

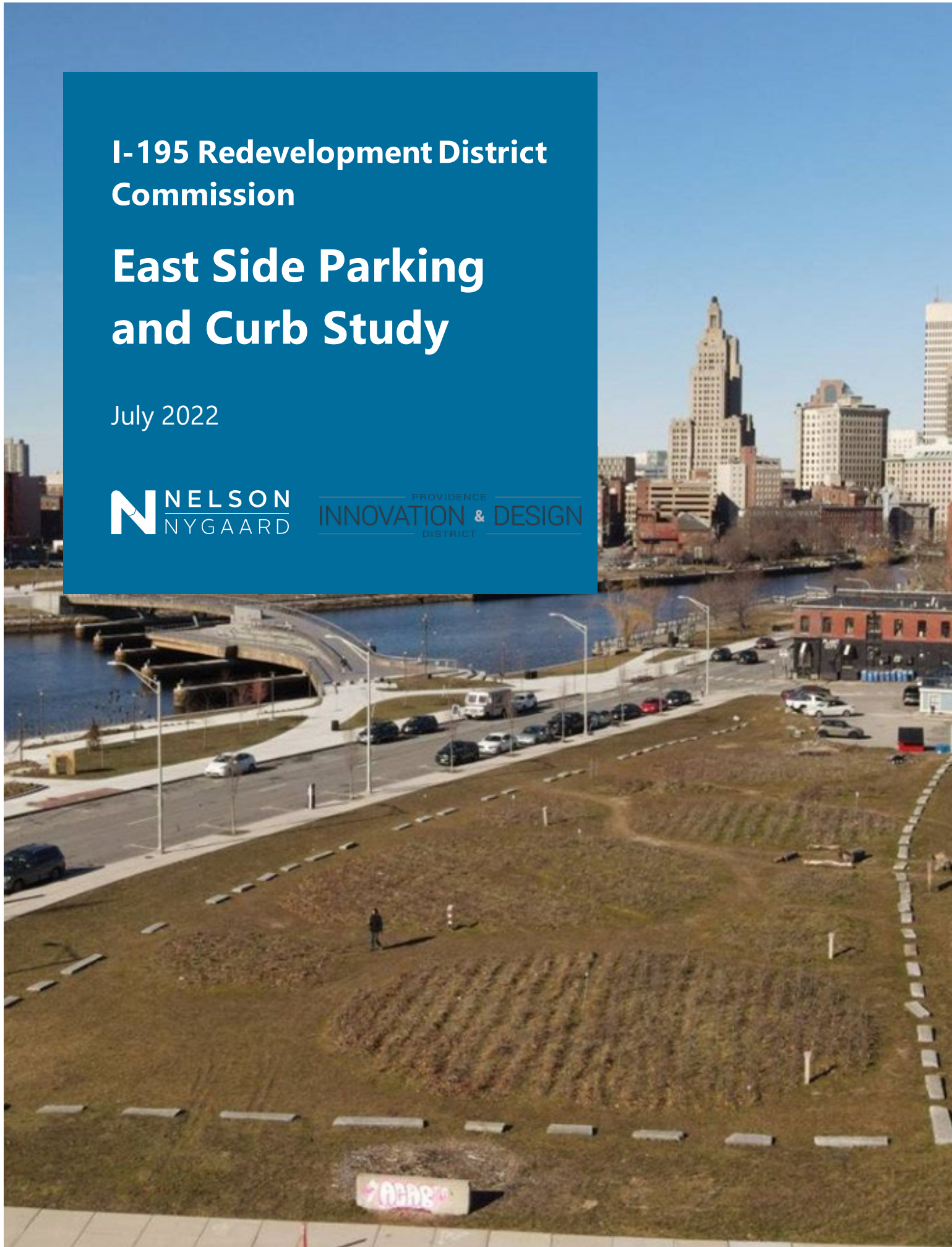
# I-195 Redevelopment District Commission

## East Side Parking and Curb Study

July 2022

**N** NELSON  
NYGAARD

PROVIDENCE  
INNOVATION & DESIGN  
DISTRICT





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# EXECUTIVE SUMMARY

The East Side Parking and Curb Study completed for the I-195 District finds that existing and future parking demands in the study area can be successfully accommodated within existing parking facilities and the likely future parking facilities to be constructed with new developments.

## Contents

The East Side Parking and Curb Study completed for the I-195 District includes the following:

- A comprehensive inventory of existing on-street and off-street parking spaces in the vicinity of the I-195 Redevelopment District's East Side parcels.
- A parking occupancy study that identifies peak parking utilization in the area for both a weekday and a Friday evening.
- A summary of public and stakeholder feedback received through multiple engagement efforts.
- Key challenges and opportunities related to parking and curb management
- A projection of future parking needs for expected development projects on East Side parcels.
- Recommendations to address parking and curb needs in the future, to be addressed by a variety of stakeholders, including the I-195 Redevelopment District and the City of Providence.

## Key Findings

### Outreach

Outreach participants and stakeholders are concerned about unsafe walking and biking conditions, congestion, too little parking enforcement, impacts from loading vehicles and construction, and a need for more loading zones and customer parking for businesses.

- Most outreach participants say that they walk (33%) or drive (26%) through the study area, with many also biking (19%).
- Pedestrian safety and congestion were identified as the top traffic issues in the area.
- Unsafe walking and biking conditions and too little parking enforcement were identified as the key curbside management issues, along with curb conflicts from loading vehicles.
- Most people (37% when excluding those who do not drive) parking in the area say that they use an on-street metered space to do so.
- South Main Street and South Water Street are challenging streets, even more so during construction periods
- Loading for businesses is a major issue. There are not enough loading zones.
- Customer parking for businesses is needed
- Lack of enforcement is a major issue in the neighborhood.
- This neighborhood has the potential to be truly car-free – if not here, then where in Providence?
- Residents, commuters, and visitors enjoy the additional bike access provided by bike facilities in the area

## **Parking and Curb Inventory**

Curbs in the study area are primarily used for parking, most of which is unmetered or unregulated entirely. No daytime resident permit programs exist to prevent commercial spillover, time limits vary, and few loading zones exist.

- Many distinct on-street regulations existing within a small area – this can lead to confusion among those who may not visit the area frequently. Meters and unmetered areas have varying time limits within a small range, adding to confusion, and limited wayfinding is available.
- A large portion of curbs (31%) in the study area are completely unregulated. These areas could benefit from increased regulation in the future when parking demand from growing retail areas increases.
- Most regulated parking is time-limited (34%) but does not feature meters. Adding meters to some time-regulated blocks can help to increase turnover and compliance.
- 32% of parking is metered with varied time limits that extend as far as 10 hours, allowing for local employees to park all day. These metered spaces may be better

used to serve local retail customers and visitors if other parking options can be found for long-term parkers.

- Some key commercial streets do not feature meters despite the high demand for businesses on those streets, namely Wickenden Street.
- No daytime resident parking permit program is currently in place. If parking demand for local businesses increases, it may spill over into residential streets unless regulations are changed.

## Parking and Curb Utilization

Parking in the study area is only 56% full during peak periods. During peak evening commercial hours metered parking is 91% full, but ample available parking spaces exist on nearby unmetered streets and in private lots. 246 available on-street parking spaces remain during peak midday hours.

- Overall parking (including on-street and off-street spaces) was only 56% full during midday peak hours and 53% full during evening hours.
- On-street spaces were more highly utilized than off-street spaces.
  - On-street parking was 64% full during midday weekday peak hours
  - On-street parking was 60% full during Friday evening hours
- Long-term meters (8-10 hour limits) were the most utilized on-street spaces during weekday midday hours (83% full)
- All on-street metered spaces were the most utilized spaces during the Friday evening hours (91% full).
  - While the metered spaces on South Water Street and South Main Street are almost completely full on Friday evening, ample other parking spaces exist on nearby streets, including Benefit Street.
  - Nearby unmetered or unregulated parking spaces were only 59% full during the same time period and should be considered underutilized.
- Only 64% of all existing public parking was occupied during midday hours.
- **246 public on-street spaces remain available during midday peak hours.**



## Future Parking Demand

The forecasted development program for the study area is expected to effectively accommodate newly generated parking demand. Some additional on-street parking demand (51 spaces) will be generated but is easily accommodated within the available on-street supply (246 spaces). Retail and restaurant visitors will be the primary users of on-street spaces and will only remain in the neighborhood for brief periods.

## Recommendations

The I-195 District and the City of Providence can address curb operational issues and manage future parking demand through a variety of strategies, including requiring shared and unbundled parking in new developments, creating permit programs, and adding and enforcing loading zones.

This study identified potential strategies to improve street and curb operations in the area while also managing future parking demand.

Strategies in the **Demand Management Toolset** can be implemented or encouraged by the I-195 District during review of incoming development proposals. These strategies are focused on mitigating parking and curbside demands and operational impacts from new development. **Not all strategies are immediately needed or expected to be implemented. They are presented as options to manage future parking demand.**

The **Curbside Management Toolset** offers strategies that can directly influence and improve how existing parking resources are used and managed in the district, both now and in the future. Many strategies in this section would need to be led and implemented by the City of Providence.

## Key Recommendations

### Demand Management Toolset

- **Shared Parking.** To achieve the parking scenarios documented here, the I-195 District must require developers to offer shared parking arrangements. This includes



opening up spaces to the public and requiring owners to lease spaces in new parking facilities for employee permit programs.

