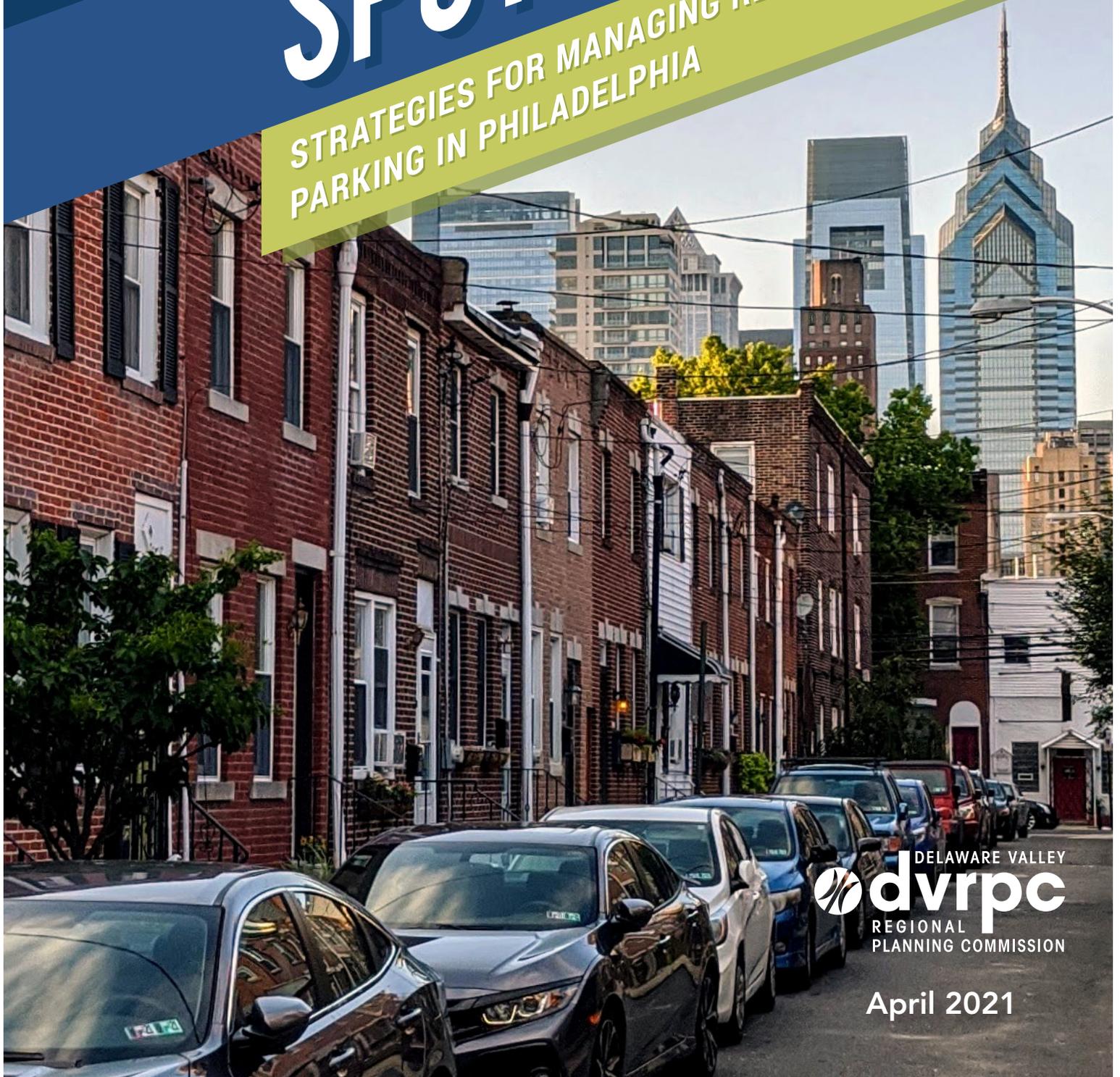


# SPOT CHECK

STRATEGIES FOR MANAGING RESIDENTIAL  
PARKING IN PHILADELPHIA



DELAWARE VALLEY  
 **dvrpc**  
REGIONAL  
PLANNING COMMISSION

April 2021



**The Delaware Valley Regional Planning Commission** is the federally designated Metropolitan Planning Organization for a diverse nine-county region in two states: Bucks, Chester, Delaware, Montgomery, and Philadelphia in Pennsylvania; and Burlington, Camden, Gloucester, and Mercer in New Jersey.



**DVRPC's vision** for the Greater Philadelphia Region is a prosperous, innovative, equitable, resilient, and sustainable region that increases mobility choices by investing in a safe and modern transportation system; that protects and preserves our natural resources while creating healthy communities; and that fosters greater opportunities for all.

**DVRPC's mission** is to achieve this vision by convening the widest array of partners to inform and facilitate data-driven decision-making. We are engaged across the region, and strive to be leaders and innovators, exploring new ideas and creating best practices.

**TITLE VI COMPLIANCE** | DVRPC fully complies with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, Executive Order 12898 on Environmental Justice, and related nondiscrimination mandates in all programs and activities. DVRPC's website, [www.dvrpc.org](http://www.dvrpc.org), may be translated into multiple languages. Publications and other public documents can usually be made available in alternative languages and formats, if requested. DVRPC's public meetings are always held in ADA-accessible facilities, and held in transit-accessible locations whenever possible. Translation, interpretation, or other auxiliary services can be provided to individuals who submit a request at least seven days prior to a public meeting. Translation and interpretation services for DVRPC's projects, products, and planning processes are available, generally free of charge, by calling (215) 592-1800. All requests will be accommodated to the greatest extent possible. Any person who believes they have been aggrieved by an unlawful discriminatory practice by DVRPC under Title VI has a right to file a formal complaint. Any such complaint must be in writing and filed with DVRPC's Title VI Compliance Manager and/or the appropriate state or federal agency within 180 days of the alleged discriminatory occurrence. For more information on DVRPC's Title VI program or to obtain a Title VI Complaint Form, please visit: [www.dvrpc.org/GetInvolved/TitleVI](http://www.dvrpc.org/GetInvolved/TitleVI), call (215) 592-1800, or email [public\\_affairs@dvrpc.org](mailto:public_affairs@dvrpc.org).

DVRPC is funded through a variety of funding sources including federal grants from the U.S. Department of Transportation's Federal Highway Administration (FHWA) and Federal Transit Administration (FTA), the Pennsylvania and New Jersey departments of transportation, as well as by DVRPC's state and local member governments. The authors, however, are solely responsible for the findings and conclusions herein, which may not represent the official views or policies of the funding agencies.

# SPOT CHECK

## STRATEGIES FOR MANAGING RESIDENTIAL PARKING IN PHILADELPHIA

### TABLE OF CONTENTS

Executive Summary.....	1
1. Introduction .....	5
2. Residential Permit Parking in Philadelphia and Beyond.....	15
3. Understanding Philadelphia’s Changing Context .....	27
4. Exploring Potential RPP Policy Reforms.....	45
5. Evaluating the Future of RPP in Philadelphia .....	61
Endnotes.....	69
Appendix A: Residential Permit Parking District Profiles.....	A-1

### EXHIBITS

Figure 1: Trends in Car Ownership Among American Cities (2010–2018) .....	6
Figure 2: Residential Permit Districts .....	16
Figure 3: Permit Types (2018) .....	19
Figure 4: City of Philadelphia Population (2005–2018).....	27
Figure 5: Occupied Housing Units (2010–2018).....	28
Figure 6: Building Permits Issued in Philadelphia by Type (2010–2018) .....	28
Figure 7: Percentage of Households with One or More Vehicles.....	29
Figure 8: Number of Households by Vehicle Availability .....	29
Figure 9: Estimated Number of Cars .....	30
Figure 10: Journey to Work .....	30
Figure 11: Share of Employed Residents Working in Philadelphia .....	31

EXHIBITS continued

Figure 12: Household and Per Capita Income .....	31
Figure 13: Population Change by Census Tract (2010–2018) .....	32
Figure 14: Population Change by Planning District (2010–2018) .....	33
Figure 15: Change in Housing Units by Census Tract (2010–2018) .....	34
Figure 16: Change in Housing Units by Planning District (2010–2018) .....	35
Figure 17: Change in Households with Any Vehicle Available by Census Tract (2010–2018) .....	36
Figure 18: Change in Households with Any Vehicle Available by Planning District (2010–2018) .....	37
Figure 19: Change in Commuters Driving Alone to Work by Census Tract (2010–2018) .....	38
Figure 20: Change in Commuters Driving Alone to Work by Planning District (2010–2018) .....	39
Figure 21: Change in Median Household Income by Census Tract (2010–2018) .....	40
Figure 22: Number of Proposed Driveways by Planning District (2001–2020) .....	41
Figure 23: Estimating Permit Parking Capacity.....	43
	.
Table 1: Residential Permit Districts .....	17
Table 2: Comparing Permit Eligibility .....	21
Table 3: Comparing Permit Pricing .....	23
Table 4: Comparing Visitor Parking Options .....	24

# Executive Summary

On-street parking is an integral part of Philadelphia’s transportation system. Like any piece of transportation infrastructure, parking must be managed properly to ensure that it works efficiently and adds value to the community. On-street parking policy is fundamentally about managing the demand for an unchanging supply. Unlike a city’s supply of off-street parking, which theoretically can be continuously expanded, the supply of on-street parking is essentially fixed.

Residential Permit Parking (RPP) programs are one of the most common and effective tools that cities can use to manage on-street residential parking. RPP programs are designed to make it easier for residents to find parking in their neighborhoods by exempting eligible permit holders from on-street parking time limits. These types of programs typically manage on-street parking for residents on a block-by-block basis and allow residents to collaboratively craft restrictions on their block.

Already a contentious issue in many Philadelphia neighborhoods, population growth and a variety of other contributing factors have resulted in more intense parking conflicts and an escalating set of parking challenges in recent years. In some permit districts, the demand for parking appears to be outstripping or close to outstripping the supply of curbside spots. These conditions force us to consider several important questions:

- How can scarce parking be equitably allocated among users, including residents and others?
- How can RPP be administered to support a variety of Philadelphia’s transportation and quality of life objectives?
- Which potential RPP reforms can help the city respond to changing conditions in various neighborhoods?

This document is the culmination of a planning process led by the Delaware Valley Regional Planning Commission (DVRPC) in collaboration with the Philadelphia City Planning Commission designed to help inform future decisions about residential parking policy in Philadelphia. This study focuses on RPP and was undertaken to accomplish two research objectives:

1. Highlight data and trends shaping demand for residential parking in neighborhoods throughout the city.
2. Identify best practices and policy options for managing residential parking in Philadelphia neighborhoods.

Based on this research, the study team has outlined a number of potential revisions to Philadelphia’s RPP program that can be considered in order to better accommodate residential parking needs while more effectively supporting broader city goals.

## **Key Themes**

The first RPP districts were established in Philadelphia in 1982 and today there are 38 permit districts located throughout the city. Philadelphia's RPP program functions much as it always has even though Philadelphia has changed substantially in recent decades. Philadelphia's streets face different challenges now than when the RPP program was conceived, making this an opportune time to consider the potential benefits of RPP policy reform.

Three simple, yet important, themes emerged during the course of this study.

### **Philadelphia's Growing Car Population**

A series of related demographic, socioeconomic, and development trends have contributed to a significant increase in the number of cars owned by Philadelphia residents. In fact, between 2010 and 2018, the number of cars in Philadelphia increased more quickly in absolute and percentage terms than the number of people. This increase is behind the fundamental problem in the most stressed permit districts: too many cars appear to be competing for too few on-street spaces. In order to be effective, parking management strategies will need to reduce parking demand and/or the number of permits issued in some districts.

### **Parking Demand Varies across Neighborhoods and Permit Districts**

Despite the overall increase in vehicles, the demand for parking is not uniform across the city. Historic development patterns and the distribution and character of new residential development vary significantly by neighborhood. Furthermore, any individual household's decision to obtain a vehicle (or multiple vehicles) is influenced by a variety of considerations, including family size and composition, income, travel needs, and proximity to transit. As such, RPP policies may need to incorporate more flexible standards that can effectively respond to varying context of different neighborhoods.

### **Attitudes and Approaches to Parking Management Have Changed**

Parking is not a new problem; however, approaches to managing parking have changed significantly since Philadelphia's RPP program was initiated. Changes to Philadelphia's RPP policy may be necessary to help the program evolve to meet the needs of a changing city. However, reviewing RPP policy also presents Philadelphia decision makers with an opportunity to reinforce the objectives of recent transportation and sustainability goals. Where possible, RPP should be viewed as a tool that can help reduce congestion while helping to support a shift from driving to walking, biking, and transit.

## Evaluating RPP Policy Reforms

Cities updating their RPP policies typically focus on revising the rules governing permit eligibility, cost, and/or the process by which an RPP district is established or modified. Most cities adjusting permit eligibility rules have introduced restrictions on the number of permits that can be issued in an effort to reduce demand for on-street resident parking. Some cities have instituted blanket or target increases in permit pricing in place of or in conjunction with eligibility restrictions to achieve parking goals. Finally, some cities have focused their efforts on revising or supplementing the process by which permit parking is initiated in an effort to streamline operations and enhance the overall effectiveness of RPP programs.

This study explores the application of eight potential RPP reforms using examples from peer cities when possible.

1. Establish area permit caps.
2. Establish household-based permit caps.
3. Reduce or eliminate the permit eligibility of new housing in transit-oriented locations.
4. Reduce or eliminate permit eligibility for residents with access to off-street parking.
5. Expand permit eligibility to certain nonresidents.
6. Increase the overall cost of residential parking permits.
7. Institute targeted price increases based on housing location and/or characteristics.
8. Enable city staff to initiate RPP activities.

No single parking strategy discussed in this report can solve Philadelphia's parking challenges. However, more effective RPP policies can make transportation work better for all Philadelphia residents. In general terms, any potential RPP policy reforms can be evaluated based on the degree to which they can be implemented and enforced and contribute to a program with simple rules that are easily understood and clearly applied. In practical terms, instituting any of the reforms discussed in this report will require making trade-offs between efficacy, convenience, and ease of administration and enforcement. Importantly, some potential policy revisions will need to be assessed based on how they balance effectiveness and equity. The report concludes by presenting a series of principles that can help decision makers contextualize and gather feedback on potential changes to RPP policy.



## CHAPTER 1

# Introduction

In 2018, Philadelphia posted its 12th straight year of population growth. Over that time, Philadelphia gained more than 95,000 residents. Although the city's growth rate has trailed that of several faster-growing cities around the country, the growth itself is notable because it comes after more than five decades of precipitous population decline. The city reached a population peak of over two million in 1950, then proceeded to lose over a half-million residents over the next 56 years.

A related, yet less celebrated, aspect of this turnaround is the fact that the number of cars and the percentage of households with cars in Philadelphia has been growing steadily. For example, according to U.S. Census data, nearly 70 percent of the city's roughly 595,000 households had at least one car in 2018, compared with 64 percent in 2000 (see Figure 1). Furthermore, Philadelphia's car population has grown more quickly in absolute and percentage terms than its human population. Between 2010 and 2018, the city grew by nearly 56,000 residents (3.7 percent). During the same period, we estimate that the number of cars in the city grew by 81,000—an increase of 15.3 percent.<sup>1</sup>

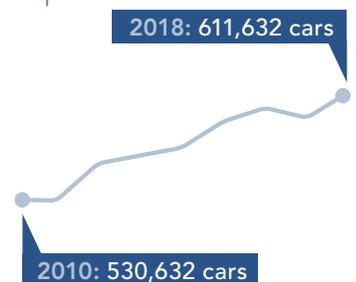
Although the increase in cars has not received many headlines, parking has been and continues to be a point of contention in many of Philadelphia's neighborhoods, particularly those seeing population growth. In some areas, the problem is increasingly easy to identify—too many cars competing for too few on-street parking spaces. Residents, visitors, and business owners lament what they see as parking shortages and/or unfair parking prices. Addressing parking issues may be further complicated by citizen attitudes toward, and expectations related, to vehicle storage in general. Many people may think that parking in their neighborhood is already intolerable and that any change will only make it worse.

Parking is certainly a complex issue that affects the character, form, function, and social fabric of our communities. As Philadelphia's population continues to increase, decisions about how we use our streets and curbs become even more critical to addressing the city's transportation and traffic challenges. However, effective parking management can also play an integral role in helping the city achieve a variety of economic development, land use, sustainability, and social equity goals.

### Study Overview: Purpose and Goals

This report, *Spot Check: Strategies for Managing Residential Parking in Philadelphia*, is the culmination of a planning study conducted by the DVRPC. The primary objective of this study was to research and identify best practices and policy options for managing the supply and demand of on-street parking throughout Philadelphia's neighborhoods. Parking management refers to the suite of policies, programs, and strategies that

Since 2010, the number of cars in Philadelphia has grown more quickly in absolute and percentage terms than the number of people.



municipalities may employ to encourage more efficient use of parking resources. This study was undertaken at the request of the Philadelphia City Planning Commission and led by DVRPC’s Office of Smart Growth as part of the Fiscal Year 2020 Work Program.

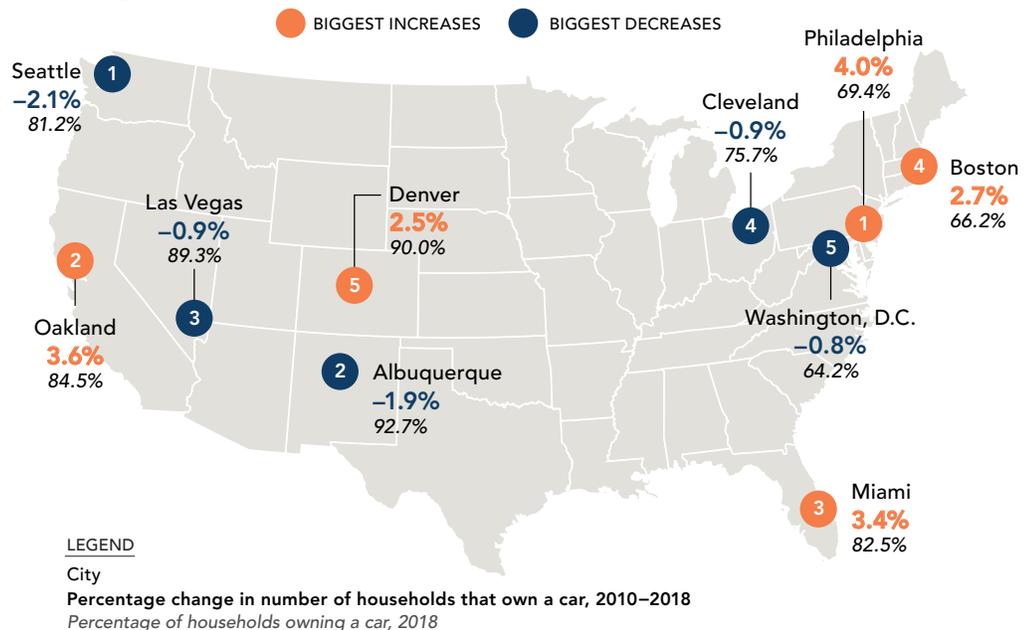
DVRPC’s study broadly focused on curbside parking and more specifically on Philadelphia’s RPP program. As opposed to off-street parking, which can be continuously expanded, the supply of on-street parking is essentially fixed. Accordingly, on-street parking policy is fundamentally about managing the demand for an unchanging supply. On-street parking is an integral part of Philadelphia’s transportation system and how the city and other stakeholders manage that parking affects the overall success of the system. RPP programs are one of the most common and effective tools that municipalities have to manage on-street residential parking. Generally, these programs ensure that residents have primary access to parking on certain streets or in certain districts. These types of programs typically manage on-street parking for residents on a block-by-block basis and allow neighbors to collaboratively craft restrictions on their block. Residents can participate in a residential permit program by obtaining a permit for a fee.

### Project Approach

The first RPP districts were established in Philadelphia in 1982. Since this time, the mechanics of the permit program have remained largely the same, even though Philadelphia has changed substantially. Similarly, parking management theory and practice have changed significantly in recent decades. Philadelphia faces different challenges on the street now than when the residential permit program began, and city stakeholders recognize that the program may need to be updated in order to continue

**Figure 1: Trends in Car Ownership Among American Cities (2010–2018)<sup>2</sup>**

Nearly 70 percent of Philadelphia households owned at least one vehicle in 2018, according to the U.S. Census. Although this percentage is less than many other cities around the country, car ownership increased by 4 percent in Philadelphia between 2010 and 2018—the largest increase among the 50 largest cities in the country. The increase in Philadelphia’s “car population” reflects the city’s growth in recent years and is contributing to a parking crunch in many residential neighborhoods.



Source: U.S. Census Bureau

meeting the needs of an evolving city. This review of RPP policies also provides an opportunity to address citizen concerns and more closely align RPP and related policies with contemporary city goals and objectives. Several complex questions helped to guide the work of the study team, including:

- How can residential parking zones be structured to address different needs in different places?
- Who should be eligible for permit parking?
- How can scarce parking be equitably allocated among users, including residents and others?
- How can guest parking be made more convenient for residents and their guests?
- What should permits cost?
- How can the city ensure that all neighborhoods receive equal attention and that all citizens have an equal voice?

Adequately addressing these questions involves collecting relevant data, conducting research, and discussing strategies with a wide array of stakeholders. The study team completed a series of tasks designed to illuminate these questions and help inform decision makers as they consider potential reforms to the RPP program. These included:

- forming a study advisory committee composed of representatives from city agencies to guide the study and review its findings;
- gathering and analyzing relevant development, social, travel, and demographic trends influencing parking demand and supply in the city; and
- reviewing residential permit program innovations and policies from other cities.

## **A Note about COVID-19**

A portion of this study was conducted prior to the COVID-19 pandemic. Although the epidemic did limit the ability of the study team to conduct fieldwork, it did not alter the findings summarized in this document. The long-term impact of the pandemic presents some uncertainties for parking management initiatives in Philadelphia. As discussed later in this report, parking demand in a given neighborhood is driven by the complex interaction of multiple factors, including development pressure, location, transit access, density, and a variety of socioeconomic conditions.

It is too early to tell if the pandemic will have a lasting impact on factors like population growth, development patterns, and travel behavior that could alter the dynamics of parking supply and demand in certain neighborhoods. However, long-term population and employment forecasts generated by DVRPC suggest that Philadelphia will gain nearly 130,000 residents and 100,000 jobs between 2015 and 2045.<sup>3</sup> Even if a relatively small portion of these projected residents and employees arrive in the city with automobiles, they threaten to exacerbate what is already a serious issue in many places.

## Document Overview

The remainder of this chapter provides an overview of several planning studies that have served as a foundation for this study. The chapter concludes with a brief review of some of the ways that parking management has evolved in recent years. The document itself is organized into five chapters, this introduction and the four that are briefly described below.

### **Chapter 2: Residential Permit Parking in Philadelphia and Beyond**

This chapter describes how Philadelphia's RPP program has grown and the rules and regulations that govern permit parking in the city today. Philadelphia's permit parking policies regarding eligibility, pricing, and visitor parking are compared to those of several other North American cities.

### **Chapter 3: Understanding Philadelphia's Changing Context**

Some neighborhoods in Philadelphia have a parking crunch while others do not. Chapter 3 explores the demographic, travel, and development trends that are shaping demand for parking in Philadelphia. This chapter reviews citywide trends and uses the geography of the city's 18 planning districts and 38 RPP zones as a framework for presenting data.

### **Chapter 4: Exploring Potential RPP Policy Reforms**

As on-street parking capacity fills, Philadelphia must carefully balance the parking demands of residents against the supply of parking. This may mean altering the rules that currently regulate permit eligibility, pricing, and/or the process by which permit parking is initiated. Chapter 4 explores eight potential revisions to the rules governing permit parking in the city.

### **Chapter 5: Evaluating the Future of RPP in Philadelphia**

Chapter 5 presents additional parking strategies that can potentially help supplement the permit policy revisions discussed in Chapter 4. The document concludes by offering some guiding principles that can help Philadelphia decision makers evaluate the trade-offs inherent in various parking management strategies and navigate the process of implementing changes.

## Past Studies

Parking has been a longstanding issue in American cities, including Philadelphia. Numerous studies on various aspects of parking in Philadelphia have been conducted over the years. This section presents brief overviews of the most relevant studies to help establish a foundation for the data, analysis, and recommendations contained in this document. Some studies focus exclusively on Philadelphia, while others cover jurisdictions and/or issues that extend beyond the city. Parking stakeholders may wish to review these past studies to learn more about individual topics and/or conditions in particular neighborhoods.

## Preliminary Report on Philadelphia Residential Parking

*Pennsylvania Economy League, 1962*

This report assesses parking challenges in neighborhoods across the city. To determine parking demand, a team of surveyors traversed the city over three months in 1962 between midnight and 5:00 AM and found that 290,861 vehicles were parked during the observed time. The study team then developed a methodology to determine the amount of curb space that could be used for storing cars. Based on this data, the report outlines two indices for measuring the severity of parking problems by census tract. The study found that there were no substantial parking problems in approximately three quarters of the city. The study notes that parking problems were most significant in South Philadelphia; however, growing demand for parking was cited as an issue for portions of West and North Philadelphia.

## Parking in Philadelphia's Neighborhoods

*Pennsylvania Economy League, 1966*

The Pennsylvania Economy League built on their 1962 study by developing recommendations designed to guide parking requirements for the city's zoning code, as well as the provision of municipal parking lots throughout the city. The report contained 11 recommendations, including establishing a minimum parking standard of three parking spaces for every two single-family homes outside of Center City. The report also recommends that off-street parking facilities only be constructed in neighborhoods where parking capacity has reached 90 percent or higher.

---

## A Persistent Problem

Many users, including residents, workers, visitors, patrons, and deliveries, place demands on the curbside portions of modern streets. However, curbside demand is nothing new. Since the start of the automobile era, cities have struggled to balance the multiple and often conflicting demands of curbside users. A 1949 brochure created by the Philadelphia Highway Traffic Board used the ominous image below to depict the dual impacts of traffic congestion and inadequate parking on Center City. Insufficient residential parking was identified as a serious issue as far back as 1962. The following quote from a parking study conducted in 1966 identifies many of the same parking challenges facing the city today.



“Many of Philadelphia’s residential areas were built up before the automobile age. There are mainly row house neighborhoods...The houses themselves are mainly 14 to 16 feet wide, considerably less than the 22 feet required to park a car, and they do not have garages. Many of these houses face streets which are so narrow that parking must be restricted to one side to permit one lane of moving traffic; some of the streets are so narrow that parking should be prohibited altogether. With the growth of car ownership in the city, it is apparent that many of the older sections would have residential parking problems as curb spaces become increasingly hard to find.”

*Parking in Philadelphia's Neighborhoods*  
*Pennsylvania Economy League, 1966*

Source: Philadelphia Highway Traffic Board

### **Design Guidelines for Off-Street Parking**

*Philadelphia City Planning Commission, 2010*

This document was compiled to help guide the development of surface parking lots, off-street residential parking, and parking structures throughout the city. The guidelines describe the city's requirements and the Philadelphia City Planning Commission's policies for proposed parking facilities. It also provides suggested design solutions to assist applicants in navigating the review process and building context-sensitive facilities.

### **Philadelphia 2035 and associated District Plans**

*Philadelphia City Planning Commission, 2011-2018*

The city's expansive [citywide vision](#) and the associated 18 district plans provide a framework for the future growth and development of Philadelphia. One of the key themes that emerges from *Philadelphia 2035* is that the city should seek to reduce the overabundance of parking in certain locations and instead focus on improving transit service and ensuring that the built environment supports alternative modes of travel.

Parking-related strategies and recommendations contained in various district plans include:

- discouraging surface parking lots as the primary frontage along major commercial corridors;
- encouraging transit-oriented development around transit stations to reduce parking demand and increase transit ridership;
- instituting parking maximums for certain community commercial mixed-use zoning districts in Center City;
- increasing the supply of parking in dense residential neighborhoods and along important commercial and industrial corridors;
- adding parking at select transit stations;
- promoting shared parking strategies and facilities; and
- using parking revenue to fund streetscape improvements or other local projects.

### **Connect: Philadelphia's Strategic Transportation Plan**

*City of Philadelphia Office of Transportation, Infrastructure, and Sustainability, 2018*

The *Connect* plan presents the city's vision for a transportation system that is safe, affordable, accessible, and reliable at moving Philadelphians, visitors, and commerce. This comprehensive plan touches on several parking-related topics, including the growth of automobile ownership and the numerous competing interests, including deliveries, residential parking, commercial parking, and rideshare drop-off and pick-up, vying for its limited curbside space throughout the city. The plan identifies permit parking as one of the tools that the city can refine to balance the interests of residents and visitors, and calls for piloting additional policies that can support the RPP and other existing parking management strategies.

**Center City Philadelphia Parking Inventory (2015)**  
**University City Philadelphia Parking Inventory (2017)**  
*Philadelphia City Planning Commission*

The Philadelphia City Planning Commission regularly surveys the location and use of public parking spaces in Center City and University City. [These reports](#) document trends related to parking costs and occupancy rates and identify best practices for managing off-street parking facilities. These inventory reports are conducted to collect and share information that can be used to help ensure that parking facilities meet the needs of commuters, visitors, businesses, and residents, while also advancing the city's broader goals of economic development and sustainability.

**The Automobile at Rest: Toward Better Parking Policies in the Delaware Valley**  
*DVRPC, 2008*

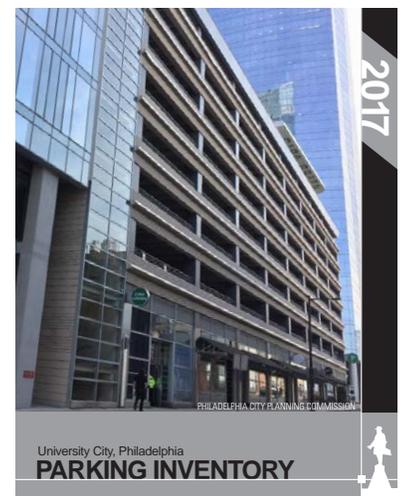
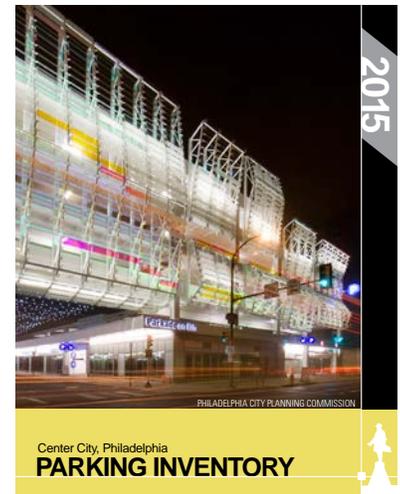
[DVRPC's 2008 study](#) reviews the most common parking policies found in our region and provides planners, local leaders, and citizens with information and best practices for designing, managing, and regulating parking. The report highlights the role that municipal parking requirements play in shaping the built and natural environment and explores scenarios where municipal parking ordinances may result in too much parking or requirements that are not flexible enough for mixed-use settings. The report also examines ways to reduce parking demand and improve parking supply where appropriate or necessary through parking management strategies, such as pricing, car-sharing, and shared parking, among others. Different types of parking are examined, from surface parking to underground parking to bicycle parking, along with innovative design treatments.

**Quantified Parking: Comprehensive Parking Inventories for Five U.S. Cities**

*Research Institute for Housing America (RIHA), 2018*

RIHA used data from parking authorities, property tax assessments offices, the US Census, satellite images, and Google Maps to create what it calls the "[first complete parking inventories](#)" for five U.S. cities: New York; Philadelphia; Seattle; Des Moines; and Jackson, Wyoming. After determining the total number of parking spaces in each city—whether on the street, in lots, or structures—the study team calculated the overall estimated replacement costs of parking infrastructure based on local land prices.

Based on their analysis, the study team found that four of the cities had much more parking than they needed. Locally, the researchers determined that Philadelphia contains 2.2 million parking spaces, two-thirds of which are off-street parking spaces. They found that the number of parking spaces per acre (25.3) is 3.7 times greater than the number of households per acre (6.8). Furthermore, they determined that the city's 2.2 million parking spaces have an estimated replacement cost of over \$17 billion. The authors suggest that their research reveals an investment in parking that is out of balance with the current demand for parking in almost all cases, and even less in tune with what they suggest appears to be declining future demand.



Parking inventories for Center City and University City were last conducted by the Philadelphia City Planning Commission in 2015 and 2017, respectively.

Every parking space also represents an opportunity to accommodate bicycle lanes, car-shares, and other more sustainable and efficient forms of transportation.

## The Evolution of Residential Parking Management Theory

Cities across the country have embraced parking permit programs as the most direct way of managing parking in residential neighborhoods. Despite their popularity, RPPs are not without their critics. The most common criticism of RPP is that these programs privatize public space, typically at a very nominal cost. RPP programs function by taking a publicly owned asset, the right-of-way, and reserving it only for those who live adjacent to or near it, even though public streets are paid for by all taxpayers. Others may contend that RPP hurts businesses in commercial areas. Although, a permit system cannot be instituted on streets that are primarily commercial, entire blocks around those businesses can be. These criticisms are part of a larger conversation about parking that is taking place in cities around the country. The way that we define parking problems and evaluate potential solutions is changing, and any discussion about the future of RPPs must be informed by recent trends in residential parking management.

In 1962, Philadelphia City Planning Commission Executive Director Edmund Bacon remarked, "We think it better not to fight with the automobile... but rather to treat it as an honored guest and cater to its needs."<sup>4</sup> This sentiment, common in cities throughout the country at the time, reflected the belief that highway access and ample convenient parking would help the city compete with its burgeoning suburbs. Mayors and public officials across the nation hoped that new highways would encourage people to drive downtown from the suburban fringe, helping to revitalize downtowns.

However, in recent decades, many planners and public officials have become more aware of the potentially negative impacts of parking on congestion, air quality, economic development, and the pedestrian environment. Where once the parking problem was identified as a problem of too little supply, the problem is increasingly now viewed as the inadequate management of existing supply and perhaps even too much supply in some places.

Modern planning theory acknowledges parking as an important part of a city's transportation and land use systems which must be priced and managed properly. Viewed at the regional level, parking can be

---

## Focus on Parking Minimums

No discussion of parking management is complete without addressing parking minimums. Minimum parking requirements, common in many communities since the middle of the 20th century, are intended to ensure that new development does not overwhelm local on-street parking. However, the practice of requiring all new buildings to provide abundant off-street parking may create more problems than it solves. Minimum parking requirements are often viewed as encouraging unnecessary vehicle ownership, making development more expensive, and spreading development over a larger area, which in turn reduces walkability and degrades the character of the built environment.

