, second, to **minimize the amount of employee parking** through demand management measures...”(TSP Policy 6.28, Objective A).
- The Comprehensive Plan “promote[s] the development of **new bicycle parking facilities...**” (Comp Plan Policy 9.53).



CURRENT PARKING OPERATIONS NUMBERS

The Portland Bureau of Transportation manages and enforces parking both on and off street.



11,419,406

Transactions at pay stations in 2014/2015



44,000

Annual meter help desk calls

9,500

On-street metered spaces (approximately 810 block faces)

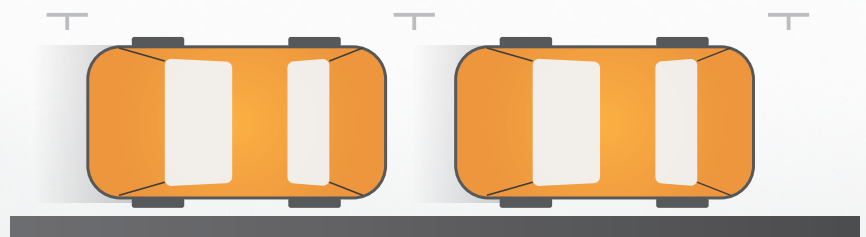


\$1.00-\$1.60 per hour

On-street meter rate

\$3.50 per hour

Event meter rate



total supply



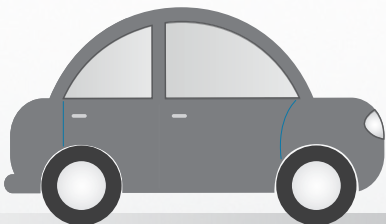
SmartPark

\$1.60 per hour

First two hours

\$10 to \$15 per day

SmartPark garage only



1.85
million



Transactions processed in 2014/2015



85%

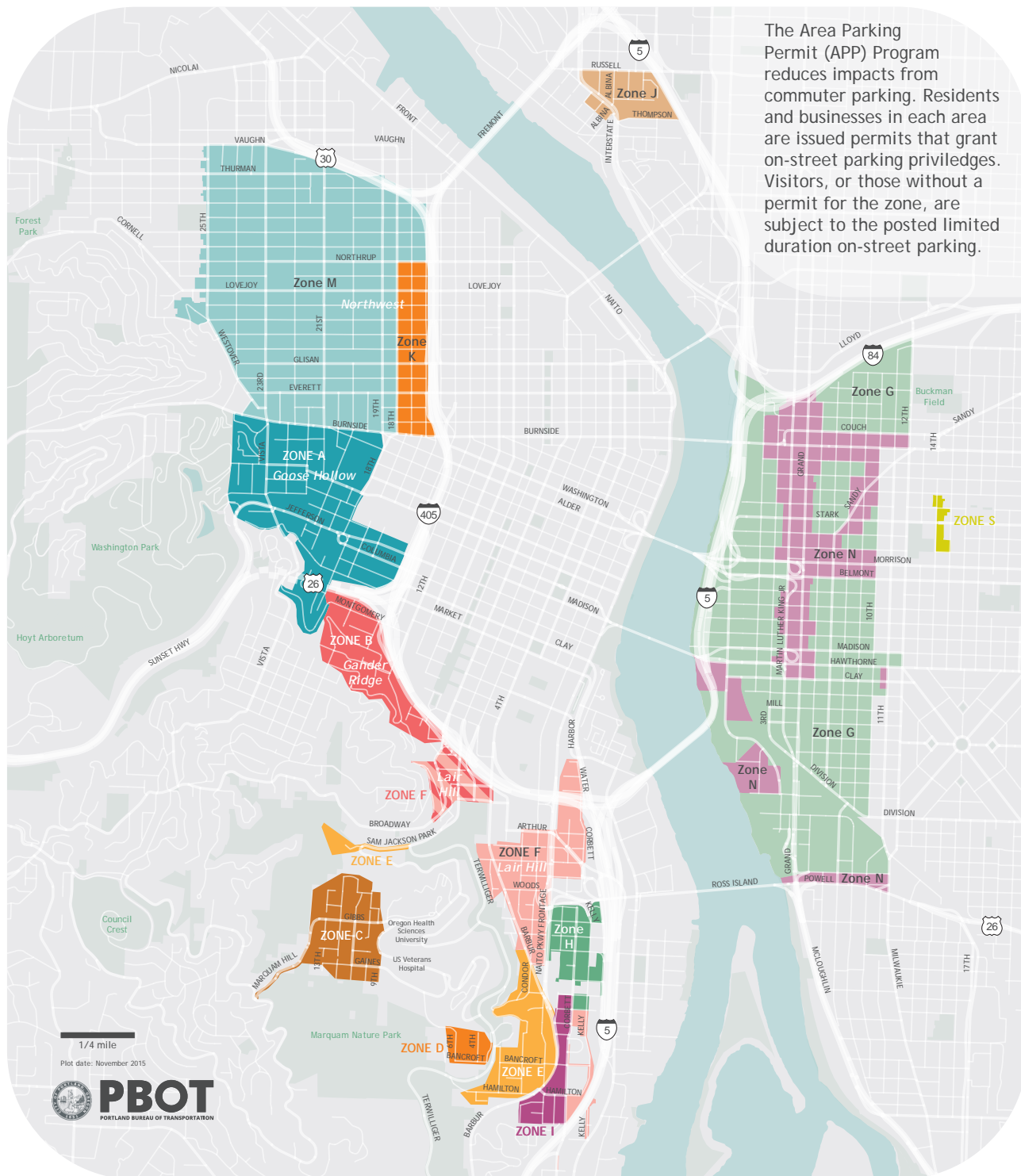
Average weekday
peak occupancy
system wide



6 Parking
facilities

AREA PARKING PERMIT PROGRAM ZONES

The Area Parking Permit (APP) Program reduces impacts from commuter parking. Residents and businesses in each area are issued permits that grant on-street parking privileges. Visitors, or those without a permit for the zone, are subject to the posted limited duration on-street parking.



ZONE A	2 hour visitor limit 7am - 6pm, Mon. - Fri.; 90 minute visitor limit 6 - 10pm, Mon. - Fri.; 90 minute visitor limit; 1 - 10pm, Sat. and Sun.	ZONE D	2 hour visitor limit 7am - 6pm, Mon. - Fri.	ZONE G	2 hour visitor limit 7am - 6pm, Mon. - Fri.	ZONE K	2 hour visitor limit 7am - 7pm, Mon. - Sat.
ZONE B	1 hour visitor limit 7am - 9pm, Mon. - Fri.	ZONE E	2 hour visitor limit 7am - 6pm, Mon. - Fri.	ZONE H	2 hour visitor limit 7am - 6pm, Mon. - Fri.	ZONE M	4 hour visitor limit 9am - 7pm, Mon. - Sat. Timbers game event times vary
ZONE C	2 hour visitor limit 7am - 6pm, Mon. - Fri.	ZONE F	2 hour visitor limit 7am - 6pm, Mon. - Fri.	ZONE I	2 hour visitor limit 7am - 6pm, Mon. - Fri.	ZONE N	2 hour visitor limit 7am - 6pm, Mon. - Fri.
	ZONE F	1 hour visitor limit 7am - 6pm, Mon. - Fri.	ZONE J	2 hour visitor limit 7am - 7pm, Mon. - Sat.	ZONE S	2 hour visitor limit 7am - 6pm, Mon. - Fri.; 90 minute visitor limit 6 - 12am, Mon. - Fri.	

A SNAPSHOT OF PARKING AND DEVELOPMENT PATTERNS

Demand for parking is linked to changes in land use and travel patterns. As Portland's population grows, more residents may choose to park on streets. The City's approach to the supply, management, and pricing of parking must adapt to meet changes in demand for curbside parking.

Neglecting parking management is not an option. Parking provides vehicle storage and access for people and goods. It is a major land use in its own right, and a key determinant of both land development patterns and transportation patterns. As such, parking is critical to developing compact and affordable communities and sustainable mobility.