- **Unbundled Parking.** Separating the cost of parking from the cost of rent or purchase price is one of the simplest methods to reduce overall car trips, reduce traffic congestion, and reduce the cost of development. Unbundled parking is leased separately from active uses and is not associated with one particular use.

#### **Curbside Management Toolset**

- **Add Loading Zones.** Additional loading zone for both commercial and passenger loading will support local businesses and improve street operations and safety.
- **Extend Meter Times and Simplify Regulations.** Activity in the area continues beyond 6 PM into the evening. Meters should reflect this. Regulations can be simplified to improve the user experience for business customers.
- **Add Meters to Commercial Streets.** Some busy commercial streets such as Wickenden Street do not feature meters. Adding meters to these streets will help to moderate demand and control turnover.
- **Increase Enforcement.** Existing enforcement is insufficient to ensure compliance with curb regulations. Additional enforcement can reduce safety and operational issues and ensure the success of other curb strategies.

# INTRODUCTION

Parking and curb management near the I-195 Redevelopment District's East Side parcels must accommodate a diverse array of users and transportation modes while supporting future development needs. This means that front-door parking at all destinations may not always be possible. A short (<5 minutes) walk from parking is a reasonable expectation in a dense, multi-use, urban neighborhood during the busiest times.

This study is intended to unravel the nature of parking and curb use in the I-195 Redevelopment District's East Side area and propose solutions to ensure that future curb management benefits all stakeholders, regardless of how they move to, from, or within the area. It incorporates stakeholder and public feedback as well as on-the-ground data collection and analysis to identify challenges and opportunities related to existing curb management in the study area as well as future needs. This study includes:

- A comprehensive inventory of existing on-street and off-street parking spaces in the vicinity of the I-195 Redevelopment District's East Side parcels.
- A parking occupancy study that identifies peak parking utilization in the area for both a weekday and a Friday evening.
- A summary of public and stakeholder feedback received through multiple engagement efforts.
- Key challenges and opportunities related to parking and curb management
- A projection of future parking needs for expected development projects on East Side parcels.
- Recommendations to address parking and curb needs in the future, to be addressed by a variety of stakeholders, including the I-195 Redevelopment District and the City of Providence.

## Study Area and Process

### Study Area

The I-195 Redevelopment District Parking and Curb Study included the area indicated in Figure 2. This area includes both residential and commercial oriented streets with a variety of

parking and curb regulations. Curb users in the area include local residents, business operators and their employees, visitors and customers, and affiliates of local institutions including Brown University and the Rhode Island School of Design. Streets in the study area include South Water Street, South Main Street, and Wickenden Street, all of which may be considered signature streets in Providence.

This study area was selected as all streets included here are within an easy walking distance of I-195 District East Side parcels and will function as part of the neighborhood curb and parking ecosystem as development continues.

**Figure 1    Parked Cars on Benefit Street**



## **Multimodal Access in the Study Area**

The area is also served by strong multimodal transportation infrastructure, particularly for pedestrians and cyclists. This infrastructure will play a key role in moderating future parking demand and allowing developers to plan for parking ratios that are oriented toward an urban, multimodal environment.

Bicycle facilities are featured on the following streets in the study area:

- South Water Street
- South Main Street
- Portions of Wickenden Street

Pedestrian facilities are ample in the area as well. Almost all streets in the study area include sidewalks, although some do not meet accessibility standards. A substantial pedestrian

facility exists along the Providence River, and the Michael S. Van Leesten Memorial Pedestrian Bridge provides a key connection across the river, further increasing access to the study area by foot and bike.

Public transportation services also operate in the area. RIPTA Routes 35, 60, and 78 operate on South Water Street and South Main Street and provide access to and from the study area from the following locations:

- Kennedy Plaza and Downtown Providence
- East Providence
- Rumford
- Pawtucket
- Barrington, Warren, and Bristol
- Newport

Impacts from COVID-19 have changed how people travel. Transit ridership dropped during the pandemic but continues to recover over time.

**Figure 2 I-195 Redevelopment District East Side Parking and Curb Study – Study Area**





## Project Process

This project included six major tasks as described below.

### **Confirm the existing curb and parking inventory.**

The first task included a comprehensive review of on-street and off-street parking and curb facilities and regulations in the study area. Project team members reviewed current aerial imagery, conducted field data collection, and coordinated with local property owners to understand the supply of parking spaces in the area, how those spaces are regulated, and what specific non-parking curb uses and needs exist. Inventory data was collected in the field during April 2022.

### **Evaluate the existing demand for parking and curb access.**

In order to understand the existing demand for parking and curb access in the study area, the project team conducted parking occupancy counts using a mixture of current aerial imagery and on-the-ground data collections. Field teams walked all streets in the study area during peak parking periods to understand how full parking spaces are. Parking occupancy counts were collected during the following times:

- Tuesday, October 12, 2021, from 12 PM – 2 PM
  - This date was selected to provide a weekday peak parking occupancy count that reflected local schools being in session during the Fall peak period. Data was collected using aerial imagery. On-the-ground counts to confirm occupancy were also conducted in April 2022.
- Friday, April 15, 2022, and June 17, 2022, from 5 PM – 7 PM
  - These dates were selected to provide a Friday evening peak parking occupancy count that reflects local restaurant and retail activity. Data was collected by field teams.

### **Conduct outreach to the public and local stakeholders to understand key curb and parking issues.**

This study acknowledges that a wide variety of parking, curb, and transportation needs exist within the study area. In order to better understand these needs, the project team conducted two key engagement events to direct the outcomes of this work. Findings from these events are documented in the Public Outreach chapter of this report.

- A public meeting conducted on May 11, 2022, at District Hall in Providence.

- This meeting was publicized by the I-195 Redevelopment District and was intended for a general audience. Attendees included local residents, business owners, developers, institutional and government representatives, and advocates.
- This meeting was a joint effort between the Parking and Curb Study team and the consultant team conducting a traffic study for the east side of the I-195 District. Public outreach findings related to the Traffic Study are not included in this report. Please see the Traffic Study for details.
- A stakeholder meeting conducted on-site with key representatives of the business community and local institutions. This meeting was intended to gather business-specific feedback on curb and parking needs. This meeting was conducted on June 9, 2022.

### **Model future district parking demand.**

Following analysis of existing parking supply and demand data, the project team developed future parking demand projections based on expected and speculative future buildout of East Side redevelopment parcels. Future parking demands were estimated using conservative future development programs and national standard parking generation rates provided by the Institute of Transportation Engineers (ITE). Conservative development programs are those that are likely to generate more parking demand.

### **Recommend parking and curb management and transportation demand management strategies.**

Following completion of all analysis tasks, the project team developed a set of recommendations to ensure that future parking and curb needs can be successfully met while achieving the wide variety of goals expressed by the community.









## **Key Parking and Curb Management Concepts**

The challenges, opportunities, and potential solutions identified by this study are rooted in a holistic understanding of curb, parking, and transportation needs in the study area and Providence as a whole. This means taking into account all of the ways that people travel within the study area, and how those ways may change in the future. It also means considering the relationship between curb management and a range of community goals and objectives, not just providing ample parking.

**Figure 3 Curb Zones on Power Street**

## Curb Management and Community Goals

Curb management directly impacts many facets of every community in Providence, and the East Side is no exception. Doing a great job at curb and parking management is an opportunity to achieve the following:

-  Support local business health.
-  Create development potential.
-  Improve the pedestrian environment.
-  Improve bicycling and micromobility accommodations.
-  Improve transit reliability.
-  Make efficient use of municipal resources.
-  Ensure that traffic operations do not create inefficient or unsafe conditions.
-  Improve signage and wayfinding.

Balancing these goals is a key part of successful curb management around the I-195 Redevelopment District parcels. This study makes a concerted effort to bring these objectives into balance, consider the needs of all stakeholders, and plan for a future that meets the needs of everyone in the district.

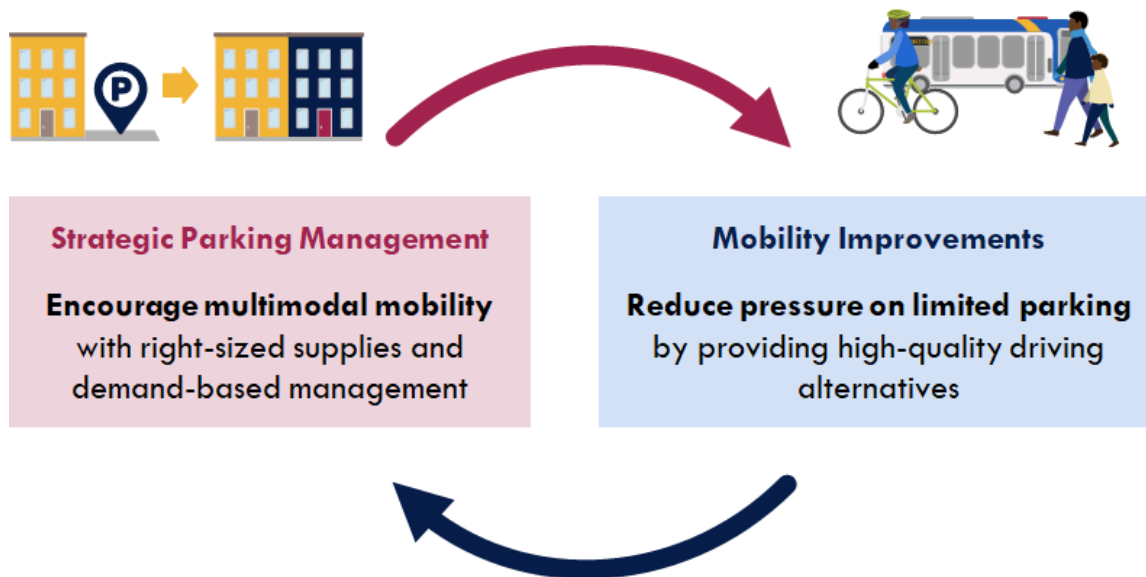


## Curb Management and Mobility Improvements

A virtuous cycle exists between curb management and investment in mobility improvements such as bicycle, pedestrian, and transit facilities. Effective curb management is able to maximize the use of available curb spaces and avoid an oversupply of parking. This creates surplus space which can be invested in mobility improvements. These improvements further reduce demand for parking by increasing the comfort, safety, and feasibility of non-driving travel. This, in turn, continues to reduce the amount of space needed for parking, freeing up even more space for investment in other transportation improvements.