As a result, several cities have considered removing minimum parking requirements, and in some cases, replacing them with maximum parking allowances. Some cities encourage or require that on-site car- or bike-sharing services and/or bicycle parking be provided in lieu of off-street parking spaces. Donald Shoup, a professor of urban planning at the University of California, Los Angeles, is recognized as one of the foremost authorities on parking management and the negative repercussion of off-street parking requirements. More information on this topic can be found in his book, *The High Cost of Free Parking*.

constructed and managed in conjunction with other land uses to support transit systems, enhance the vitality of downtowns and commercial areas, and help limit sprawling development from overtaking valuable open space. At the local level, parking strategies can help minimize congestion, lower housing costs, and preserve neighborhood quality of life.

Although this study focuses on RPPs, a comprehensive approach to parking management must include:

- reviewing off-street parking requirements for various land uses;
- coordinating on- and off-street parking capacity and pricing;
- improving the reliability and frequency of transit alternatives; and
- enhancing pedestrian safety and nonmotorized access to transit.

*Connect: Philadelphia's Strategic Transportation Plan* recognizes that many people in Philadelphia still use and depend on cars for transportation. However, this document emphasizes that vehicle use should be supported in a way that respects everyone else who may also be using the street. In a growing number of cities, the demand for parking is being managed through a combination of pricing, shared parking facilities, and reduced off-street parking requirements. Although citizens and public officials are often hesitant to reduce parking capacity, some cities are identifying compelling alternative uses for these spaces, including exclusive bus lanes, widened sidewalks, bike-share stations, shared spaces, and bike lanes.

---

## Making Parking Decisions in San Francisco

The San Francisco Municipal Transportation Agency (SFMTA) is a department of the City and County of San Francisco responsible for the management of all ground transportation in the city. SFMTA uses a clearly articulated approach to managing on-street parking that is designed to enhance access for all modes of travel, promote economic opportunity, and reduce the overall demand for parking. SFMTA employs a combination of parking meters, RPPs, time limits, and color curb regulations to achieve these goals. The agency's 2012 document, *Policies for On-Street Parking Management*, outlines the principles that the agency uses to guide parking management decisions.

- **Limited right-of-way should be well used:** Policies should maximize the utility of any right-of-way dedicated to parking vehicles and discourage long-term, on-street vehicle storage in order to improve the use of the public right-of-way and the usable parking supply.
- **Parking availability is critical:** When a minimum level of availability is achieved, it is easier to find a parking space; drivers double park and circle less; access to businesses and public safety are improved, as is transit performance.
- **Parking policies are designed to encourage travel by public transit and sustainable modes of transportation:** The SFMTA manages parking to prioritize public transit, walking, bicycling, and the needs of paratransit and commercial deliveries.
- **Managing parking demand promotes San Francisco's commercial vitality:** On-street parking spaces in commercial and mixed-use areas are intended for commercial use when businesses are open.
- **Managing parking demand improves quality of life in San Francisco's residential neighborhoods:** In 1976 the city established a permit system to restrict long-term parking of cars by commuters and employees in certain designated areas while exempting residents from those restrictions.
- **Parking management is a tool to reduce greenhouse gas emissions and other pollutants:** The SFMTA manages parking to minimize environmental impacts.



## CHAPTER 2

# Residential Permit Parking in Philadelphia and Beyond

RPP programs have historically been implemented in cities across the world to protect parking for local neighborhood residents.

These programs function by restricting the parking on certain streets to residents of a defined area. In a conventional RPP system, motorists without a permit are typically allowed to park for a certain amount of time, a “grace period” that commonly lasts two hours, during a specified time frame, such as 8:00 AM to 8:00 PM, Monday through Saturday. Permit holders are exempt from posted time limits on RPP blocks. Furthermore, permits are only valid on blocks posted for permit parking and only those posted with the district number for which the permit is issued. For example, a permit issued for District 1 is not valid in District 3. Permit holders are still required to comply with all other regulations, such as “No Parking,” “No Stopping,” or “Loading Zone.” Importantly, ownership of a permit does not guarantee the availability of a parking space on a given street or even within a designated district.

RPPs are often thought to be most effective in neighborhoods that are impacted by high parking demand from neighboring uses, such as commercial corridors or institutions. In these situations, RPPs can ensure that residential neighborhoods are not overwhelmed by employees, visitors, or commuters, thereby enabling local residents to park their vehicles more easily. RPPs can be especially important in older neighborhoods where many residences were built with limited or no off-street parking. In theory, a successful RPP would enable residents to park with a permit while enough spaces are left on the street to accommodate others visiting local businesses or running other errands.

### RPP in Philadelphia

The Philadelphia Parking Authority (PPA) is the entity responsible for administering Philadelphia’s residential permit program. The PPA was created on January 11, 1950, by an Ordinance of the Philadelphia City Council pursuant to an act of the General Assembly of the Commonwealth of Pennsylvania enacted in 1947. In 1982, the City of Philadelphia assigned responsibility for managing on-street parking resources to the PPA. The following year, the city transferred several parking-related functions, including issuing RPPs and collecting revenue from parking meters and tickets, to the PPA. Under the terms of the original agreement, all net program revenue was transferred to the City of Philadelphia. On February 10, 2005, Governor Rendell signed Act 9 of 2005, which established a formula by which net revenue from the on-street parking program is split between the City of Philadelphia and the School District of Philadelphia.<sup>1</sup>

Since the RPP program was established in 1982, a total of 38 permit districts have been created (see Figure 2). These districts vary significantly

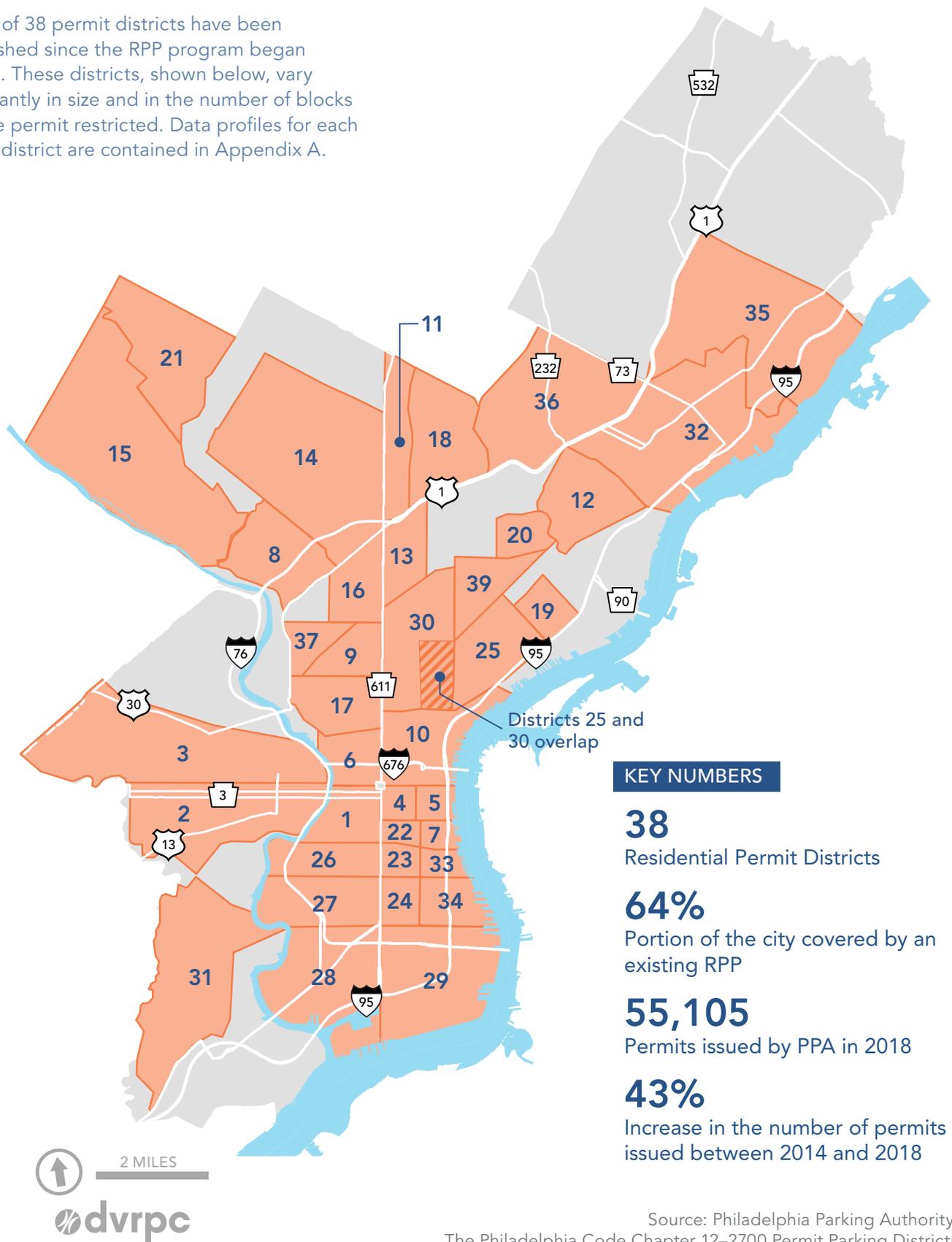


Signs, like these posted throughout Philadelphia, identify blocks with RPP.

In theory, a successful RPP would enable residents to park with a permit while enough spaces are left on the street to accommodate short-term parking for people visiting local businesses or running other errands.

## Figure 2: Residential Permit Districts

A total of 38 permit districts have been established since the RPP program began in 1982. These districts, shown below, vary significantly in size and in the number of blocks that are permit restricted. Data profiles for each permit district are contained in Appendix A.



### KEY NUMBERS

**38**  
Residential Permit Districts

**64%**  
Portion of the city covered by an existing RPP

**55,105**  
Permits issued by PPA in 2018

**43%**  
Increase in the number of permits issued between 2014 and 2018

Source: Philadelphia Parking Authority, The Philadelphia Code Chapter 12-2700 Permit Parking Districts

**Table 1: Residential Permit Districts**

District	Size Square Miles	Permits Issued		Percentage Change* 2014–2018
		2014	2018	
1	1.2	7,635	8,947	17%
2	3.8	2,070	3,248	57%
3	5.7	1,250	1,664	33%
4	0.4	1,659	1,810	9%
5	0.5	1,815	1,838	1%
6	1.0	3,914	4,443	14%
7	0.4	2,665	3,017	13%
8	2.0	946	1,136	20%
9	0.9	128	172	34%
10	2.3	2,084	3,457	66%
11	1.3	507	496	-2%
12	2.0	135	233	73%
13	1.1	111	169	52%
14	7.2	413	381	-8%
15	7.7	310	1,314	324%
16	1.2	147	194	32%
17	1.5	1,070	1,888	76%
18	2.4	1	256	25,500%
19	0.7	19	26	37%
20	0.7	0	0	—
21	3.2	233	375	61%
22	0.3	2,720	3,065	13%
23	0.4	2,212	3,337	51%
24	0.6	3,093	3,847	24%
25	2.6	942	2,197	133%
26	1.3	565	2,896	413%
27	1.9	1,237	2,842	130%
28	4.0	90	82	-9%
29	4.4	292	413	41%
30	2.9	41	53	29%
31	4.8	14	153	993%
32	6.2	0	0	—
33	0.5	236	813	244%
34	1.1	61	515	744%
35	6.7	0	12	—
36 **	4.5	—	—	—
37 **	0.7	—	—	—
39 **	1.2	—	—	—

\* In some cases, larger percentage increases in permit sales are the result of the relatively small number of residential permits issued in 2014. For example, the number of permits sold in District 31 increased by nearly 1,000% between 2014 and 2018. However, this increase is based on the sale of 14 permits in 2014, compared to the 153 in 2018.

\*\* Districts 36, 37, and 39 were established in 2019. No data on permit sales was available at the time of this study.

Source: Philadelphia Parking Authority

in size. The smallest, District 22, regulates a 0.3-square-mile area of the Bella Vista neighborhood bounded by Broad, South, and 6th streets and Washington Avenue. Meanwhile, District 15 covers roughly 7.6 square miles of the city's Manayunk and Roxborough neighborhoods.

Similarly, these districts vary significantly in the number of block faces that are permit restricted. Based on data provided by the PPA, District 1, which was established in 1982 and covers a dense, mixed-use portion of Center City West bounded by Market Street, Broad Street, Washington Avenue, and the Schuylkill River, contains over 240 permit-regulated blocks. By comparison, newer districts and districts encompassing less dense portions of the city typically contain far fewer permit-restricted blocks. According to City Ordinance 547-A, permit parking cannot be posted on a block when commercial and/or institutional uses account for more than 50 percent of property on the ground-floor level. In total, 64 percent of the city is covered by one of the established residential parking permit districts.

Data profiles highlighting permit activity and key stats related to population, development, income, and travel behavior for each of Philadelphia's 38 permit districts can be found in Appendix A.

This study analyzed RPP sales data in Philadelphia between 2014 and 2018. In 2018, 55,105 permits were issued citywide, an amount that represents an increase of 16,519 permits (43 percent) from 2014. Permit sales vary significantly across permit districts; see Table 1 for information on permit sales activity in each of the 38 permit districts between 2014 and 2018. More information on parking trends across permit parking districts is presented in Chapter 3. Permit district profiles featuring demographic and social data for each of Philadelphia's 38 residential permit districts are contained in Appendix A.

## Current RPP Rules and Regulations

### Eligibility

To be eligible for an annual RPP sticker, Philadelphia residents must live within an established permit parking district and their vehicle must display Pennsylvania license plates and be registered to their home address. There is no limit on the number of permits that may be purchased by a household. Residents may also purchase temporary permits that last for 15 or 30 consecutive days.

### Permit Fees

The PPA introduced a tiered pricing system for parking permits in 2013. The tiered system replaced a flat \$20 permit fee, which had been in place since 1992. The annual fee for a permit is now based on the number of vehicles attributed to a household.

- first vehicle in a household: \$35;
- second vehicle in a household: \$50;
- third vehicle in a household: \$75;
- four or more vehicles in the same household: \$100.

In 2018, the vast majority (79 percent) of permits issued were for the first vehicle within a household. Permits for third and fourth vehicles associated with a household accounted for less than three percent of all permit sales. See Figure 3 for more information.

## Visitor Parking

Visitors may park for the duration of the posted time limit (grace period) on a permit-restricted street. For longer stays, residents can obtain a temporary parking permit for their guests. Visitor day passes are also available in books of five or 10 passes. Visitors may also park without limit on blocks that do not have permit parking.

## Establishing Permit Parking

Residents interested in creating permit parking on their street can contact the PPA to request a petition package. Interested residents will need to obtain signatures of support from at least 60 percent of residents on that street, including the renters/owners of any multifamily housing on that block. Completed petition packages need to be submitted to the local councilperson who will then forward to the PPA along with a letter of support.

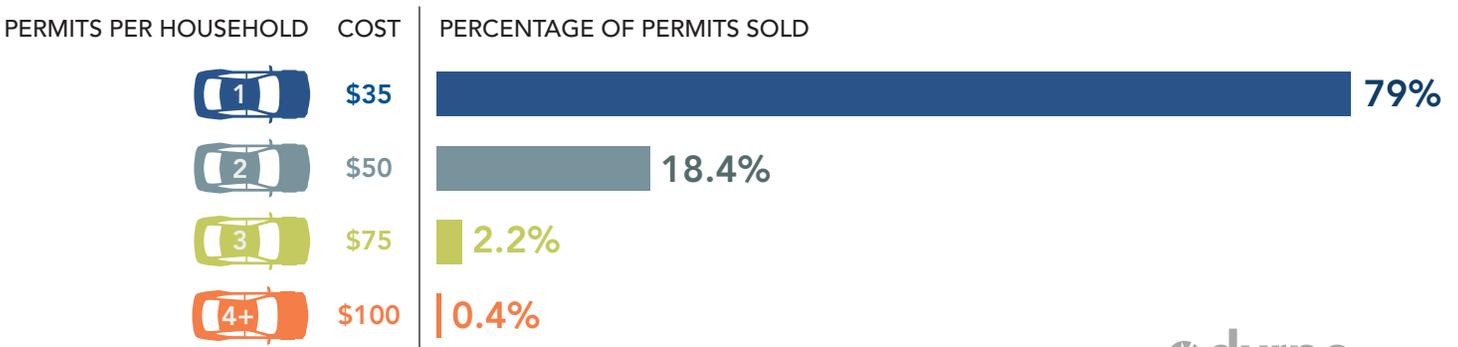
## Enforcement

Parking enforcement officers patrol permit districts to enforce the posted time limit. When a vehicle without a permit is parked overtime, it is ticketed. Vehicles with permits will be ticketed if the numbers punched on the permit do not match the first and last digits of the license plate number. Permitted vehicles will also be ticketed if the month and year punched indicate that the permit has expired.

### Figure 3: Permit Types (2018)

Over 55,000 residential parking permits were sold in 2018. Figure 3 shows the distribution of these permits according to the number of vehicles per household. Philadelphia’s tiered pricing system charges an escalating price per permit based on the number of permits obtained by a household. The vast majority (79 percent)

of permitted vehicles in the city qualify as the first vehicle in a household, costing their owners \$35 per year. Another 10,141 vehicles (18.4 percent) are permitted as the second vehicle in a household. Households with three and four permitted vehicles only accounted for a combined 2.6 percent of all permitted cars in 2018.



Source: Philadelphia Parking Authority

## Comparing RPP Policies

RPP zones are not a perfect solution. While they may be beneficial in many neighborhoods, they often cannot completely solve issues related to the supply of, and demand for, parking spaces in dense residential neighborhoods and mixed-use areas. Other factors, such as excessive curb cuts that reduce the pool of available on-street parking spaces or business customers searching for free parking in a neighborhood rather than paid parking along arterial streets, can lessen the effectiveness of RPPs. In some places, residents alone may own more vehicles than there are spaces to park them and so they compete for space, not only with “outsiders” but also with each other. Signs that a given RPP may be under stress include high occupancy rates despite the widespread adoption of permit restrictions in a neighborhood and long parking search times in which residents may frequently end up parking several blocks from their homes.

In general, RPPs have been slower to innovate than other areas of transportation planning and policy in North American cities. The literature suggests that many RPP programs evolve through similar stages. First, residential parking restrictions are introduced to address problems like commuters, employees, or visitors flooding residential neighborhoods. Then, restricted parking zones are incrementally expanded to other neighborhoods across the city. Finally, the discovery that some districts may not be functioning as effectively or efficiently as they once were prompts a reexamination of the overall structure and operation of the program. Based upon this reexamination, policy reforms designed to solve problems of growth and/or realign program goals with broader city goals related to development, land use, transportation, and sustainability are introduced. As Philadelphia enters this third stage, it can learn from the growing number of cities that are experimenting with and introducing RPP policy reforms. This section compares the RPP policies of several cities as they relate to eligibility, pricing, and visitors.

This information is presented to survey the state of RPP policy and generate discussion about which policies may be applicable to permit districts in Philadelphia. Some cities were selected for this comparison because of their pioneering approaches to managing on-street parking, while others were chosen because their size, population, and level of transit access are like that of Philadelphia. Although this type of survey can be informative, it is important to remember that each city has its own policy goals; which are influenced by a combination of existing regulations, resident attitudes, and current political administrations. Accordingly, there is no one-size-fits-all approach to structuring a residential parking permit program.

## Eligibility

Eligibility for residential parking permits can be assessed along two dimensions:

- Can permits be obtained by nonresidents?
- What restrictions, if any, are placed on residential households?

Although Philadelphia issues contractor parking permits that allow licensed contractors to park in metered and timed parking zones without limit, Philadelphia's RPP program is limited to residents only, with no exceptions. In this way, Philadelphia is similar to cities such as Austin, Boston, Pittsburgh, and Toronto. Other cities have expanded eligibility beyond residents to include individuals working in residential areas, such as home health care workers, child care providers, and school teachers.

Currently, Philadelphia does not place any limits on the number of permits that are available to residents. However, some cities have implemented various restrictions that range from the number of parking passes a household can receive to what types of households are eligible to receive a residential parking pass. Table 2 summarizes both aspects of permit eligibility for nine cities.

**Table 2: Comparing Permit Eligibility**

City	Nonresident Eligibility	Resident Restrictions
Philadelphia	None	No limitations
Austin, TX	None	Most streets have a limit of two permits per household, although some streets have a limit of one permit per household.
Baltimore, MD	Permits are available for medical and child care providers. Homeowners must provide a notarized letter stating the days and times needed for care.	Limit of four permits per household.
Boston, MA	None	No limitations
Pittsburgh, PA	None	No limitations
Portland, OR	Each zone has its own combination of residential, business, and visitor permits available for purchase. The number of permits that is available to a businesses is capped at 50 and calculated based on the total number of employee hours per week. Businesses requesting more than 30 permits must complete a survey on their transportation demand management strategies and practices.	In some districts, permits are limited to one per licensed driver. The number of permits allowed per address is also reduced proportionally by the number of off-street parking spaces available to that address. In some districts, permits are further restricted based on the age of a building, with the effect that newer buildings are eligible for fewer permits.

**Table 2: Comparing Permit Eligibility (continued)**

City	Nonresident Eligibility	Resident Restrictions
San Francisco, CA	Business owners, medical and child caregivers, teachers, diplomats, active military, and students may be eligible for permits.	General limit of four permits per household; however, in two districts, permits are restricted to one permit per driver and a total of up to two per household.
Seattle, WA	Businesses in certain light rail zones are eligible for up to two guest passes that may be used by employees. Businesses in all other areas can request parking for employees if they meet specific criteria.	Limit of four permits per household.
Toronto, ON	None	The number of permits issued in some areas is capped at 110 percent of permitted spaces. Once this cap has been met, a wait list is created.
Washington DC	Renewable health care provider parking permits are available for individuals providing at-home nursing care.	No limitations

### Pricing

The cost of permits varies significantly among the nine cities surveyed for this study. Annual residential parking permits are \$20 in Pittsburgh; \$35 in Washington, DC; \$65 in Seattle; and free in Boston. Including Philadelphia, the average cost for a household’s first residential parking permit in the cities discussed here is \$61. Raising the cost of permits is one of the first strategies that is typically discussed as part of potential RPP reforms. The idea is that the relatively inexpensive cost of most parking permits may incentivize some households to store more vehicles than they might if permits were more expensive. However, adjusting the costs of permits may be more complex than it first appears. In some states like Pennsylvania, legislation requires that there must be a connection between the price of parking permits and the actual costs of administering the permit program.

Including Philadelphia, the average cost for a household’s first parking permit among the cities surveyed here is \$61.

Philadelphia’s citywide tiered pricing scheme, in which the second, third, and fourth cars registered to a household are progressively more expensive, is an effort to help control the number of cars stored in the city. However, Philadelphia’s tiered system is somewhat of an anomaly—most of the cities surveyed here use the same flat rate for each permit issued. The most significant differential in permit prices is found in Toronto, the most expensive city surveyed. There, the cost of a second permit is \$626.52,

\$425 more than the cost of the first. For residents with access to on-site parking, the cost of a “convenience” permit rises to nearly \$900. Portland employs a more geographically specific approach to permit pricing. Permits start at \$75, but surcharges that can significantly raise the cost of a permit are applied in districts where parking is especially problematic.

Some cities offer discounts on parking permits to certain populations. For example, qualifying low-income households in Seattle can obtain a parking permit for \$10 instead of the normal price of \$65. In Washington, DC, seniors can purchase a permit for \$25, a savings of \$10.

**Table 3: Comparing Permit Pricing**

City	Permit Cost(s) (Annual)
Philadelphia	First permit: \$35, second permit: \$50, third permit: \$75, subsequent permits: \$100
Austin, TX	\$15 per permit
Baltimore, MD	\$20 per permit
Boston, MA	No charge
Pittsburgh, PA	\$20 per permit
Portland, OR	Permits generally cost \$75; however, some permit districts carry a surcharge that raises the price of a permit. For example, permits in Area M carry a \$120 surcharge, raising the total cost of a permit to \$195.
San Francisco, CA	\$144 per permit
Seattle, WA	\$65 per permit
Toronto, OR	For addresses with no access to on-site parking, the first permit costs \$201. Additional permits cost \$626.52. For residents with access to on-site parking, a permit costs \$881.40.
Washington, DC	\$35 per permit

## Visitor Parking

With few exceptions, most cities incorporate temporary and/or visitor parking provisions into residential parking permit programs. Boston appears to be one of the exceptions. Boston makes no special provisions for guests, and permit zones are permit parking only. Although a small number of visitor parking spaces with short-term time limits (typically two hours) exist, guests are advised to find paid parking off-street or on a nearby commercial street. Table 4 compares visitor parking accommodations across the cities surveyed for this study.

**Table 4: Comparing Visitor Parking Options**

City	Visitor Accommodations
Philadelphia	Visitors may use temporary permits that are available for 15 (\$15) or 30 (\$30) days. After the permit period has expired, households must wait 45 days before they can get another temporary pass. Residents can also purchase day passes. One book of five passes costs \$35. Residents can purchase a maximum of 10 passes every 90 days.
Austin, TX	Residents can purchase two visitor hang tags at a cost of \$15 each. Residents may also purchase up to 20-day passes a month per resident address. Day passes are good for a 24-hour period and cost \$1 each.
Baltimore, MD	Most districts enable residents to purchase one or two visitor passes (\$20 each) that allow guests to park in an RPP while visiting a resident. Residents can also request up to four single-day visitor permits a month. These free visitor permits enable a guest to park for up to 24 hours.
Boston, MA	Residents with a current parking permit may obtain a temporary permit for rental cars, but no visitor passes are available.
Pittsburgh, PA	Residents can purchase an annual visitor parking pass for \$1.
Portland, OR	Each household may purchase one guest pass for \$75. Daily guest passes are also available and cost \$15 for a book of 10 permits.
San Francisco, CA	Residents may purchase temporary one-day and weekly permits for visitors. Each household may purchase up to 20 one-day permits and a total of 32 weeks of weekly permits per year. Both types of temporary passes use a graduated pricing system in which the cost increases with the number/length of passes purchased. For example, the first five one-day permits cost \$6 per permit, while the cost increases to \$13 per permit for the 16th through 20th one-day permit.
Seattle, WA	Each household may purchase one guest permit. Guest permits cost \$30 for permit holders and \$65 for those without a permit.

**Table 4: Comparing Visitor Parking Options** (continued)

City	Visitor Accommodations
Toronto, ON	Residents can obtain temporary permits that are good for 24 hours, 48 hours, or one week. These permits cost \$14.16, \$21.24, and \$34.74, respectively. Residents can purchase temporary permits up to a maximum of eight consecutive weeks at a time.
Washington DC	Residents may obtain free 15-day visitor parking permits from a police station or substation in the ward in which they reside. Most residents are also eligible for one free visitor parking pass, which allows guests to park for more than two hours on permit-restricted blocks.



## CHAPTER 3

# Understanding Philadelphia's Changing Context

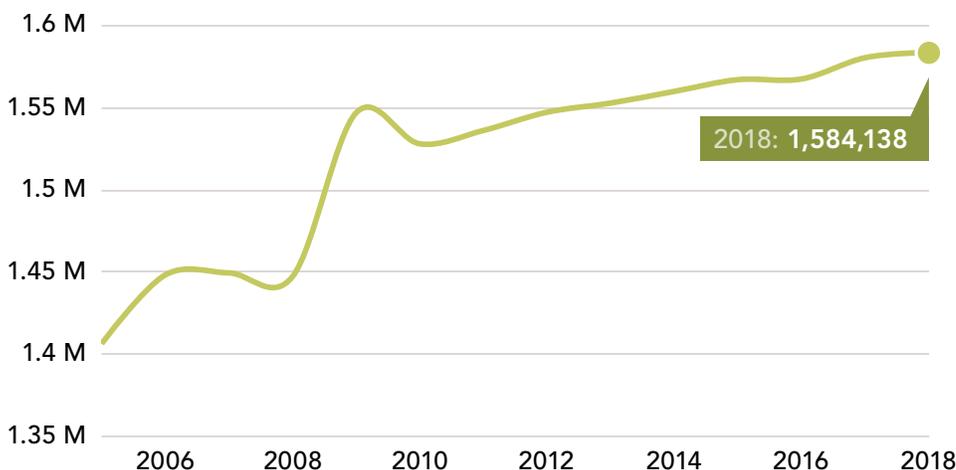
On its face, rising demand for on-street parking in Philadelphia is being fueled by a combination of population growth and increasing development.

However, understanding the factors that influence the demand for, and supply of, on-street parking in various neighborhoods can be complicated. Parking demand is not uniform across the city because historic development patterns and the distribution and character of new residential construction have varied significantly across the city. At the same time, several factors have the ability to diminish the supply of on-street parking spaces in a neighborhood, including abandoned vehicles, curb cuts, and residents who use their garages for purposes other than car storage. Furthermore, any individual household's decision to obtain a vehicle (or multiple vehicles) is influenced by a variety of considerations, including family size and composition, income, travel needs, and proximity to transit.

This chapter explores how the context for residential parking in Philadelphia is changing by presenting a variety of maps, charts, and tables that highlight demographic, socioeconomic, and development characteristics that influence parking demand. Information and trends related to population, development, employment, travel, and income are presented at two geographic scales: citywide and planning district. The chapter concludes by highlighting more specific parking-related data for select residential parking permit districts and neighborhoods.

### CITYWIDE DATA AND TRENDS

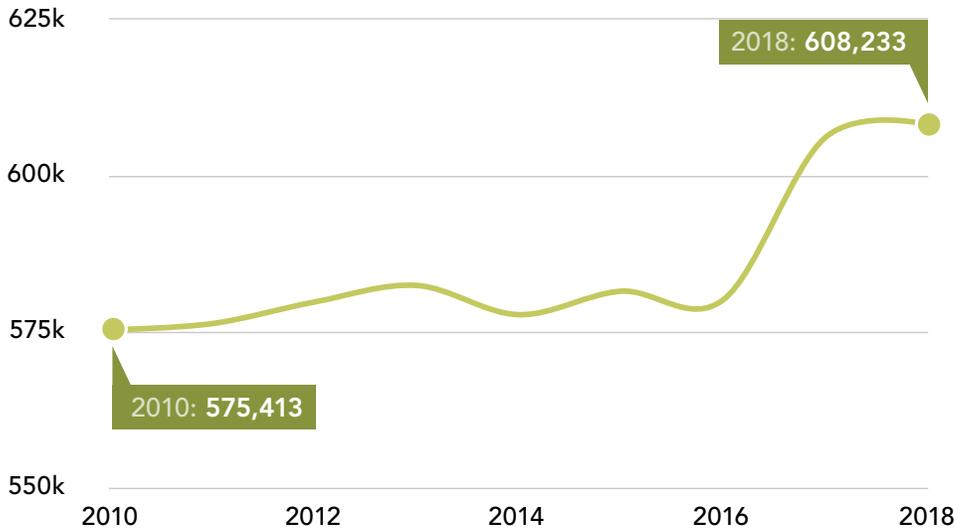
**Figure 4: City of Philadelphia Population (2005–2018)**



Source: U.S. Census Bureau

In general, increased competition for on-street parking spaces in some neighborhoods reflects the population growth that Philadelphia has experienced in recent years. After more than five decades of decline, the city has grown for 12 straight years. Between 2010 and 2018, the number of employed residents has grown by nearly 20 percent, from 597,521 to 741,190. The average household size has also ticked up during that time from 2.58 to 2.63.

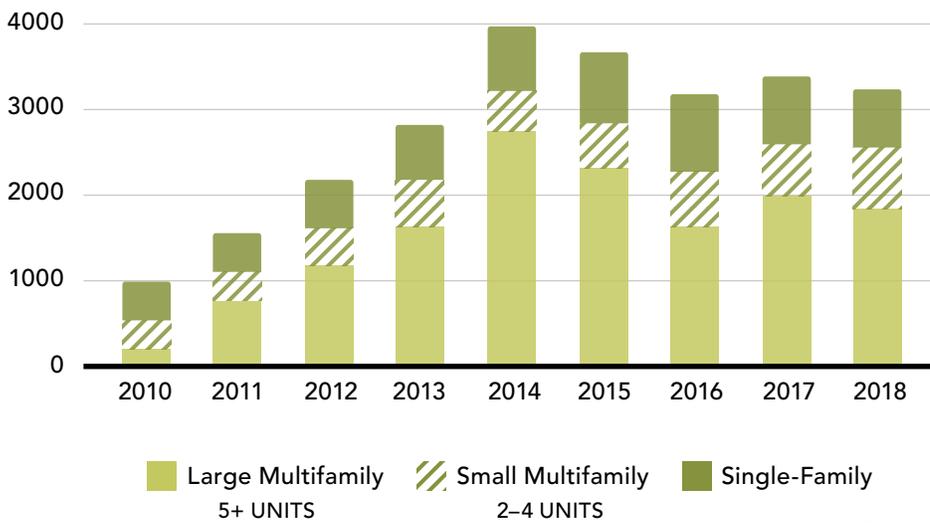
**Figure 5: Occupied Housing Units (2010–2018)**



Source: U.S. Census Bureau

The number of occupied housing units in Philadelphia grew by nearly 6 percent between 2010 and 2018. During that same period, the total number of housing units grew from 670,022 to 688,846 (2.8 percent).

**Figure 6: Building Permits Issued in Philadelphia by Type (2010–2018)**

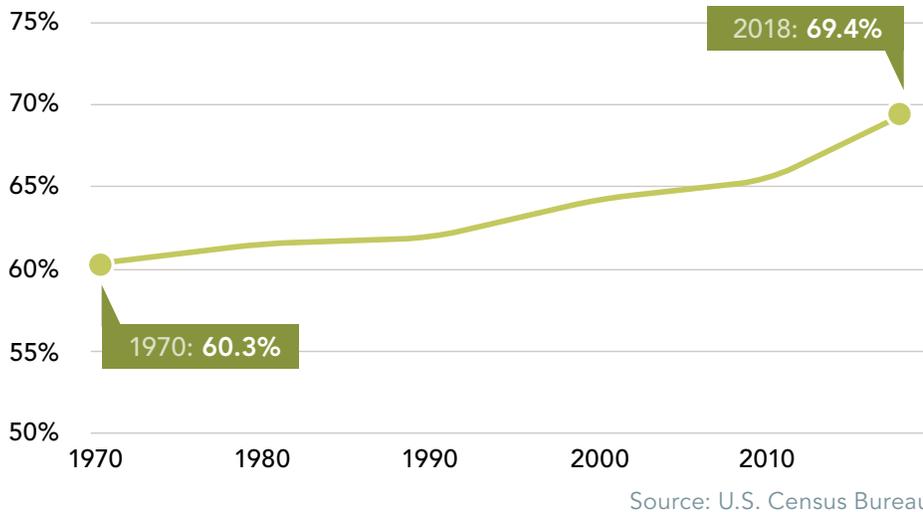


Source: U.S. Census Bureau

Development activity in Philadelphia picked up significantly in the years following the great recession of 2007–2009. Between 2014 and 2018, the city issued an average of nearly 3,500 building permits, compared to an average of 1,881 between 2010 and 2013.