To better understand how parking is affecting economic development and the livability of Portland neighborhoods and commercial areas, PBOT commissioned several studies on

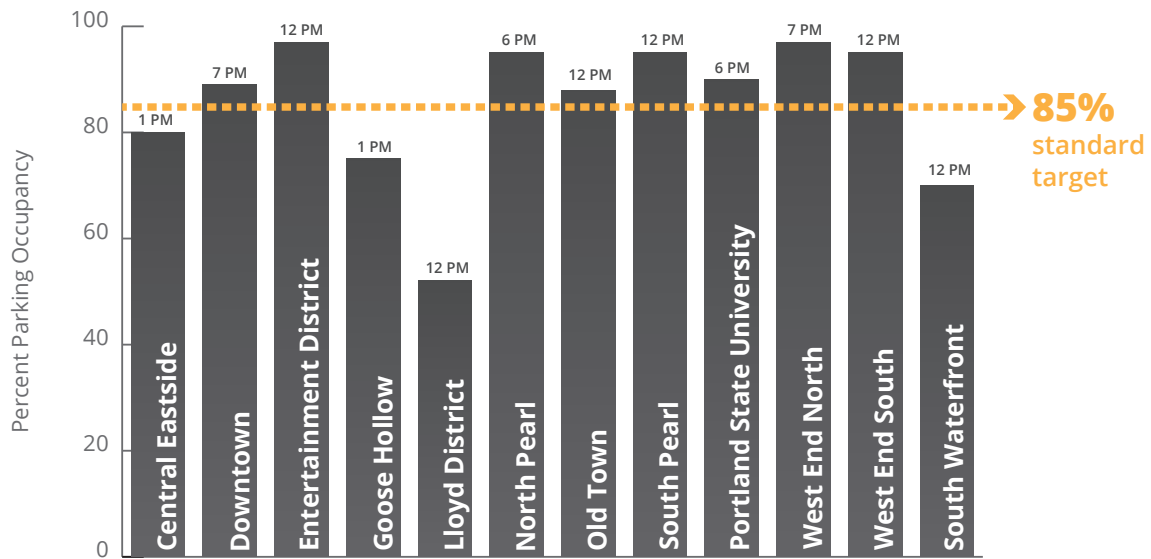
parking utilization and development trends. Findings suggest that parking supply is tightening on commercial districts, including the Central City, and that parking along Centers and Corridors (e.g. Mississippi Avenue, Division Street and Hollywood Town Center) is spilling into adjacent neighborhoods. At the same time, many off-street parking lots are underutilized.

“ As land use and travel patterns change, so do parking use patterns...As residents and businesses adjust, so too must the City's approach to the supply, management, and pricing of parking.

Doing nothing is not an option. ”

CENTRAL CITY PARKING PATTERNS

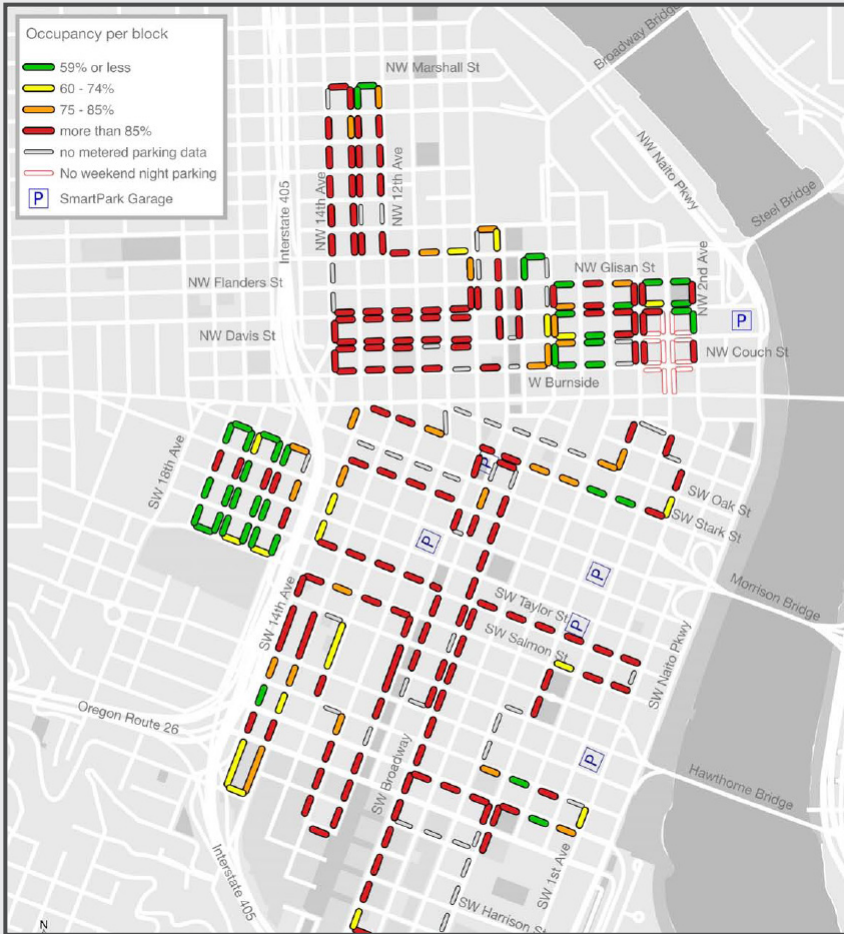
In fall of 2014, PBOT commissioned an analysis of on-street parking utilization in the Central City neighborhoods, including Downtown, Old Town/Chinatown, West End, Goose Hollow, University District, and the Pearl District.⁵



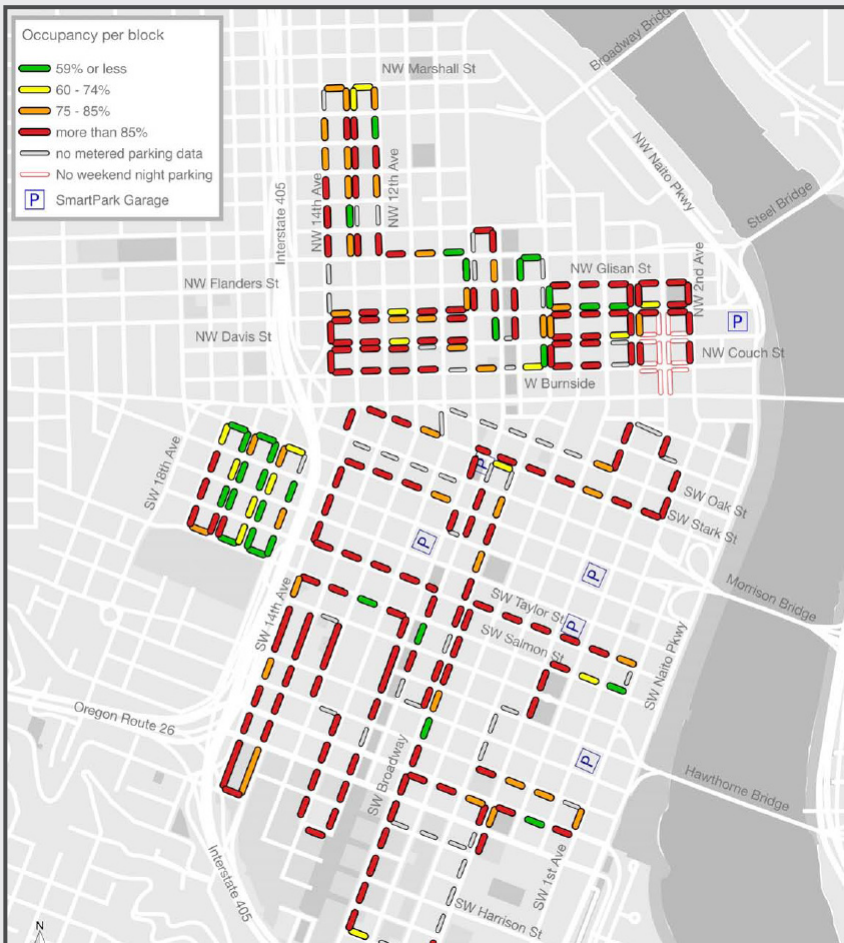
Source: Lancaster Engineering, 2015

KEY OCCUPANCY STUDY FINDINGS

- On weekdays, there are two distinct periods when parking spaces are most well utilized, with a midday peak (12:00-1:00 pm), and highest demand during an evening peak period (6:00-7:00 pm). These peak periods are similar to those identified in a 2008 study.
- Parking occupancy is shown by district, in relation to the industry standard target of approximately 85 percent. That rate allows one to two spaces available on each block for new arrivals, reducing parking search time.
- During the evening peak period, parking on most of the sampled block faces within Downtown, the Pearl District, and the University District was full or nearly full (e.g. more than 85 percent occupied), while parking was more widely available in the Goose Hollow and Old Town/Chinatown neighborhoods.