This study acknowledges this cycle and proposes solutions which will maximize the use of available curb space and remain supportive of future mobility investments in the neighborhood.

**Figure 4 Strategic Parking Management and Mobility Improvements – A Virtuous Cycle**



## Multimodal Transportation in Providence



People in Providence get around in different ways and increasingly have things come to them. This study acknowledges the need to accommodate a diverse array of transportation and non-transportation uses at the curbside. These include:

- Parking for personal vehicles
- Loading for commercial vehicles
- Short term pickup / drop-off for passengers, food, and goods
- Access for individuals with disabilities
- Bicycle facilities and storage
- Transit stops and amenities
- Expanded pedestrian amenities
- Outdoor dining, retail, and parklet space

# PUBLIC OUTREACH

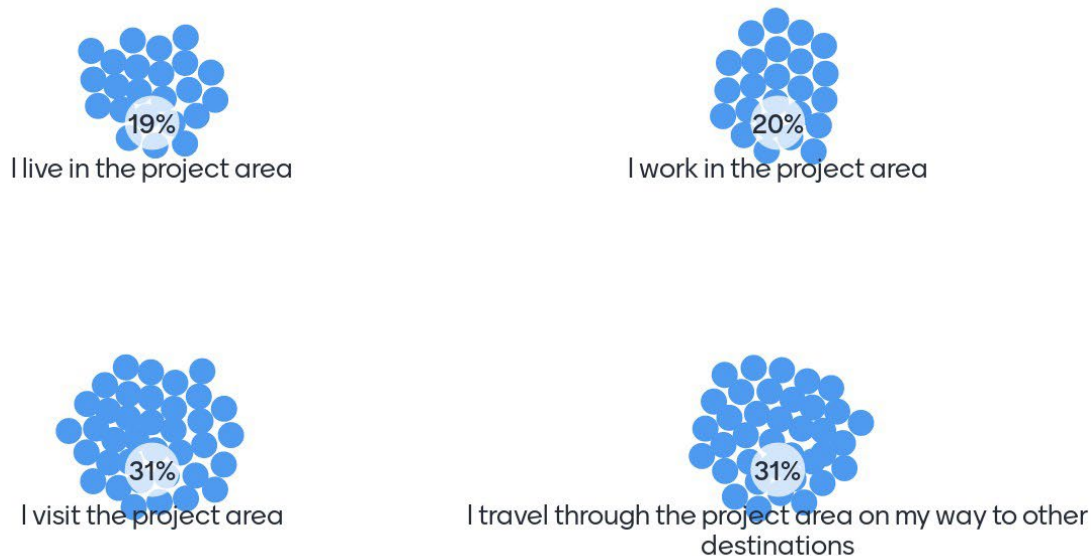
The I-195 Redevelopment District East Side Parking and Curb Study included two key engagement events. Findings from these events are documented in this chapter.

## Public Meeting

The I-195 Redevelopment District hosted a public meeting to discuss parking, curb, and traffic issues near the East Side redevelopment parcels on May 11, 2022, at District Hall in Providence. **This meeting was co-hosted by representatives of the Parking and Curb Study team and the Traffic Study team. Findings related to the Traffic Study are not included here. Please refer to the Traffic Study for more details.**

The public meeting included over 60 attendees who were a mix of residents, business owners, institutional and government representatives, and visitors and advocates in the area. The image below indicates how attendees self-reported their relationship to the study area.

**Figure 5 Public Meeting Attendee Relationships to Project Area**



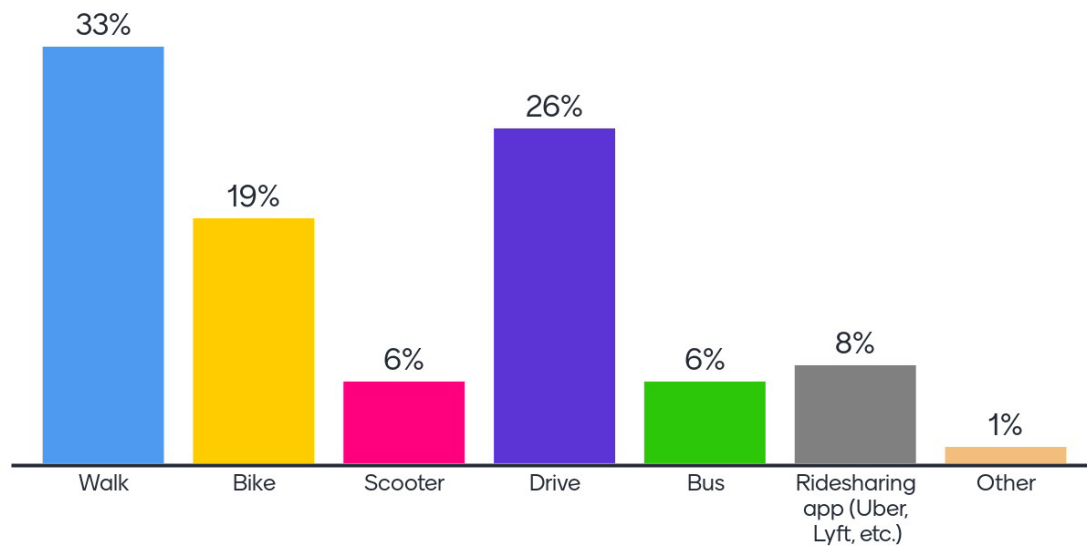
## Public Meeting Live Poll Results

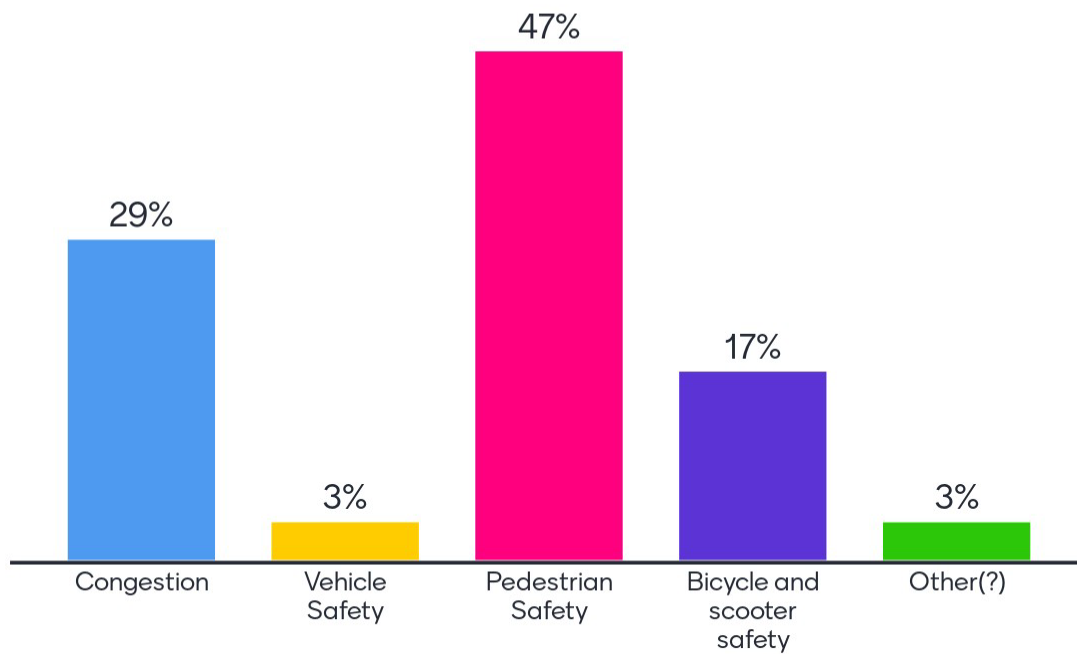
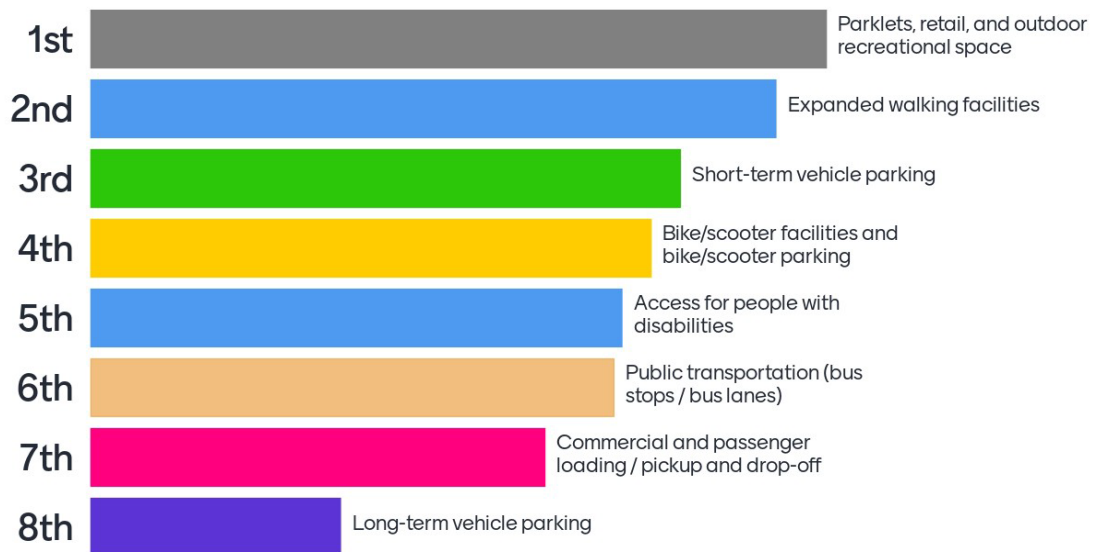
The outreach portion of the public meeting began with a live polling exercise. Results from this live poll represent the opinions of meeting attendees but may not reflect the opinions of other community members who did not attend the meeting. Key findings from this effort include:

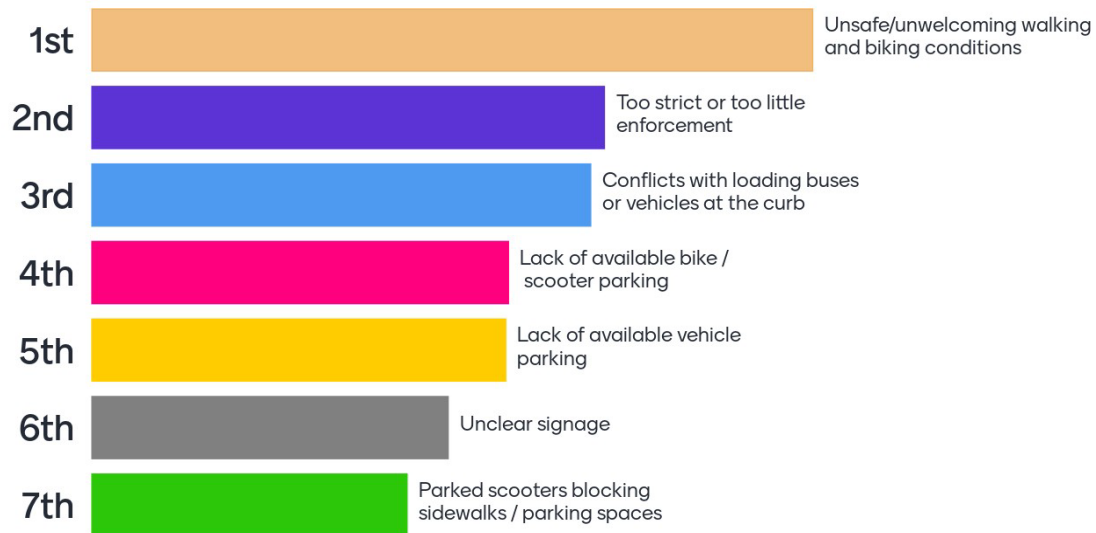
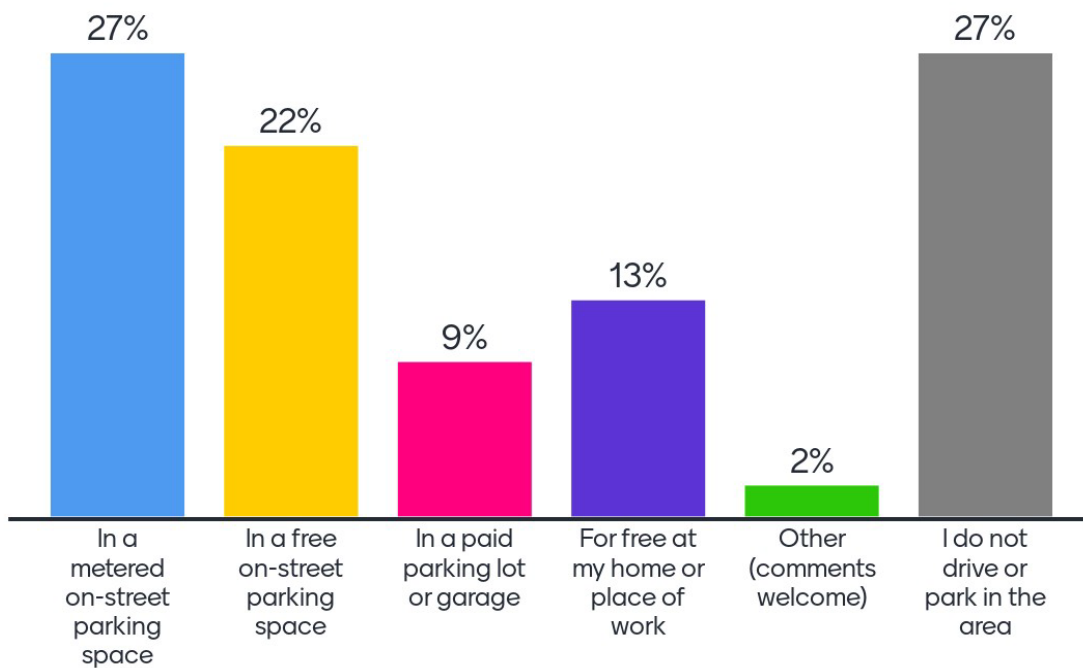
- Most poll respondents say that they walk (33%) or drive (26%) through the study area, with many also biking (19%).
- Pedestrian safety and congestion were identified as the top traffic issues in the area.
- Unsafe walking and biking conditions and too little parking enforcement were identified as the key curbside management issues, along with curb conflicts from loading vehicles.
- Most people (37% when excluding those who do not drive) parking in the area say that they use an on-street metered space to do so.

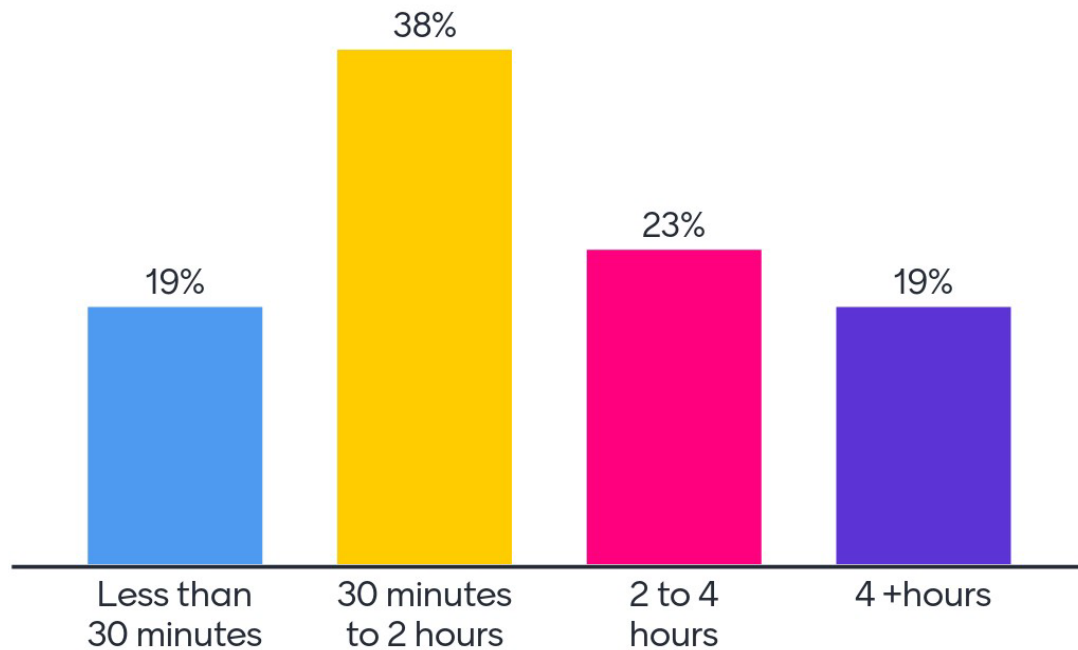
Full results from each live polling question are documented below.

**Figure 6 Public Meeting Attendees – Preferred Travel Modes in the Study Area**



**Figure 7 Public Meeting Attendees – Top Traffic Related Concerns****Figure 8 Public Meeting Attendees – Ranked Curb Use Priorities for the Neighborhood**

**Figure 9 Public Meeting Attendees – Ranked Key Curb and Parking Issues****Figure 10 Public Meeting Attendees – Where do you typically park?**

**Figure 11 Public Meeting Attendees – How long do you typically park in the area?**

## Other Public Meeting and Written Comments

Public meeting attendees expressed a variety of concerns during an open comment period following the live poll. Other members of the public also submitted written comments directly to project staff and over 50 written comments were received. Key concerns related to parking and curb issues raised in these additional comments included:

- The study area for this study is limited and may not capture all parking-related issues deeper in the neighborhood
- South Main Street and South Water Street are particularly challenged streets, even more so during construction periods
- Are developers building enough parking? How will this impact the neighborhood? Will there be parking spillover?
- Loading for businesses is a major issue. There are not enough loading zones.
- Customer parking for businesses is needed
- Lack of enforcement is a major issue in the neighborhood.
- This neighborhood has the potential to be truly car-free – if not here, then where in Providence?
- Residents, commuters, and visitors enjoy the additional bike access provided by bike facilities in the area



- Traffic calming on South Water Street is desirable to improve the pedestrian experience and safety
- No daytime resident parking permits exist – is it possible to implement these?
- How does snow removal impact the parking supply?
- Parking garages on the West Side should be better utilized and connected to this area.
- If we build fewer parking spaces, fewer cars will come. Not everyone chooses to own a car.