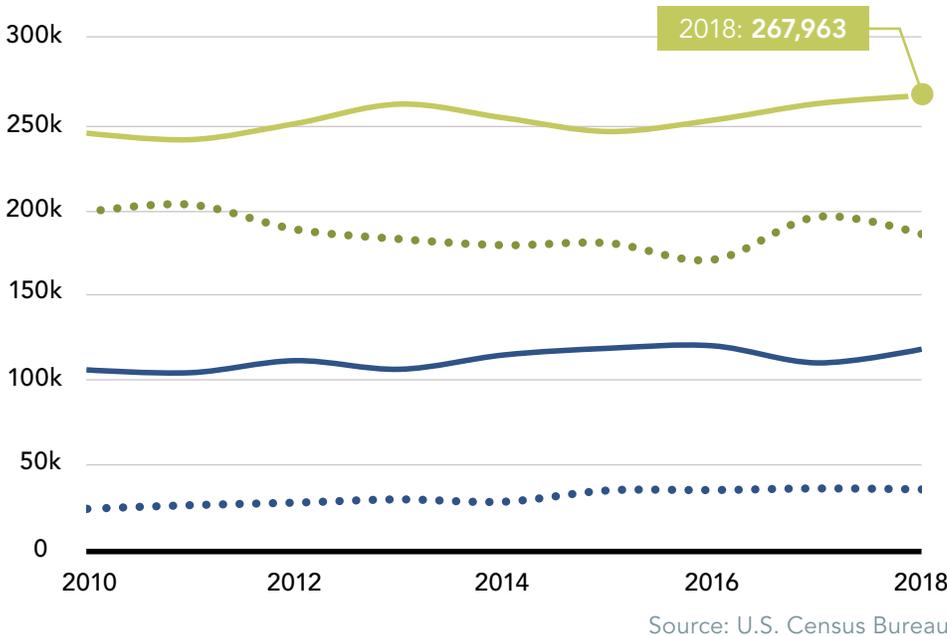
Aside from 2010, larger multifamily developments (those with five or more units) have consistently accounted for more than half of building permit activity.

**Figure 7: Percentage of Households with One or More Vehicles**



The percentage of Philadelphia households that own a vehicle has increased steadily over the last 50 years. According to U.S. Census data, nearly 70 percent of Philadelphia households owned at least one vehicle in 2018. As illustrated on page 6, Philadelphia experienced the largest increase in car owners among the 50 largest cities between 2010 and 2018.

**Figure 8: Number of Households by Vehicle Availability**



**CHANGE 2010–2018**

**1-CAR HOUSEHOLDS**  
-22,112 | +9.0%

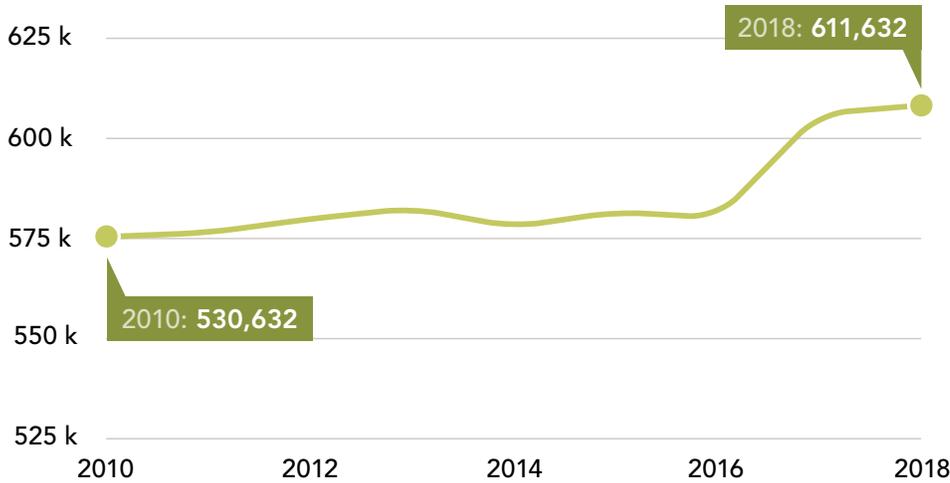
**0-CAR HOUSEHOLDS**  
-12,995 | -6.5%

**2-CAR HOUSEHOLDS**  
+12,221 | +11.5%

**3+-CAR HOUSEHOLDS**  
+11,482 | +47.5%

Figure 8 tracks the change in the number of households by vehicle availability between 2010 and 2018. The number of one-car households, the most common vehicle arrangement, increased by over 22,000 (9 percent) during this period. Two-car households grew by 12,221 (11.5 percent). Although households with three or more cars are the least common household type, this group experienced the largest percentage increase (47.5 percent) between 2010 and 2018. Zero-car households are the only group to see a decline in numbers during this period. Despite the overall number of households increasing by nearly 33,000 between 2010 and 2018, the number of carless households decreased by 12,995 (6.5 percent).

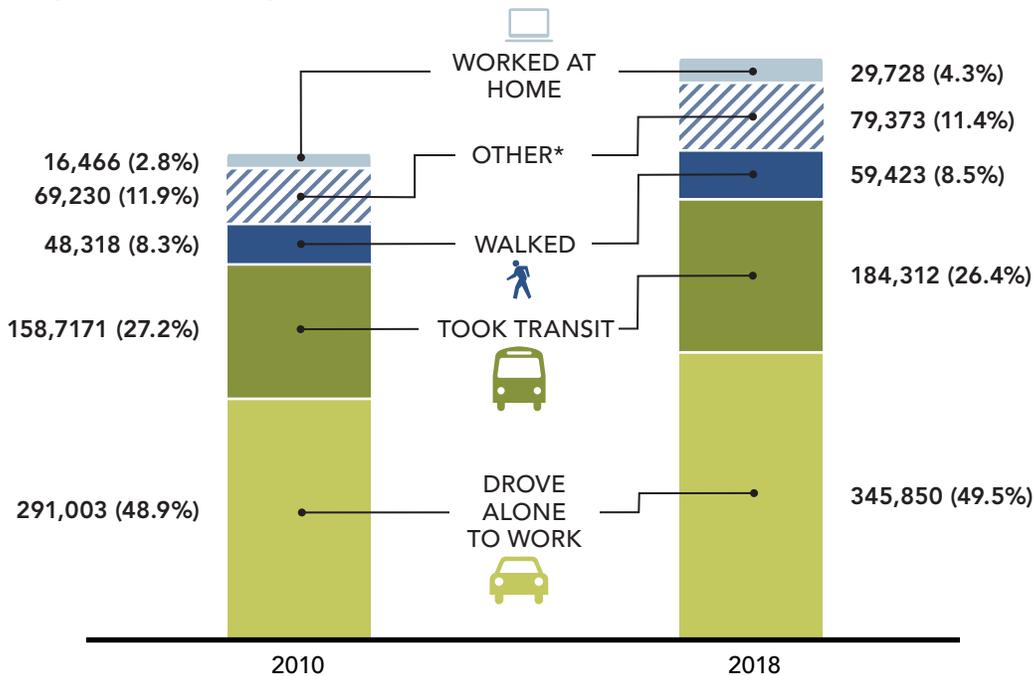
Figure 9: Estimated Number of Cars<sup>1</sup>



Source: U.S. Census Bureau

Based on estimates derived from U.S. Census data, the number of personal vehicles owned by Philadelphia residents grew by 81,000 (15.3 percent) between 2010 and 2018. This increase in the number of vehicles outpaced the city's population growth in absolute and percentage terms. During this period, the city grew by roughly 56,000 residents (3.7 percent).

Figure 10: Journey to Work



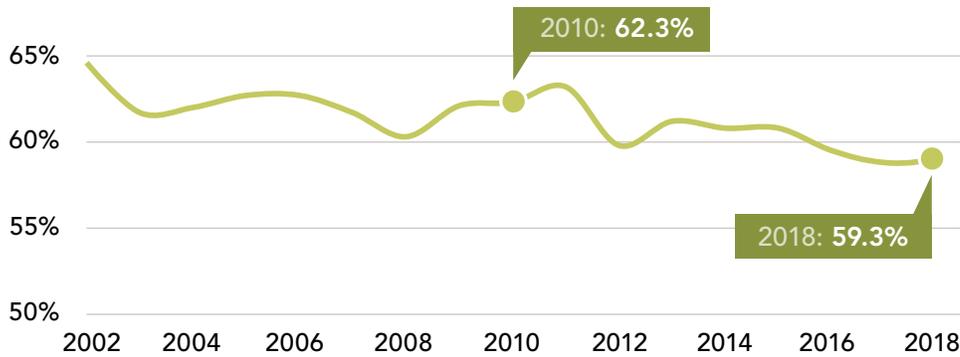
\* includes bicycle, taxi, and other means

Source: U.S. Census Bureau

Figure 10 compares the travel behavior of Philadelphia commuters between 2010 and 2018. The relative shares of the commute modes listed here remained stable during this period, except for a growing proportion of those working at home.

Despite the stability of these patterns, the sheer increase in the number of commuters is likely contributing to the increase in vehicles and related demand for parking in Philadelphia. The number of residents commuting to work grew by nearly 115,000 (20 percent) between 2010 and 2018. Consequently, the number of commuters who drove alone to work increased by nearly 55,000 (18.9 percent) during this time.

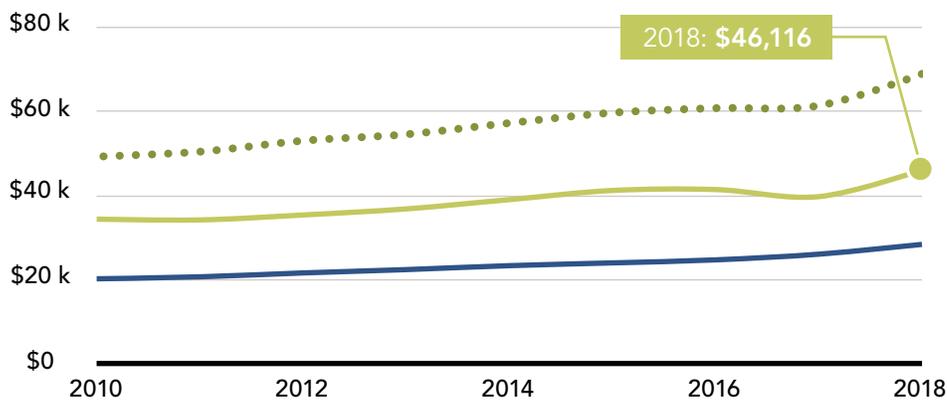
**Figure 11: Share of Employed Residents Working in Philadelphia**



Source: U.S. Census Bureau

The share of Philadelphia’s employed residents who work within the city’s boundaries has steadily declined over the last two decades. In 2002, 64.6 percent of working residents were employed within the city’s boundaries. By 2017, this percentage had dropped to 58.8 percent. This decentralization of workplaces may be contributing to the growth of commuters driving alone to work and the associated increase in vehicle ownership and parking demand.

**Figure 12: Household and Per Capita Income**



Source: U.S. Census Bureau

**CHANGE 2010–2018**

**MEAN HOUSEHOLD INCOME**  
**+\$19,718 | +40%**

**MEDIAN HOUSEHOLD INCOME**  
**+\$11,716 | +34.1%**

**PER CAPITA INCOME**  
**+\$8,209 | +40.7%**

Figure 12 traces changes in income between 2010 and 2018 for Philadelphia households and residents. During this time, the median annual household income increased by nearly \$12,000 (34.1 percent). Increasing incomes frequently correlate with greater ability to acquire and use vehicles for personal travel.

**Figure 13: Population Change by Census Tract (2010–2018)**

Philadelphia grew by nearly 56,000 residents between 2010 and 2018; however, this growth and associated increases in parking demand were not evenly distributed across the city. The census tracts shown in dark blue in Figure 13 represent the areas where the largest population increases occurred during this period. Figure 14 highlights population changes in percentage terms for the 18 planning districts used by the Philadelphia City Planning Commission.

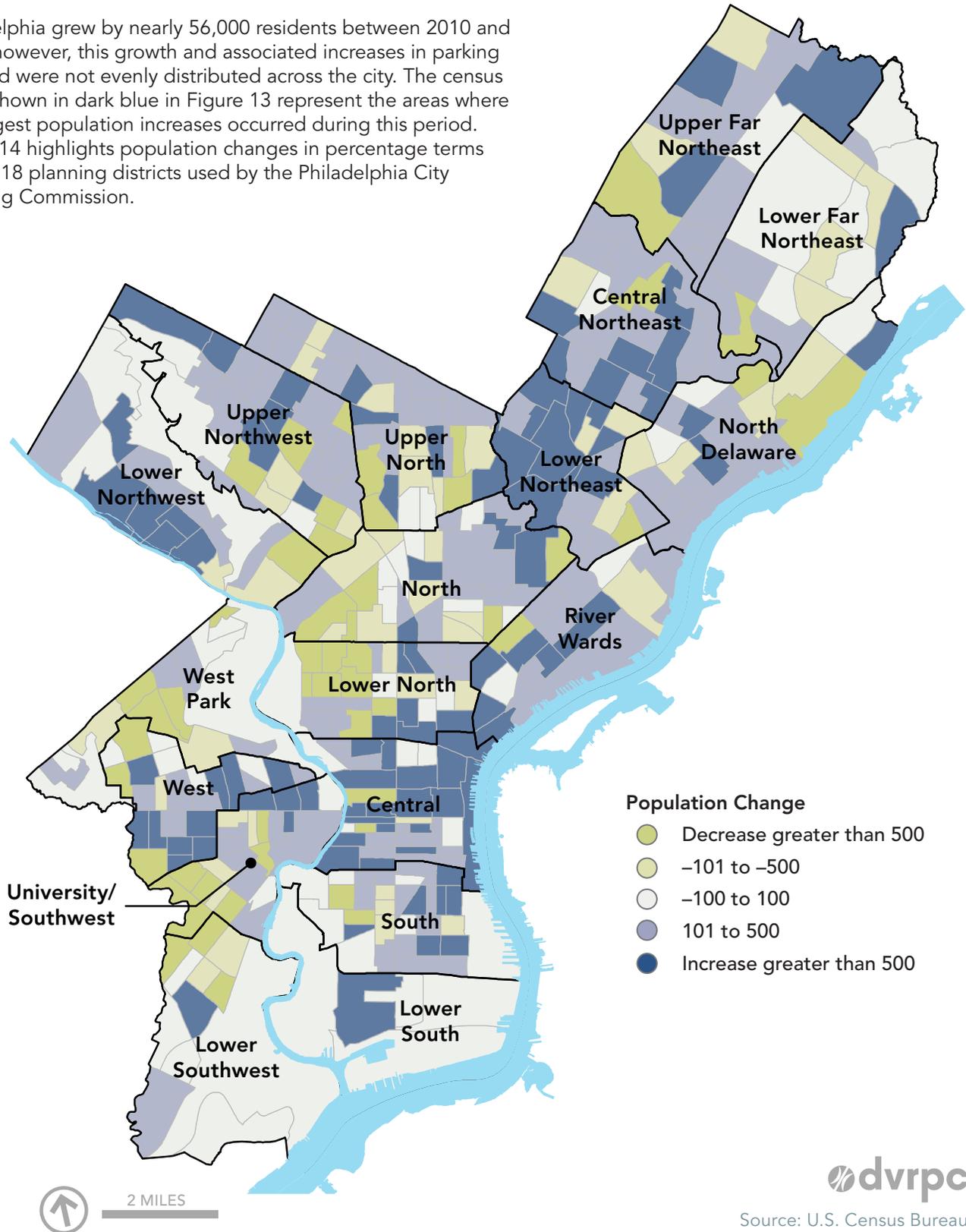
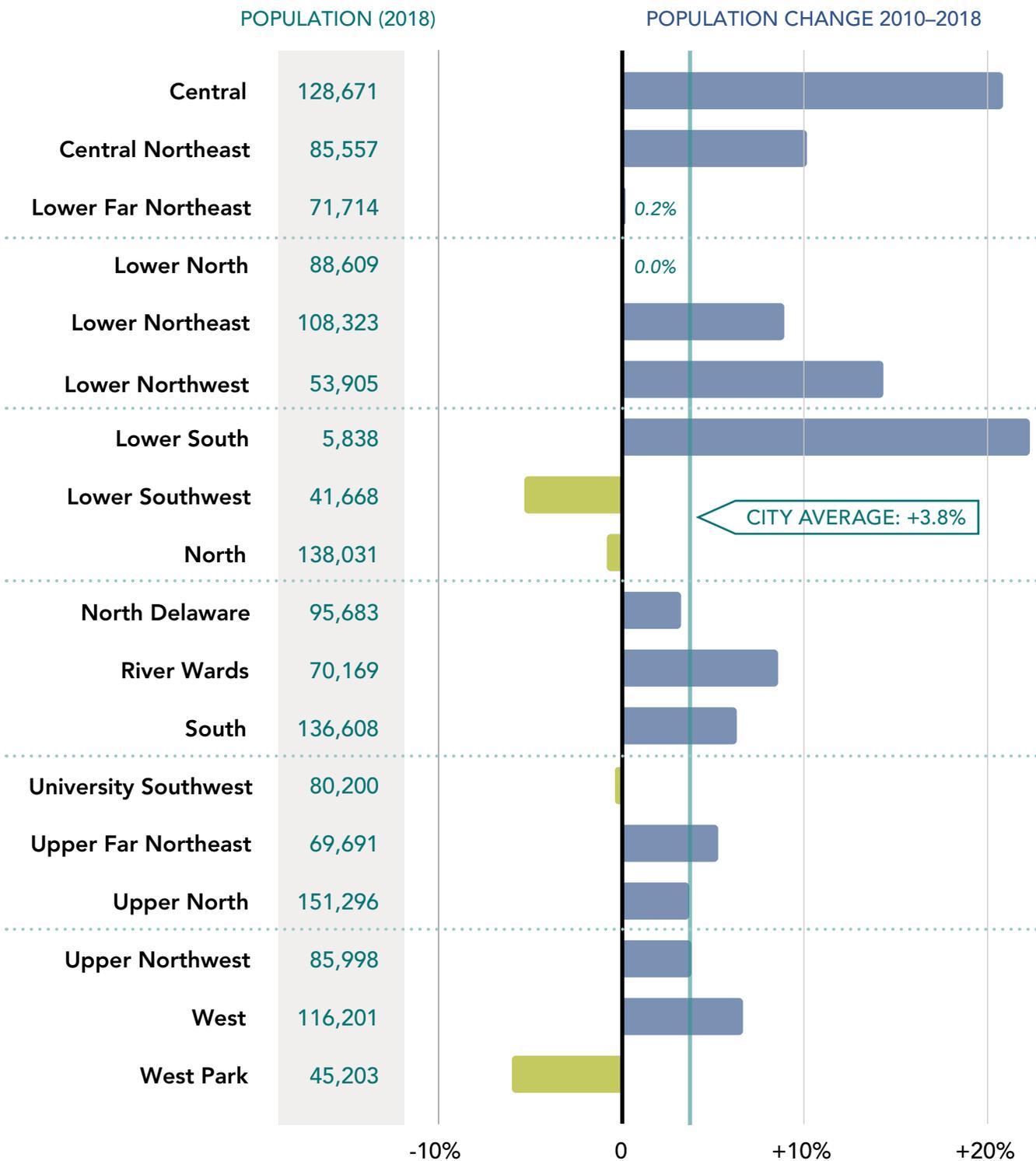


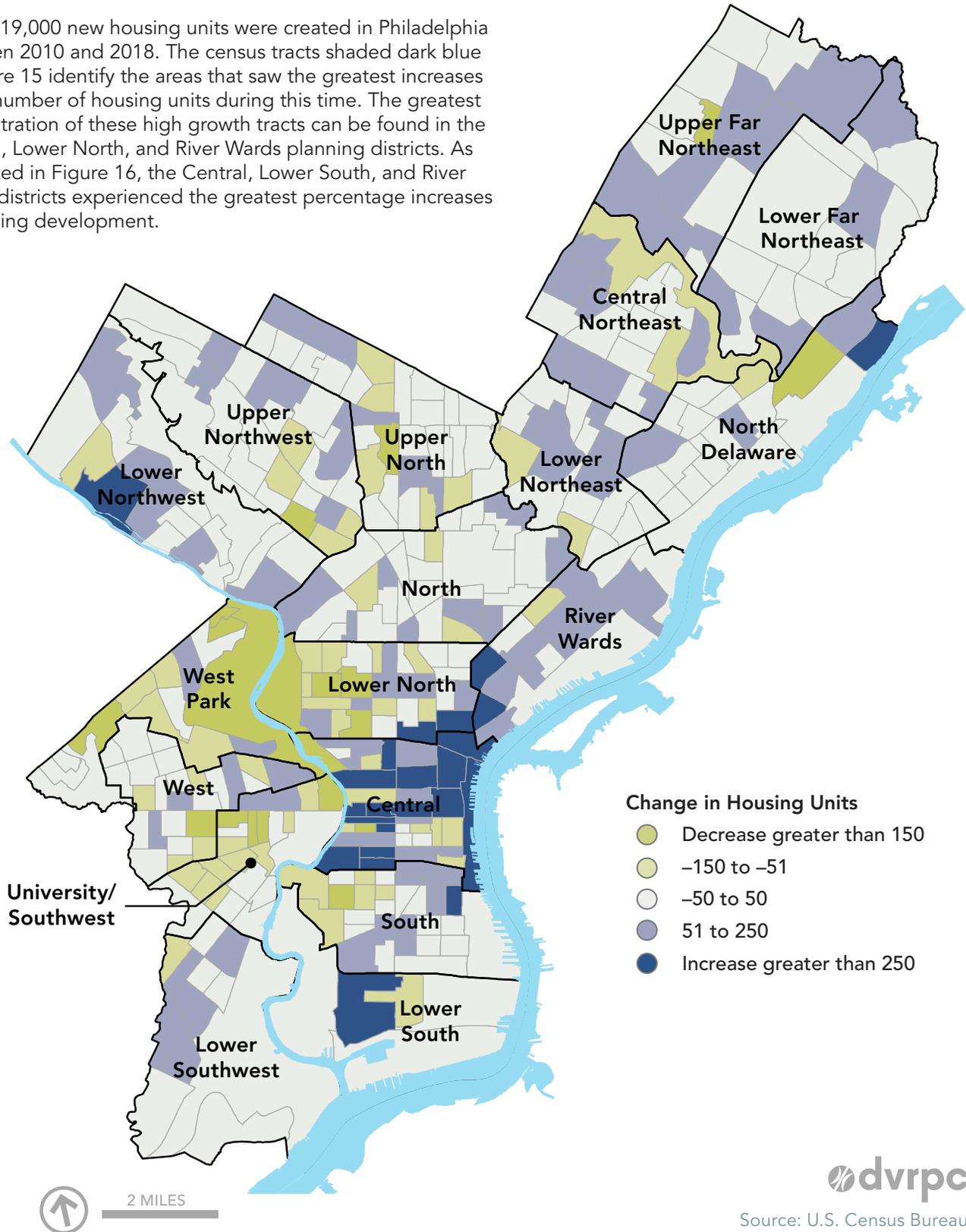
Figure 14: Population Change by Planning District (2010–2018)



Source: U.S. Census Bureau

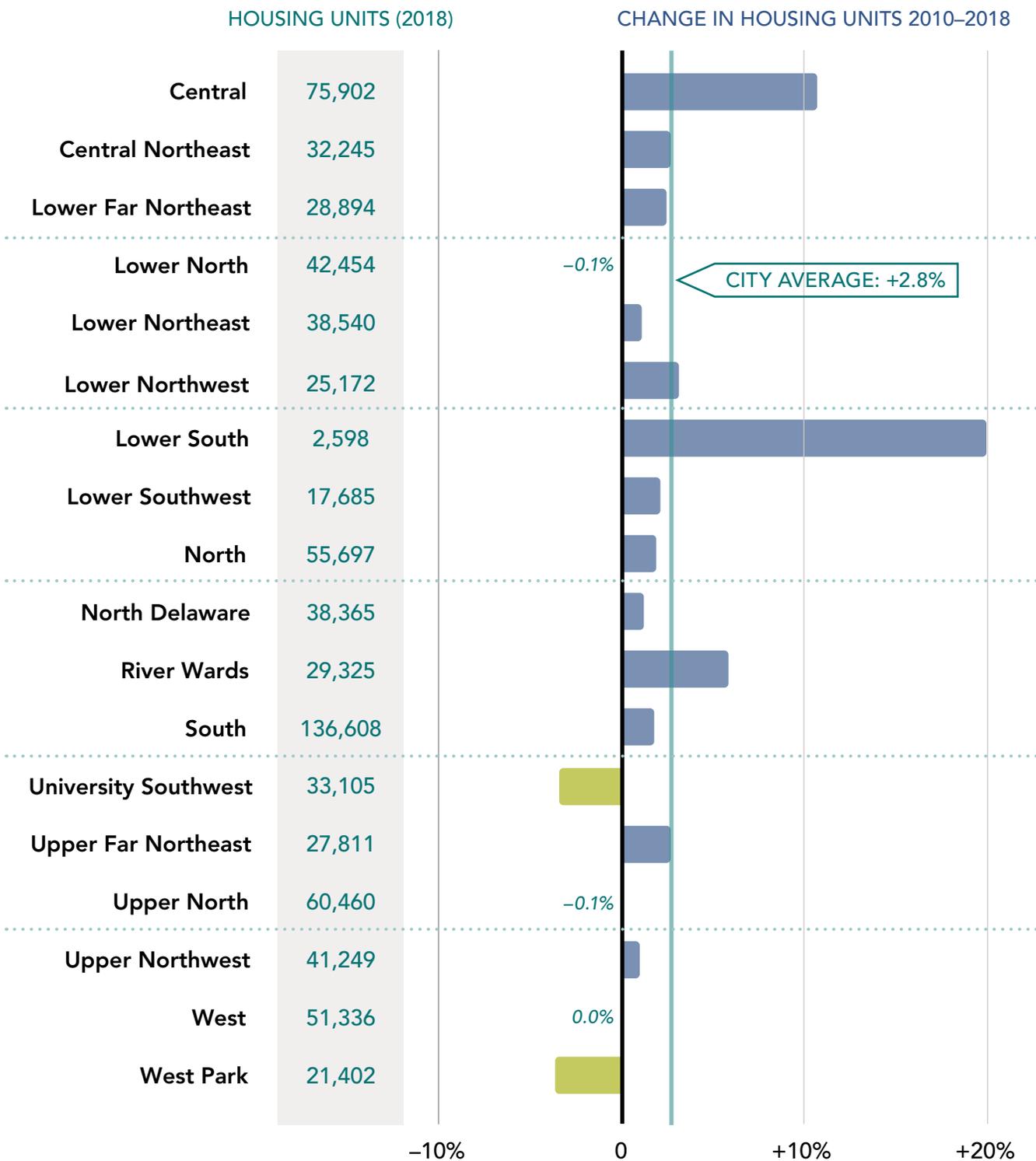
**Figure 15: Change in Housing Units by Census Tract (2010–2018)**

Nearly 19,000 new housing units were created in Philadelphia between 2010 and 2018. The census tracts shaded dark blue in Figure 15 identify the areas that saw the greatest increases in the number of housing units during this time. The greatest concentration of these high growth tracts can be found in the Central, Lower North, and River Wards planning districts. As illustrated in Figure 16, the Central, Lower South, and River Wards districts experienced the greatest percentage increases in housing development.



Source: U.S. Census Bureau

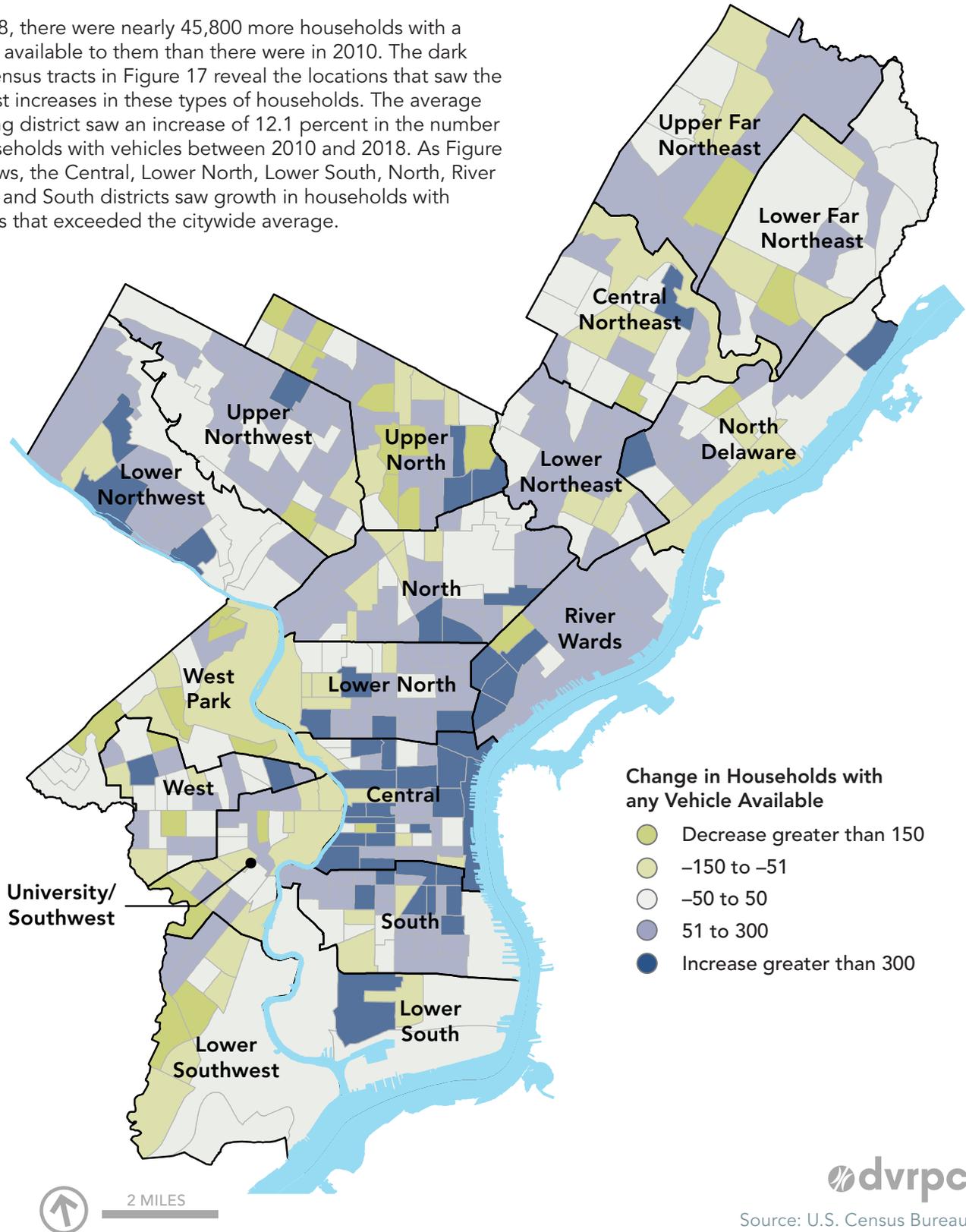
**Figure 16: Change in Housing Units by Planning District (2010–2018)**



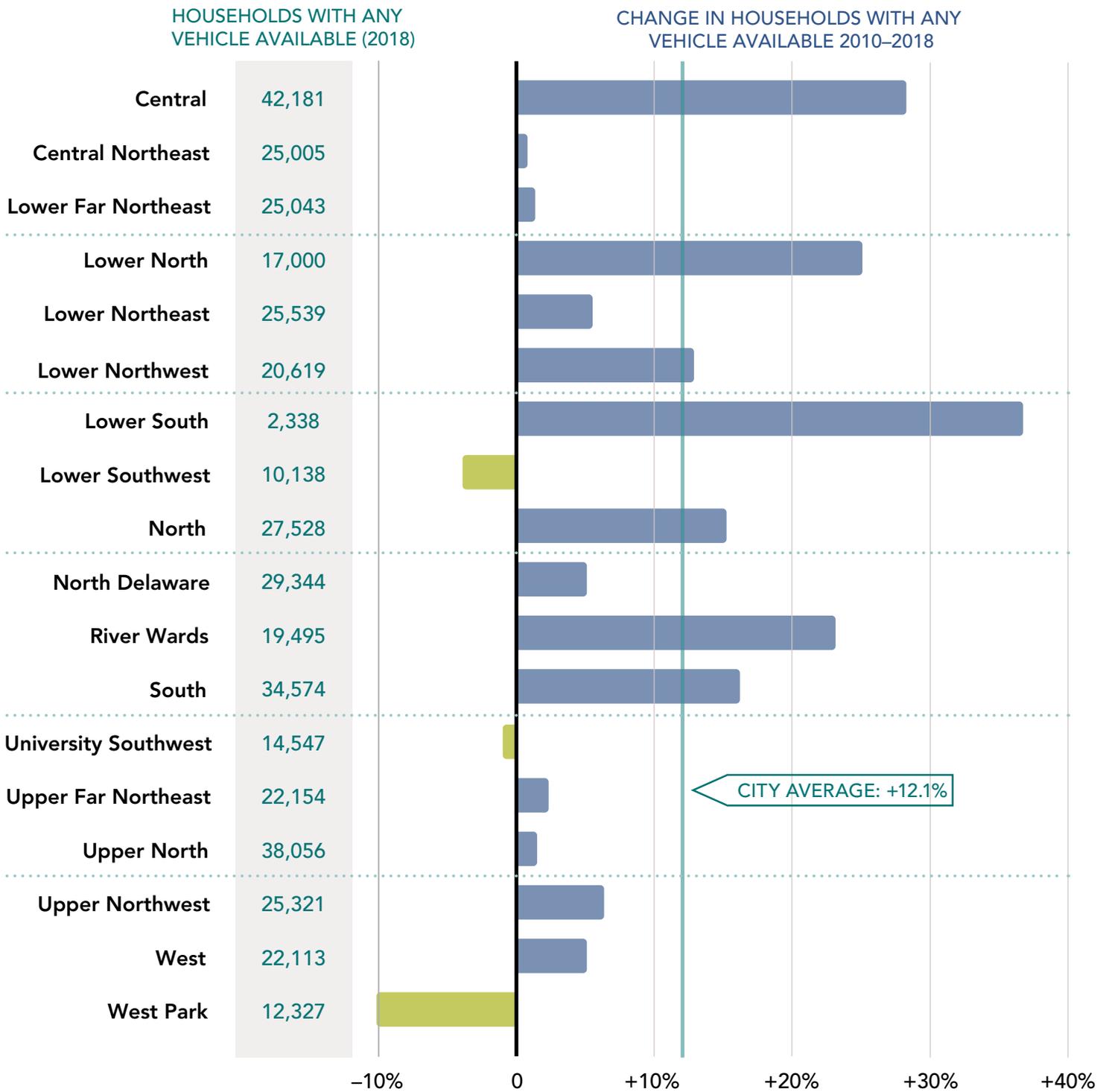
Source: U.S. Census Bureau

**Figure 17: Change in Households with Any Vehicle Available by Census Tract (2010–2018)**

By 2018, there were nearly 45,800 more households with a vehicle available to them than there were in 2010. The dark blue census tracts in Figure 17 reveal the locations that saw the greatest increases in these types of households. The average planning district saw an increase of 12.1 percent in the number of households with vehicles between 2010 and 2018. As Figure 18 shows, the Central, Lower North, Lower South, North, River Wards, and South districts saw growth in households with vehicles that exceeded the citywide average.