On-Street Parking Occupancy, 7:00-8:00 pm, "Evening Peak" (2014)



On-Street Parking Occupancy, 12:00-1:00 pm, "Midday Peak" (2014)

For the complete Central City Parking Occupancy and Turnover Analysis report from Lancaster Engineering see reference number 4 on page 33.

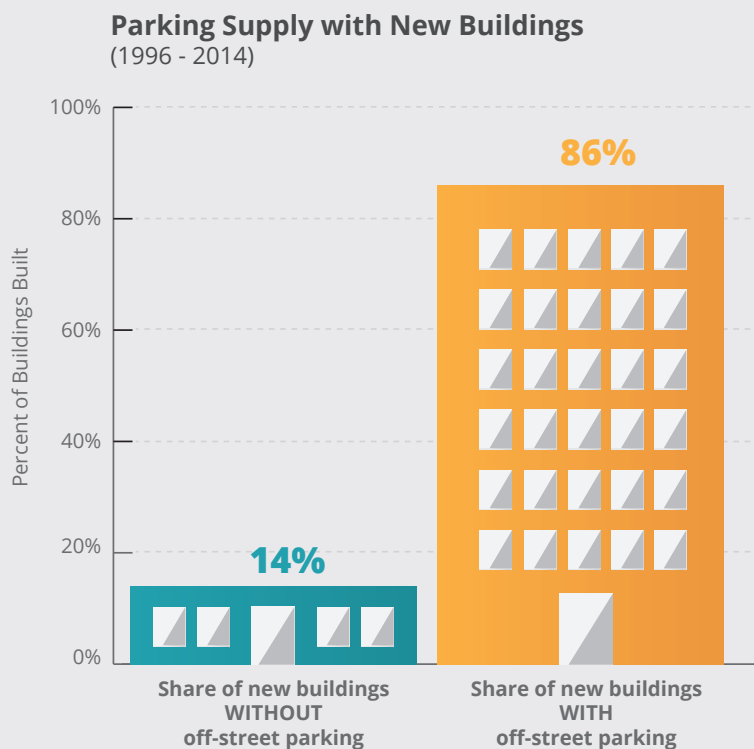
SMARTPARK PARKING OCCUPANCY TRENDS

During the same timeframe, SmartPark garages, which are visitor garages operated by the City, exceeded for many hours the 85 percent occupancy threshold, which indicates high demand for short trips. Although SmartPark garages are primarily for the use of short-term parkers, the City allowed monthly parking permits to be issued in some of these garages towards the beginning of the recession, in order to efficiently utilize the space in the garages. As SmartPark garages have started to see greater occupancy demands from short-term parkers, the City has discontinued the use of monthly permits within some of these garages.

DEVELOPMENT

Since 1996 there have been 85 new residential developments in the Central City, with over 12,000 units built. On average the Central City has built 0.85 parking stalls per unit. About 14 percent of residential developments did not provide off-street parking with development. For developments with parking, the average ratio was 1 stall per unit.

CENTRAL CITY OFF-STREET PARKING SUPPLY SINCE 1996



+6,500

parking spaces associated with new development (aka "growth" parking)*

+2,000

spaces serving existing buildings, including historic structures (aka "Preservation" parking)*

+3,400

visitor parking spaces*

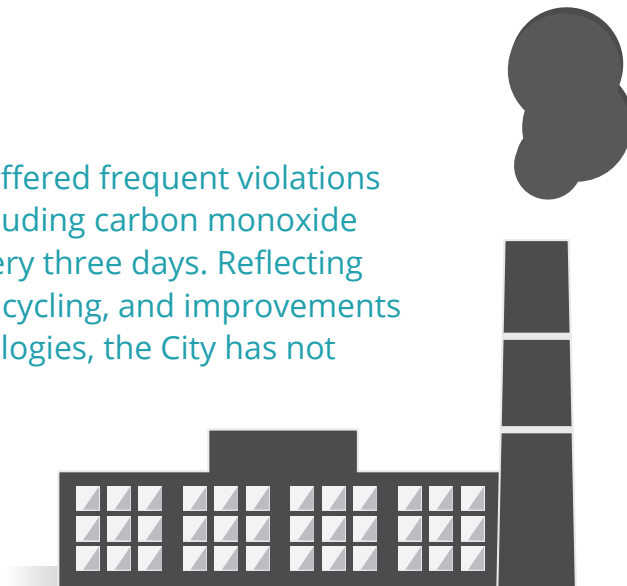
+12,300

off-street spaces built for residential buildings*

*Figures are approximate, based on local land use data

AIR QUALITY

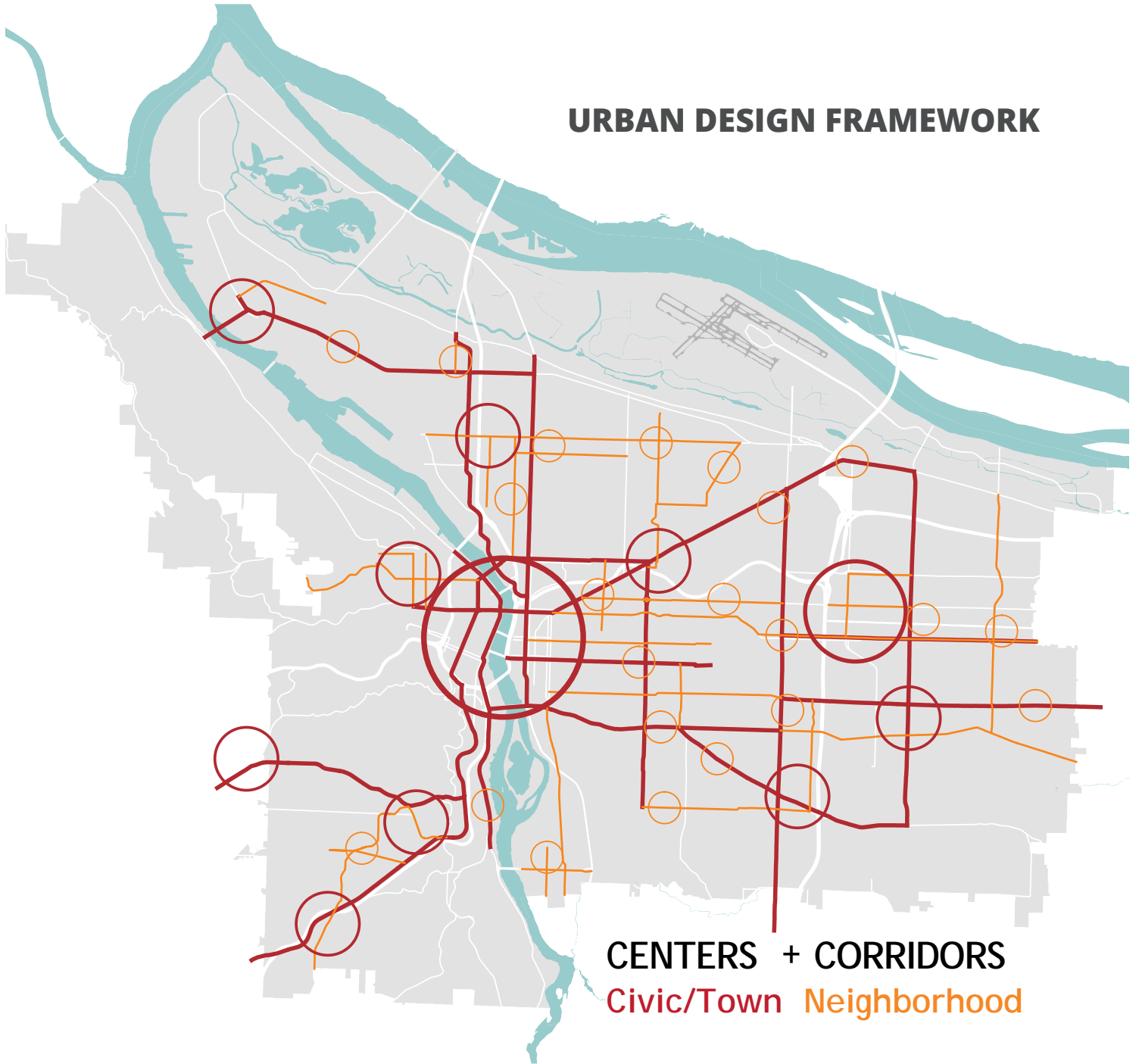
In the 1960s and 1970s Portland suffered frequent violations of federal air quality standards, including carbon monoxide violations as frequently as once every three days. Reflecting investments in transit, walking and cycling, and improvements to vehicle emissions control technologies, the City has not had an air quality violation since 1987. Parking policies that reduce driving and make it easier to find a space will help Portland maintain air quality into the future.