## Stakeholder Outreach Session Findings

Specific outreach was conducted to members of the business community and institutional representatives. An on-site stakeholder meeting with these representatives was conducted on June 9, 2022. Key findings from this meeting include:

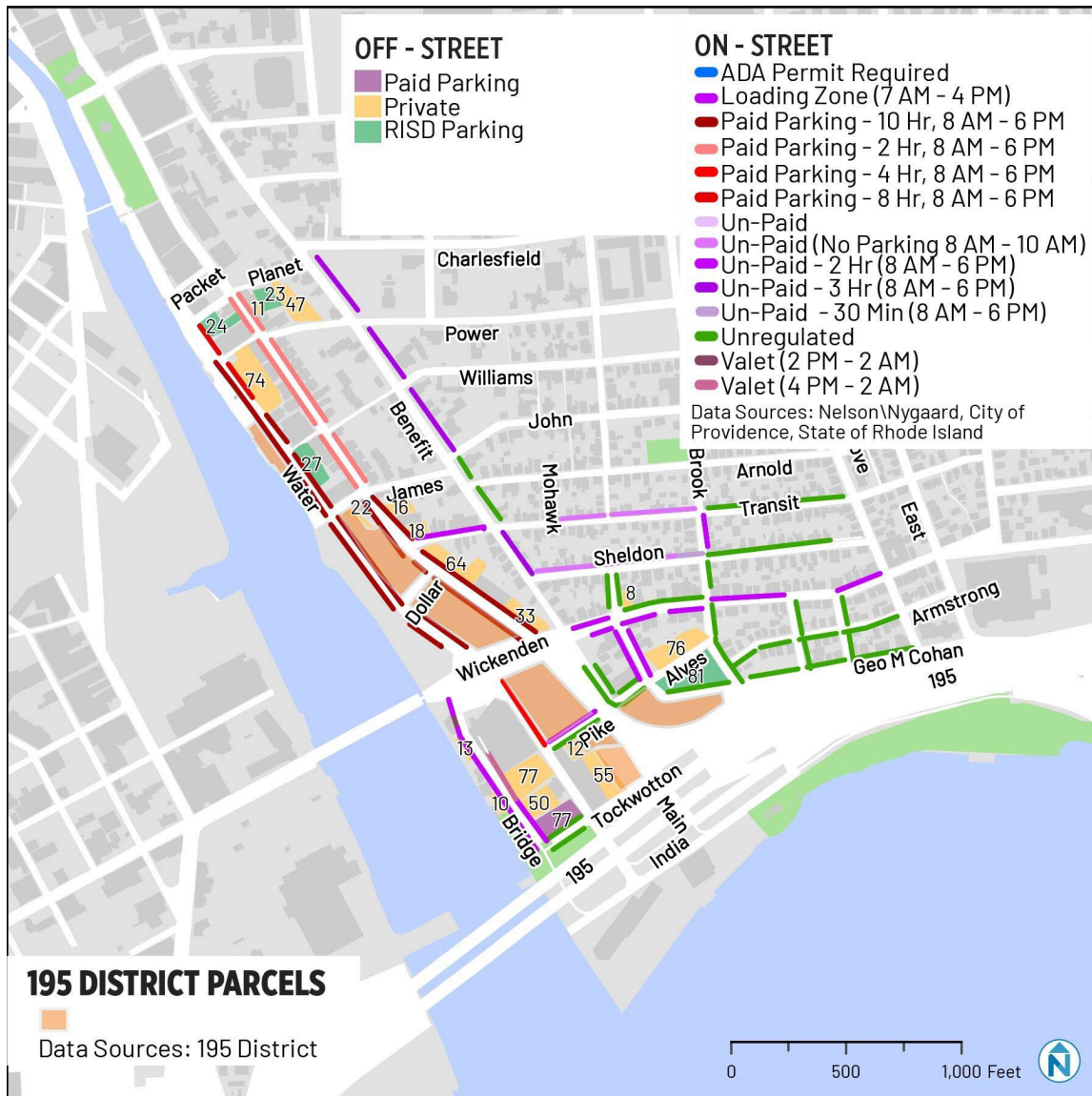
- The lack of communication around the South Water Street bike facility led to confusion around loading needs.
- Parking enforcement is a major issue – more enforcement is needed.
- Meter maintenance is an issue in some locations.
- Existing loading space is not sufficient and loading vehicles sometimes create congestion and safety issues.
- Construction impacts are a major concern and should be planned for with future development.
- Events such as Water Fire create major challenges.
- Providing adequate parking for business loading, customers, and employees should be the priority for curb access in the area.

# PARKING AND CURB INVENTORY FINDINGS

A comprehensive parking and curb inventory was conducted using aerial imagery from October 2021 and on-the-ground data collection during April 2022. Just over 700 on-street spaces exist in the study area, along with over 800 off-street parking spaces. The map and table below display the regulations for all curbs in the study area where parking or stopping is allowed as well as the regulation of off-street parking facilities and how many spaces they include.

Key findings from the parking and curb inventory are:

- Many distinct on-street regulations existing within a small area – this can lead to confusion among those who may not visit the area frequently. Meters and unmetered areas have varying time limits within a small range, adding to confusion, and limited wayfinding is available.
- A large portion of curbs (31%) in the study area are completely unregulated. These areas could benefit from increased regulation in the future when parking demand from growing retail areas increases.
- Most regulated parking is time-limited (34%) but does not feature meters. Adding meters to some time-regulated blocks can help to increase turnover and compliance.
- 32% of parking is metered with varied time limits that extend as far as 10 hours, allowing for local employees to park all day. These metered spaces may be better used to serve local retail customers and visitors if other parking options can be found for long-term parkers.
- Some key commercial streets do not feature meters despite the high demand for businesses on those streets, namely Wickenden Street.
- No daytime resident parking permit program is currently in place. If parking demand for local businesses increases, it may spill over into residential streets unless regulations are changed.

**Figure 12 Parking and Curb Inventory Map**

**Table 1 On-Street Parking Inventory in the Study Area**

<b>Regulation</b>	<b>Sum of Spaces</b>	<b>% of Total</b>
Unregulated	219	31%
Metered - 10 Hr, 8 AM - 6 PM	148	21%
Unmetered - 2 Hr (8 AM - 6 PM)	139	20%
Metered - 2 Hr, 8 AM - 6 PM	65	9%
Unmetered - 3 Hr (8 AM - 6 PM)	53	7%
Unmetered (No Parking 8 AM - 10 AM)	44	6%
ADA Permit Required	15	2%
Metered - 8 Hr, 8 AM - 6 PM	13	2%
No Parking	5	1%
Valet (2 PM - 2 AM)	3	0%
Unmetered - 30 Min (8 AM - 6 PM)	2	0%
Valet (4 PM - 2 AM)	2	0%
Loading Zone (7 AM - 4 PM)	1	0%
<b>Grand Total</b>	<b>709</b>	<b>100%</b>

**Table 2 Off-Street Parking Inventory in the Study Area**

<b>Regulation</b>	<b>Sum of Spaces</b>	<b>% of Total</b>
Private	512	63%
RISD Parking	155	19%
Paid Parking (Privately Owned)	151	18%
<b>Grand Total</b>	<b>818</b>	<b>100%</b>

# PARKING AND CURB UTILIZATION FINDINGS

Parking and curb occupancy data was collected for both a peak weekday midday period and a peak Friday evening period. Weather was clear during all collection periods. Collecting this data allows the project team to understand how full parking spaces are and identify any existing parking surplus or shortfall. The maps below indicate how full each block or off-street lot in the study area was during observed periods.

Parking is generally considered challenging when it exceeds a 95% occupancy level. An 85% - 95% occupancy level indicates parking that is highly utilized but still has spaces available. A 70% - 85% occupancy level indicates an efficient use of parking space that still makes it very easy to find a space. Occupancy levels below 70% indicate parking which is underutilized – incentives, improved wayfinding, or changes to regulations on these blocks may be recommended if more parking has been identified as a need by community members despite a low overall neighborhood utilization.