**Figure 18: Change in Households with any Vehicle Available by Planning District (2010–2018)**



Source: U.S. Census Bureau

**Figure 19: Change in Commuters Driving Alone to Work by Census Tract (2010–2018)**

Increases in the number of commuters driving to work is likely contributing to the parking crunch in some neighborhoods. Figure 19 illustrates how the number of residents driving alone to work has changed between 2010 and 2018. Census tracts with the greatest increases are shown in dark blue. Planning districts across the city averaged an increase of nearly 19 percent in the number of commuters driving alone to work. Figure 20 shows that the Central, Lower North, and River Wards districts saw the greatest percentage increases in these types of commuters.

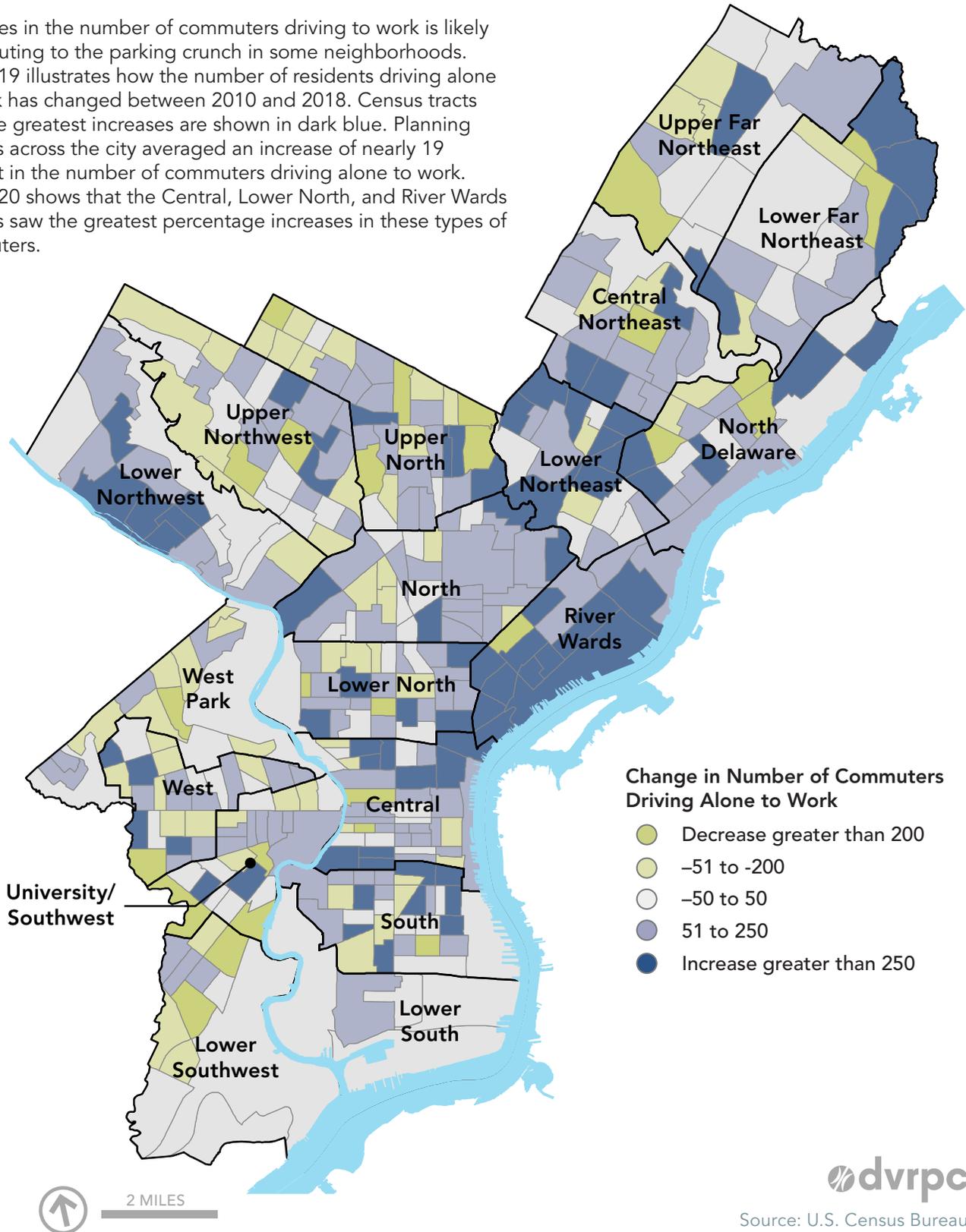
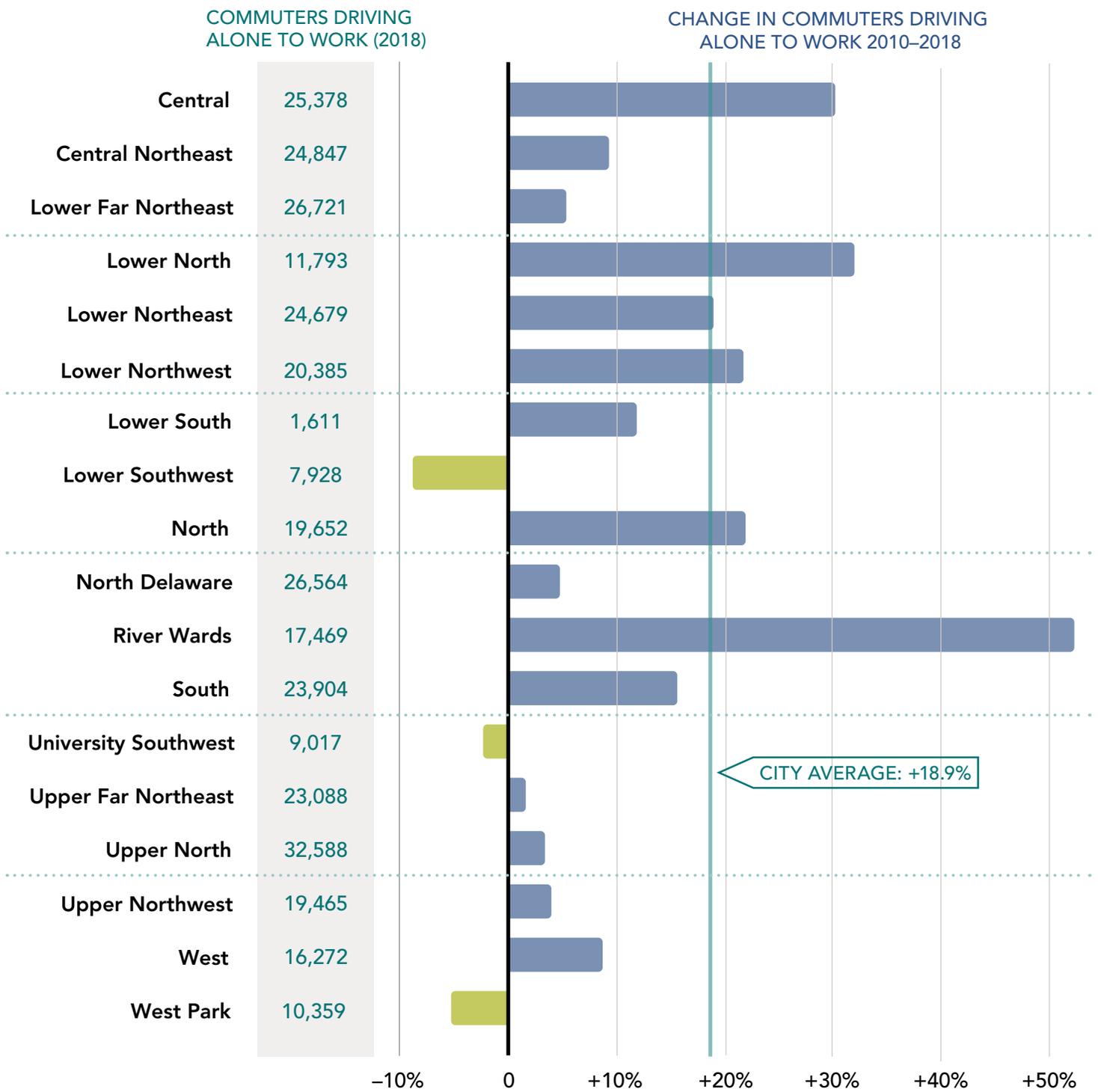


Figure 20: Change in Commuters Driving Alone to Work by Planning District (2010–2018)



Source: U.S. Census Bureau

**Figure 21: Change in Median Household Income by Census Tract (2010–2018)**

Median household income in Philadelphia grew from \$34,400 to \$46,116 between 2010 and 2018, an increase of \$11,716 (34.1 percent). The census tracts shown in dark blue highlight the areas where median household income grew the most during this period. High income growth census tracts are found in 15 of the 18 planning districts; however, these tracts are concentrated in the Central, River Wards, South, Lower Northwest, and Upper Northwest districts.

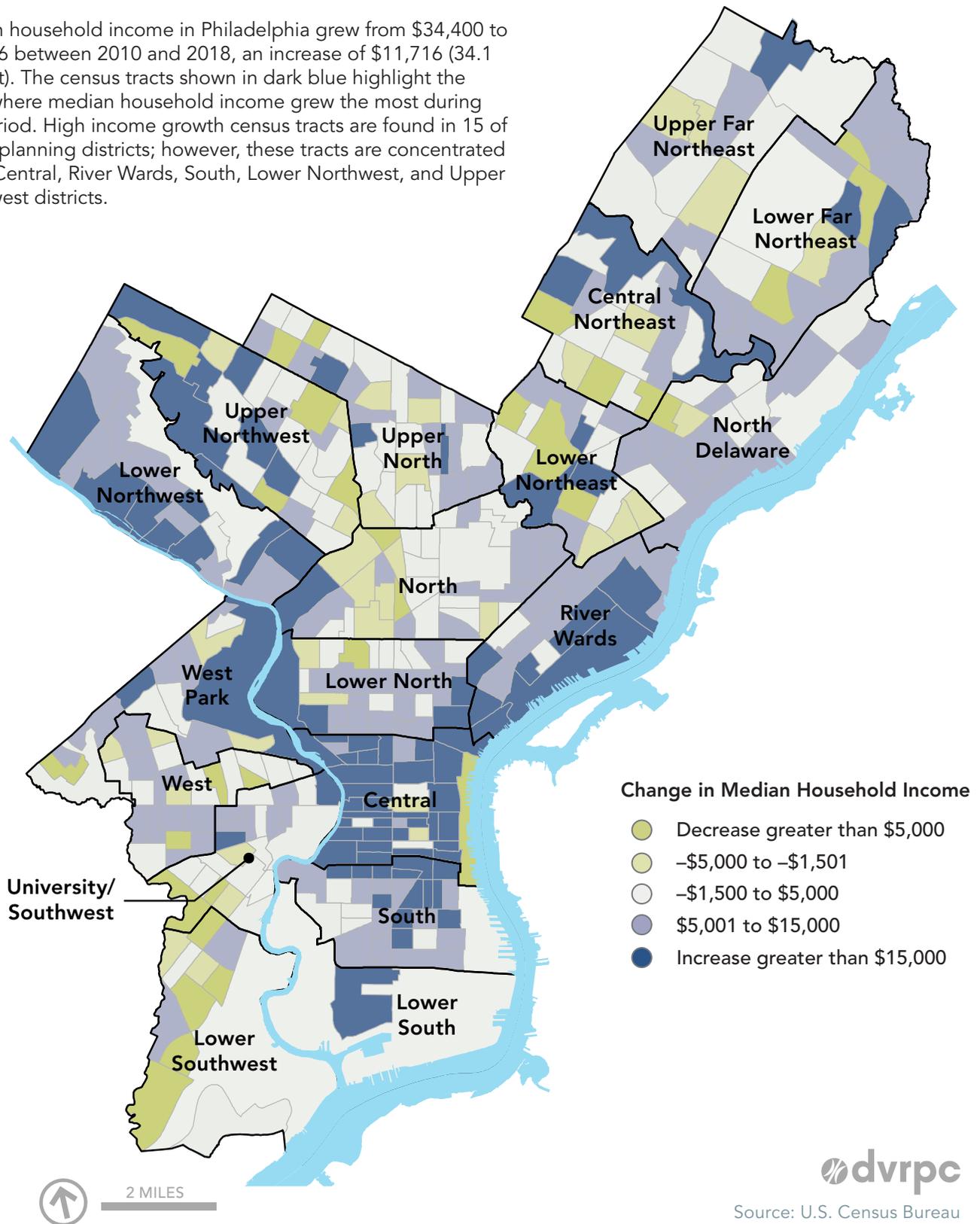


Figure 22: Number of Proposed Driveways by Planning District (2001–2020)



Source: Google Maps

Driveways in residential areas detract from the supply of on-street parking spaces. As such, the distribution and concentration of driveways in certain areas can have a significant impact on local parking capacity. Figure 22 depicts the number of driveways that have been proposed in each planning district between 2001 and 2020, using data provided by the Philadelphia Streets Department.

The fact that a driveway has been proposed does not guarantee that it has been built. Additionally, for several reasons, many of the driveways captured in this data do not influence the supply of curbside parking. Nonetheless, this data helps to illustrate how physical changes to the street work in tandem with rising demand to exacerbate parking challenges in certain neighborhoods.

Source: Philadelphia Streets Department

Ten RPP districts accounted for over 70 percent of the permits sold in 2018.

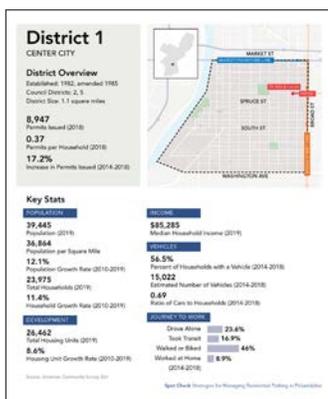
Residential parking permit sales have increased significantly in recent years. Citywide, 16,674 (43.2 percent) more permits were sold in 2018 than in 2014. However, the distribution of permits varies significantly across the city, presumably influenced by the number of regulated blocks, competition for on-street spaces, and a host of socioeconomic factors. For example, over 16 percent of all permits sold in the city were issued to residents of District 1 covering Southwest Center City. Furthermore, the top 10 RPP districts account for over 70 percent of permits sales.

### Quantifying the Parking Crunch

Permit sales provide an important starting point for measuring the “parking crunch” in a given district. However, they are only one side of the equation. Permits hint at the demand for parking, but a thorough analysis would require knowing more about the supply of regulated and unregulated parking spaces in each district. In one case, two Registered Community Organizations (RCOs)—Center City Residents Association (CCRA) and South of South Neighborhood Association (SOSNA)—partnered to conduct this analysis and found that the number of parking permits issued significantly outnumbered the supply of on-street regulated parking spaces in Zone 1. Permit Zone 1 covers the entirety of SOSNA’s jurisdiction and nearly all of CCRA’s territory. In 2013, when Zone 1 had 6,957 active parking permits, the RCOs inventoried the permit-regulated spaces within their boundaries and found a total of 3,687 spaces.<sup>2</sup> This analysis suggests that there were nearly two parking permits issued for every permit-regulated space. Although there may be several reasons why permits outnumber spaces in this zone, including residents who may purchase permits even

### Comparing RPP Districts

Although we cannot exactly quantify the parking crunch in each existing RPP district, demographic, development, and socioeconomic data can tell us a lot about the conditions driving parking demand and availability in these districts. In addition to documenting permit sales data for each district, the district profiles in Appendix A highlight population and development trends and present information on median income, the estimated number of vehicles, and commute mode. This data can illustrate where population, development, and permit sales have increased the most, and allow us to compare useful measures of permit adoption and vehicle availability.



#### Highest Permit Adoption RATIO OF PERMITS TO HOUSEHOLDS

1. District 7 (Queen Village\*): 0.71
2. District 22 (Bella Vista): 0.65
3. District 23 (Passyunk Square): 0.5
4. District 5 (Society Hill/Old City): 0.4
5. District 1 (SW Center City): 0.37

#### Greatest Vehicle Density RATIO OF VEHICLES TO HOUSEHOLDS

1. District 15 (Roxborough/Manayunk): 1.5
2. District 21 (Chestnut Hill): 1.43
3. District 35 (Holmesburg/Torresdale): 1.42
4. District 20 (Feltonville/Juniata): 1.34
5. District 36 (Oxford Circle/Lawncrest): 1.3

\* The neighborhoods listed here are for general reference purposes only and not meant to be comprehensive. For a map of RPP districts, please see p. 16 or Appendix A.

though they have access to off-street parking, the fact remains that the number of permits sold in this district continues to increase—nearly 9,000 permits were issued in 2018—while on-street parking capacity remains flat.

Recent Planning Commission research also suggests that parking demand either already exceeds or will soon exceed on-street parking capacity in some neighborhoods. For example, in 2019, the Philadelphia City Planning Commission found nighttime parking occupancy rates of 107 percent and 97 percent in the Fairmount and Fishtown neighborhoods. An occupancy rate greater than 100 percent indicates that illegal parking, such as parking in crosswalks, center turn lanes, or on sidewalks, is occurring to meet demand.

Determining the on-street parking capacity for all RPP districts throughout the city was beyond the scope of this study; however, the study team conducted fieldwork in Districts 8 (East Falls) and 15 (Manayunk/Roxborough) in order to estimate the number of permit-restricted spaces in these zones. Using data provided by PPA as a starting point, the study team traversed these districts and noted the locations and extents of permit restrictions (see Figure 23 for a sample). Using geographic information systems (GIS), the team then determined the length of each permit-restricted block segment and divided that number by 22 feet to determine the parking capacity of a given segment. Although PPA frequently uses 18 feet as the typical size of an on-street parking space, the study team decided to use 22 feet based on a review of parking literature and real-world observations of parking conditions on numerous

### Figure 23: Estimating Permit Parking Capacity

DVRPC used a combination of field work and GIS analysis to generate permit parking capacity estimates for Permit Zones 8 and 15. The map shown here illustrates the distribution of permit-regulated streets within District 8, an area that includes the East Falls neighborhood. The study team verified that permit restrictions are generally concentrated in a central portion of the district on streets near the East Falls Regional Rail Station. Permit-restricted parking can be found on one or both sides of the street depending, on the context. The hours and days on which permit parking is required vary by street.



DVRPC estimates that District 8 (East Falls) contains 1,174 permit-restricted spaces. A total of 1,136 permits were issued for this district in 2018, meaning that there is nearly one vehicle with a permit for each Zone 8 spot. In District 15, the competition is more fierce. DVRPC estimates that 1,134 vehicles with a permit are competing for 1,051 spaces.

Philadelphia streets.

The study team generated an estimated permit parking capacity for each district by adding together the number of spaces on each permit-regulated segment. The results of this analysis support the anecdotal experiences of many who have noticed increased competition for parking in recent years. Between 2014 and 2018, the number of parking permits issued grew by 20 percent and over 320 percent in districts 8 and 15, respectively. Using 2018 permit sales data, DVRPC found that there are 0.97 vehicles with permits for every permit space in District 8 and 1.25 vehicles with permits for every space in District 15.

## CHAPTER 4

# Exploring Potential RPP Policy Reforms

Cities considering changes to their permit parking policies can revise the rules governing permit eligibility, cost, and/or the process by which an RPP district is established or modified. This chapter outlines eight potentially relevant policy changes across these categories. The discussion of prospective reforms includes the intended purpose, examples from peer cities where appropriate, and implementation considerations for Philadelphia.

### Permit Eligibility

Most RPP programs were established with fairly straightforward rules for regulating eligibility. Permits were reserved for residents with few, if any, restrictions on the number of permits that could be acquired by a household. Over time, however, cities have reconsidered these standards in the face of growing demand for parking and shifting transportation priorities. Four of the five eligibility revisions discussed here seek to restrict the number of permits issued in a given area in an effort to reduce demand for on-street parking. Theoretically, this reduction should make it easier and more convenient for permit holders to park.

#### **Potential Policy Reform 1: Establish Area Permit Caps**

Currently there is no limit on the number of permits that may be issued within one of Philadelphia's established permit zones. Simply put, area permit caps constrain the number of permits that can be issued in a district based on some measure related to the actual number of available parking spaces. By rationing the total number of permit issues in an area where demand exceeds supply, this policy seeks to maintain the operational efficiency of a district by balancing the number of permits issued and the number of on-street spaces in a district.

#### **Implementation Examples**

Only one of the nine cities inventoried for this study has implemented a cap on the number of permits issued per area. Toronto, Ontario, has established a cap at 110 percent of available spaces in some of its permit zones. When this cap is reached, residents are placed on a wait list until others with permits give them up. The concept of establishing area permit caps was also identified as a potentially useful strategy for certain neighborhoods in Baltimore, Maryland, as part of the 2018 *South Baltimore Gateway Parking Study*. This study contained draft language that could be used to help introduce this type of regulation:

Where it appears that the number of permits issued would exceed the number of legal on-street parking spaces, the total number of permits may be decreased at the discretion of the Director of the Parking Authority of Baltimore City or his/her designee.<sup>1</sup>

#### **1. Area permit caps**

constrain the number of permits that can be issued in a district based on some measure related to the actual number of available parking spaces. This policy seeks to maintain the operational efficiency of a district by rationing permits in areas where demand exceeds supply.

Toronto's straightforward approach to capping permits at 110 percent of available spaces is based on the notion that the vehicles of all permit holders will rarely, if ever, all need to be parked at the same time. Although Baltimore has not instituted permit district limits, the city has considered an alternative approach that could be used to customize a target number of permits to be issued in each RPP zone. This process would include:

- establishing a benchmark time period to measure parking occupancy: surveys conducted as part of the *South Baltimore Gateway Parking Study* determined that Saturday night was the highest occupancy period for all neighborhoods involved in the study;
- choosing a maximum occupancy target: Baltimore's 2018 study recommended an occupancy rate of 95 percent;
- using the surveyed occupancy, calculate the factor that will result in the occupancy target (95 percent); and
- applying that factor to the current number of active residential permits to determine the target number of permits for that RPP area: in the Baltimore example, the target number of permits was lower than the actual number of permits issued in three out of the five neighborhoods.

### **Implementation Considerations**

Area permit caps represent one strategy for dealing with permit districts that are at or over capacity. However, effectively implementing permit caps would require accurate and up to date information on the number of permit-regulated spaces in each zone. This data does not currently exist for most permit zones in Philadelphia, so it is impossible to determine how many existing permit districts might be affected by such a cap. The data that does exist suggests that some permit districts may be bumping up against on-street parking limits. For example, third-party research (see page 42) suggests that the number of permits issued in Zone 1 significantly outnumbers the number of spaces found there. Based on 2018 permit sales data, DVRPC fieldwork suggests that Zone 8 is approaching capacity (0.97 permits issued for every permit space) and Zone 15 is overcapacity (1.25 permits issued for every permit space).

Advocates of area permit caps contend that rationing the supply of permits ensures that each permit retains its value and more closely corresponds with user expectations of parking availability. However, others suggest that enacting an area permit cap could negatively impact home values in some neighborhoods if residents were unable to obtain a parking permit.

Practically speaking, determining the on-street capacity of each permit zone could be accomplished through a combination of field work and remote spatial analysis using GIS and/or websites like Google Maps. However, even if accurate data were available for each permit zone, implementing area permit caps presents several spatial and equity challenges. For example, distributing parking permits via a lottery- or deadline-based system does not ensure that permits are geographically balanced throughout a district. Furthermore, to more equitably allocate

permits, a permit cap system may need to prioritize those residents without access to off-street parking. Finally, as will be the case with several potential rule changes, the process of transitioning from unlimited permit sales to a permit cap would present administrative and communication challenges for PPA. Residents accustomed to simply renewing their permit(s) each year may be confused and/or disgruntled after learning that their ability to purchase permits may be subject to a wait list.

### **Potential Policy Reform 2: Establish Household-Based Permit Caps**

As opposed to area permit caps, which limit the total number of permits issued in a district, some cities have placed restrictions on the number of permits that can be issued per household. These restrictions can take the form of a limit on the number of permits that can be issued to a specific household or a limit on the number of permits that can be issued to a specific driver in that household. These restrictions theoretically reduce the number of permits issued while ensuring that each household retains some eligibility for permit parking.

#### **Implementation Example**

Household-based permit caps are significantly more common than area permit caps. Five of the nine cities inventoried for this study have implemented some sort of household-based permit cap. For example, Baltimore and Seattle, Washington, have imposed a blanket limit of four permits per household across their cities. Austin, Texas, and San Francisco, California, enforce different restrictions based on neighborhood context. Most addresses in Austin are limited to two permits per household; however, households are limited to one permit on 14 of the city's 370 permit-regulated blocks.

Alternatively, Portland, Oregon, restricts households in some permit districts to one permit per licensed driver. San Francisco uses a hybrid approach to permit eligibility. In 29 of the city's permit districts, households are limited to a total of four permits per household. However, permit eligibility is further restricted in two high-growth permit districts. For example, after two years of planning and community outreach, the SFMTA approved the Dogpatch Neighborhood Parking Plan and established RPP Area EE with restrictions of one permit per driver and a total of up to two per household.<sup>2</sup>

#### **Implementation Considerations**

Household permit caps are generally viewed as more equitable and less arbitrary than area permit caps. However, permit caps that regulate housing units rather than drivers may still be controversial to implement. For example, limiting households to two permits is more likely to adversely impact large families and groups of unrelated roommates. Conversely, allowing every licensed driver in a household to be eligible for a permit may not achieve the desired reduction in vehicles.

We can estimate the potential impact of various household permit restrictions in Philadelphia by using permit sales data from 2018. During

**2. Household-based permit caps** limit the number of permits that can be issued to a specific household or to a specific driver in that household.

### 3. Permit restrictions based on location

often focus on new housing units in transit-oriented locations and are designed to promote transit use and reinforce the benefits of walkable neighborhoods.

that year, 2.2 percent of vehicles were registered as the third vehicle in a household, while 0.4 percent were registered as the fourth vehicle. Based on this data, enacting a citywide cap of three permits per household would theoretically remove 232 vehicles from city streets, while a cap of two permits per household would remove an additional 1,206 vehicles.

#### **Potential Policy Reform 3: Reduce or Eliminate the Permit Eligibility of New Housing in Transit-Oriented Locations**

This eligibility restriction seeks to promote alternative forms of travel by limiting or eliminating access to permits for residents of new housing in locations with excellent transit access. New housing in Philadelphia's walkable transit-accessible neighborhoods has been a key driver of Philadelphia's construction boom over the last decade. Many residents have chosen to live in these locations because the urban amenities and transit access that they provide enable them to live without an automobile. Accordingly, this walkable transit-oriented development (TOD) can help reinforce the city's objectives of reducing vehicular traffic and promoting transit use, bicycling, and walking, particularly if it is accompanied by zoning regulations that eliminate or reduce parking requirements. Advocates for location-based eligibility guidelines worry that the potential benefits of TOD will be eroded if residents of these developments obtain residential parking permits and store their vehicles on neighborhood streets.

Practically speaking, this restriction could be enacted by creating and maintaining a parking permit "blocklist" for new buildings in areas governed by a TOD overlay or similar zoning designation. In this scenario, PPA would keep a list of the addresses of new reduced parking and/or car-free buildings, crosscheck new permit applications against the list, and deny permit requests from residents in those buildings.

#### **Implementation Examples**

No city surveyed for this report cited TOD principles as the sole basis for reforming residential permit policy. However, cities across the country are investigating how permit policy can be used to promote alternative forms of transportation. For example, Portland created a pilot program to test additional tools to manage on-street parking in Northwest Portland in 2016. The resulting Northwest Parking District, also known as Zone M, uses a variety of techniques designed to support a full range of transportation options and reduce reliance on single-occupancy vehicles in a rapidly growing residential portion of the city served by buses and streetcars.

One of the strategies employed in this district is limiting the number of permits available to residents of new multifamily buildings. The permit caps instituted here are based on the date that a building obtained its certificate of occupancy. Buildings that obtained their certificate of occupancy after August 7, 2013, but before September 1, 2017, are limited to 0.6 permits per number of units in the building. Buildings that obtained their certificate of occupancy September 1, 2017, or after, are limited to 0.4 permits per number of units in the building. For more information on the Northwest Parking District, see the sidebar on page 57.

Promoting transit use has historically been cited as one of the reasons that residents of most duplexes, townhomes, and multifamily buildings are not eligible for parking permits in Arlington, Virginia, home to several Washington Metro stations. Similarly, Somerville, Massachusetts, is currently considering permit parking restrictions for new development within a 10-minute walk of one of the city's Massachusetts Bay Transportation Authority's Red, Orange, or Green line stations. The purpose of this policy is to preclude the future residents of new development from creating additional traffic and parking problems while also helping to implement multiple objectives of the city's comprehensive plan, *SomerVision*. The proposed policy does not apply to residents of existing housing in Somerville. If adopted, "households that do not live in Somerville will have to make a choice about whether to purchase or rent a home or apartment that is subject to this restriction based on their own personal needs."<sup>3</sup> Somerville's parking policy would create exceptions for future residents that may be "choice limited," including persons with disabilities, occupants of affordable dwelling units, and residents with extenuating circumstances.

### **Implementation Considerations**

Cities may find that permit restrictions targeting new residential development in transit-accessible locations are appealing for two reasons. First, these restrictions can help achieve overlapping objectives related to promoting transit use, reducing car dependency, and advancing climate goals. In areas where parking requirements have been reduced or eliminated, restricting the permit eligibility of new residents may be required to ensure that the original intention of zoning is preserved. Accordingly, advocates for these measures argue that these limitations can help cities accommodate growth in a sustainable way.

Second, these types of restrictions are likely to be less controversial because they affect future residents rather than existing residents. In fact, restricting parking access for new residents may help facilitate TOD in some neighborhoods. Near neighbors may be less inclined to object to new higher density development if it will not create additional competition for neighborhood parking.

Despite their potential effectiveness, the implementation of such a policy would require careful coordination with the city's legal counsel to ensure that the city's parking policy does not violate any state laws that preclude the provision of preferential parking to residents of certain types of housing while excluding others. Nonetheless, location-based permit restrictions that are viewed as benefiting existing residents over future residents and/or homeowners over renters may raise equity and fairness issues.

In order to be effective in Philadelphia, location-based permit restrictions would likely need to be coordinated with or integrated into the designation of TOD zoning districts. Although the option of creating TOD overlay zones became available in 2013, few TOD districts have been created. Practically speaking, implementing this reform would require PPA to track development and restrict permits in a new way that may present some operational adjustments. Furthermore, new measures would be needed to ensure that developers market new housing in affected areas as subject to permit eligibility restrictions.

**4. Permit restrictions based on housing characteristics** often focus on reducing permit eligibility for residents with access to off-street parking.

#### **Potential Policy Reform 4: Reduce or Eliminate Permit Eligibility for Residents with Access to Off-Street Parking**

Eligibility restrictions that limit the number of permits available to households with off-street parking seek to reduce parking demand and prioritize on-street parking spaces for residents without off-street car storage. This policy attempts to prioritize the issuance of parking permits on a basis of need rather than convenience. Where implemented, each off-street parking space included with a property typically reduces the number of permits that a household is eligible for proportionally. For example, if a household owns two vehicles and has access to one off-street space, they would only be allowed to receive one parking permit. This housing characteristic eligibility restriction can be applied to attached homes, which may include garages or driveways, and multifamily units, which often have access to surface parking lots or structured parking.

#### **Implementation Examples**

This permit eligibility restriction is currently in effect in only one of the cities surveyed for this study. Three permit areas in Baltimore have off-street parking requirements that preclude residences with an off-street parking space from receiving a permit decal for their “first” car. If residents have more than one off-street space, they must demonstrate that each off-street space is being used before a decal is granted for an additional vehicle.

Portland is considering implementing additional permit restrictions in some permit zones based on the availability of off-street parking. Toronto also incorporates this philosophy into its area permit caps. Households without access to off-street parking are given priority over those with off-street storage options when new parking permits become available in a district with a permit wait list.

Beyond North America, Amsterdam considers off-street parking access as part of the rules governing permit eligibility. Amsterdam households are limited to a maximum of one or two permits depending on their neighborhood. However, each available parking space at a site reduces the number of permits available to that address. Residents of multifamily buildings with on-site parking are prohibited from obtaining a permit unless they complete a declaration of no available parking signed by the owner or manager of the property.

#### **Implementation Considerations**

Limiting the number of permits available to households with off-street parking is often presented as a logical and fair approach to managing demand for on-street parking, particularly in Philadelphia’s dense rowhome neighborhoods. Homes with ground-floor garages create a personal parking space while requiring curb cuts that typically remove one to two on-street spaces.

However, this type of housing-characteristic permit restriction only makes sense if it can be layered on top of a baseline area or household permit cap. Currently, there is no limit on the number of permits available to Philadelphia households. Several implementation considerations are

discussed below in the event that off-street parking restrictions were to be introduced in coordination with area or household permit caps in the future.

The ultimate effectiveness of this type of restriction will depend on the resulting permit eligibility. As discussed above in relation to household permit caps, the vast majority of participating Philadelphia households only obtain one or two permits. Accordingly, permit restrictions that reduce eligibility from two to one permit will have a more dramatic impact than restrictions that reduce eligibility from four to three.

Accounting for off-street parking will introduce new complexities to PPA's permit review process. It is unclear how accurate the city's database of property records may be in regard to the presence of on-site parking. Discrepancies may arise if spaces that were originally constructed as garages have been converted to other uses or if new parking spaces have been created without being officially recorded.