PARKING ISSUES AND OPPORTUNITIES

- Parking occupancies are very high in some parts of the Central City, but in other parts they are low, especially in the Lloyd District.
- Time limit violation rates were high. In fact, the average estimated duration of stay for vehicles parked in 1-hour time limited zones is greater than one hour (18 percent of vehicles exceed the time limit).
- The shorter the maximum time limit, the higher the share of parked vehicles found staying longer than permitted. Occupancy was also lower in spaces with the shortest time limits (5- to 15- minute limits). Only 50 percent of short-stay spaces were filled at any one time.
- Most buildings build off-street parking, but there are restrictions on sharing most of that parking, leaving much of those parking spaces empty.

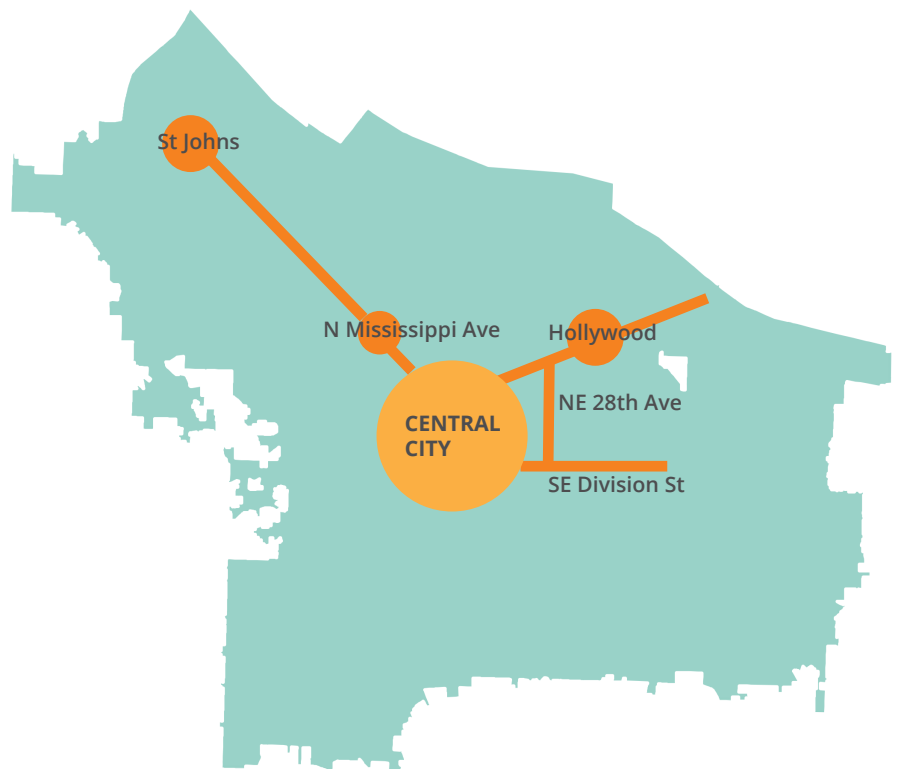
URBAN DESIGN FRAMEWORK



NEIGHBORHOOD CENTERS AND CORRIDORS

To date, the City's parking management planning and policies have largely been focused on the Central City. As the City continues to develop, access and parking challenges are increasing in the mixed-use centers and transit corridors where growth has been concentrated according to the Comprehensive Plan and the Metro 2040 Growth Concept. To enhance access and support further planned development, there is a need to develop clear and flexible parking management tools and policies for these key areas outside of the Central City. The Urban Design Framework map to the left shows where Portland's neighborhood centers and corridors are located.

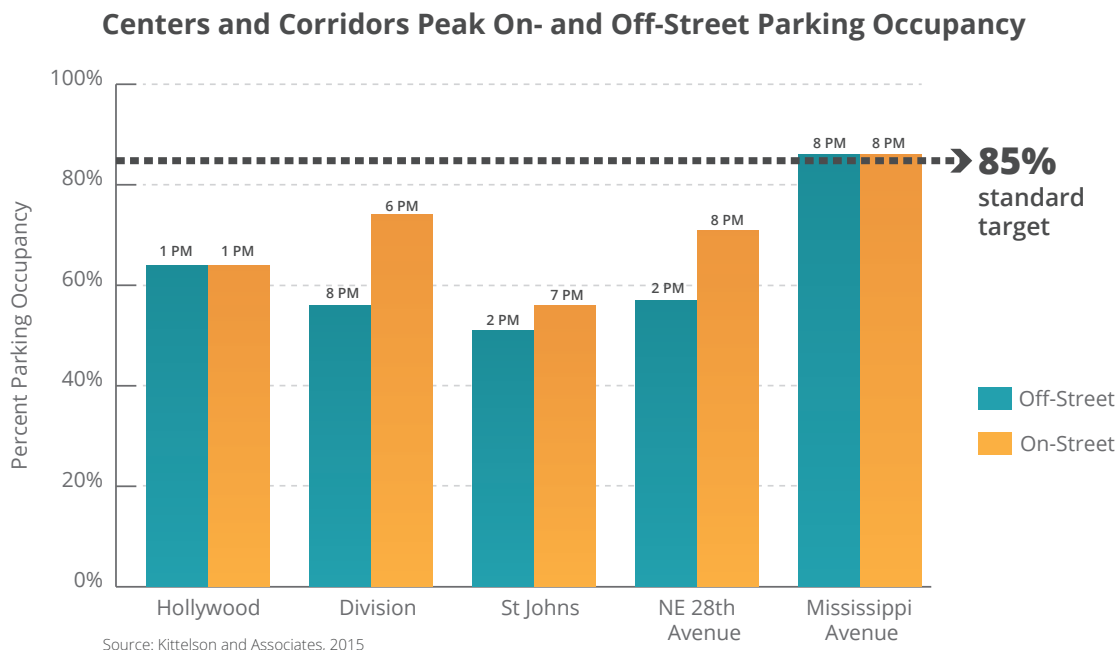
Through the Centers and Corridors Parking Study, parking occupancy and turnover was studied in fall 2014 in order to determine the parking trends in neighborhood centers and commercial corridors. The five study areas are show on the map to the right, they are St Johns, N Mississippi Ave, Hollywood Center, NE 28th Ave, and SE Division Street.