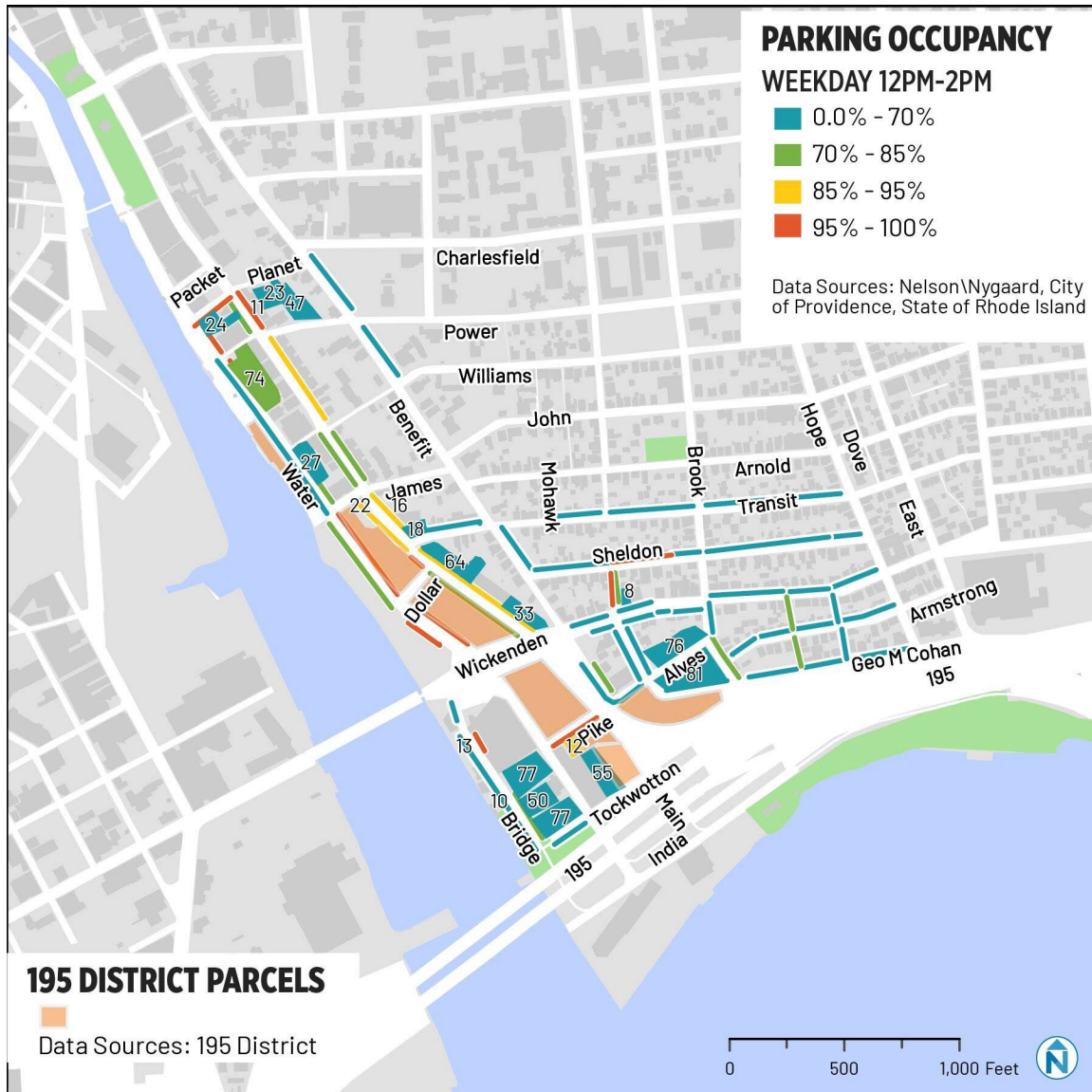
Key findings from the parking and curb utilization analysis are:

- Overall parking (including on-street and off-street spaces) was only 56% full during midday peak hours and 53% full during evening hours.
- On-street spaces were more highly utilized than off-street spaces.
  - On-street parking was 64% full during midday weekday peak hours
  - On-street parking was 60% full during Friday evening hours
- Long-term meters (8-10 hour limits) were the most utilized on-street spaces during weekday midday hours (83% full)
- All on-street metered spaces were the most utilized spaces during the Friday evening hours (91% full).
  - While the metered spaces on South Water Street and South Main Street are almost completely full on Friday evening, ample other parking spaces exist on nearby streets, including Benefit Street.
  - Nearby unmetered or unregulated parking spaces were only 59% full during the same time period and should be considered underutilized.
- Only 64% of all existing public parking was occupied during midday hours.
- **246 public on-street spaces remain available during midday peak hours.**

The map below shows parking occupancy by block on a typical Tuesday from 12 PM – 2 PM. Parking was well utilized on South Water Street and South Main Street at this time,

particularly the long-term metered parking, but parking on all other streets was underutilized. Many available spaces remain throughout the study area, including on Water Street and Wickenden Street.

**Figure 13 Parking Occupancy, Weekday, 12 PM – 2 PM**

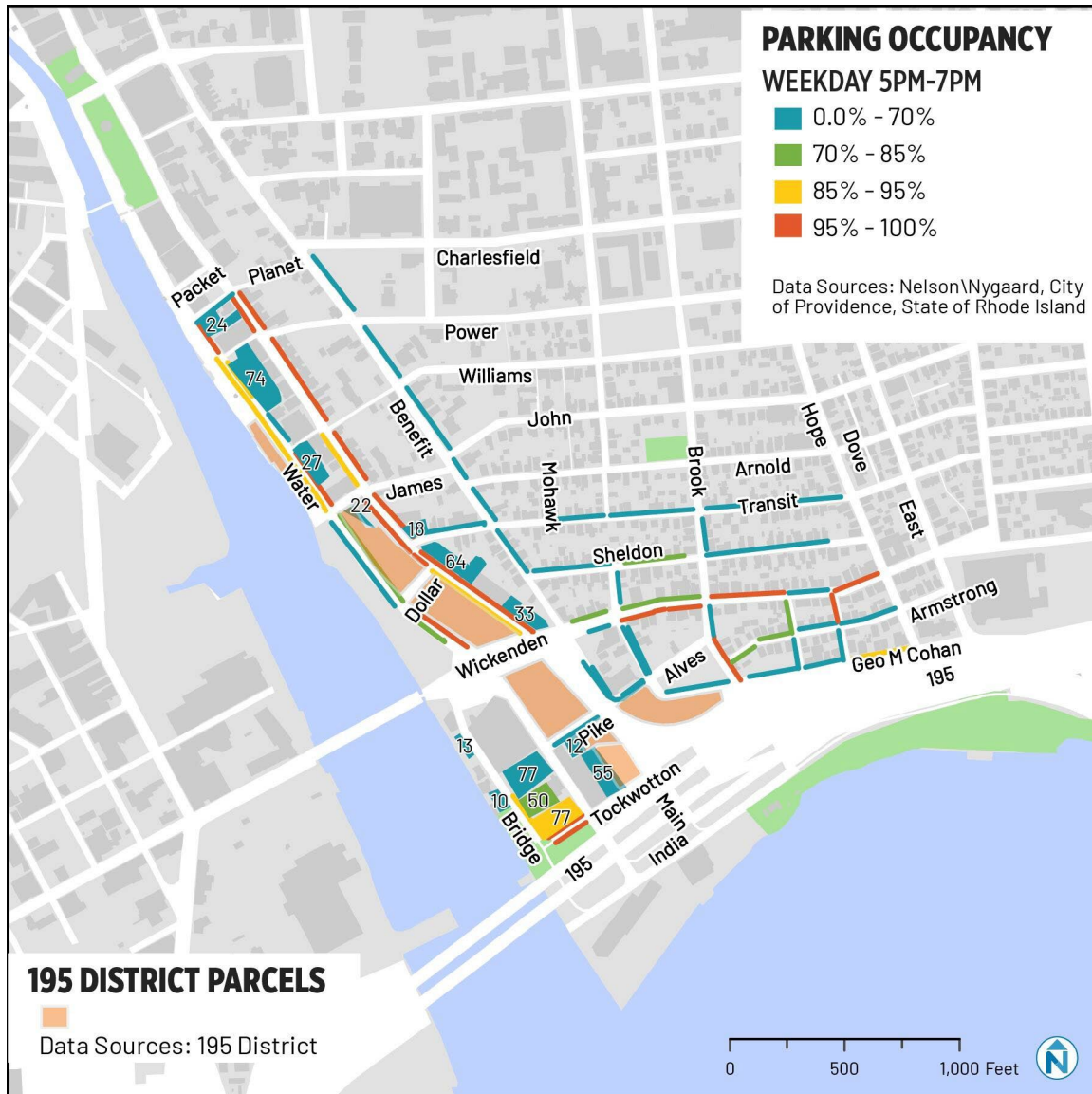


The map below shows parking occupancy by block on a typical Friday evening from 5 PM – 7 PM. Parking was well utilized on South Water Street and South Main Street at this time, with little parking remaining on Main Street but spaces still available on Water Street. Parking on all other streets was underutilized. Parking on Wickenden Street was well utilized at this time, but available spaces remained. Many available spaces remain throughout other streets in the study area including Benefit Street, Sheldon Street, and Transit Street. Off-street parking lots



were generally underutilized with many available spaces remaining. Off-street lots were more utilized in the area south of Wickenden Street.

**Figure 14** Parking Occupancy, Friday, 5 PM – 7 PM





**Figure 15 Parking Occupancy by Time of Day and Regulation**

<b>Parking Regulation</b>	<b>Spaces</b>	<b>% of Total</b>	<b>% Occupied Midday</b>	<b>% Occupied Evening</b>
Unregulated	219	31%	58%	58%
Metered - 10 Hr, 8 AM - 6 PM	148	21%	82%	87%
Unmetered - 2 Hr (8 AM - 6 PM)	139	20%	43%	69%
Metered - 2 Hr, 8 AM - 6 PM	65	9%	88%	98%
Unmetered - 3 Hr (8 AM - 6 PM)	53	7%	58%	36%
Unmetered (No Parking 8 AM - 10 AM)	44	6%	59%	59%
ADA Permit Required	15	2%	60%	60%
Metered - 8 Hr, 8 AM - 6 PM	13	2%	100%	92%
No Parking	5	1%	100%	40%
Valet (2 PM - 2 AM)	3	0%	0%	67%
Unmetered - 30 Min (8 AM - 6 PM)	2	0%	50%	0%
Valet (4 PM - 2 AM)	2	0%	0%	0%
Loading Zone (7 AM - 4 PM)	1	0%	0%	0%
<b>Grand Total</b>	<b>709</b>	100%	64%	69%

# FUTURE DEVELOPMENT PARKING DEMAND

Following the analysis of existing parking supply and demand, the project team projected future parking demand based on expected and speculative future development on I-195 District parcels on the East Side.