Parking for multifamily housing units may create additional challenges. Determining the permit eligibility for units in properties that include parking in each lease may be relatively straightforward. However, tracking parking availability for units in properties that do not automatically include parking would be more cumbersome. The PPA would also need to make a policy decision regarding instances in which the cost of parking was unbundled from the cost of rent. Should the opportunity to rent a private parking space, likely at a significantly higher cost than a residential parking permit, affect the eligibility status of a housing unit?

### **Potential Policy Reform 5: Expand Permit Eligibility to Certain Nonresidents**

As implied by the name of the program, Philadelphia's RPP program was created to improve the availability of parking for residents in Philadelphia neighborhoods. Although most RPP programs accommodate visitors in some fashion, RPP programs function primarily by removing nonresidents from the competition for on-street parking. These types of programs are most often employed in residential areas that are threatened by all-day commuter or visitor parking generated by nearby businesses, facilities, or institutions.

Despite these origins, some cities have expanded their RPP program or added additional programs designed to include nonresidents. Philadelphia's Contractor Parking Permit program, which enables contractors to park in metered and timed parking zones without limits while they are working, is one such example. Other cities have made similar accommodations for business owners, employees, home health care workers, or others. Although these programs typically continue to prioritize parking for residents, they seek to acknowledge that businesses and service providers may also need access to neighborhood curb space.

**5. Expanded eligibility provisions** enable select nonresidents to access parking usually reserved for residents.

## **Implementation Examples**

Five of the nine cities surveyed for this report maintain permit programs that extend some sort of parking privilege to nonresidents. Although the operation and administration of these programs vary significantly, businesses, contractors, and home health and child care providers are the most common beneficiaries of these privileges.

Washington, DC, and Baltimore both offer their residents the opportunity to purchase a permit that can be used by medical care providers. In Washington, these renewable permits are provided free of charge and last for 60 days. To be eligible, residents must provide a statement on doctor's letterhead certifying the resident's medical needs and the name(s) of the persons providing care. In Baltimore, residents are eligible to receive an annual Medical Care Provider Permit when they submit a notarized letter from the homeowner stating the days and times needed for care. Baltimore also offers a similar child care provider permit.

San Francisco represents a relatively straightforward example of a business parking program. Businesses located in RPP areas in San Francisco may obtain one parking permit for a personal vehicle per postal address and up to three permits for delivery vehicles with commercial license plates. For permit purposes, shared office space with one common street entry is considered one business address. Only one business permit will be issued to these types of buildings. The cost of business-related parking permits is identical to those used by residents.

Business parking privileges vary significantly in other cities. For example, in Berkeley, California, business permits cost nearly three times more than resident permits. In Portland, the number of business permits issued is based on the number of employees and varies by permit area. In the Northwest Parking District (see page 57 for more details), the maximum number of permits available to any business is 50. Businesses requesting more than 30 permits must complete a mandatory survey on their transportation demand management plans and practices, as well as their inventory of off-street parking. Businesses that purchase fewer permits than the previous year are eligible to receive free collections of passes and credits for use on transit, streetcar, bikeshare, and e-scooters, known as Transportation Wallets.

## **Implementation Considerations**

Cities considering expanding parking eligibility in residential permit zones must seek to balance the parking needs of residents against the needs of others who may desire to park in these locations. The stakeholders consulted during this study consistently emphasized that the primary problem being experienced in most permit districts is one of too many cars already competing for too few on-street parking spaces. As such, expanding eligibility beyond residents may only exacerbate the parking challenges being experienced in these districts.

Two of Philadelphia's greatest assets are its walkability and its extensive transit system. Aside from running counter to the stated purpose of the program, expanding parking privileges beyond residents, their visitors,

and contractors performing work may undermine ongoing efforts to promote transit and nonmotorized transportation options, such as walking and cycling, that can help the city address traffic congestion and achieve sustainability goals.

## Permit Pricing

The relatively nominal cost of parking permits is frequently cited as an incentive for some households to store more vehicles on city streets than they might if permits were more expensive. As such, raising the cost of permits is typically one of the most discussed RPP reforms. The policies discussed below seek to use blanket or targeted price increases as a tool to decrease demand for on-street parking. In this way, permit pricing is a tool that can be used in place of, or in conjunction with, eligibility restrictions to achieve parking goals. However, setting effective and fair prices for permits can be complex. For one thing, Pennsylvania is one of several states in which the state law requires that there be a connection between the price of parking permits and the actual costs of administering the permit program. For more discussion about the role of pricing in parking management, please see the sidebar on page 54.

### **Potential Policy Reform 6: Increase the Overall Cost of Residential Parking Permits**

Philadelphia is one of relatively few cities to use a graduated pricing system for RPPs. Most cities charge the same flat rate for each permit issued. Including Philadelphia, the average cost of one residential parking permit in the cities surveyed for this report is \$61. The \$35 fee in Philadelphia is more expensive than Austin, Baltimore, Boston, and Pittsburgh, but cheaper than Portland, San Francisco, Seattle, and Toronto.

Raising permit fees in Philadelphia could be accomplished in multiple ways that preserve (options one and two) or abandon (option three) the existing tiered pricing scheme:

1. Raise the cost of all permits while retaining the existing tiered pricing scheme.
2. Retain the existing price for first permit while raising the price of subsequent permits.
3. Retire the tiered pricing system and institute a single higher fee for all permits sold.

In each of these scenarios, higher fees would theoretically serve to discourage some households from storing cars on residential streets.

### **Implementation Examples**

West Hollywood, California, and Toronto are two other cities using graduated pricing for RPPs. In West Hollywood, four price tiers exist: \$22, \$30, \$52, and \$75. Although permits are cheaper in West Hollywood, the differential between tiers is comparable to those in Philadelphia. For example, the second permit in both cities costs approximately 1.4 times more than the first permit. Conversely, the price differential between permits is significantly more extreme in Toronto. At \$626, the cost of a

**6. Increased permit fees** raise the cost of on-street residential parking for some or all permit holders.

second permit in Toronto is more than three times greater than the first permit.

RPPs are currently provided free of charge to residents in Boston. However, a 2016 planning study, entitled *The Future of Parking in Boston*, recommended the adoption of an escalating RPP fee per household to limit abuse and generate revenue for neighborhood improvements. The study suggests that tiers of \$25, \$50, and \$100 may be appropriate. A similar study conducted in Baltimore in 2017 concluded that Baltimore should charge a higher price for permits beyond the first. Researchers suggested that the price of a first permit remain at \$20 because the first registered vehicle is likely to be a necessity, and higher prices would have little impact on permit demand. The report recommended a \$40 target for second permits, and a \$100 target for third permits.

### Implementation Considerations

As mentioned above, PPA's ability to raise the price of parking permits is constrained by state legislation linking permits prices to the cost of program administration. The introduction of Philadelphia's tiered pricing system in 2013 was meant to both help manage parking demand and cover the costs of administering an increasingly expensive program. It is beyond

---

## How much should a parking permit cost?

Car owners who park on residential streets typically pay only a tiny fraction of a parking spot's market value. The \$35 annual fee for a residential parking permit in Philadelphia means that permit holders pay less than \$3 per month to park on city streets. By comparison, motorists parking on a metered street pay nearly the same amount to store their car for one hour. In 2015, the Philadelphia City Planning Commission calculated that the average one-hour cost of parking at a public parking facility in Center City was \$13.39, an increase of 23 percent from 2010.<sup>4</sup> Furthermore, the average cost of a monthly parking space is approximately \$275.<sup>5</sup> That rate translates to roughly \$9 per day and \$3,300 per year.

Some advocates have also observed that the typical disparities in costs between residential permits and transit passes raise significant equity issues, send the wrong message to residents, and incentivize deleterious travel behavior. Currently, a monthly SEPTA TransPass costs \$96, or nearly three times the annual cost of a permit. Over the course of a year, TransPass holders will pay nearly 33 times more than the cost of a permit.<sup>6</sup>

Contemporary approaches to parking management emphasize that parking must be priced correctly for a parking system to function properly. For example, failing to price parking based on demand can result in



lost revenue, increased congestion, decreased access to businesses, and environmental harm. By extension, the arbitrary underpriced fixed parking rates used in most RPP programs function as a subsidy for car owners that results in excess demand for a finite resource. In this case, nearly free residential parking permits may also distort household vehicle ownership decisions and individual travel behavior in a way that retards important city policy goals. As such, cities attempting to address on-street parking shortages frequently explore options for raising the cost of parking permits.

the scope of this study to quantify the costs of operating Philadelphia's RPP program. However, most observers suggest that even the higher fees enacted in 2013 do not come close to covering costs associated with the program, which include processing applications, mailing permits out, and enforcing regulations, particularly as the number of permit streets has grown in recent years. This possibility suggests that raising permit prices in the name of cost recovery and more effective parking management may be feasible.

As Philadelphia considers price-related permit reforms, it is important to remember that the prices of a first and second permit are the most important to establish in terms of policy impact. Together, cars qualifying as the first or second car in a household account for over 97 percent of permits in the program. As such, raising the cost for the third or fourth permit issued to a household will likely only have a minimal impact on overall demand for on-street parking.

Philadelphia's somewhat rare, tiered pricing structure has also created challenges in the practical administration of the program, including technical issues stemming from the use of software customized to meet PPA's unique pricing needs. When combined with the fact that the city's tiered system may not be functioning as much of a deterrent, these administrative challenges suggest that replacing the existing price structure with a single higher fee may produce organizational and operational benefits.

Any plans to raise the cost of RPPs must consider the impacts of higher prices on low-income households. Permit programs are regressive for low-income residents because even nominal permit fees represent a larger percentage of their income than for higher-income groups. Some cities have incorporated income-based discounts into their permit programs to help address this issue. For example, permits generally cost \$65 in Seattle. However, income-eligible vehicle owners can receive a residential parking permit for \$10. To demonstrate eligibility, residents must prove enrollment in one of several assistance programs identified by the Seattle Department of Transportation.

### **Potential Policy Reform 7: Institute Targeted Price Increases Based on Housing Location and/or Characteristics**

Some cities have instituted permit surcharges that increase the cost of a permit for residents in certain transit-oriented locations and/or residents with access to off-street parking. These surcharges based on housing location and/or characteristics can serve as an alternative or a supplement to the eligibility restrictions discussed earlier in this chapter. Targeted price increases seek to influence resident behavior and parking demand in select locations based on the local land use, development, and transportation context. In theory, permit surcharges could be applied to all residents within a designated area or solely to the residents of new development.

**7. Targeted price increases** raise the cost of on-street residential parking for some residents based on location and/or housing characteristics, such as the availability of off-street parking.

### **Implementation Examples**

Permit surcharges are rare. Of the programs reviewed for this study, only Portland's includes the use of permit surcharges. As part of a pilot program, Portland has instituted a surcharge designed to raise the cost of all permits in its Northwest Parking District. On top of the citywide permit fee of \$75, a surcharge of \$120 raises the total cost of a permit to \$195 for residents in this district. This permit surcharge works in conjunction with permit restrictions limiting each licensed driver to one permit and each housing unit to a maximum of three permits. More information on this parking district is provided on page 57.

### **Implementation Considerations**

Permit surcharges based on housing location and characteristics would likely present opportunities and drawbacks similar to those created by eligibility restrictions based on the same factors. For example, permit surcharges applied to homes in transit-oriented districts function similarly to policies that restrict or eliminate permit eligibility for residents in transit locations. Both strategies represent a logical extension of policies designed to promote transit use and discourage travel by single-occupancy vehicle.

Whereas the location-based permit restrictions discussed earlier in this chapter were primarily presented as a policy that could be applied to the residents of new development, location-based surcharges could be applied evenly across a transit-oriented district or reserved solely for new residents of new developments. Although the former implementation would have the most impact, the latter would likely be viewed as more politically feasible.

Permit surcharges that raise the cost of permits for residents with off-street parking reinforce the logical position that finite on-street parking resources should be prioritized for residents without other alternatives before being offered as a convenience. However, both pricing strategies discussed in this chapter create additional complexity for PPA as it administers the permit program. Efforts to implement surcharges would need to be introduced in conjunction with trustworthy methods of tracking zoning designation and/or parking availability.

As discussed in relationship to strategy six, permit surcharges designed to discourage car ownership need to be balanced against equity concerns. In Portland's Northwest Parking District, the permit surcharge is waived for residents with incomes below 80 percent of the area median income. These residents may receive a permit for the base fee of \$75. Lower-income residents who live in buildings with off-street parking are also eligible to buy one parking permit at the base rate.

## Putting it all together: Portland, Oregon's Northwest Parking District

Several of the eligibility and pricing strategies discussed in this chapter have been integrated into a comprehensive approach to parking management in Northwest Portland. Northwest Portland is a densely populated neighborhood with a limited supply of on-street parking to meet the varied commercial and residential needs of a rapidly growing area. In 2013, the City Council adopted a parking plan designed to manage on-street parking based on best practices and data. The plan created a metered area, expanded the permit district (also known as Zone M), and established the Northwest Parking District Stakeholder Advisory Committee to advise the city on transportation and parking issues in the district.

On-street parking analyses are conducted annually to inform the work of the committee. During the 2016–17 permit year, they determined that nearly 10,000 parking permits (including guest and business permits) were sold for an area with roughly half that many on-street parking spaces. In response, the City Council allowed the creation of a pilot program with additional tools designed to decrease the number of permits in circulation. Key elements of the pilot program included raising prices through surcharges, restricting the number of permits available to residents and employers, and replacing year-round guest permits with up to 100 daily scratch-off permits.

Key provisions of the Northwest Residential Permit District are outlined below:<sup>7</sup>

- Permits cost \$195 (\$75 permit + \$120 surcharge).
- Permits are limited to one per licensed driver and three per address. The number of resident permits allowed per address is reduced proportionately by the number of off-street parking spaces available to that address. Applicants complete an off-street declaration form with their application.
- Residents with incomes at or below 80 percent area median income pay \$75 for a permit (the surcharge is waived). Low-income residents who live in buildings with off-street parking are eligible to buy one parking permit at the low-income rate.
- Multifamily buildings are subject to permit caps. Buildings that obtained their certificate of occupancy after August 7, 2013, but before September 1, 2017, are limited to 0.6 permits per number of units in the building. Buildings that obtained their certificate of occupancy September 1, 2017, or after, are limited to 0.4 permits per number of units in the building.

In addition to reducing the number of permits in circulation, the Portland Bureau of Transportation (PBOT) uses a portion of the permit surcharge to directly promote transit use, carpooling, walking, and bicycling. For example, PBOT offers a collection of passes and credits for use on transit, streetcar, bike-share, and e-scooters, known as Transportation Wallets, to residents of the Northwest Parking District. Transportation Wallets valued at over \$230 are available to all residents for a reduced price of \$99. However, if a resident chooses not to renew their Zone M parking permit, they are eligible for a free Transportation Wallet.

### Trade your parking permit in for a Transportation Wallet!

#### Each Transportation Wallet includes:

- \$100 in TriMet value
- An annual Portland Streetcar pass
- An annual BIKETOWN Membership!

#### Who is eligible to receive this offer?

Current NW Parking District residential permit holders who choose to opt-out of their parking permit can receive one Transportation Wallet for FREE.

#### Questions?

Visit [www.nwportlandparking.com](http://www.nwportlandparking.com)



Source: City of Portland

## Permit Process

Most cities use a resident-initiated method to expand permit parking regulations on a block-by-block basis. RPP programs typically involve a petition process that requires majority approval by residents in a zone or on a block before permit restrictions are put in place. With these elements as a starting point, the methods used to establish zones and the rules governing zones vary considerably. Although citizens generally play a strong role in RPP programs, many cities have begun to revise or supplement the process by which permit parking zones can be initiated and/or modified. The RPP process modifications discussed here do not address parking demand issues as directly as the eligibility and pricing policies presented earlier. Nonetheless, alterations to permit procedures can enhance the overall effectiveness of RPP programs by streamlining operations and improving efficiencies.

**8. Permit parking initiated by city staff** provides a supplement to the conventional citizen-led process of establishing permit parking on a block.

### **Potential Policy Reform 8: Enable City Staff to Initiate RPP Activities**

Philadelphia's process for establishing permit parking on an individual block within a designated permit is typical of RPP programs across the nation. Using a petition package created by PPA, residents must obtain signatures of support from at least 60 percent of households on that block before restrictions can be put in place. The residents initiating permit regulations have the ability to select the days and times when permit restrictions will be in place.

However, in Philadelphia and in other cities, the petition-based RPP process has sometimes led to disjointed areas that do not always align with the goals of RPP or broader parking and transportation goals. The citizen-led process can also result in on-street regulations that are irregular and inconsistent, potentially resulting in confusion for residents and visitors. Enforcement may be less effective and more cumbersome in areas where permit restrictions have been implemented one block at a time, and pockets of unpermitted blocks exist within and between permit areas.

Instead of solely relying on an opt-in, block-by-block process led by citizens, policy reforms could enable select city staff to designate new permit areas designed to help manage parking demand within a district and promote operational efficiency. These staff-initiated proposals could take the form of blanket RPP zones in which all streets incorporate permit restrictions. This neighborhood-based approach to parking management allows the city to proactively address parking issues that arise based on land use and development factors rather than relying on citizens to take the initiative in an incremental way. Furthermore, blanket RPP zones ensure that only vehicles registered locally can park long term. In some Philadelphia neighborhoods, the persistent presence of out-of-state vehicles has been identified as a problem.

### **Implementation Examples**

Although citizen-initiated permits zones are a central part of most RPP programs, the roles and responsibilities granted to residents vary from place to place. The following examples are provided to illustrate the range of ways that cities can facilitate the creation and modification of permit zones.

Arlington, Virginia, is similar to Philadelphia in that the creation of zones and the control of how they operate is completely within the control of citizens. Arlington's program is based on the rationale that permit restrictions can be controversial and the city/county does not want to be viewed as imposing them on residents. As in Philadelphia, Arlington residents may petition the city to add or remove permit restrictions from their block. However, Arlington residents also have the ability to use a petition process to subdivide parking zones into smaller areas and to modify eligibility restrictions, such as the number of permits allowed per household. In most cases, efforts to subdivide permits areas have been motivated by the perception that residents were living and working in different parts of the same permit district and using permits to park while away from home.

Some cities take a hybrid approach to establishing permit areas that combines citizen and professional input. In Austin, permit zones are formally created by the city traffic engineer, but the neighborhood association is responsible for determining where there is resident support for the zone. After a public meeting is held and a petition is circulated, representatives from the neighborhood association work with city staff to detail the boundaries and time periods that restrictions should be put in place. City staff then conduct a parking inventory on streets within the designated boundaries using what is known as the 75 percent/25 percent rule. If a block is at least 75 percent occupied two days per week, with at least 25 percent of cars belonging to nonresidents, then the agreed upon permit restrictions are put in place.

Other cities, such as San Francisco and Berkeley, California, and Alexandria, Virginia, have established procedures for the creation of staff- or council-initiated permit zones. In general, these procedures enable the relevant agencies to use a public process to administratively create, expand, or reform RPP in order to improve the effectiveness of RPP as a parking management tool. In Alexandria, the creation of a supplemental process through which city staff can establish new RPP districts near transit or in areas with documented parking issues, was part of an update to the city's RPP program that occurred in 2019. The proposed changes must be communicated via mailed ballots to all addresses within the affected area. Before new restrictions can be initiated, more than 50 percent of ballots must be returned by a specified date, and more than 60 percent of respondents must indicate support for the recommendation. The proposals that meet the ballot requirements must then be presented at a public hearing for a recommendation from the Traffic and Parking Board before they will be considered by the City Council.<sup>8</sup>

Like the cities discussed here, Washington, DC's presiding agency, the District Department of Transportation (DDOT), can establish, modify, or remove RPP restrictions in response to significant land use development or curbside management initiatives that would adversely impact residential parking. However, DDOT is somewhat unique in that it spells out a broader set of factors, beyond public engagement, that should influence the creation of permit parking. In addition to a series of geographic requirements, new permit parking areas are assessed based on their potential to reduce congestion, vehicles miles traveled, illegal parking, and

health or safety hazards. Factors that might prevent the implementation of RPP in an area may include an inability to enforce program restrictions; the availability of simpler, cheaper solutions; or the perception that parking problems will simply be transferred to a different area.<sup>9</sup>

### **Implementation Considerations**

The creation of a supplemental process through which city staff can create or modify RPP districts would create a new parking management tool for Philadelphia. Such a process would allow city planners to take a more holistic view of parking issues and potentially incorporate more effective parking demand strategies into future neighborhood and district plans. However, enabling this option will require that the city establishes clear criteria for how and when staff may intervene in the RPP process and stringent policies for engaging residents in any RPP decisions.

Staff-initiated RPP designations may be most useful when employed to help manage parking in faster-growing neighborhoods outside of Center City where permit parking may be less established. Similarly, the creation of blanket RPP zones may be a necessary complement to other eligibility and pricing reforms that the city may choose to institute in the future. For example, increasing permit prices or restricting the number of permits available to a household may not have the intended effect if residents can simply avoid these restrictions by storing their cars on nearby unregulated streets.

Finally, it may be useful to discuss this administrative tool as part of a larger package of potential RPP reforms designed to simplify and streamline the RPP program. These reforms may also include measures designed to help promote more consistent regulations within permit districts and/or simplify enforcement.

## CHAPTER 5

# Evaluating the Future of RPP in Philadelphia

Effective parking management is essential to Philadelphia’s efforts to build and maintain an inclusive and balanced transportation system for a growing city. Residential permit policy is a critical, yet often overlooked, component of parking management in Philadelphia. In some residential neighborhoods, RPP works exactly as it should. Permits help to ensure that residents have adequate parking, while also permitting other users to access on-street parking. In many other neighborhoods, however, a variety of interconnected demographic, development, and socioeconomic trends are contributing to a surge in parking demand that is straining RPP districts. This report presents information on the factors driving demand for parking in Philadelphia and identifies potential RPP reforms that can help the city adapt to a variety of transportation challenges.

This final chapter identifies selected additional parking tools that can be considered in conjunction with the RPP reforms discussed in Chapter 4. The report concludes by outlining a series of suggested guiding principles that decision makers can use when evaluating the future of RPP in Philadelphia.

## Additional Parking Management Tools

In addition to RPP, a holistic approach to parking management at the city level can consider strategies related to a broad array of topics, including zoning parking requirements, on- and off-street parking pricing, public transit improvements, enhanced walkability, and enforcement. Three additional instruments that have the potential to work in concert with various RPP reforms include Parking Benefit Districts (PBDs), paid + permit parking, and neighborhood shared parking. These tools are briefly described below and included here as potential complements to the RPP rule changes discussed previously.

### Parking Benefit Districts

Strategic pricing is the most effective way of managing on-street parking when demand routinely exceeds practical capacity. As such, parking meters can be powerful tools that help to manage demand and increase turnover and parking availability for visitors, employers, and residents. However, there is frequently intense resistance to installing new parking meters and/or raising the rates charged by existing meters.

PBDs are mechanisms that can be used to implement new pricing schemes designed to manage parking demand. Simply put, PBDs are specified geographies in which the parking revenues are used to finance local improvements. The fact that some or all of the revenue generated through parking meters, fines, and/or taxes is directly returned to the community can improve local support for the initiative. PBDs are frequently created for central business districts or commercial centers, but they can also be structured to include nearby residential neighborhoods. Theoretically,

PBDs can be implemented in areas covered by an RPP program. In this case, residents with permits continue to park in these areas, but non-residents would be subject to the PBD fee via metering.

PBDs vary in structure, size, and intent, but the revenues they generate are commonly used to support transportation and public realm improvements such as walking and biking infrastructure, street trees, benches, and lighting. Some PBDs are managed by business improvement districts, while others are administered by special purpose agencies, often referred to as Parking Management Authorities (PMAs). PMAs can be composed of local stakeholders, including business owners, developers, residents, land owners, and government representatives, who collaborate to develop goals, set parking prices, and determine how parking revenue is spent.

The most extensive and well-known PBDs have been implemented in Pasadena, California; Boulder, Colorado; and Ann Arbor, Michigan. More recently, parking meter revenue return programs were created in Austin, Texas, and Washington, DC. In 2016, Massachusetts passed the Municipal Modernization Act which allows cities and towns in the state to establish PBDs.

Closer to home, Pittsburgh established a “Parking Enhancement District” (PED) in the South Side Flats neighborhood in 2017. This pilot program was implemented in an area known for its nightlife and included new stricter rules for RPP and an expansion of meter enforcement for 688 on-street parking spaces on Fridays and Saturdays. On these weekend nights, metered parking was now being enforced until midnight, an extension of six hours from the previous regulations. Estimates suggest that the additional meter revenue could generate approximately \$250,000 per year. Pittsburgh city law allows this extra income to be directed only to public safety or public works improvements in the neighborhood.<sup>1</sup>

The implementation of PBDs in Philadelphia may currently be subject to legal constraints. For example, the city charter requires that all parking revenue go into the general fund, potentially complicating efforts to set aside a portion of parking revenue for dedicated local spending. Furthermore, the PPA is a state agency, and a formula derived at the state level determines the distribution of parking revenue between the city and the school district.

If these challenges can be overcome, PBDs represent a potentially powerful addition to the city’s parking management toolbox. PBDs may be beneficial for Philadelphia neighborhoods trying to:

- provide public services similar to those in a business improvement district, such as street cleaning;
- fund commercial corridor economic development initiatives, such as wayfinding and branding, without taxing local businesses; and/or
- cover costs and capture value derived from the use of neighborhood amenities by nonresidents.

The sidebar on page 63 presents a series of questions that can help interested parties outline the structure of a potential PBD.

## **Paid + Permit Parking**

Paid + permit parking is a parking management tool that combines paid parking for visitors with free parking for vehicles with permits. In many conventional RPP zones, visitors park for free for up to the posted time limit, typically two hours. Paid + permit parking uses payment, rather than time limits, to encourage turnover. Advocates of paid + permit parking suggest that this hybrid form of RPP more effectively discourages all-day guest parking, is easier to enforce, and provides more flexibility for guests.

Paid + permit parking was instituted on some San Francisco streets as part of a package of parking management strategies implemented in 2018. In describing this regulation, SFMTA emphasizes the potential of this tool to accommodate various types of visitors while discouraging those simply

---

## **Implementing a PBD**

The prerequisites for setting up a PBD include a well-defined area with high parking demand, an insufficient supply of on-street parking, the ability to charge for curbside parking, and desired public services or infrastructure. Given these conditions, the following questions can help stakeholders think through the process of creating a PBD.<sup>2</sup>

### **Creation**

1. Where should the program start?
2. What area(s) may be appropriate for a pilot program?

### **Function**

1. What is the optimal occupancy rate? Many communities have adopted a parking vacancy goal of one to two spaces per metered block. This guideline, advanced by Donald Shoup, translates into a vacancy rate of roughly 15 percent.

### **Pricing**

1. What rate should be charged to accomplish the optimal occupancy rate?
2. How should we adjust the rates?
3. How often can/should we adjust the rates?
4. When should the rates apply?

### **Performance Management**

1. How will we measure the occupancy rates?
2. What other metrics can be used to judge the effectiveness of the program?

### **Revenue Distribution**

1. How is the spending of PBD revenue decided?
2. How will revenue be distributed?
3. Who authorizes the expenditures?
4. What are eligible projects?
5. How are program activities reported?

### **Replication**

1. How are permanent and/or additional districts created?
2. What is the role of the community in creating and administering new PBDs?

### **Interactivity**

1. How will the PBD function with other existing programs, including RPP?



These sample signs from San Francisco show how paid + permit parking zones are distinguished from areas governed by time limits.

Source: SFMTA

using residential streets for free parking. On streets with posted two-hour time limits, some visitors may simply move their car around the area in an effort to avoid getting ticketed. Paid + permit parking is envisioned as a way of addressing the needs of visitors who may need to stay longer than the time limits allow, such as service providers, contractors, or guests. In San Francisco, a conscious decision was made to price the meters at a rate that was approximately the same as the cost of a one-day visitor permit.

Paid + permit parking may be most effective in mixed-use areas, where commercial and residential uses overlap, and in dense residential neighborhoods where parking demand outstrips curb space. In both situations, residents with a valid permit are exempt from payment, and the zone functions just like a traditional RPP for them. Visitors can pay to park if they find a space.

Because visitors have the option of paying to park for longer periods of time, special care would need to be taken when applying paid + permit parking in or near commercial or retail areas where parking turnover is vital to the economic well-being of local businesses. In these areas, RPP could go into effect only during times of lower demand, such as after typical business hours. In any situation, paid + permit parking would require specific signage that distinguishes the zone from other RPP or metered parking zones.

### Neighborhood Shared Parking

Shared parking is a parking management strategy in which adjacent, or nearby, property owners share their parking facilities to reduce the number of parking spaces that each would be required to provide on their individual properties according to zoning standards. The concept of shared parking is based on the idea that certain uses, such as residential and office, primarily generate parking demand at different times of the day or week. As such, when these uses are located in close proximity, some portion of the parking can be used to satisfy both uses without conflict.

Neighborhood shared parking refers to a variety of potential arrangements in which parking for commercial properties and/or public facilities in residential neighborhoods would be made available to residents at certain times. Unlike the other parking management tools discussed in this report, neighborhood shared parking attempts to increase the supply of parking spaces available to neighborhood residents. In this way, neighborhood shared parking is more akin to other supply-expanding measures, such as the conversion of parallel parking to diagonal parking, than efforts designed to reduce parking demand.

Parking lots for public schools, recreation centers, and churches are some of the most commonly identified properties that could potentially serve as “community parking facilities.” However, little research has been done on where and how these types of facilities have been opened to the public or how they might be considered as part of an RPP program. Formal shared parking agreements typically delineate terms and conditions for important issues, such as maintenance and liability for damages. Where it exists, neighborhood shared parking appears to be more informal in nature with

less precise operating conditions. Despite the bureaucratic challenges that neighborhood shared parking facilities present, they are included here as a tool to be considered in the right situation.

## Guiding Principles

No single parking management strategy can solve the challenge of too many cars competing for too few curbside spaces. The issues involved in residential parking management are multifaceted and require a comprehensive approach that combines parking management with land use and transportation planning. As such, instituting any of the parking management strategies and RPP reforms discussed in this report will require making trade-offs between efficacy, convenience, and ease of administration and enforcement. The following considerations are presented as a series of guiding principles that can help Philadelphia decision makers contextualize and evaluate potential changes to RPP policy.

### **Establish clear criteria for how potential changes to RPP policy will be evaluated**

Changes to Philadelphia's RPP policy may be necessary to help the program evolve to continue meeting the needs of a changing city. Philadelphia decision makers should establish clear and transparent criteria to help them evaluate which potential policy reforms will be most beneficial to the city. In general terms, any potential revisions can be evaluated based on the degree to which they can be implemented and enforced and contribute to a program with simple rules that are easily understood, and clearly applied.

More specifically, new parking rules can be assessed based on how they balance effectiveness and equity. On the one hand, the reality of a growing population and increasing rates of vehicle ownership suggests that RPP policy reforms will need to result in the reduction of the number of permits issued in certain neighborhoods in order to be effective. This can be accomplished by limiting the number of permits issued, raising prices, and/or reducing the eligibility of some residents to receive permits. On the other hand, car access continues to be vital for many Philadelphians, including some of the 40 percent of residents who work outside of the city. Any changes to RPP policy should ensure that the basic protections of permit parking are distributed equitably throughout the city without discrimination based on the racial or social makeup of neighborhoods. Furthermore, any discussion of permit pricing must include the impact of increasing prices on lower-income households.

Permit reform also offers a great opportunity to ensure that the RPP program aligns with important city goals and planning initiatives. Philadelphia decision makers should ensure that any RPP policy reforms reinforce the objectives established by recent transportation and sustainability initiatives. With these objectives in mind, RPP should be viewed as a tool that can help reduce congestion and improve traffic safety while helping to support a shift from driving to walking, biking, and transit.

## **Reach out to stakeholders and the public before any changes are implemented**

Parking can be deeply personal, and planning literature often alludes to the emotional nature of public discourse related to parking issues. As such, public engagement designed to gather feedback and communicate potential changes in policy is essential to the long-term success of RPP reforms. Whether planning for future growth or addressing current parking issues, it is important to understand residents' perception of the problem and tap into their local expertise on current parking conditions.

In addition to assessing parking problems, public engagement can help build consensus for action. Although everyone may agree that there is a parking problem, they may not agree on the appropriate measures to solve it. It is important to inform stakeholders of the costs and benefits of various strategies. Public engagement can take many forms, including public open houses, surveys, and focus groups.<sup>3</sup> Regardless of the form, all outreach should include a clear set of goals for the community and city, like those discussed above, which can help guide the discussion. Similarly, most discussions will be more productive if they are preceded by a presentation of relevant data on local conditions that might include local permit adoption and/or parking occupancy rates.

Public outreach around RPP issues can be built around the following core elements:

- 1. Overview of current RPP program**  
*Goal:* Summarize current RPP regulations and local statistics.
- 2. Why evaluate potential changes?**  
*Goal:* Provide overview of demographic, physical, and travel trends shaping parking demand.
- 3. Strategic goals and guiding principles**  
*Goal:* Discuss how RPP can help address various transportation, quality of life, economic development, and equity goals.
- 4. Strategies and Tools**  
*Goal:* Solicit feedback on the pros and cons of various strategies.

## **Consider different RPP strategies for different places**

Today, all permit zones are governed by one set of operating rules for permit availability and eligibility. Although some residential parking zones function well under the program's current design, other districts are under stress due to an increase in demand for on-street parking. The number of these districts is expected to increase as development activity continues to expand in neighborhoods throughout the city.

Although a citywide set of rules helps improve the overall legibility of the RPP system, it limits the program's ability to respond to local conditions. Each neighborhood using RPP in Philadelphia has a unique set of parking needs. These needs are based primarily on the cause and degree of parking conflicts, including the location and number of parking generators, the mix of land uses, number of visitors, availability of off-street parking, and the availability of alternative modes of transportation.

One of the biggest potential changes to Philadelphia’s RPP program would involve the use of RPP regulations that vary based on a district’s specific land use and transportation context. This more tailored neighborhood-by-neighborhood approach would introduce flexibility into permit regulations guiding the number and price of permits issued, as well as other policies like the number of permits available to residents of new development. If implemented in Philadelphia, local stakeholders and city planners could work collaboratively to select the RPP rules that are appropriate for a specific district based on local conditions, citizen preferences, and best practices.