NEIGHBORHOOD CENTERS AND CORRIDORS STUDY AREA

KEY FINDINGS

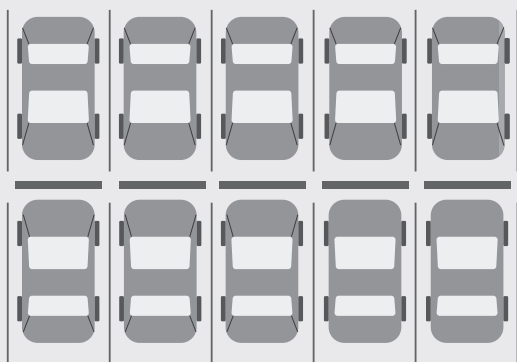
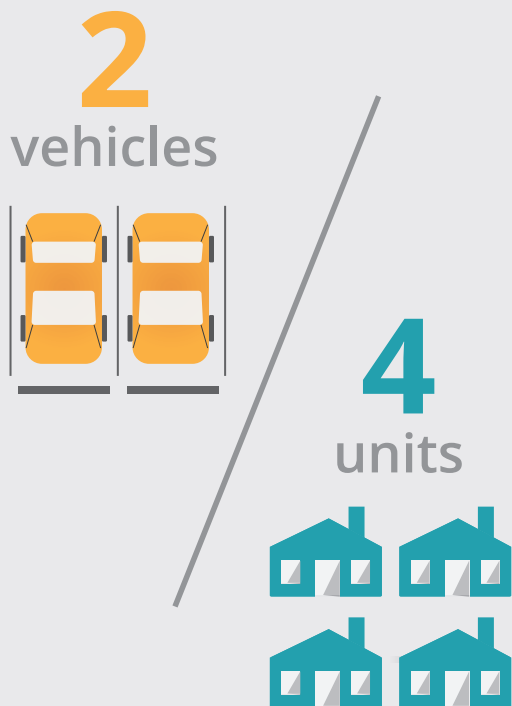
- Peak parking demand occurs along major commercial streets and selected cross streets, spilling out into surrounding residential neighborhoods during peak hours.
- Turnover of on-street parking spaces is relatively low, with average length of stays ranging from 2.5 hours to 3.5 hours.
- Peak parking occupancy on the street is between 6:00-8:00 pm in all study areas except for Hollywood.
- Low overnight occupancy of on-street and publicly accessible off-street parking presents an opportunity to accommodate additional residential parking demand with shared parking agreements, and/or changes to on-street parking regulations.



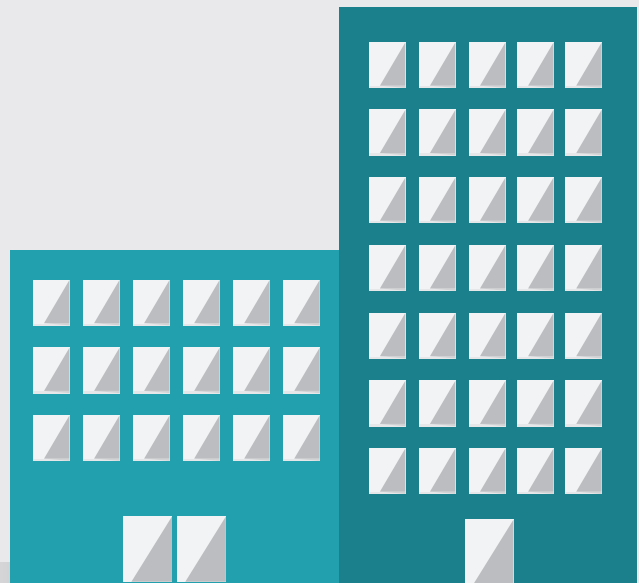
NEIGHBORHOOD CENTERS & CORRIDORS DEVELOPMENT

Building permit data for mixed-use buildings built between 2005 and 2014 shows that off-street parking has been sufficiently provided.

At the peak hour, approximately **two vehicles are parked off-street for every four residential units** within a sample of mixed-use buildings in neighborhood centers and commercial corridors.



75% of single family homes include a new off-street parking space.



50 new mixed-use buildings have been completed between 2010 and 2015.

77% of multi-family buildings in Mixed-Use zones were built with off-street parking.

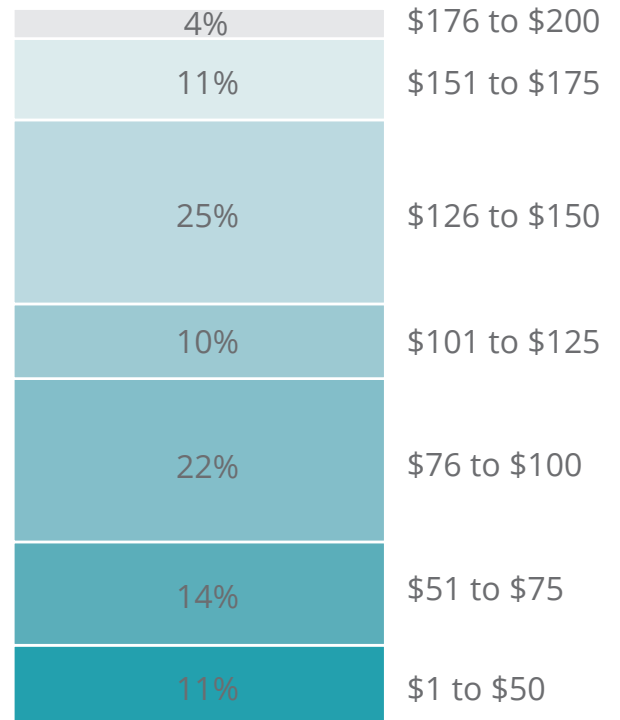
To understand the perceptions and parking and travel patterns of the residents of mixed-use buildings in these growing Portland neighborhoods, PBOT and the Bureau of Planning and Sustainability (PBPS) commissioned the associated Mixed-Use Center and Corridors Livability and Parking Analysis (2015). **This analysis was done from a sample of five new mixed-use buildings in Centers and Corridors.**

**Average:
\$112.50**

Residents of these buildings own cars at the same rate as the rest of Portland. Importantly, residents reported making an even higher percentage of their non-work trips by walking (32 percent) and other non-auto modes of transportation. (This represents a major vehicle trip reduction impact of transit oriented development, as up to 80 percent of all trips are made for non-work purposes).

Most survey respondents (65 percent), live in buildings that provide off-street parking, and most of those were charged for parking. The mean cost of