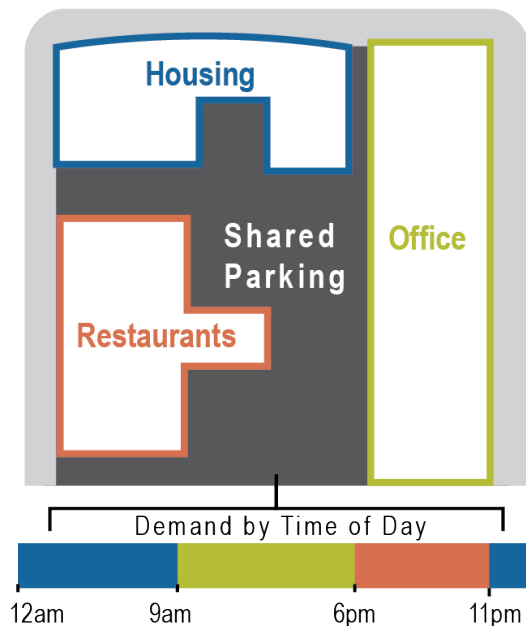
## Parking Demand Modeling Process

Understanding the relationship between land use patterns and parking demand is critical. The East Side of the I-195 Redevelopment District will function as a mixed-use parking district with a unique user behavior profile that poses challenges in managing parking resources. Traditional development expectations often assume that parking will be provided for each separate use on site, with little or no consideration of shared parking or access among different uses. This may be applicable to suburban sites with isolated single land uses oriented primarily around automobile access but is not appropriate in a mixed-use environment like the I-195 Redevelopment District where developers seek to develop a more urban and walkable environment. The I-195 Redevelopment District will mix a number of land uses, each with different demand profiles across the course of the day and located in close proximity to each other. This will support efficient sharing of local parking resources.

In a proven principle often referred to as **“staggered peaks,”** the actual demand for parking varies by use throughout the hours of a day and days of a week: office space generates parking demand during traditional weekday business hours; parking for residential housing is often highest overnight as many residents use their cars during the day; and the parking demand generated by bars and restaurants is highest during mealtimes and in the evening. If parking is shared between multiple uses, the aggregated parking demand by time of day is less than the total that would be programmed separately for each use.

A second principle of shared parking in a mixed-use area is often referred to as **“internal capture,”** which manifests in several ways:

Figure 16 Demand Temporal Distribution



- A single parking space that normally serves one land use at a time may serve another land use at the same time simply by the virtue of someone walking to a second destination after parking at their first destination.
- A resident of a development is able to meet a travel need within the development, or at a nearby development, without the use of a car that would otherwise consume a parking space.

In the example shown below, an individual may park in the garage, attend class in the morning, walk to a pizza shop in a mixed-use building for lunch, and pick up clothing at a dry cleaner before leaving the area. This eliminates demand for one parking space at the pizza shop and one parking space at the dry cleaner. Mixed-use areas naturally promote this type of shared parking which eliminates the need for many redundant parking spaces.

**Figure 17 Reduced Parking Demand in Park Once Districts**



Mixed-use areas typically experience reductions compared to traditional parking demand assumptions because of both staggered peaks and internal capture, depending on how uses are mixed together and what the walking environment is like between them. For example, the following groups may make use of only a single parking space where parking generation tables require two spaces:

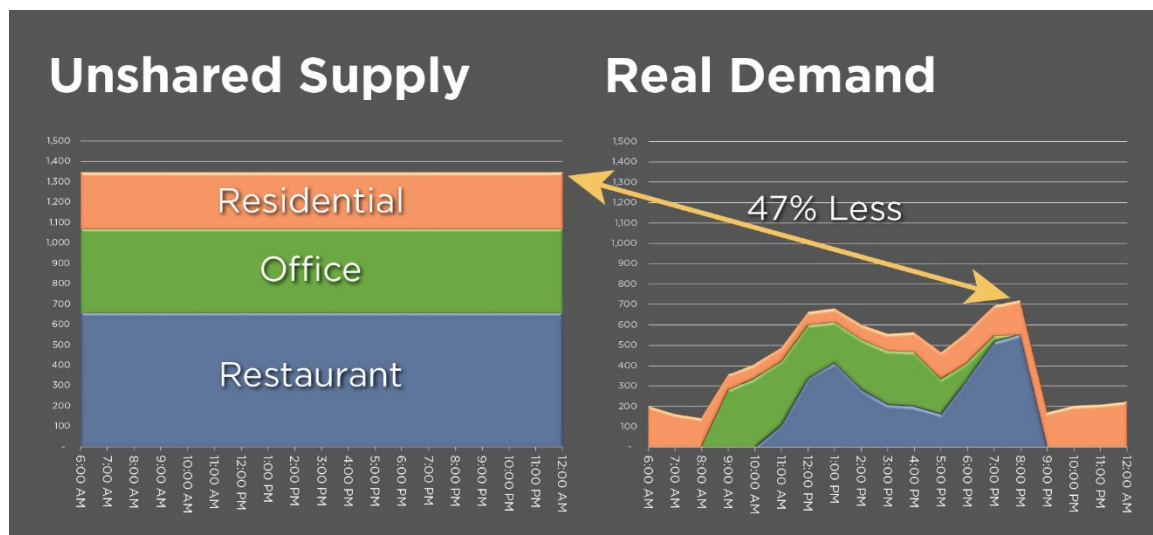
- Office workers who patronize nearby restaurants at lunchtime
- Hotel guests who attend nearby cultural events

- Residents who own vehicles yet walk to services or to their jobs

The proposed parking demand forecast methodology is different from traditional parking generation due to the consideration of staggered peaks and internal capture principles. Most often, parking generation analyses rely on the Institute of Transportation Engineers' (ITE) periodic report titled *Parking Generation*, which is the prevailing national standard in determining expected parking demand for a development or set of land uses. ITE standards are based on parking demand studies submitted to ITE by a variety of parties, including public agencies, developers and consulting firms. These studies are often based on peak hour demands of suburban sites with isolated, single land uses that provide free parking.<sup>1</sup> To calculate the estimated parking demand generated by a development, an analyst multiplies a peak parking demand factor for each land use type by the physical size of each use type and assumes that the peak amount of parking is required all day every day and exclusively for that use (Figure 18).

The most recent parking generation manual available is the 5th edition (2018) and is used as a comparative starting point to determine baseline assumptions. However, as described previously, to model a mixed-use environment, Nelson\Nygaard has created an adapted parking model with inputs from the Urban Land Institute's (ULI) *Shared Parking Manual* (2nd Edition, 2005) and study area-specific land use and parking data to reflect actual staggered peaks and internal capture behavior. Both the ITE and ULI manuals report demand by time of day for most land uses. By layering this information with peak parking ratios, an analyst can determine a more realistic peak parking demand for land uses in a given area.

**Figure 18 Traditional Expected Parking Demand vs. Real Demand Profile**



<sup>1</sup> Institute of Transportation Engineers, *Parking Generation* 4th Edition, 2010, page 2

The systematic modeling process is as follows:

1. **Land Use Program**: Categorize and aggregate proposed development land uses to determine the built square footage that attracts parking demand.
2. **Model Parking Demand**: Apply a parking model derived from the Urban Land Institute's (ULI) Shared Parking Manual to show the expected parking demand throughout the course of an average weekday, adjusted for staggered peaks. In a development context, multiple phases may be modeled to account for interim years leading up to a full buildout with all land uses online.
3. **Identify Context Variables**: Begin model calibration by assessing factors related to site-specific programming that impacts travel demand (e.g., events, the likelihood of trip-chaining), transit access, resident vehicle ownership, potential transportation demand management (TDM) programs, and local fluctuations in parking demand.
4. **Model Parking Demand with Adjustments**: Apply an adjusted parking model that accounts for staggered peaks as well as internal capture, TDM programs, local demand adjustments, and other factors.
5. **Create Demand Management Toolset**: Identify a set of TDM strategies and other adjustments necessary to accommodate the expected parking demand / desired parking ratios within the desired site supply.

## Key Model Assumptions

### Projected Development Program

The development program below was used to model future parking demand for the East Side of the I-195 Redevelopment District. This development program includes developments that are approved as well as speculative future development. The speculative development program is intended to be conservative in order to model the greatest potential parking demand that could be expected under a potential future scenario.

Retail uses are not specified in this projected development program as they are difficult to predict in advance. In order to create a conservative assumption, 30% of the expected retail space was allocated to restaurant or food hall uses while 70% of the space was allocated to general retail or grocery store uses.

The final modeled development program includes a mix of residential, office, lab, retail, and restaurant uses that will support the intended mixed-use character of the neighborhood.