Seattle and Washington, DC, have both studied more holistic approaches to classifying permit zones.<sup>4</sup> Although these classifications were never instituted, they can inform conversations about the potential use of context-sensitive permit districts in Philadelphia. Seattle considered dividing each existing permit zone into one of three categories—low impact, medium impact, and high impact—based on a range of factors that determine how a zone operates. As the names suggest, each zone would be characterized by the intensity of residential development and other traffic/parking generators found in that district. Among other strategies, permit availability would be restricted on a sliding scale that correlated with development intensity. Similarly, Washington, DC’s conceptual program imagined customized regulations that could be applied to four permit district classes: downtown core, higher-intensity districts, neighborhood centers, and lower intensity districts.

### **Consider layering parking strategies to achieve the desired effect**

As mentioned above, no silver bullet exists when it comes to parking management. However, implementing complementary RPP reforms in appropriate locations may pay important dividends. In some cases, multiple policy revisions may need to be enacted simultaneously to have the desired effect. For example, in order to reduce the permit eligibility of households with access to off-street parking, an overall cap on permits for all households in a district would also need to be initiated. In districts with severe parking challenges, RPP reforms can be used in conjunction with a variety of nonpermit-related parking management tools that make sense based on the context.

### **Start small**

Given the fact that parking is a controversial subject and that changes in RPP policy may require associated changes in program administration and enforcement, it may be best to test RPP reforms through pilot projects. Testing individual RPP reforms or combinations of reforms in smaller areas can allow decision makers to assess the impacts of various policies. Based on the performance of pilot districts, potential RPP policies can be adjusted in response or abandoned as needed.



## ENDNOTES

### Chapter 1: Introduction

<sup>1</sup> For this report, the increase in the number of vehicles was calculated by using U.S. Census estimates of the number of vehicles available by household over the years indicated. For example, the total number of vehicles in each year was determined by multiplying the number of occupied housing units having one vehicle by one, multiplying the number of units having two vehicles by two, and so on, and adding all sums together.

<sup>2</sup> The map presented in Figure 1 was adapted from a graphic created by the *Seattle Times* for a story entitled “Seattle’s rate of car ownership saw the biggest drop among big U.S. cities—by far” that appeared on November 2, 2019.

<sup>3</sup> For more information on DVRPC’s population and employment forecasts, please visit [www.dvrpc.org/webmaps/popforecast/](http://www.dvrpc.org/webmaps/popforecast/) and <https://www.dvrpc.org/webmaps/empforecasts/>.

<sup>4</sup> Bacon’s quote was taken from a 1962 video created by the Philadelphia City Planning Commission entitled “Form, Design, and the City.” The film can be viewed by visiting [www.youtube.com/watch?v=1GGqSkDXOSg](http://www.youtube.com/watch?v=1GGqSkDXOSg).

### Chapter 2: Residential Permit Parking in Philadelphia and Beyond

<sup>1</sup> For more information on the history of the Philadelphia Parking Authority, please visit: [philapark.org/2015/01/a-small-history-lesson-about-the-philadelphia-parking-authority/](http://philapark.org/2015/01/a-small-history-lesson-about-the-philadelphia-parking-authority/).

### Chapter 3: Understanding Philadelphia’s Changing Context

<sup>1</sup> There are several ways to estimate how the number of vehicles in Philadelphia has changed over the years. For this study, DVPRC based its estimates on the number of households identified by the census as having zero, one, two, or three or more cars. DVRPC generated a citywide estimate by multiplying the number of households in each category by the relevant number of cars.

<sup>2</sup> For more information please read PlanPhilly article entitled, “Center City has more parking permits than parking spaces, and other fun parking findings” available at [why.org/articles/center-city-has-more-parking-permits-than-parking-spaces-and-other-fun-parking-findings/](http://why.org/articles/center-city-has-more-parking-permits-than-parking-spaces-and-other-fun-parking-findings/).

### Chapter 4: Exploring Potential RPP Policy Reforms

<sup>1</sup> Area permit caps were discussed as a potential strategy for some Baltimore neighborhoods in the *South Baltimore Gateway Parking Study*. This study can be viewed at [transportation.baltimorecity.gov/sites/default/files/Website%20upload%20Parking%20Study%20Presentation\\_11-13-2017.pdf](http://transportation.baltimorecity.gov/sites/default/files/Website%20upload%20Parking%20Study%20Presentation_11-13-2017.pdf).

<sup>2</sup> For more information on the parking changes implemented in San Francisco’s Dogpatch neighborhood, please visit [www.sfmata.com/blog/parking-changes-coming-dogpatch](http://www.sfmata.com/blog/parking-changes-coming-dogpatch).

<sup>3</sup> For more information about parking regulations in Somerville, MA, please visit [www.somervillema.gov/departments/traffic-commission](http://www.somervillema.gov/departments/traffic-commission).

<sup>4</sup> The Philadelphia City Planning Commission’s parking inventories for Center City and University City can be found at [www.phila.gov/documents/philadelphia-parking-inventories/](http://www.phila.gov/documents/philadelphia-parking-inventories/).

<sup>5</sup> The cost of a monthly parking space in Philadelphia was sourced from Spothero in January 2021: [spothero.com/city/monthly/philadelphia-parking](http://spothero.com/city/monthly/philadelphia-parking).

<sup>6</sup> The concept of transit pass cost parity was discussed in a 2018 *Philadelphia Inquirer* article, [www.inquirer.com/philly/opinion/commentary/philadelphia-traffic-congestion-cars-drivers-trucks-solutions-ideas-20181019.html](http://www.inquirer.com/philly/opinion/commentary/philadelphia-traffic-congestion-cars-drivers-trucks-solutions-ideas-20181019.html). Other research suggests that nationally, the average price of a monthly parking permit in cities is \$2.25, compared to \$70.00 for a transit pass. For more information, please visit: [usa.streetsblog.org/2020/09/24/op-ed-it-shouldnt-cost-31x-more-to-take-transit-than-park/](http://usa.streetsblog.org/2020/09/24/op-ed-it-shouldnt-cost-31x-more-to-take-transit-than-park/).

<sup>7</sup> The details of Portland's Northwest Parking District summarized here can be viewed at [www.portland.gov/transportation/parking/northwest-parking-district](http://www.portland.gov/transportation/parking/northwest-parking-district).

<sup>8</sup> For more information on Alexandria's proposed RPP reforms, please visit [www.alexandriava.gov/tes/info/default.aspx?id=106254](http://www.alexandriava.gov/tes/info/default.aspx?id=106254).

<sup>9</sup> For more details on RPP guidelines in Washington, DC, please see DDOT's *Curbside Management Study* available at [www.ite.org/pub/?id=C29F4D5E-FE34-2037-3B96-DE312E1DBBFF](http://www.ite.org/pub/?id=C29F4D5E-FE34-2037-3B96-DE312E1DBBFF).

## **Chapter 5: Evaluating the Future of RPP in Philadelphia**

<sup>1</sup> More information on Pittsburgh's PED is contained in the following articles, "Pittsburgh touts new South Side parking rules, including nighttime meter enforcement." ([www.post-gazette.com/local/city/2017/06/26/east-carson-street-meters-South-Side-parking-Enhancement-District-pittsburgh-business-concerns-Bruce-Kraus/stories/201706190116](http://www.post-gazette.com/local/city/2017/06/26/east-carson-street-meters-South-Side-parking-Enhancement-District-pittsburgh-business-concerns-Bruce-Kraus/stories/201706190116)) and "Parking Enhancement District Clean Time will hit the streets in S. Side this week" ([www.sopghreporter.com/story/2018/09/04/front-page/parking-enhancement-district-clean-team-will-hit-the-streets-in-s-side-this-week/19137.html](http://www.sopghreporter.com/story/2018/09/04/front-page/parking-enhancement-district-clean-team-will-hit-the-streets-in-s-side-this-week/19137.html)).

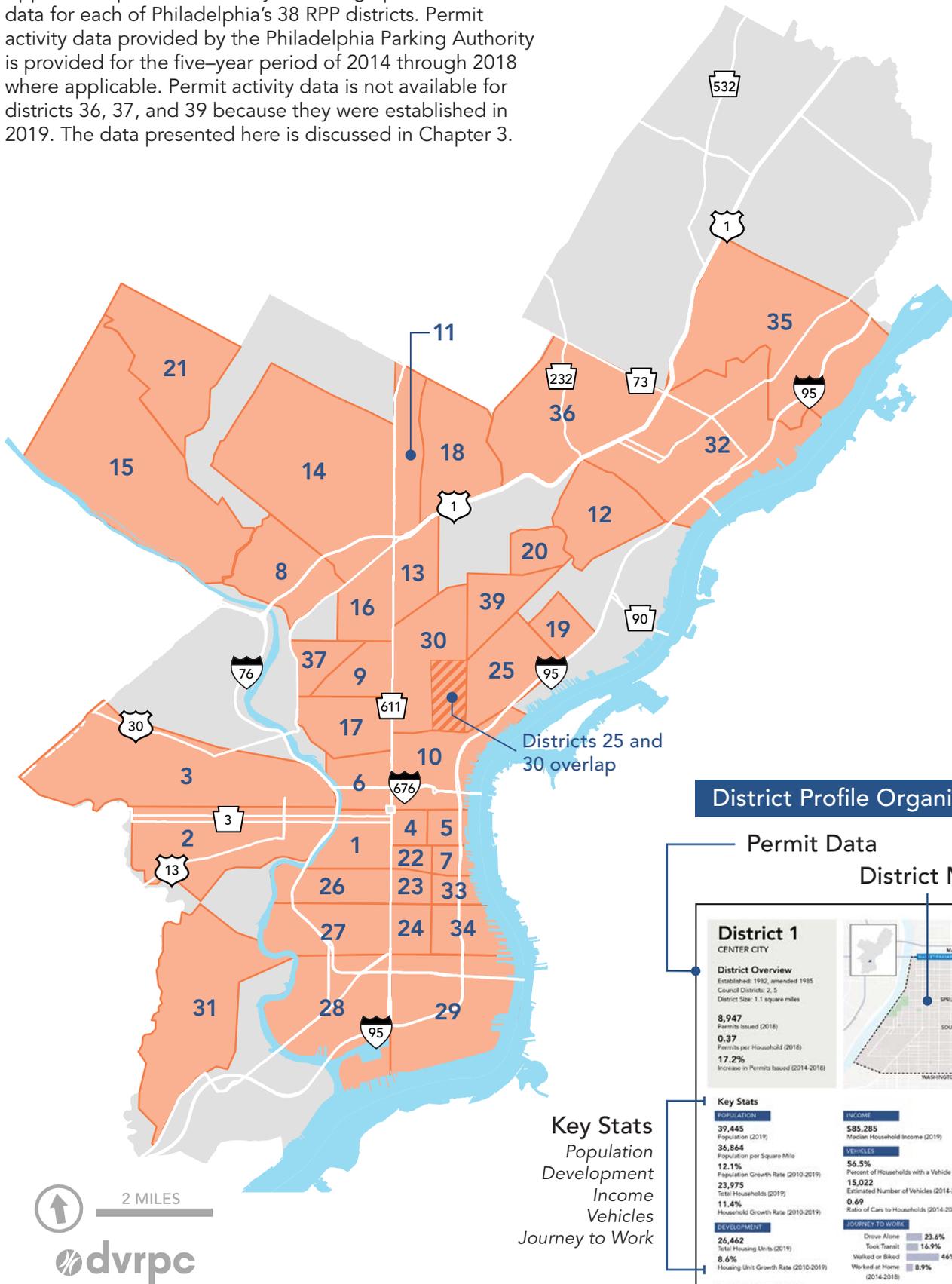
<sup>2</sup> These questions were adapted from Urban Land Institute (ULI) research conducted as part of ULI's *Study on Parking Benefit Districts and Opportunities for New Orleans* in 2012. The report can be viewed at [uli.org/wp-content/uploads/2012/12/ULI-LA-Study-on-Parking-Benefits-District-for-New-Orleans-FINAL.pdf](http://uli.org/wp-content/uploads/2012/12/ULI-LA-Study-on-Parking-Benefits-District-for-New-Orleans-FINAL.pdf).

<sup>3</sup> San Francisco conducted fairly extensive public engagement as part of its parking permit evaluation reform project. These engagement activities can be viewed by visiting [www.sfmta.com/projects/residential-parking-permit-evaluation-reform-project](http://www.sfmta.com/projects/residential-parking-permit-evaluation-reform-project) and clicking on "Past Meetings" and "Related Reports and Documents."

<sup>4</sup> More information on conceptual RPP classifications in Seattle are presented in the *Residential Parking Zone Policy Review Project Draft Final Report*, available at [www.seattle.gov/Documents/Departments/SDOT/ParkingProgram/rpz/RPZBrochureApril2009.pdf](http://www.seattle.gov/Documents/Departments/SDOT/ParkingProgram/rpz/RPZBrochureApril2009.pdf).

# Appendix A: Residential Permit Parking District Profiles

Appendix A presents a variety of demographic and social data for each of Philadelphia's 38 RPP districts. Permit activity data provided by the Philadelphia Parking Authority is provided for the five-year period of 2014 through 2018 where applicable. Permit activity data is not available for districts 36, 37, and 39 because they were established in 2019. The data presented here is discussed in Chapter 3.



## District Profile Organization

### Permit Data

### District Map

#### District 1

**CENTER CITY**

**District Overview**  
 Established: 1932, amended 1985  
 Council Districts: 2, 5  
 District Size: 1.1 square miles

**8,947**  
Permits Issued (2018)

**0.37**  
Permits per Household (2018)

**17.2%**  
Increase in Permits Issued (2014-2018)

**Key Stats**

<b>POPULATION</b>	<b>INCOME</b>
39,445 Population (2019)	585,285 Median Household Income (2019)
36,864 Population per Square Mile	<b>VEHICLES</b>
12.1% Population Growth Rate (2010-2019)	56.5% Percent of Households with a Vehicle (2014-2018)
23,975 Total Households (2019)	15,022 Estimated Number of Vehicles (2014-2018)
11.4% Household Growth Rate (2010-2019)	0.69 Ratio of Cars to Households (2014-2018)
<b>DEVELOPMENT</b>	<b>JOURNY TO WORK</b>
26,442 Total Housing Units (2019)	Drove Alone: 23.6%
8.6% Housing Unit Growth Rate (2010-2019)	Took Transit: 16.9%
	Walked or Biked: 46%
	Worked at Home (2014-2018): 8.9%

Source: American Community Survey, Esri

**Key Stats**  
 Population  
 Development  
 Income  
 Vehicles  
 Journey to Work

# District 1

## District Overview

Established: 1982, amended 1985  
Council Districts: 2, 5  
District Size: 1.1 square miles

**8,947**

Permits Issued (2018)

**0.37**

Permits per Household (2018)

**17.2%**

Increase in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**39,445**

Population (2019)

**36,864**

Population per Square Mile

**12.1%**

Population Growth Rate (2010–2019)

**23,975**

Total Households (2019)

**11.4%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**26,462**

Total Housing Units (2019)

**8.6%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$85,285**

Median Household Income (2019)

### VEHICLES

**56.5%**

Percentage of Households with a Vehicle (2014–2018)

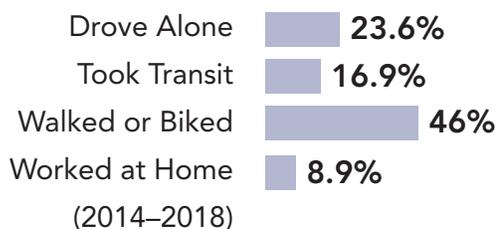
**15,022**

Estimated Number of Vehicles (2014–2018)

**0.69**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK



Source: American Community Survey, Esri

# District 2

## District Overview

Established: 1982, amended 2018  
Council Districts: 2, 3  
District Size: 3.8 square miles

**3,248**

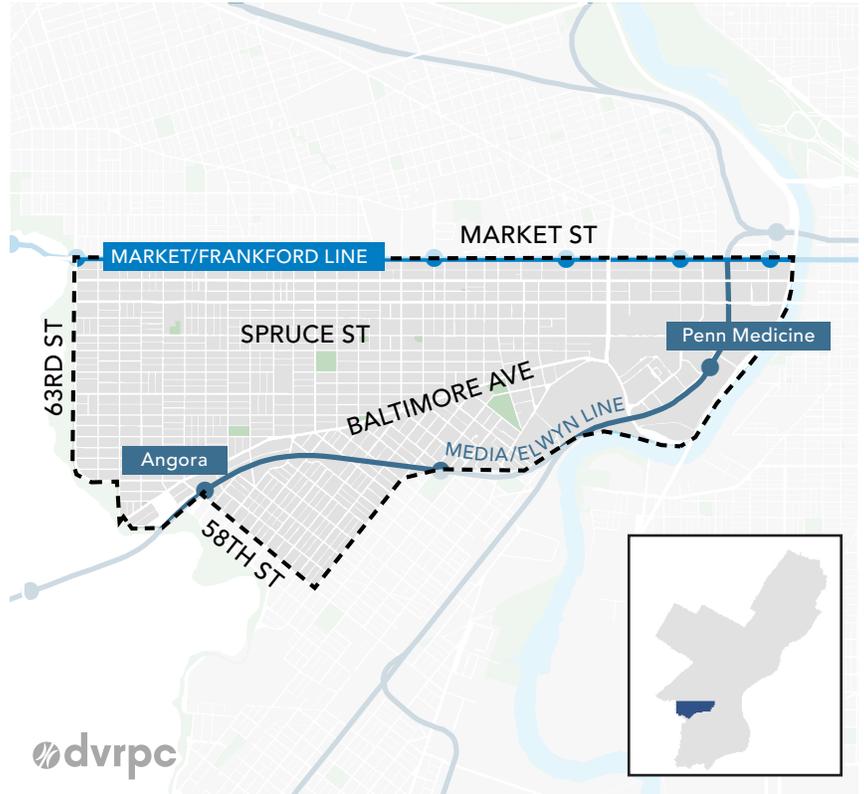
Permits Issued (2018)

**0.08**

Permits per Household (2018)

**56.9%**

Increase in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**111,903**

Population (2019)

**21,941**

Population per Square Mile

**5.4%**

Population Growth Rate (2010–2019)

**41,598**

Total Households (2019)

**5.6%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**47,318**

Total Housing Units (2019)

**4.1%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$27,771**

Median Household Income (2019)

### VEHICLES

**53.4%**

Percentage of Households with a Vehicle (2014–2018)

**26,203**

Estimated Number of Vehicles (2014–2018)

**0.63**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **31.6%**

Took Transit **38.2%**

Walked or Biked **19.9%**

Worked at Home **4.2%**  
(2014–2018)

Source: American Community Survey, Esri

# District 3

## District Overview

Established: 1982, amended 1986  
Council Districts: 3, 4  
District Size: 5.7 square miles

**1,664**

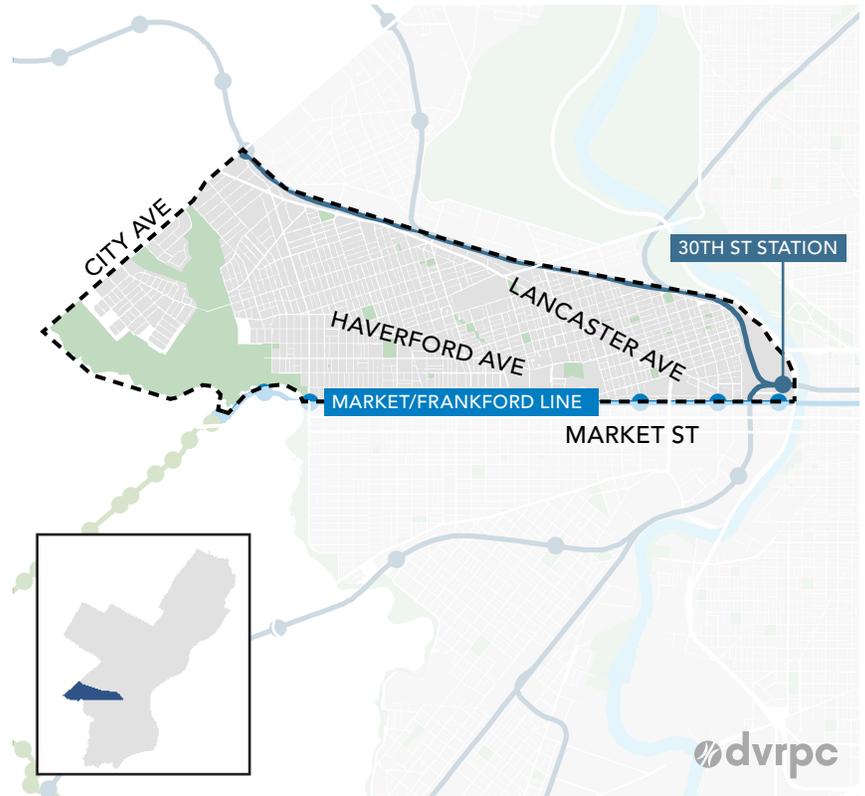
Permits Issued (2018)

**0.04**

Permits per Household (2018)

**33.1%**

Increase in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**127,798**

Population (2019)

**13,467**

Population per Square Mile

**4.8%**

Population Growth Rate (2010–2019)

**51,533**

Total Households (2019)

**4.7%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**59,510**

Total Housing Units (2019)

**3.5%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$27,771**

Median Household Income (2019)

### VEHICLES

**59.9%**

Percentage of Households with a Vehicle (2014–2018)

**40,914**

Estimated Number of Vehicles (2014–2018)

**0.80**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **45.9%**

Took Transit **36.2%**

Walked or Biked **7.9%**

Worked at Home **3.2%**  
(2014–2018)

Source: American Community Survey, Esri

# District 4

## District Overview

Established: 1982, amended 1993  
Council District: 1  
District Size: 0.38 square miles

**1,810**

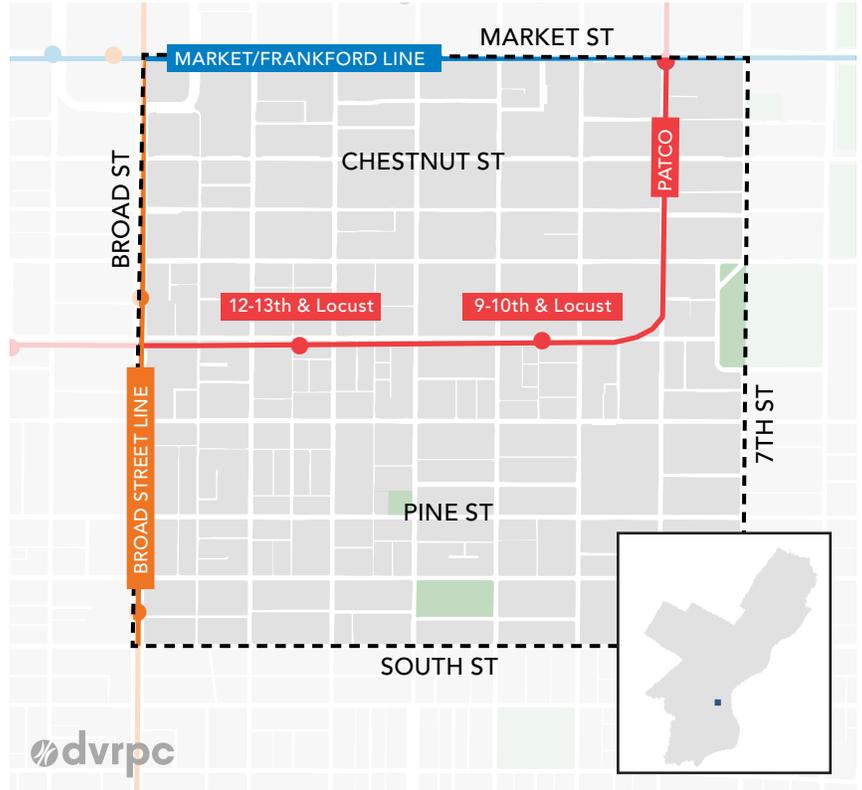
Permits Issued (2018)

**0.21**

Permits per Household (2018)

**9.1%**

Increase in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**15,623**

Population (2019)

**41,113**

Population per Square Mile

**13.5%**

Population Growth Rate (2010–2019)

**9,180**

Total Households (2019)

**15%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**9,820**

Total Housing Units (2019)

**12.4%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$58,471**

Median Household Income (2019)

### VEHICLES

**43.1%**

Percentage of Households with a Vehicle (2014–2018)

**3,727**

Estimated Number of Vehicles (2014–2018)

**0.41**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **23.2%**

Took Transit **22.4%**

Walked or Biked **41.6%**

Worked at Home **8.1%**

(2014–2018)

Source: American Community Survey, Esri

# District 5

## District Overview

Established: 1982, amended 2003  
Council District: 1  
District Size: 0.44 square miles

**1,838**

Permits Issued (2018)

**0.40**

Permits per Household (2018)

**1.3%**

Increase in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**7,430**

Population (2019)

**16,886**

Population per Square Mile

**7.1%**

Population Growth Rate (2010–2019)

**4,418**

Total Households (2019)

**7.1%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**4,796**

Total Housing Units (2019)

**4.5%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$118,357**

Median Household Income (2019)

### VEHICLES

**68.8%**

Percentage of Households with a Vehicle (2014–2018)

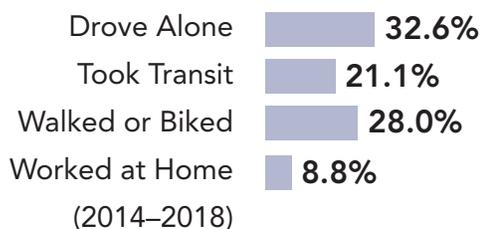
**3,295**

Estimated Number of Vehicles (2014–2018)

**0.76**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK



Source: American Community Survey, Esri

# District 6

## District Overview

Established: 1982, amended 1986  
Council District: 5  
District Size: 0.95 square miles

**4,443**

Permits Issued (2018)

**0.36**

Permits per Household (2018)

**13.5%**

Increase in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**22,771**

Population (2019)

**23,969**

Population per Square Mile

**26.6%**

Population Growth Rate (2010–2019)

**13,417**

Total Households (2019)

**27.7%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**14,211**

Total Housing Units (2019)

**26.3%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$79,034**

Median Household Income (2019)

### VEHICLES

**64.5%**

Percentage of Households with a Vehicle (2014–2018)

**9,489**

Estimated Number of Vehicles (2014–2018)

**0.71**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **35.3%**

Took Transit **14.6%**

Walked or Biked **36.6%**

Worked at Home **7.9%**  
(2014–2018)

Source: American Community Survey, Esri

# District 7

## District Overview

Established: 1982, amended 1993  
Council District: 1  
District Size: 0.37 square miles

**3,017**

Permits Issued (2018)

**0.71**

Permits per Household (2018)

**13.2%**

Increase in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**8,337**

Population (2019)

**22,532**

Population per Square Mile

**11.1%**

Population Growth Rate (2010–2019)

**4,129**

Total Households (2019)

**9.3%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**4,478**

Total Housing Units (2019)

**7.0%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$90,369**

Median Household Income (2019)

### VEHICLES

**72.8%**

Percentage of Households with a Vehicle (2014–2018)

**3,843**

Estimated Number of Vehicles (2014–2018)

**0.94**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **38.3%**

Took Transit **21.3%**

Walked or Biked **20.2%**

Worked at Home **7.9%**

(2014–2018)

Source: American Community Survey, Esri

# District 8

## District Overview

Established: 1982, amended 1987  
Council District: 4  
District Size: 2.09 square miles

**1,136**

Permits Issued (2018)

**0.19**

Permits per Household (2018)

**20.1%**

Increase in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**13,500**

Population (2019)

**6,459**

Population per Square Mile

**6.4%**

Population Growth Rate (2010–2019)

**6,162**

Total Households (2019)

**6.5%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**6,780**

Total Housing Units (2019)

**4.4%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$52,204**

Median Household Income (2019)

### VEHICLES

**80.7%**

Percentage of Households with a Vehicle (2014–2018)

**6,400**

Estimated Number of Vehicles (2014–2018)

**1.05**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **56.6%**

Took Transit **24.3%**

Walked or Biked **6.1%**

Worked at Home **5.5%**  
(2014–2018)

Source: American Community Survey, Esri

# District 9

## District Overview

Established: 1983  
Council District: 5  
District Size: 0.94 square miles

**172**

Permits Issued (2018)

**0.02**

Permits per Household (2018)

**34.4%**

Increase in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**22,718**

Population (2019)

**24,168**

Population per Square Mile

**5.8%**

Population Growth Rate (2010–2019)

**7,819**

Total Households (2019)

**4.5%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**9,903**

Total Housing Units (2019)

**4.7%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$13,784**

Median Household Income (2019)

### VEHICLES

**45.3%**

Percentage of Households with a Vehicle (2014–2018)

**3,813**

Estimated Number of Vehicles (2014–2018)

**0.48**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **38.4%**

Took Transit **42.9%**

Walked or Biked **11.4%**

Worked at Home **2.6%**  
(2014–2018)

Source: American Community Survey, Esri

# District 10

## District Overview

Established: 1984  
Council Districts: 1, 5  
District Size: 2.2 square miles

**3,457**

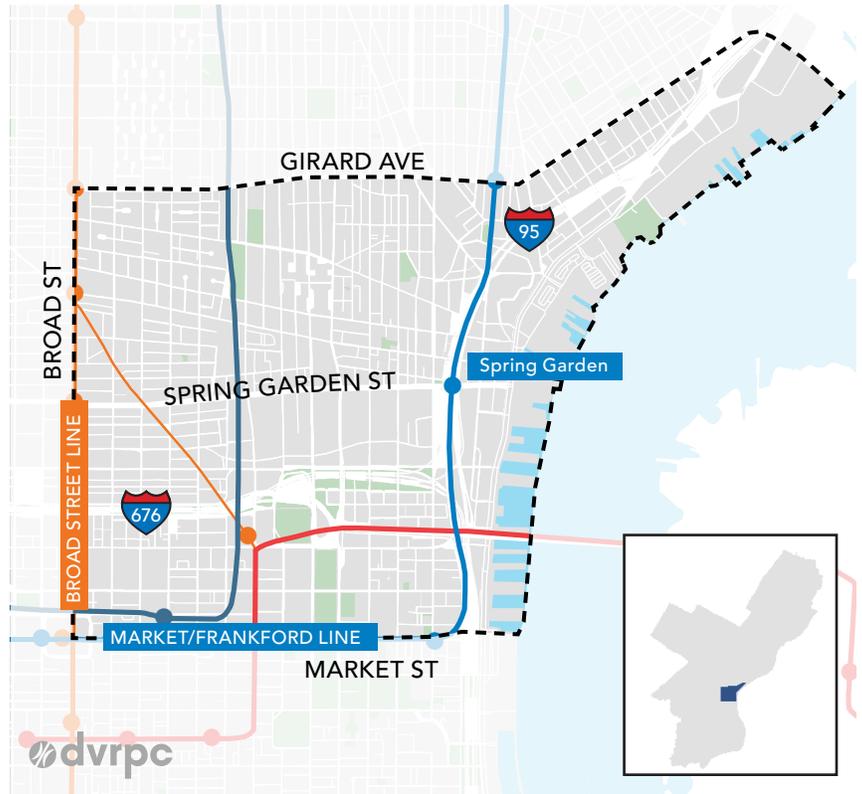
Permits Issued (2018)

**0.27**

Permits per Household (2018)

**65.9%**

Increase in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**29,577**

Population (2019)

**13,444**

Population per Square Mile

**22.1%**

Population Growth Rate (2010–2019)

**13,714**

Total Households (2019)

**24.5%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**15,087**

Total Housing Units (2019)

**20.2%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$76,791**

Median Household Income (2019)

### VEHICLES

**71.4%**

Percentage of Households with a Vehicle (2014–2018)

**12,037**

Estimated Number of Vehicles (2014–2018)

**0.90**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **41.9%**

Took Transit **25.3%**

Walked or Biked **20.4%**

Worked at Home **6.5%**

(2014–2018)

Source: American Community Survey, Esri

# District 11

## District Overview

Established: 1985, amended 1990,1992  
Council Districts: 8, 9  
District Size: 1.5 square miles

**496**

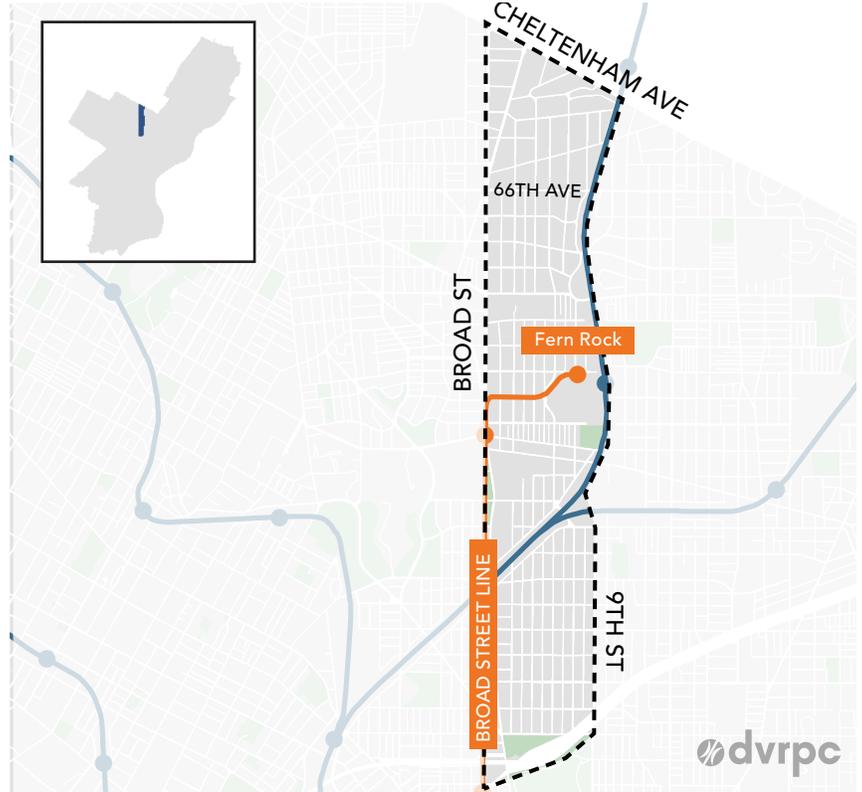
Permits Issued (2018)

**0.05**

Permits per Household (2018)

**-2.2%**

Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**23,497**

Population (2019)

**16,094**

Population per Square Mile

**3.0%**

Population Growth Rate (2010–2019)

**8,795**

Total Households (2019)

**3.0%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**10,197**

Total Housing Units (2019)

**2.2%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$29,040**

Median Household Income (2019)

### VEHICLES

**58.5%**

Percentage of Households with a Vehicle (2014–2018)

**7,497**

Estimated Number of Vehicles (2014–2018)

**0.85**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **49.6%**

Took Transit **39.2%**

Walked or Biked **1.8%**

Worked at Home **4.0%**  
(2014–2018)

Source: American Community Survey, Esri

# District 12

## District Overview

Established: 1985, amended 1986,2013  
Council Districts: 6, 7  
District Size: 1.97 square miles

**233**

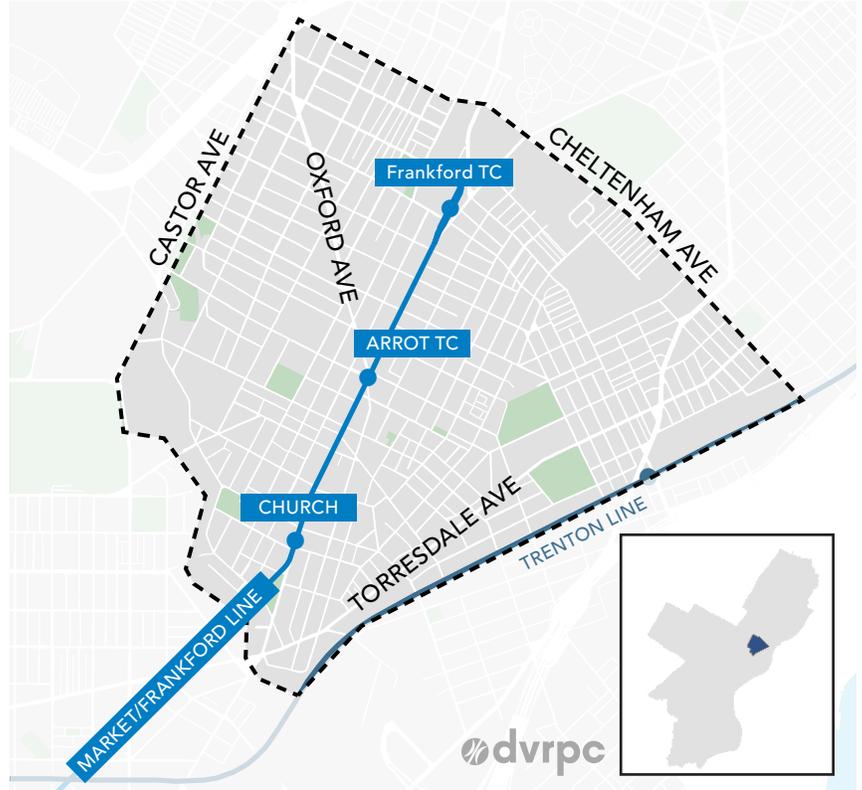
Permits Issued (2018)

**0.06**

Permits per Household (2018)

**72.6%\***

Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**36,321**

Population (2019)

**18,437**

Population per Square Mile

**0.8%**

Population Growth Rate (2010–2019)

**12,506**

Total Households (2019)

**-0.8%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**14,362**

Total Housing Units (2019)

**0.7%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$25,952**

Median Household Income (2019)

### VEHICLES

**64.1%**

Percentage of Households with a Vehicle (2014–2018)

**11,679**

Estimated Number of Vehicles (2014–2018)

**0.93**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **51.5%**

Took Transit **30.4%**

Walked or Biked **4.0%**

Worked at Home **2.4%**

(2014–2018)

\*In some cases, larger percentage increases in permit sales are the result of the relatively small number of residential permits issued in 2014.