The price of parking in your building



Price of monthly parking

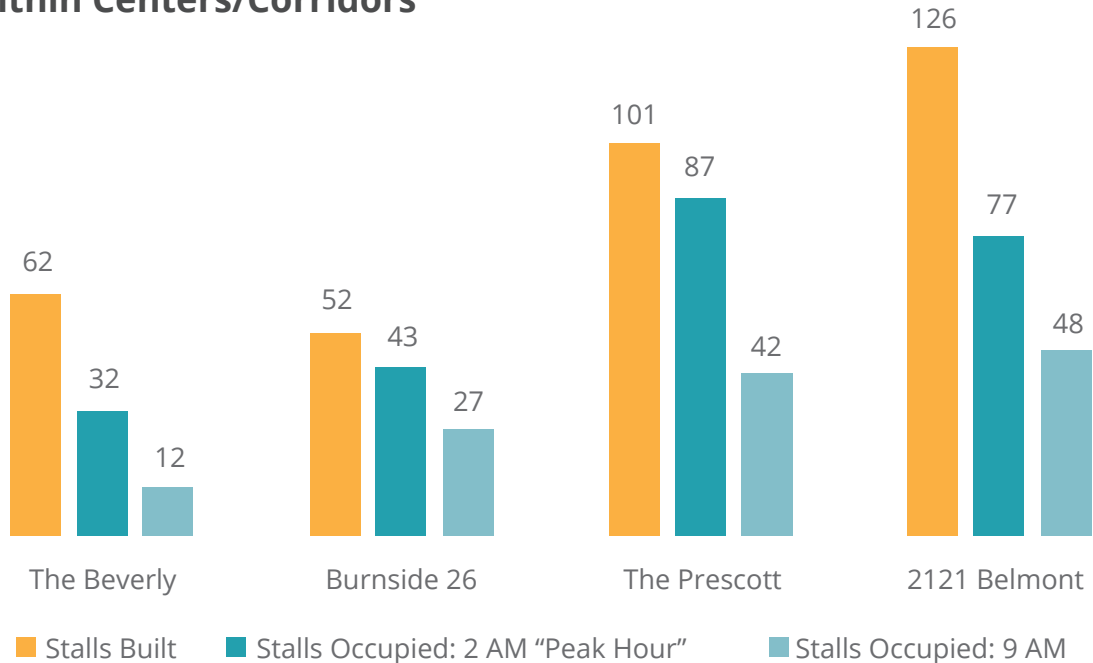
Source: Portland Bureau of Planning and Sustainability

monthly parking was \$112.60 per month. Most survey respondents did not use the off-street parking provided to them either for free or a monthly fee; the majority (56 percent) used on-street parking.

Mixed-Use Centers and Corridors Livability Survey (2015)	Residents of Mixed-Use Buildings in Centers/ Corridors	Citywide
Have one vehicle in household	63 percent	40 percent
Have two or more vehicles in household	25 percent	46 percent
Commute by Transit	21 percent	12 percent
Commute by Walking	8 percent	6 percent
Commute by Bicycle	8 percent	6 percent

See reference number 6 on page 33 for complete Mixed Use Center and Corridors Livability and Parking Analysis report.

Parking Occupancy at Residential/Mixed-Use Sites within Centers/Corridors



Source: Rick Williams Consulting (Mixed-Use Centers and Corridors Livability and Parking Analysis, Final Report, PBOT/PBPS, 2013).

VISITOR PARKING IN CENTERS AND CORRIDORS

A separate intercept survey of visitors to each of the Centers and Corridors was conducted as part of the Mixed-Use Centers and Corridor Livability and Parking Analysis (2015). Of survey respondents, 38 percent reported walking to their destination, 38 percent drove, and 22 percent took public transit. Of those who drove to the area, most (89 percent) parked on-street. Seventy percent of drivers indicated that finding parking was either "not at all difficult" (42 percent), or "not too difficult" (28 percent).

PARKING ISSUES AND OPPORTUNITIES

Findings of the Centers and Corridors parking analysis and the associated surveys of residents and visitors point to common parking-related issues and opportunities:

- Peak parking demand occurs along major commercial streets and selected cross streets.
- Turnover of on-street parking spaces is low, cars stay parked for long periods of time.
- Peak parking occupancy is in the evening (between 6:00 and 9:00 pm) in all study areas except for Hollywood.
- Parking is widely available in publicly accessible off-street parking lots, even during peak hours, with occupancies ranging from 37 percent in St. Johns, to 64 percent in the Hollywood Neighborhood Center during their respective peak periods.
- The low overnight occupancy of on-street and publicly accessible off-street parking presents an opportunity to accommodate additional residential parking demand where shared parking agreements and changes to on-street parking regulations are feasible.

STATE OF THE PRACTICE: LESSONS FROM OTHER CITIES

Research of other cities identified new tools that may be useful in Portland. PBOT reviewed programs and policies such as residential permit districts, overnight parking enforcement, off-street parking sharing agreements, variable pricing and performance-based parking management. Below are three parking management strategies that would be the most beneficial for Portland to adopt.

RESIDENTIAL PARKING PERMIT PROGRAM

Residential and neighborhood parking permit programs are intended to improve on-street parking availability for local residents within a specific permit district boundary and may restrict parking for non-residents, employees, and visitors during selected hours, and/or on selected days. Residential parking permit programs were first created in response to the recognition that traffic generation resulting from growth in adjacent commercial business districts caused high levels of parking congestion. This type of permit program allows residents of a district to buy a permit to park on-street overnight in the district.

To enhance the effectiveness of the existing Area Parking Permit Program, PBOT conducted a scan of permit programs in 12 cities across North America. Best practices in permit district management include:

- Cap the number of permits based on supply. Toronto is the only city in North America that currently has a cap.
- Limit the number of permits a household can purchase. (Providence, RI-2 per residence; Seattle, WA- 4 per residence; Sacramento, CA- 2 per residence.)
- Progressively price permits. Many cities set the price for additional permits per residences above the cost of the first one to encourage residents to use available off-street parking supply.
- Extend hours of enforcement to coordinate with parking demand based on district needs.
- Establish a base permit price that is at least as expensive as the cost of a monthly transit pass. For example, in San Francisco, the cost of a Muni Adult Fast Pass was \$55 per month, as contrasted to a residential parking permit rate of \$109 per year.
- Restrict the eligibility for permits, based on land use type, geographic area, development type, or other characteristics. Atlanta only allows one permit per resident for those with available off-street parking. Seattle differentiates between single family residences and micro-housing units, only allowing four permits per kitchen in micro-housing developments.⁶

SHARED AND DISTRICT PARKING

Shared parking is a supply of publicly or privately owned off-street parking that provides access to two or more land uses or activities, as opposed to exclusively dedicated parking, accessory to a single use. Shared parking can be used more efficiently than single-use parking, especially when serving uses with different periods of peak demand for access. This means that the same level of parking availability can be maintained for two more uses, with a substantially lower total supply of parking spaces than would be necessary if each use provided exclusive parking. For example, a restaurant, with peak demand during the evenings and weekends may easily share the same parking facility as a dental or medical office building that has peak demand during the day. Most often, shared parking arrangements are established through private agreements between private property owners and developers. However, sharing of private parking may also be facilitated by local governments or public agencies.

District shared parking is the application of shared parking arrangements to a neighborhood or district-wide scale, with multiple parking facilities serving together to form a common pool of publicly accessible parking, providing access to any of the homes or commercial establishments within the district. District parking allows visitors to park once and visit multiple destinations within a common mixed-use district without moving their vehicle. Municipal Zoning Codes in many cities present a barrier to district shared parking, where each private property owner is required to maintain access to a minimum number of dedicated off-street parking spaces for each land use on site.

To inform potential policy changes in Portland, PBOT reviewed shared parking strategies in six US cities. The following initiatives stand out:

- The City of Long Beach, CA addressed on-street parking challenges by arranging for commercial, church, and city-owned parking facilities to be available for overnight residential parking. The program allows residents to reserve parking in advance online, and addresses liability concerns of parking facility owners by requiring participants to sign a release of liability form.⁷
- Montgomery County, MD saw a 26 percent reduction in parking required for a mixed office and retail development by allowing sharing between the uses.⁸
- The Adapted Reuse Ordinance (ARO, 1999) amended the City of Los Angeles' zoning code to allow, among other things, residential units in downtown to lease off-street parking spaces to commuters and visitors. Over 9,000 new housing units were constructed in downtown Los

Angeles, between 2000 and 2010, with up to 75 percent of that development attributed, in part, to the ARO.⁹

Shared parking benefits communities by:

- Facilitating the efficient use of existing off-street parking facilities that would otherwise be minimally utilized.
- Preserving historic buildings and revitalizing traditional, mixed-use centers and corridors
- Encouraging desirable infill development
- Improving housing affordability by reducing the cost of mixed-use development and residential development in mixed-use districts
- Promoting the development of dense, walkable, mixed-use districts, accessible by multiple modes of travel.
- Reducing vehicle ownership and travel by separating the cost of parking from the ownership costs of commercial and residential space within mixed-use districts, thereby removing hidden incentives to drive and park.

PERFORMANCE-BASED PARKING MANAGEMENT

As the City of Portland considers its options for better management and coordination of on-street and off-street parking, it is helpful to consider the experience of other cities that have implemented performance-based parking management, including Seattle, WA, San Francisco, CA and Berkeley, CA. Each of these cities have:

- **Established clear policy goals and targets** for the management of all or a portion of their public parking systems.
- **Implemented demand-based pricing** as a means of allocating parking spaces.
- Conducted **regular and comprehensive performance evaluation** to inform changes to rates, policies and programs.



TARGET BLOCK OCCUPANCY

85 percent (1-2 spaces open)

If a block is too full, INCREASE THE PRICE

If a block is too empty, LOWER THE PRICE

If the block is just right, KEEP SAME PRICE

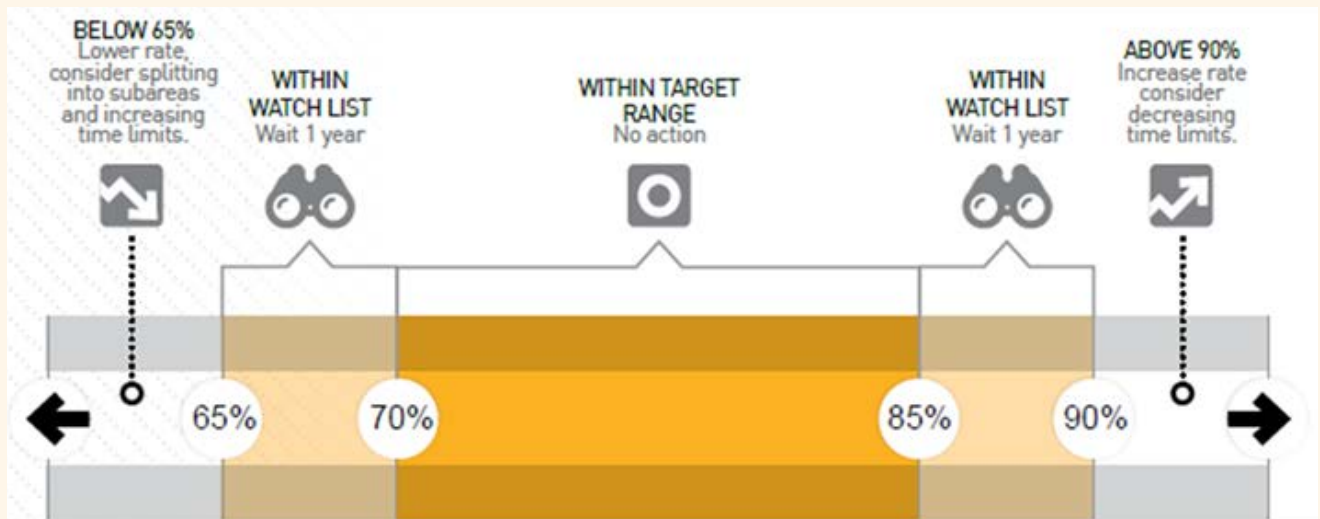
SEAPARK, SEATTLE, WA

Seattle established a performance-based parking pricing program in 2010. Meter rates vary by neighborhood sub-area, time of day, day of week, and season, based on observed utilization.

Policy goals: Make parking available within walking distance of destinations; increase business access through turnover; ensure parking is well used; reduce traffic and pollution.

Occupancy target (by ordinance): 1-2 spaces available per block face throughout the day.

Rate adjustment: Rates are adjusted administratively by SDOT once per year, as informed by annual parking occupancy surveys (manual). Pricing objective is to shift demand within sub-areas from congested main streets to empty blocks nearby.



SeaPark: Results

Performance-analysis has informed innovative management tactics, including:

- Extending meter hours (to 8:00 pm) with extended time limits (after 5 pm) in selected areas where occupancy exceeds target range after 7:00 pm.
- Established 10-hour time limits in South Lake Union, where lower prices were not expected to shift demand from congested areas nearby.
- Implemented new “Best Value” signage to direct motorists to lower priced parking.
- Established seasonal rate changes in selected areas with seasonal variation in demand.
- Key lesson: Importance of balancing a refined, but not too complex rate structure (variance by sub-area) with simple and clear signage and communication for customers.

SFpark, SAN FRANCISCO, CA

In 2010, San Francisco initiated SFpark, a federally-funded pilot project to test demand-based pricing for on- and off-street parking.

- **On-street:** Installed occupancy sensors, new smart meters, and implemented demand-based pricing in seven pilot and two control zones. Extended and eliminated time limits.
- **Off-street:** New rates in 13 public garages (12,000 spaces), with off-peak discounts.

SFpark: Policy guidance

Target: 60 percent-80 percent occupancy

Pricing: On-street prices vary by block face, time of day and day of week; adjusted administratively every six to eight weeks (\$0.25 increments) to meet targets.

SFpark: Results

- Average hourly prices decreased overall
- Citations declined by 23 percent.
- Parking search time declined 43 percent. Double-parking declined 22 percent.
- Greenhouse gas emissions declined by 30 percent in pilot zones; 6 percent in control areas.



Hourly parking rates in SFpark areas

Before vs. after (10 rate changes)
On- and off-street rates



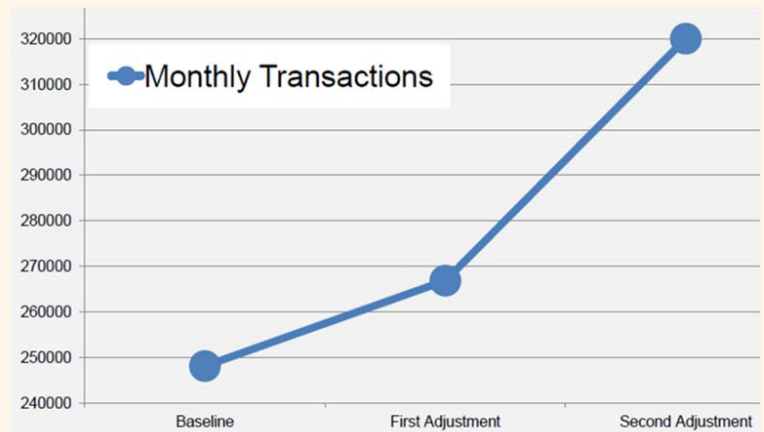
GOBERKELEY, BERKELEY, CA

GoBerkeley is a program to improve parking availability, reduce traffic congestion, and promote use of non-auto travel.

Incentives: Universal transit passes were provided to employees and residents of multi-family housing at selected sites.

Parking Management: Berkeley implemented demand-based pricing of on- and off-street parking in the Downtown, Elmwood and Telegraph districts:

- “Premium” curb spaces priced up to \$2.75/hr (2-hour limit)
- “Value” spaces priced at \$1.50/hr (8-hour limit)
- Graduated pricing for 3-hour limited spaces (1 hr: \$1.50, 2 hrs: \$3.50, 3 hrs: \$6.00)



GoBerkeley: Results

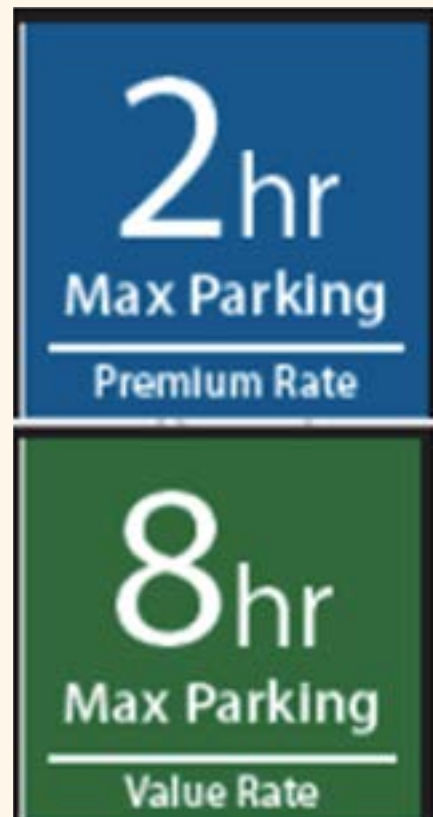
- Parking availability improved: 78 percent of drivers can “easily find parking,” up from 41 percent.
- More people served: turnover increased; 29 percent more transactions at single space meters.
- Demand shifted to previously under-utilized off-street lots/garages.