Source: American Community Survey, Esri

# District 13

## District Overview

Established: 1985  
Council Districts: 6, 7  
District Size: 1.09 square miles

**169**

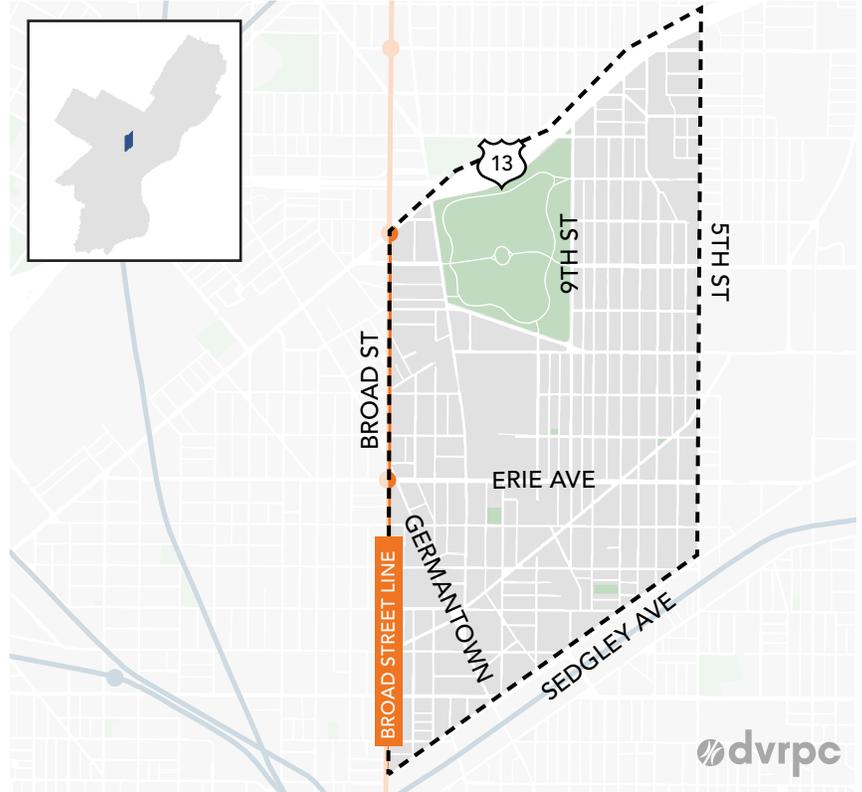
Permits Issued (2018)

**0.02**

Permits per Household (2018)

**52.3%**

Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**22,863**

Population (2019)

**20,975**

Population per Square Mile

**1.5%**

Population Growth Rate (2010–2019)

**7,389**

Total Households (2019)

**0.7%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**8,541**

Total Housing Units (2019)

**0.6%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$18,764**

Median Household Income (2019)

### VEHICLES

**57.0%**

Percentage of Households with a Vehicle (2014–2018)

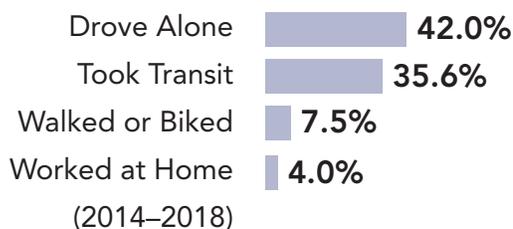
**5,334**

Estimated Number of Vehicles (2014–2018)

**0.72**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK



Source: American Community Survey, Esri

# District 14

## District Overview

Established: 1988  
Council District: 8  
District Size: 7.2 square miles

**381**

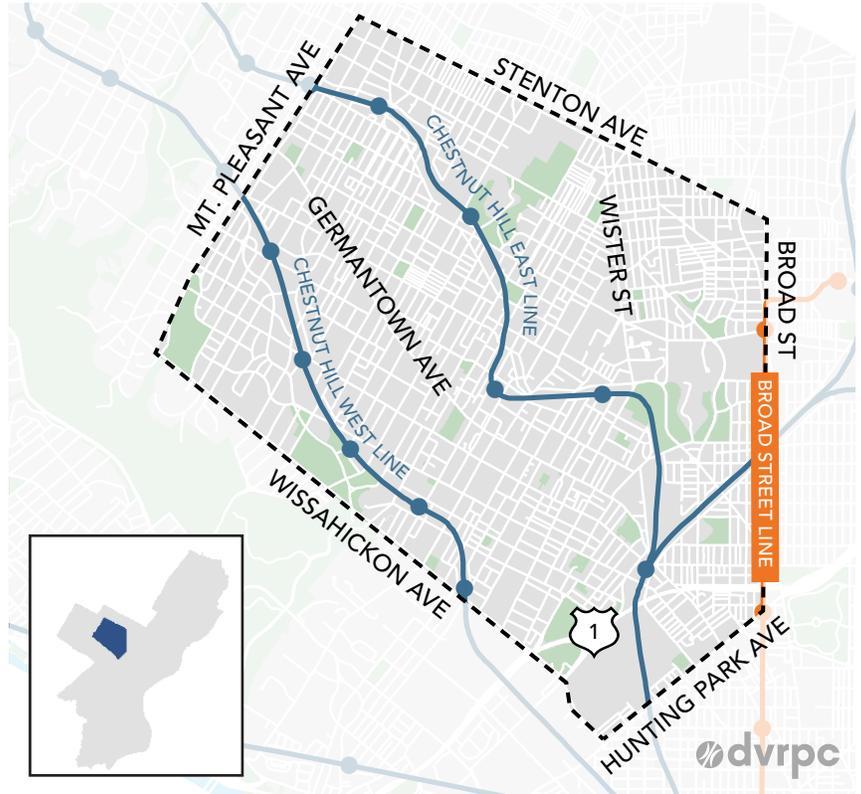
Permits Issued (2018)

**0.01**

Permits per Household (2018)

**-7.7%**

Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**99,053**

Population (2019)

**13,776**

Population per Square Mile

**2.6%**

Population Growth Rate (2010–2019)

**40,241**

Total Households (2019)

**2.4%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**45,868**

Total Housing Units (2019)

**2.2%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$30,880**

Median Household Income (2019)

### VEHICLES

**64.6%**

Percentage of Households with a Vehicle (2014–2018)

**35,326**

Estimated Number of Vehicles (2014–2018)

**0.87**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **50.5%**

Took Transit **33.1%**

Walked or Biked **4.0%**

Worked at Home **4.9%**  
(2014–2018)

Source: American Community Survey, Esri

# District 15

## District Overview

Established: 1988  
Council District: 4  
District Size: 7.6 square miles

**1,314**

Permits Issued (2018)

**0.07**

Permits per Household (2018)

**323.9%\***

Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**43,383**

Population (2019)

**5,738**

Population per Square Mile

**5.5%**

Population Growth Rate (2010–2019)

**19,880**

Total Households (2019)

**5.1%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**21,068**

Total Housing Units (2019)

**3.4%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$71,927**

Median Household Income (2019)

### VEHICLES

**91.6%**

Percentage of Households with a Vehicle (2014–2018)

**28,848**

Estimated Number of Vehicles (2014–2018)

**1.5**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **67.5%**

Took Transit **16.3%**

Walked or Biked **4.0%**

Worked at Home **4.1%**

(2014–2018)

\*In some cases, larger percentage increases in permit sales are the result of the relatively small number of residential permits issued in 2014.

# District 16

## District Overview

Established: 1990  
Council Districts: 10  
District Size: 1.2 square miles

**194**

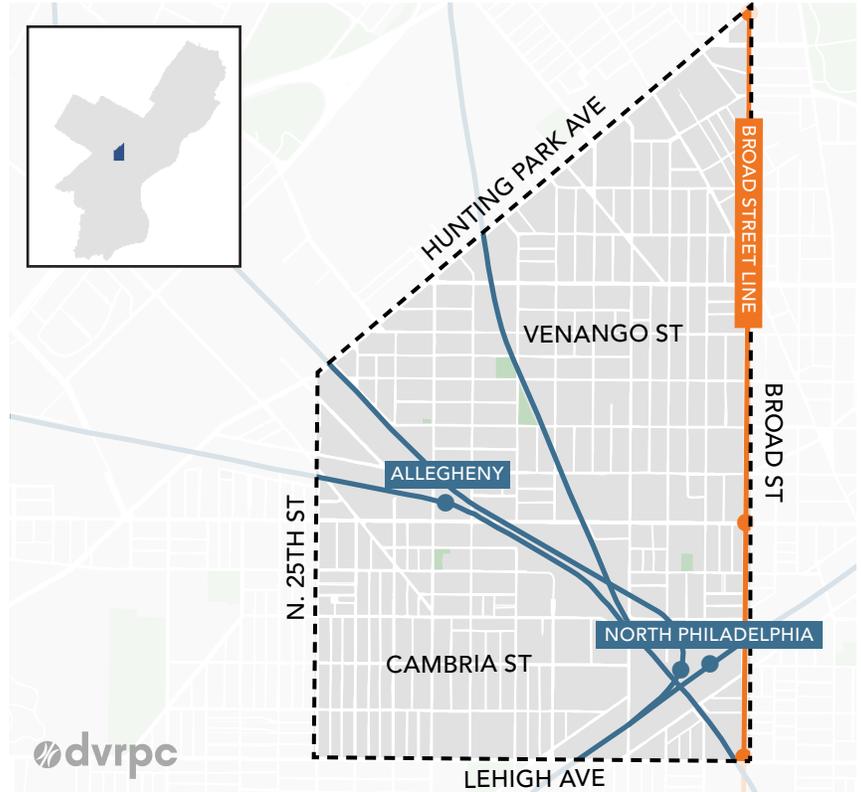
Permits Issued (2018)

**0.02**

Permits per Household (2018)

**32%**

Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**20,778**

Population (2019)

**17,172**

Population per Square Mile

**3.3%**

Population Growth Rate (2010–2019)

**8,191**

Total Households (2019)

**2.7%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**10,183**

Total Housing Units (2019)

**1.8%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$18,847**

Median Household Income (2019)

### VEHICLES

**46.3%**

Percentage of Households with a Vehicle (2014–2018)

**4,605**

Estimated Number of Vehicles (2014–2018)

**0.56**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **36.2%**

Took Transit **46.7%**

Walked or Biked **5.6%**

Worked at Home **3.2%**  
(2014–2018)

Source: American Community Survey, Esri

# District 17

## District Overview

Established: 1991  
Council District: 5  
District Size: 1.5 square miles

**1,888**

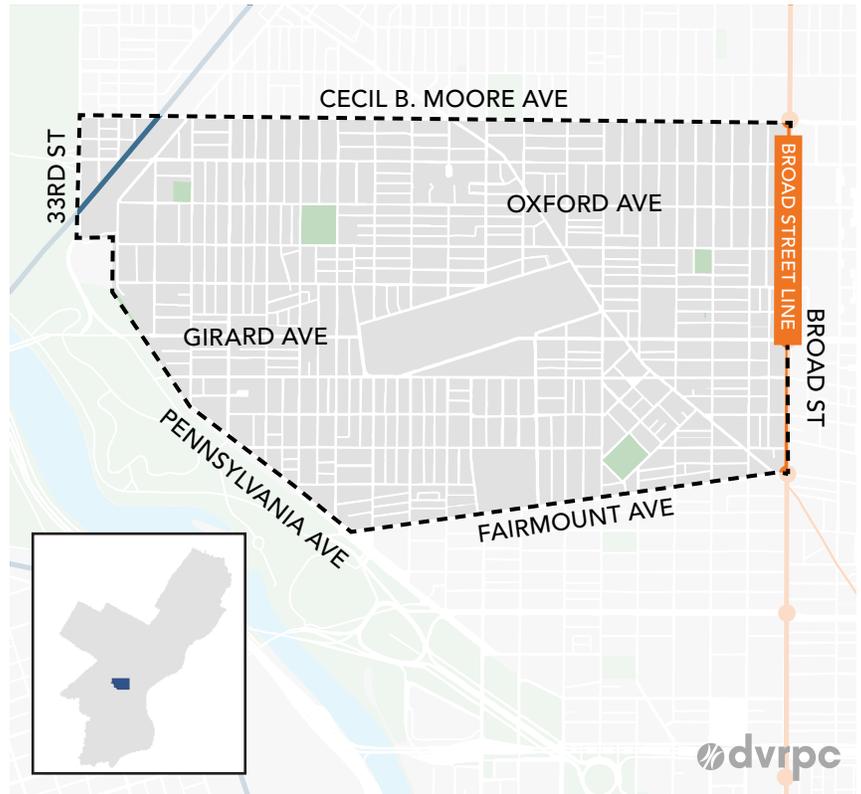
Permits Issued (2018)

**0.13**

Permits per Household (2018)

**76.4%**

Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**35,717**

Population (2019)

**23,811**

Population per Square Mile

**8.5%**

Population Growth Rate (2010–2019)

**14,590**

Total Households (2019)

**8.5%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**17,215**

Total Housing Units (2019)

**8.3%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$37,238**

Median Household Income (2019)

### VEHICLES

**63.6%**

Percentage of Households with a Vehicle (2014–2018)

**11,379**

Estimated Number of Vehicles (2014–2018)

**0.78**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **39.2%**

Took Transit **26.4%**

Walked or Biked **21.5%**

Worked at Home **5.2%**

(2014–2018)

\*In some cases, larger percentage increases in permit sales are the result of the relatively small number of residential permits issued in 2014.

Source: American Community Survey, Esri

# District 18

## District Overview

Established: 1992  
Council Districts: 8, 9  
District Size: 2.3 square miles

**256**

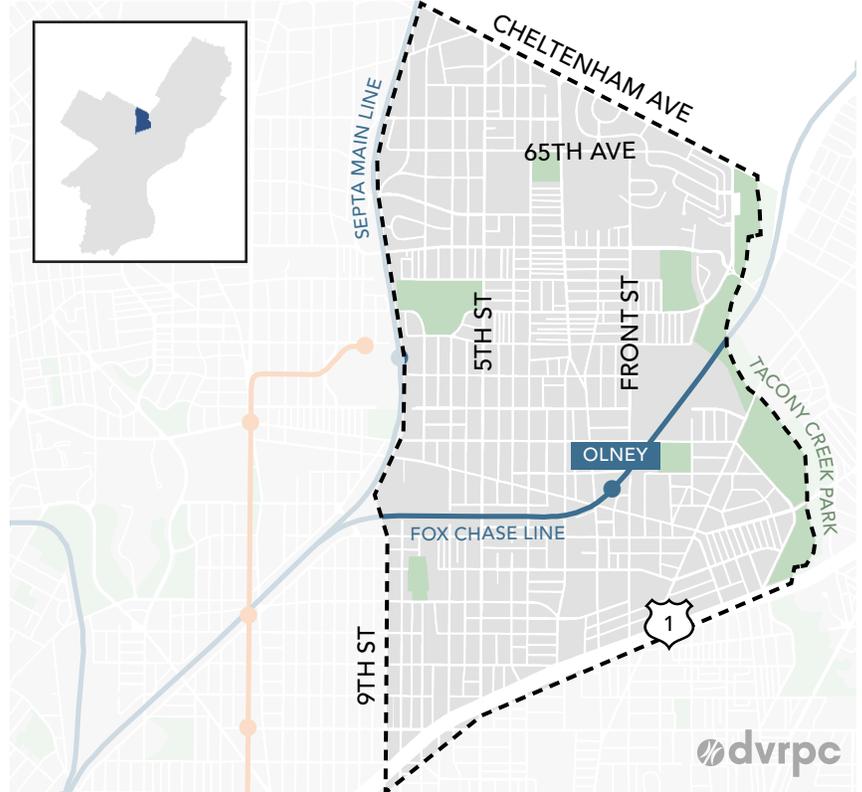
Permits Issued (2018)

**0.01**

Permits per Household (2018)

**25,500%**

Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**46,137**

Population (2019)

**20,325**

Population per Square Mile

**0.5%**

Population Growth Rate (2010–2019)

**15,589**

Total Households (2019)

**0%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**16,714**

Total Housing Units (2019)

**0.3%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$38,624**

Median Household Income (2019)

### VEHICLES

**77.7%**

Percentage of Households with a Vehicle (2014–2018)

**19,530**

Estimated Number of Vehicles (2014–2018)

**1.25**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **57.9%**

Took Transit **23.6%**

Walked or Biked **2.2%**

Worked at Home **1.9%**

(2014–2018)

\*In some cases, larger percentage increases in permit sales are the result of the relatively small number of residential permits issued in 2014.

Source: American Community Survey, Esri

# District 19

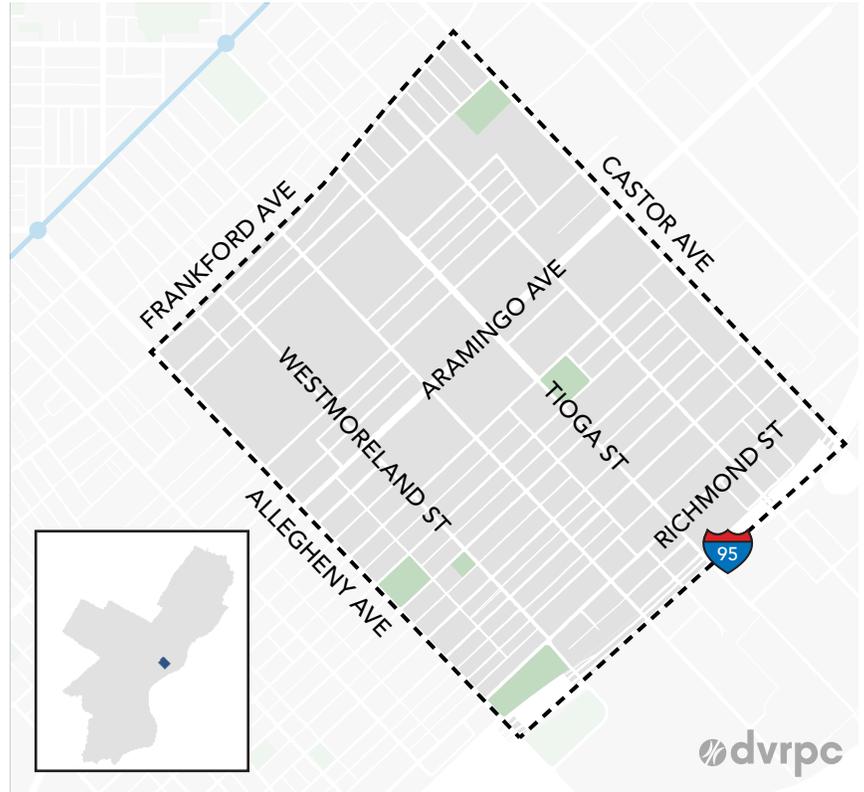
## District Overview

Established: 1992  
Council Districts: 1, 6  
District Size: 0.7 square miles

**26**  
Permits Issued (2018)

**0.01**  
Permits per Household (2018)

**36.8%**  
Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**9,348**  
Population (2019)

**13,354**  
Population per Square Mile

**5.4%**  
Population Growth Rate (2010–2019)

**3,574**  
Total Households (2019)

**4%**  
Household Growth Rate (2010–2019)

### DEVELOPMENT

**3,822**  
Total Housing Units (2019)

**1.7%**  
Housing Unit Growth Rate (2010–2019)

### INCOME

**\$37,463**  
Median Household Income (2019)

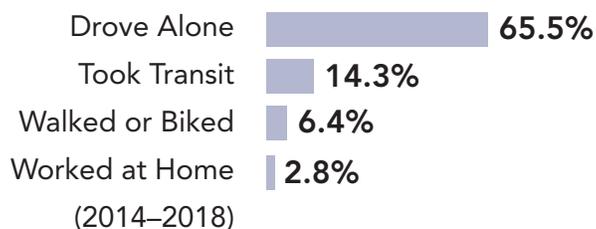
### VEHICLES

**76%**  
Percentage of Households with a Vehicle (2014–2018)

**4,002**  
Estimated Number of Vehicles (2014–2018)

**1.13**  
Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK



Source: American Community Survey, Esri

# District 20

## District Overview

Established: 1992  
Council District: 7  
District Size: 0.7 square miles

**0**  
Permits Issued (2018)

—  
Permits per Household (2018)

—  
Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**15,168**  
Population (2019)

**21,983**  
Population per Square Mile

**3.1%**  
Population Growth Rate (2010–2019)

**4,790**  
Total Households (2019)

**-0.2%**  
Household Growth Rate (2010–2019)

### DEVELOPMENT

**5,095**  
Total Housing Units (2019)

**0.2%**  
Housing Unit Growth Rate (2010–2019)

### INCOME

**\$31,139**  
Median Household Income (2019)

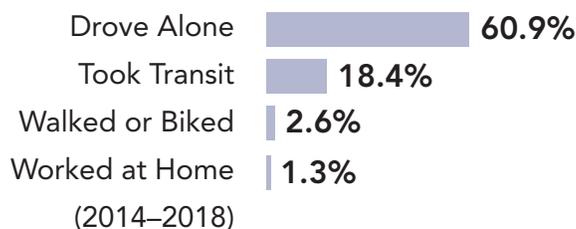
### VEHICLES

**81.7%**  
Percentage of Households with a Vehicle (2014–2018)

**6,448**  
Estimated Number of Vehicles (2014–2018)

**1.34**  
Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK



Source: American Community Survey, Esri

# District 21

## District Overview

Established: 1992  
Council District: 8  
District Size: 3.2 square miles

**375**

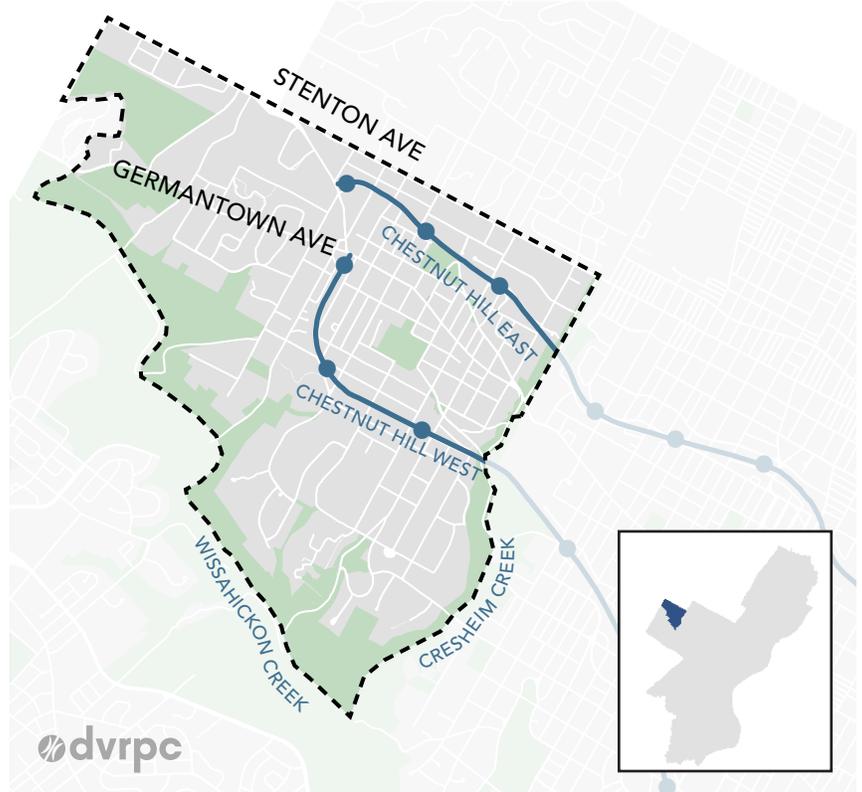
Permits Issued (2018)

**0.08**

Permits per Household (2018)

**60.9%**

Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**9,759**

Population (2019)

**3,128**

Population per Square Mile

**0.4%**

Population Growth Rate (2010–2019)

**4,353**

Total Households (2019)

**-0.2%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**4,715**

Total Housing Units (2019)

**1%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$98,137**

Median Household Income (2019)

### VEHICLES

**89.0%**

Percentage of Households with a Vehicle (2014–2018)

**6,2,21**

Estimated Number of Vehicles (2014–2018)

**1.43**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **56.1%**

Took Transit **21.2%**

Walked or Biked **7.1%**

Worked at Home **9.1%**

(2014–2018)

\*In some cases, larger percentage increases in permit sales are the result of the relatively small number of residential permits issued in 2014.

Source: American Community Survey, Esri

# District 22

## District Overview

Established: 1992, amended 1994  
Council Districts: 1, 2  
District Size: 0.3 square miles

**3,065**

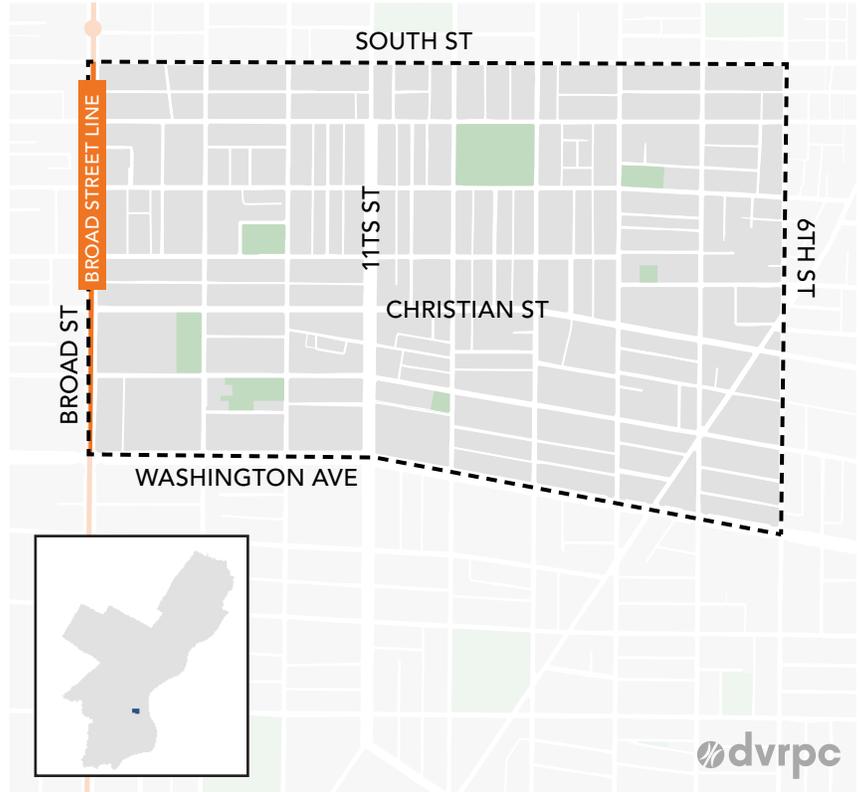
Permits Issued (2018)

**0.65**

Permits per Household (2018)

**12.7%**

Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**9,660**

Population (2019)

**32,200**

Population per Square Mile

**12.7%**

Population Growth Rate (2010–2019)

**4,574**

Total Households (2019)

**10.6%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**5,114**

Total Housing Units (2019)

**8%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$81,536**

Median Household Income (2019)

### VEHICLES

**68.5%**

Percentage of Households with a Vehicle (2014–2018)

**3,844**

Estimated Number of Vehicles (2014–2018)

**0.84**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **28.4%**

Took Transit **15.9%**

Walked or Biked **40.8%**

Worked at Home **7.7%**  
(2014–2018)

Source: American Community Survey, Esri

# District 23

## District Overview

Established: 1994  
Council Districts: 1  
District Size: 0.4 square miles

**3,337**

Permits Issued (2018)

**0.50**

Permits per Household (2018)

**50.9%**

Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**14,893**

Population (2019)

**36,324**

Population per Square Mile

**6.1%**

Population Growth Rate (2010–2019)

**6,380**

Total Households (2019)

**5.2%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**6,892**

Total Housing Units (2019)

**2.4%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$55,667**

Median Household Income (2019)

### VEHICLES

**69.1%**

Percentage of Households with a Vehicle (2014–2018)

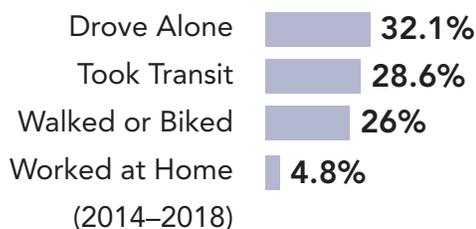
**5,231**

Estimated Number of Vehicles (2014–2018)

**0.82**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK



Source: American Community Survey, Esri

# District 24

## District Overview

Established: 1994  
Council District: 1  
District Size: 0.6 square miles

**3,847**

Permits Issued (2018)

**0.35**

Permits per Household (2018)

**24.4%**

Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**26,506**

Population (2019)

**43,756**

Population per Square Mile

**3.4%**

Population Growth Rate (2010–2019)

**10,247**

Total Households (2019)

**2%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**11,136**

Total Housing Units (2019)

**0.7%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$44,912**

Median Household Income (2019)

### VEHICLES

**61.6%**

Percent of Households with a Vehicle (2014–2018)

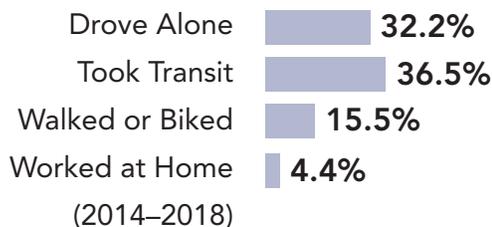
**8,527**

Estimated Number of Vehicles (2014–2018)

**0.83**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK



Source: American Community Survey, Esri

# District 25

## District Overview

Established: 1995, amended 1999  
Council Districts: 1, 5, 7  
District Size: 2.6 square miles

**2,197**

Permits Issued (2018)

**0.23**

Permits per Household (2018)

**133.2%**

Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**58,533**

Population (2019)

**22,954**

Population per Square Mile

**11.9%**

Population Growth Rate (2010–2019)

**22,178**

Total Households (2019)

**11.3%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**24,733**

Total Housing Units (2019)

**8.2%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$35,712**

Median Household Income (2019)

### VEHICLES

**72.4%**

Percentage of Households with a Vehicle (2014–2018)

**21,779**

Estimated Number of Vehicles (2014–2018)

**1.0**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **49.5%**

Took Transit **25.3%**

Walked or Biked **10%**

Worked at Home **4.3%**

(2014–2018)