GoBerkeley: Policy Guidance

Policy goals: (1) Make best use of all spaces, (2) make garage parking as a first choice, (3) use time limits that match needs, (4) provide better parking information (including signage).

Occupancy target: 65-85 percent (On- and off-street).

Rate adjustment: Rates have been adjusted twice since program initiation (2013), based on manual counts and transaction data. Berkeley plans to use an algorithm to estimate occupancy based on payment data, calibrated by data collected on-street by license plate readers (LPR) used for enforcement.



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ROADMAP FOR BETTER PARKING MANAGEMENT

To define current parking conditions, issues, and opportunities in different areas, PBOT has recently completed both the *Central City Parking Analysis* (an element of the CCTMP Update), and the *Mixed-Use Centers and Corridors Parking Analysis and Toolkit*. As an integral element of the Comprehensive Plan update, the Citywide Parking Strategy will synthesize and make policy and program recommendations based on the findings of these two studies.

What works

Many existing parking policies and practices help us reach air quality, mode split, livability and economic development goals. Key successful policies include:

- Limiting drive alone trips and encouraging other modes by limiting the amount of new parking.
- Facilitating turnover to serve retail and other short-term destinations.
- Prioritizing on-street parking users based on community goals.
- Regulating off-street parking to promote compact and walkable urban form.

Key policy changes

With direct assistance from three broad public Stakeholder Advisory Committees (SAC), PBOT staff are working to develop a roadmap for better parking management. Preliminary policy recommendations include:

- Change zoning code to **allow and encourage shared use** of existing and new off-street parking, including implementation of district parking programs.
- **Redefine the purpose and value of the “curb zone”** (curbside street space often used for parking, loading, and or other uses). Recommended draft Comprehensive Plan Policy 9.55 states:
 - » **Policy 9.55 Curb Zone.** Recognize that the Curb Zone is a public space, a physical and spatial asset that has value and cost. Evaluate whether, when, and where parking is the highest and best use of this public space in support of broad City policy goals and local land use context. Establish thresholds to utilize parking management and pricing tools in areas with high parking demand.

- **Simplify** parking regulations in the Central City Plan District.
- Develop a new **Residential Parking Permit Program** for neighborhoods:
 - » Permit district boundaries would be based on zoning.
 - » Limit the number of permits sold based on supply.
 - » Limit number of permits to households.
- Require new developments above a certain size to develop **transportation demand management** plans with the city, meet modal targets, and provide mobility subsidies (i.e. transit passes, etc.) to their residents and employees.
- Add **Equity** criteria to evaluate parking policies and programs. Primary equity considerations are for low-income people and people with disabilities. Policies should focus on lowering the cost of development and **mitigate disproportionate burdens on low-income households**.
- **Implement a performance-based parking management program by:**
 - » **Establishing policy guidance, including performance targets** (adopted by Council). Policy must be clear about the goals, targets, methods of data collection and analysis, and program parameters ((e.g. units for rate adjustment (e.g. \$0.25, or \$1.00)), frequency of data collection and rate adjustment).
 - » **Coordinating on- and off-street parking**, scoping periodic monitoring for both on- and off-street occupancy and hourly rates.
 - » **Prioritizing uses** for public parking.
 - » **Adjusting parking prices** to meet target occupancy rate(s).
 - » **Utilizing demand-based pricing**, using existing systems such as Smart Meters and a pay-by-phone option.¹⁰
 - » Extending or eliminating **time limits**, with the expectation that pricing will optimize turnover.

These parking policy and practice proposals align with City goals on a range of issues:

- **Environment/air quality:** Reduces vehicle travel and associated negative impacts on climate and air quality impacts, while improving air quality.
- **Economic development:** Improves access to commercial districts and reduces transportation-related costs of business operations.
- **Travel mode shift:** Reduces congestion from drivers searching for parking, which improves transit speed and reliability and makes walking/biking safer.
- **Equity and affordability:** Reduces the perceived need to provide costly new off-street parking with all new residential and mixed-use buildings; shifts the focus of transportation spending away from subsidized parking toward mobility services.

ENDNOTES

1. Title 16 of the City Code and Charter establishes PBOT authority to regulate use of the curb zone for parking and other uses, and SmartPark garages to serve the public interest, and delegates decision-making authority for many parking management tools to the City Traffic Engineer. Rules and procedures not specifically defined in the Code are governed by the PBOT Rules and Procedures Manual.
2. The CCTMP (1995) is Portland's current policy framework for managing growth, transportation and parking in the Central City, including Downtown, North Macadam/South Waterfront, Goose Hollow, Lower Albina, the Central Eastside, and the River, University and Lloyd Districts.
3. APPP area designation is considered by PBOT and Council upon petition by a majority of residents and businesses within the proposed permit parking area.
4. Taxis are permitted to use TriMet bus zones outside of peak periods (7-9 am, 4-6 pm) for up to 15-minute stays.
5. Lancaster Engineering (2015), Central City Parking Occupancy and Turnover Analysis (prepared for PBOT).
6. Rick Williams Consulting (2015).
7. City of Long Beach (2014), "Urban Parking Partnership." <http://www.communityparking.com/images/FAQ.pdf>.
8. Collins, P., South Waterfront Community Relations Memo, (April, 2015).
9. Collins, P., South Waterfront Community Relations Memo, April, 2015 [additional publication info, if available by search], AND "Los Angeles Adaptive Reuse Ordinance (1999)
10. PBOT is reviewing proposals from Pay by Phone Vendors in the fall 2015.

REFERENCES

All the documents below can be found online at portlandoregon.gov/transportation/ParkingReports.

1. Public Parking In the City of Portland Current Management Policies and Practices, December 2014. Prepared by the Portland Bureau of Transportation Parking Operations Division.
2. City of Portland Off-Street Parking Management & Guiding Policies, January 2015. Prepared by the Portland Bureau of Transportation Parking Operations Division.
3. Transportation System Plan Parking Policies, City of Portland Bureau of Transportation, 2008.
4. City Parking Occupancy and Turnover Analysis October–November, 2014. Prepared by Lancaster Engineering.
5. Neighborhood Centers and Civic Corridors Draft Parking Inventory, Occupancy and Turnover Study Findings and Conclusions Report, June 2015. Prepared by Kittleson & Associates.
6. Mixed-Use Centers and Corridors Livability and Parking Analysis Final Report, August 2015. Prepared by: Angelo Planning Group DHM Research, Rick Williams Consulting
7. South Waterfront Occupancy and Turnover Study, February 2015. Prepared by South Waterfront Community Relations.
8. Go Lloyd Annual Parking Study, Fall 2014. Prepared by Go Lloyd Transportation Management Association.
9. Central Eastside Parking Occupancy and Turnover Study, Fall 2015. Prepared by Rick Williams Consulting.
10. City of Portland Recommended Comprehensive Plan 2035, approved by Planning & Sustainability Commission August 2015, prepared by Portland Bureau of Planning and Sustainability.

HELP SHAPE THE PLAN FOR PARKING

Stakeholders from across the city have been working with staff to update our parking management policies and practices. In the next few months, we will develop a citywide parking strategy. You will have the opportunity to weigh in on both the policies and the implementation plans. Follow the links below to access the full documents referenced in this report, discover what's new and learn how to get involved in planning the future of parking in Portland.

Read parking survey reports, studies, and proposals on our website:
portlandoregon.gov/transportation/ParkingReports

Send comments via email to: PDXparking@portlandoregon.gov

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