Source: American Community Survey, Esri

# District 26

## District Overview

Established: 1995  
Council District: 2  
District Size: 1.3 square miles

**2,896**

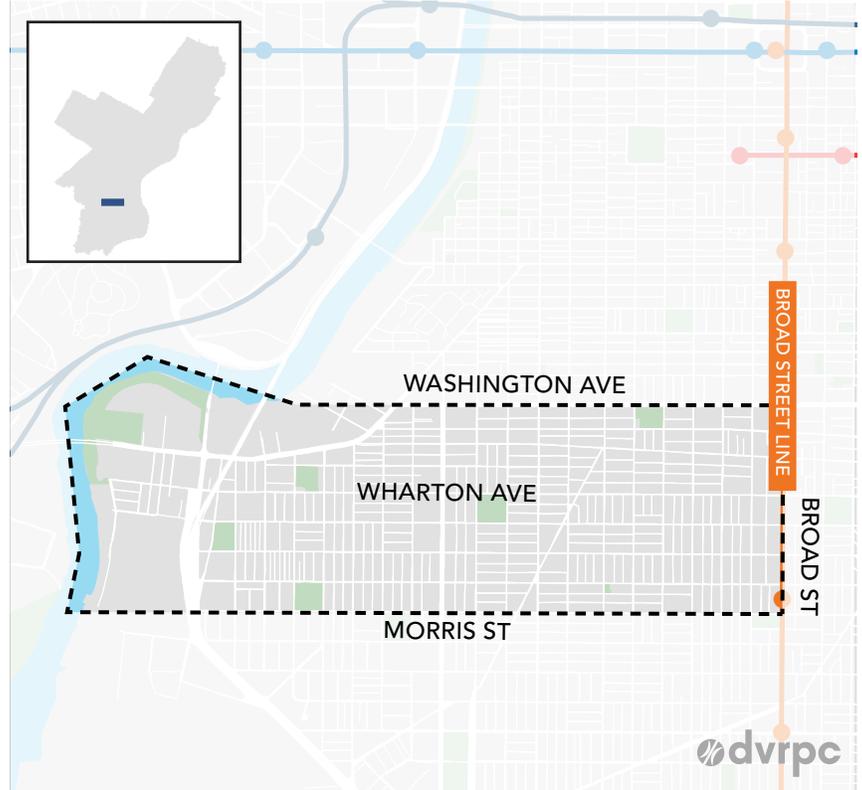
Permits Issued (2018)

**0.24**

Permits per Household (2018)

**413%**

Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**26,673**

Population (2019)

**20,518**

Population per Square Mile

**9.7%**

Population Growth Rate (2010–2019)

**10,519**

Total Households (2019)

**9.4%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**24,733**

Total Housing Units (2019)

**8.2%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$27,285**

Median Household Income (2019)

### VEHICLES

**57.3%**

Percentage of Households with a Vehicle (2014–2018)

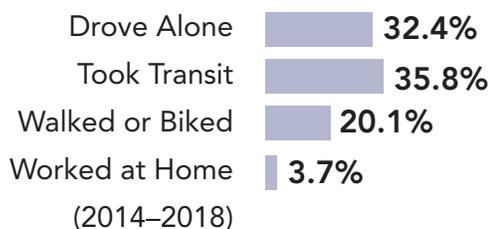
**7,273**

Estimated Number of Vehicles (2014–2018)

**0.7**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK



Source: American Community Survey, Esri

# District 27

## District Overview

Established: 2013  
Council District: 2  
District Size: 1.9 square miles

**2,842**

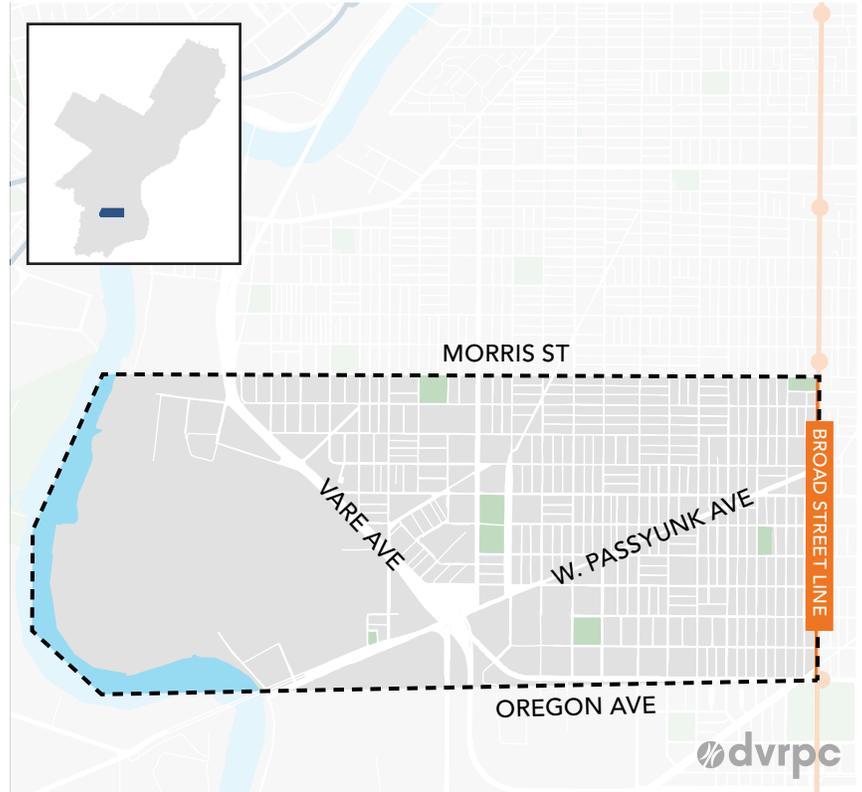
Permits Issued (2018)

**0.19**

Permits per Household (2018)

**129.7%**

Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**36,016**

Population (2019)

**18,956**

Population per Square Mile

**2.6%**

Population Growth Rate (2010–2019)

**13,913**

Total Households (2019)

**1.3%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**15,357**

Total Housing Units (2019)

**1.1%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$33,094**

Median Household Income (2019)

### VEHICLES

**62.4%**

Percentage of Households with a Vehicle (2014–2018)

**11,866**

Estimated Number of Vehicles (2014–2018)

**0.85**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **39.3%**

Took Transit **33.5%**

Walked or Biked **11.5%**

Worked at Home **4.6%**  
(2014–2018)

Source: American Community Survey, Esri

# District 28

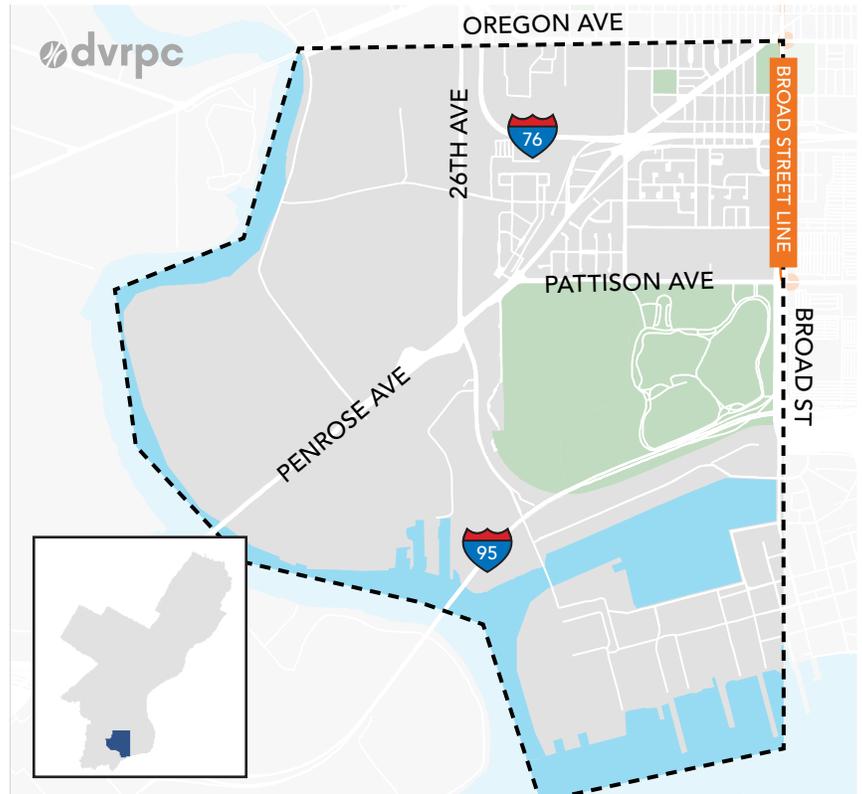
## District Overview

Established: 2013  
Council Districts: 2, 3  
District Size: 4.0 square miles

**82**  
Permits Issued (2018)

**0.02**  
Permits per Household (2018)

**-8.9%**  
Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**8,057**  
Population (2019)

**1,999**  
Population per Square Mile

**5.2%**  
Population Growth Rate (2010–2019)

**3,603**  
Total Households (2019)

**4.3%**  
Household Growth Rate (2010–2019)

### DEVELOPMENT

**3,861**  
Total Housing Units (2019)

**2.4%**  
Housing Unit Growth Rate (2010–2019)

### INCOME

**\$73,165**  
Median Household Income (2019)

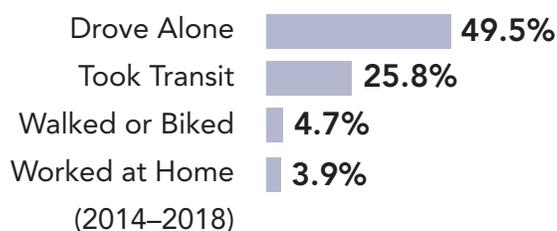
### VEHICLES

**88.2%**  
Percentage of Households with a Vehicle (2014–2018)

**4,511**  
Estimated Number of Vehicles (2014–2018)

**1.26**  
Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK



Source: American Community Survey, Esri

# District 29

## District Overview

Established: 2013  
Council Districts: 1, 2  
District Size: 4.2 square miles

**413**

Permits Issued (2018)

**0.2**

Permits per Household (2018)

**41.4%**

Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**4,791**

Population (2019)

**1,141**

Population per Square Mile

**1.2%**

Population Growth Rate (2010–2019)

**1,005**

Total Households (2019)

**0.4%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**2,109**

Total Housing Units (2019)

**0%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$63,511**

Median Household Income (2019)

### VEHICLES

**82.4%**

Percentage of Households with a Vehicle (2014–2018)

**2,507**

Estimated Number of Vehicles (2014–2018)

**1.25**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **47.4%**

Took Transit **30%**

Walked or Biked **10.6%**

Worked at Home **3.2%**  
(2014–2018)

Source: American Community Survey, Esri

# District 30

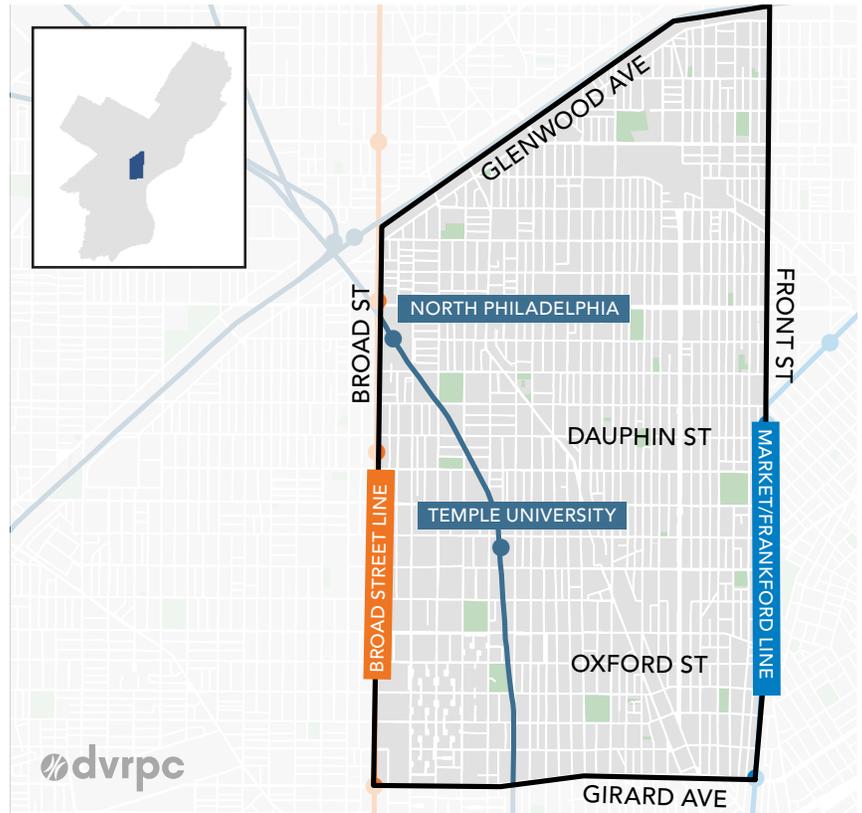
## District Overview

Established: 2013  
Council Districts: 5, 7  
District Size: 2.8 square miles

**53**  
Permits Issued (2018)

**0.0**  
Permits per Household (2018)

**29.3%**  
Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**59,306**  
Population (2019)

**20,956**  
Population per Square Mile

**7.6%**  
Population Growth Rate (2010–2019)

**19,223**  
Total Households (2019)

**8.1%**  
Household Growth Rate (2010–2019)

### DEVELOPMENT

**21,738**  
Total Housing Units (2019)

**6.2%**  
Housing Unit Growth Rate (2010–2019)

### INCOME

**\$14,643**  
Median Household Income (2019)

### VEHICLES

**57.9%**  
Percentage of Households with a Vehicle (2014–2018)

**13,904**  
Estimated Number of Vehicles (2014–2018)

**0.73**  
Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone	<b>42.6%</b>
Took Transit	<b>29.3%</b>
Walked or Biked	<b>13.5%</b>
Worked at Home (2014–2018)	<b>4.3%</b>

Source: American Community Survey, Esri

# District 31

## District Overview

Established: 2013, amended 2018  
Council Districts: 2, 3  
District Size: 4.7 square miles

**153**

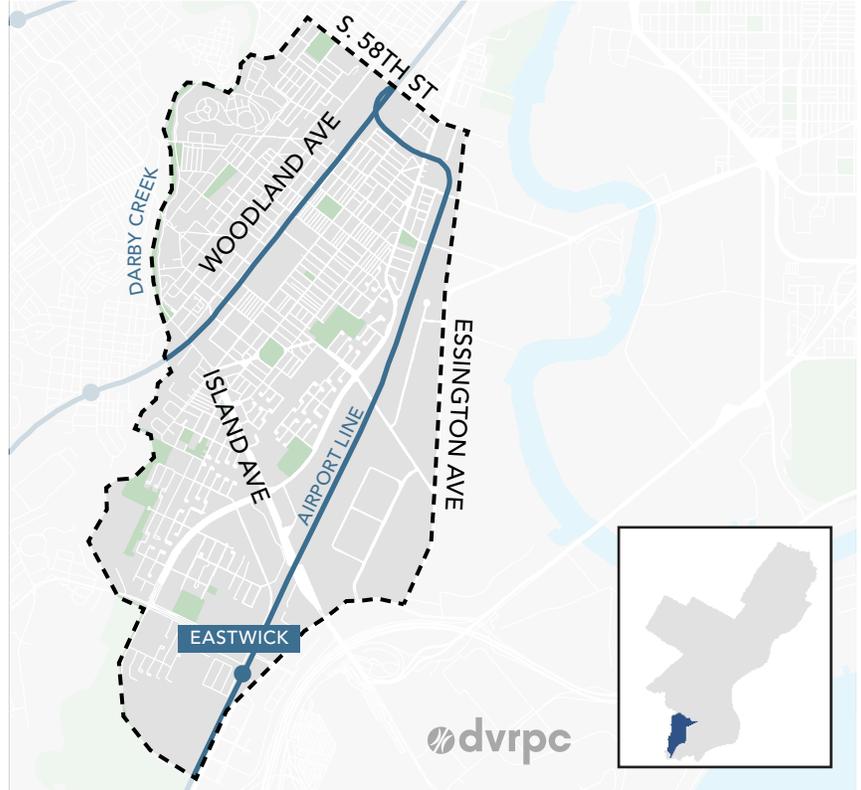
Permits Issued (2018)

**0.01**

Permits per Household (2018)

**993%**

Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**44,556**

Population (2019)

**9,521**

Population per Square Mile

**2.3%**

Population Growth Rate (2010–2019)

**15,666**

Total Households (2019)

**0.8%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**17,544**

Total Housing Units (2019)

**1.1%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$31,660**

Median Household Income (2019)

### VEHICLES

**65.7%**

Percentage of Households with a Vehicle (2014–2018)

**14,656**

Estimated Number of Vehicles (2014–2018)

**0.94**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **50%**

Took Transit **35.7%**

Walked or Biked **2.5%**

Worked at Home **1.4%**

(2014–2018)

\*In some cases, larger percentage increases in permit sales are the result of the relatively small number of residential permits issued in 2014.

Source: American Community Survey, Esri

# District 32

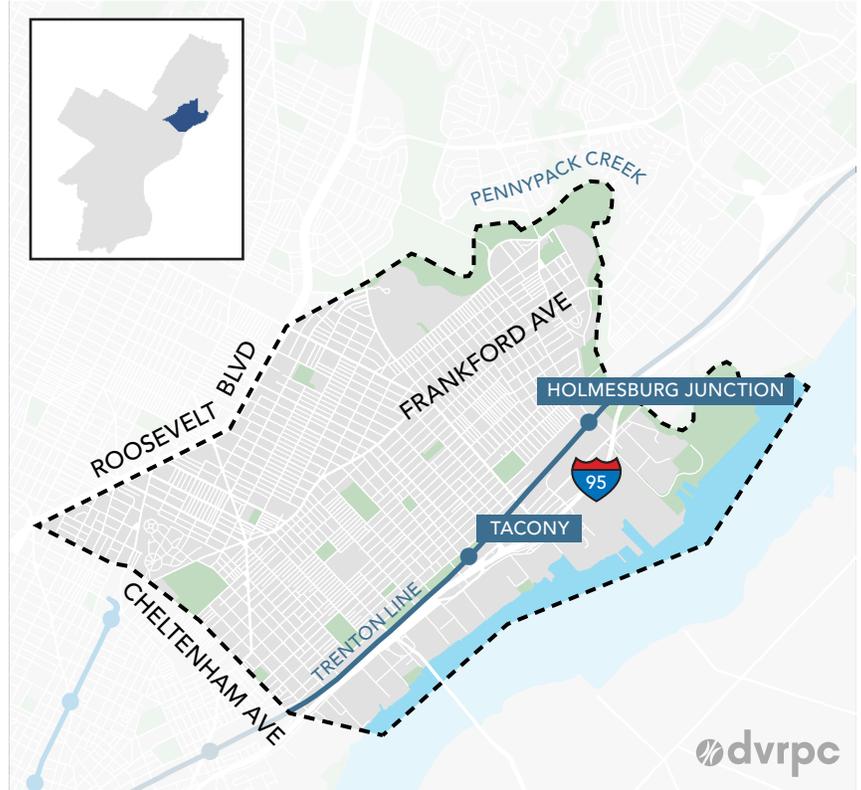
## District Overview

Established: 2013, amended 2015  
Council District: 6  
District Size: 6.1 square miles

**0**  
Permits Issued (2018)

—  
Permits per Household (2018)

—  
Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**87,977**  
Population (2019)

**14,399**  
Population per Square Mile

**1.5%**  
Population Growth Rate (2010–2019)

**30,924**  
Total Households (2019)

**0.7%**  
Household Growth Rate (2010–2019)

### DEVELOPMENT

**32,840**  
Total Housing Units (2019)

**0.5%**  
Housing Unit Growth Rate (2010–2019)

### INCOME

**\$45,290**  
Median Household Income (2019)

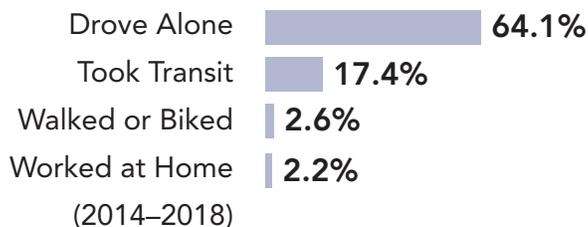
### VEHICLES

**83.8%**  
Percentage of Households with a Vehicle (2014–2018)

**39,087**  
Estimated Number of Vehicles (2014–2018)

**1.26**  
Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK



Source: American Community Survey, Esri

# District 33

## District Overview

Established: 2013  
Council District: 1  
District Size: 0.4 square miles

**813**

Permits Issued (2018)

**0.25**

Permits per Household (2018)

**244.5%**

Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**7,340**

Population (2019)

**16,682**

Population per Square Mile

**12.9%**

Population Growth Rate (2010–2019)

**3,191**

Total Households (2019)

**13.1%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**3,491**

Total Housing Units (2019)

**9%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$61,560**

Median Household Income (2019)

### VEHICLES

**77.2%**

Percentage of Households with a Vehicle (2014–2018)

**3,566**

Estimated Number of Vehicles (2014–2018)

**1.16**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **41.9%**

Took Transit **22.9%**

Walked or Biked **19.5%**

Worked at Home **6.3%**

(2014–2018)

Source: American Community Survey, Esri

# District 34

## District Overview

Established: 2013  
Council District: 1  
District Size: 1.1 square miles

**515**

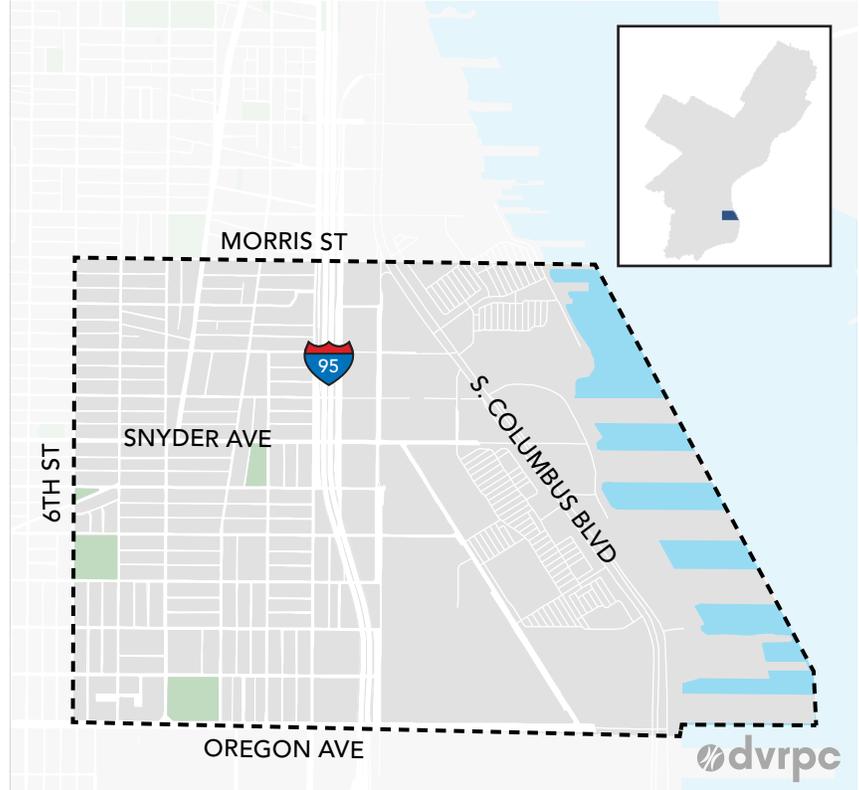
Permits Issued (2018)

**0.08**

Permits per Household (2018)

**744.3%**

Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**15,656**

Population (2019)

**14,770**

Population per Square Mile

**3.3%**

Population Growth Rate (2010–2019)

**6,032**

Total Households (2019)

**2.7%**

Household Growth Rate (2010–2019)

### DEVELOPMENT

**6,538**

Total Housing Units (2019)

**1.1%**

Housing Unit Growth Rate (2010–2019)

### INCOME

**\$47,328**

Median Household Income (2019)

### VEHICLES

**73.7%**

Percentage of Households with a Vehicle (2014–2018)

**5,867**

Estimated Number of Vehicles (2014–2018)

**0.98**

Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK

Drove Alone **43.6%**

Took Transit **26.6%**

Walked or Biked **13.6%**

Worked at Home **2.1%**  
(2014–2018)

Source: American Community Survey, Esri

# District 35

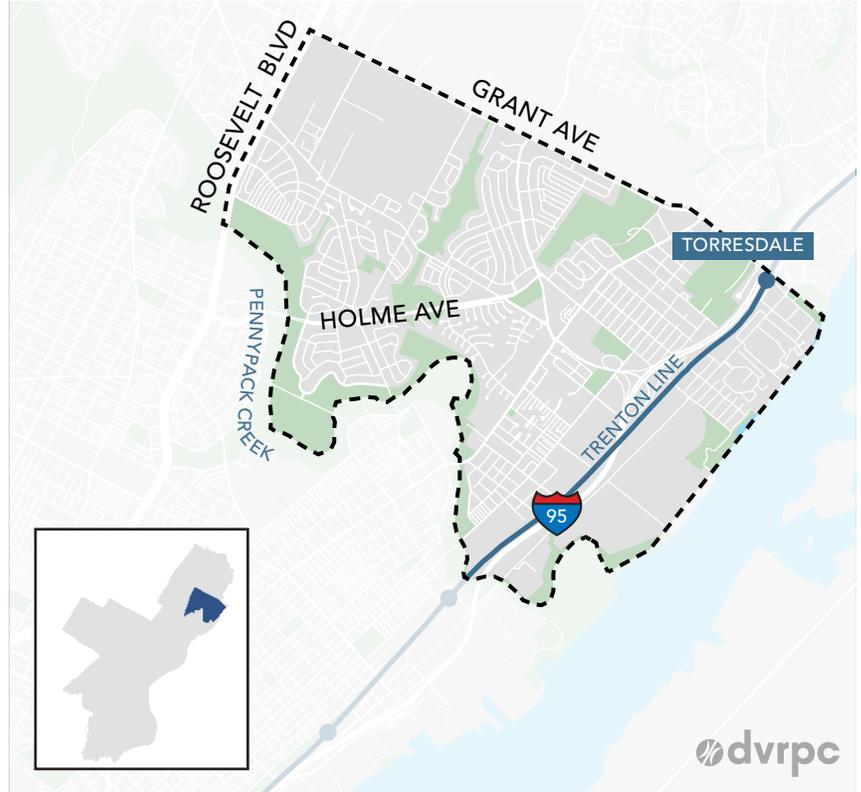
## District Overview

Established: 2015  
Council District: 6  
District Size: 6.5 square miles

**12**  
Permits Issued (2018)

**0.0**  
Permits per Household (2018)

—  
Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**47,560**  
Population (2019)

**7,217**  
Population per Square Mile

**0.4%**  
Population Growth Rate (2010–2019)

**18,722**  
Total Households (2019)

**2.5%**  
Household Growth Rate (2010–2019)

### DEVELOPMENT

**19,842**  
Total Housing Units (2019)

**1.6%**  
Housing Unit Growth Rate (2010–2019)

### INCOME

**\$54,389**  
Median Household Income (2019)

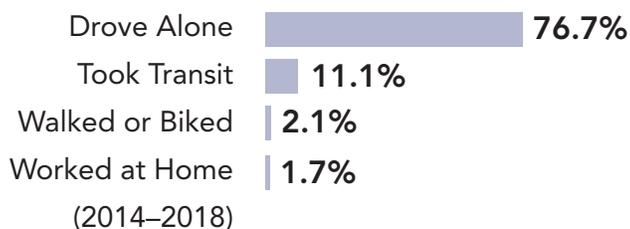
### VEHICLES

**88.1%**  
Percentage of Households with a Vehicle (2014–2018)

**26,015**  
Estimated Number of Vehicles (2014–2018)

**1.42**  
Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK



Source: American Community Survey, Esri

# District 36

## District Overview

Established: 2019  
Council District: 9  
District Size: 4.5 square miles

—  
Permits Issued (2018)

—  
Permits per Household (2018)

—  
Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**86,363**  
Population (2019)

**19,235**  
Population per Square Mile

**4.3%**  
Population Growth Rate (2010–2019)

**27,996**  
Total Households (2019)

**0.5%**  
Household Growth Rate (2010–2019)

### DEVELOPMENT

**29,881**  
Total Housing Units (2019)

**0.7%**  
Housing Unit Growth Rate (2010–2019)

### INCOME

**\$40,123**  
Median Household Income (2019)

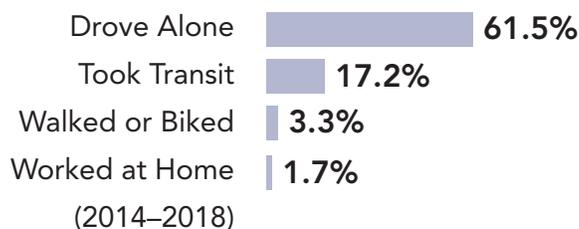
### VEHICLES

**80.1%**  
Percentage of Households with a Vehicle (2014–2018)

**36,494**  
Estimated Number of Vehicles (2014–2018)

**1.30**  
Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK



Source: American Community Survey, Esri

# District 37

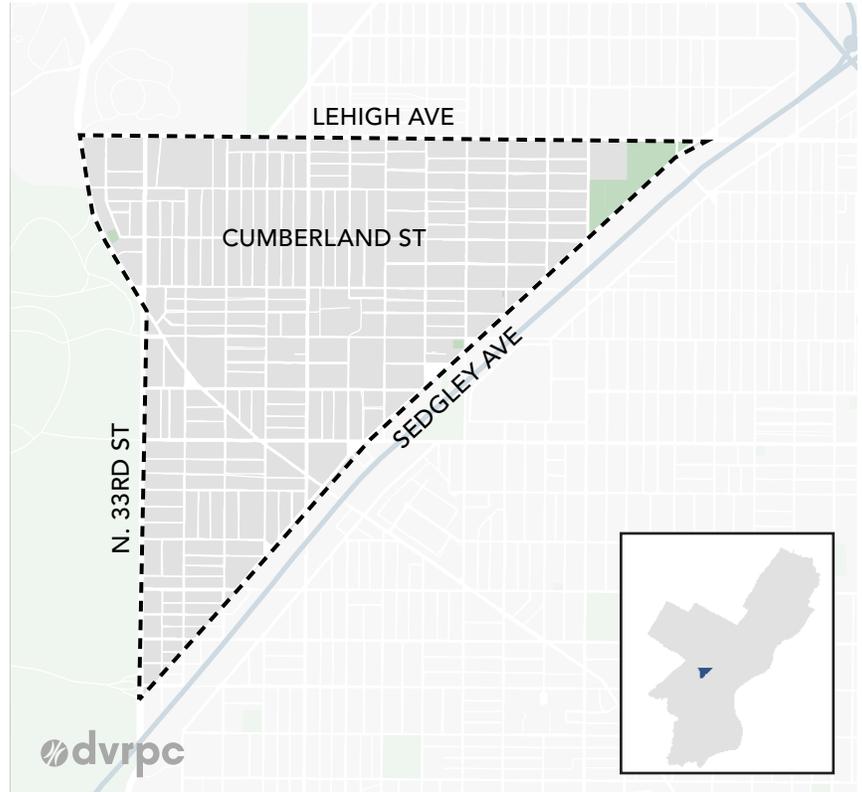
## District Overview

Established: 2019  
Council District: 5  
District Size: 0.67 square miles

—  
Permits Issued (2018)

—  
Permits per Household (2018)

—  
Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**14,942**  
Population (2019)

**22,301**  
Population per Square Mile

**0.1%**  
Population Growth Rate (2010–2019)

**5,840**  
Total Households (2019)

**-0.4%**  
Household Growth Rate (2010–2019)

### DEVELOPMENT

**7,733**  
Total Housing Units (2019)

**1.2%**  
Housing Unit Growth Rate (2010–2019)

### INCOME

**\$18,963**  
Median Household Income (2019)

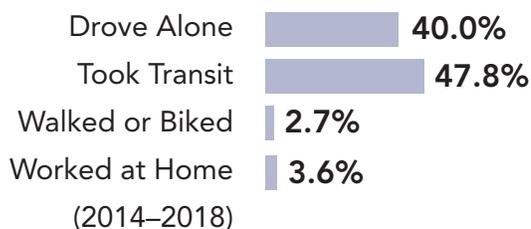
### VEHICLES

**47.3%**  
Percentage of Households with a Vehicle (2014–2018)

**3,196**  
Estimated Number of Vehicles (2014–2018)

**0.54**  
Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK



Source: American Community Survey, Esri

# District 39

## District Overview

Established: 2019  
Council District: 7  
District Size: 1.16 square miles

—  
Permits Issued (2018)

—  
Permits per Household (2018)

—  
Change in Permits Issued (2014–2018)



## Key Stats

### POPULATION

**26,162**  
Population (2019)

**22,553**  
Population per Square Mile

**2.5%**  
Population Growth Rate (2010–2019)

**7,773**  
Total Households (2019)

**1.8%**  
Household Growth Rate (2010–2019)

### DEVELOPMENT

**8,976**  
Total Housing Units (2019)

**0.9%**  
Housing Unit Growth Rate (2010–2019)

### INCOME

**\$16,145**  
Median Household Income (2019)

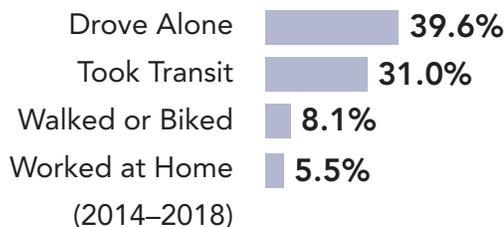
### VEHICLES

**56.5%**  
Percentage of Households with a Vehicle (2014–2018)

**5,917**  
Estimated Number of Vehicles (2014–2018)

**0.76**  
Ratio of Cars to Households (2014–2018)

### JOURNEY TO WORK



Source: American Community Survey, Esri



# SPOT CHECK

## STRATEGIES FOR MANAGING RESIDENTIAL PARKING IN PHILADELPHIA

<b>Publication Number</b>	20026
<b>Date Published</b>	May 2021
<b>Geographic Area Covered</b>	Philadelphia
<b>Key Words</b>	Parking, Parking Benefit Districts, Parking Management, On-Street Parking, Residential Permit Parking, RPP.
<b>Abstract</b>	Effective parking management is essential to Philadelphia's efforts to build and maintain an inclusive and balanced transportation system. Residential permit parking (RPP) is a critical, yet often overlooked, component of parking management. In some Philadelphia neighborhoods, RPP works exactly as it should. Permits help to ensure that residents have adequate parking, while also permitting other users to access on-street parking. In many other neighborhoods, however, a variety of interconnected demographic, development, and socioeconomic trends are contributing to a surge in parking demand that is straining RPP districts. This report presents information on the factors driving demand for parking in Philadelphia and identifies potential RPP reforms that can help the city adapt to a variety of transportation challenges.
<b>Staff Contact</b>	Andrew Svekla, AICP Manager, Office of Smart Growth (215) 238-2810 asvekla@dvrpc.org
<b>Staff Project Team</b>	Derek Lombardi, Senior Planner, Smart Growth Delaware Valley Regional Planning Commission 190 N Independence Mall West, 8th Floor Philadelphia, PA 19106-1520 Phone: (215) 592-1800 Fax: (215) 592-9125



190 N Independence Mall West  
8th Floor  
Philadelphia, PA 19106-1520  
215.592.1800 | fax: 215.592.9125  
[www.dvrpc.org](http://www.dvrpc.org)

Connect With Us! [f](#) | [t](#) | [@](#) | [in](#) | [v](#)