**Table 3      Projected Future Development, East Side I-195 District Parcels, for Future Parking Model**

Project Type	Parcel Number	Primary Use	GSF	Residential	Lab	Office	Retail	Parking		
				Units	GSF	GSF	GSF	Spaces	Parking Management	Residential Parking Ratio
Current	P-2	Residential, Retail	174,082	194	--	--	15,000	90	Reserved for Residential	0.5
Current	P-6	Residential, Retail	67,000	62	--	--	23,000	162	Shared Parking	0.5
Current	P-9	Residential	150,000	135	--	--	5,000	55	Reserved for Residential	0.4
Hypothetical Future	P-1A	Residential	36,500	37	--	--	5,000	16	Reserved for Residential	0.4
Hypothetical Future	P-5	Lab or Office	190,400	--	175,500	--	15,000	225	Shared Parking	N/A
Hypothetical Future	P-8/8A <sup>1</sup>	Residential, Office	200,000	69	--	58,000	4,000	169	Shared Parking	0.5
<b>TOTAL</b>		--	817,982	497	175,500	65,000	70,000	717	--	--
1. used the more conservative proposal currently being considered (i.e., most demand for parking outside what is included on site)										

## Parking Ratios

Parking ratios for residential units are based on developer expectations for their expected market. Developer proposals for the area indicate expected parking ratios that will not exceed 0.5 spaces per residential unit.

Non-residential parking ratios were set as follows according to national standards laid out by the Institute of Transportation Engineers (ITE):

- General Retail: 1.95 spaces / ksf
- Restaurants, Food Hall, Cafes: 9.31 spaces / ksf
- Office and Lab: 1.63 spaces / ksf

## Context Adjustments

Parking models must remain sensitive to local context factors including the presence of mixed land uses, multimodal transportation access, and any existing transportation demand management (TDM) programs.

Due to the mixed-use character of the projected development and the existing neighborhood, an internal capture adjustment of 15% was applied to future parking demand for commercial uses. This represents the fact that many users of these commercial spaces live or work in the same neighborhood and will not drive and park to reach these destinations once they are already on site.

In order to remain conservative, no specific adjustment was made to account for multimodal transportation access to the site. However, the project team expects that multimodal transportation will further reduce the expected parking demand and should feature prominently in proposed solutions to manage future demand.

Future parking to be provided on development parcels will feature a mix of management approaches. Some facilities may be reserved for residents, while others will feature a shared parking approach that opens spaces up for visitors to multiple uses and to the public. The number of parking spaces to be provided on-site for each parcel was modeled after previous developments, other comparable developments in the New England region, and potential developer proposals.

In order to remain conservative, the project team assumes that 74% of the expected residential parking demand will translate into reserved spaces. All other parking is assumed to be shared.



## Future Parking Demand – Key Findings

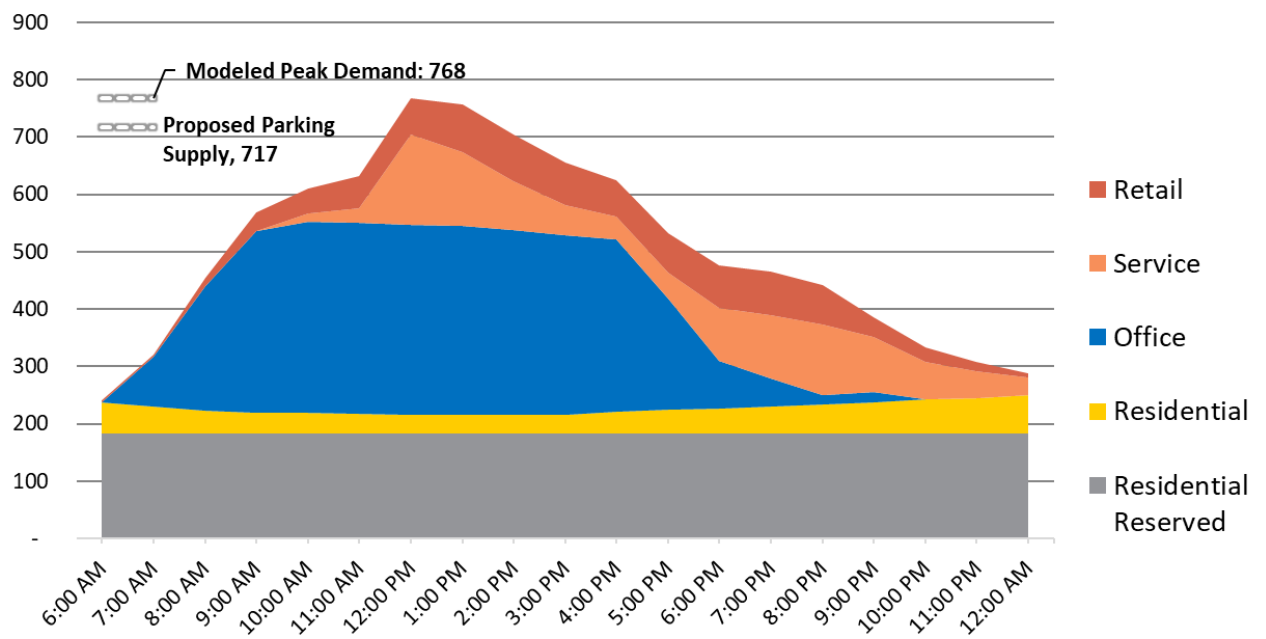
Using the method and key assumptions laid out in this chapter, the project team modeled weekday and weekend parking demand for the speculative future development program.

### Future Weekday Parking Demand

The calibrated parking model indicates a weekday peak parking demand of 768 spaces for the proposed development program. This peak will occur during the midday period from roughly 12 PM – 2 PM. The projected parking supply for the development parcels amounts to 717 spaces – this means there is an expected deficit of 51 on-site parking spaces during this brief peak period. The 51 excess vehicles can easily be accommodated in the 246 available on-street parking spaces observed in the neighborhood during the curb utilization analysis or in additional underutilized parking resources located across the Providence River (no further than 0.5 miles away, or a 10 minute walk). These more distant parking facilities would be best used by longer-term parkers such as small business employees rather than business customers making short stops.

The forecasted development program is expected to effectively accommodate expected parking demand when accounting for other available parking in the area. Retail and restaurant visitors will be the primary users of available on-street spaces and will only remain in the neighborhood for brief periods.

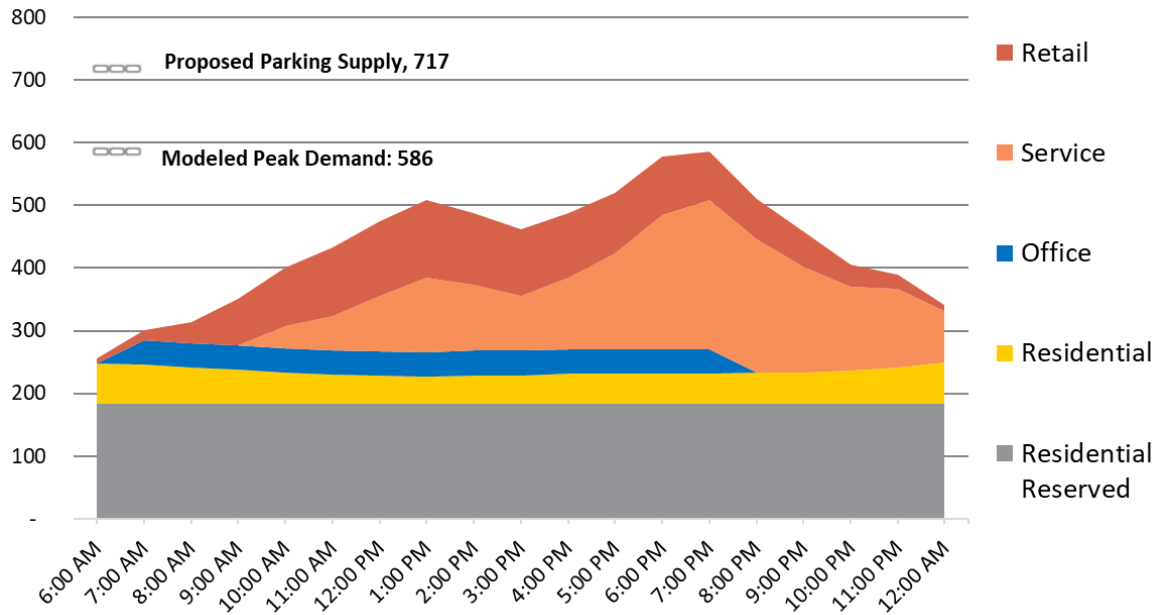
Evening demand is expected to fall well below the expected on-site parking supply. The on-site parking supply will easily accommodate residential and commercial demand in the evening with no spillover onto neighborhood streets.

**Figure 19 Modeled Weekday Parking Demand**

## Future Weekend Parking Demand

The calibrated parking model indicates a weekend peak parking demand of 586 spaces for the speculative future development program. This peak will occur during the evening period from roughly 5 PM – 7 PM. All weekend parking demand can easily be accommodated within the 717 proposed parking spaces on-site at the development parcels.

**Figure 20 Modeled Weekend Parking Demand**



# RECOMMENDATIONS

The following recommendations are the result of the analyses completed by the project team and documented in this report. They are divided into two groups:

- **The Demand Management Toolset.** This toolset provides a suite of strategies that can be directly implemented or encouraged by the I-195 District during review of incoming development proposals. These strategies are focused on mitigating parking and curbside demands and operational impacts from new development. **This is a toolset – not all strategies are expected to be implemented. They are presented as options to manage future parking demand.**
- **The Curbside Management Toolset.** This toolset offers strategies that can directly influence and improve how existing parking resources are used and managed in the district, both now and in the future. Many strategies in this section would need to be led and implemented by the City of Providence. This study is documenting these recommendations with the intention of sharing this information with the City of Providence.

## Demand Management Toolset

The parking demand scenarios modeled during this study did not apply adjustments based on a suite of demand management tools. Implementation of these policies by the I-195 District would further reduce parking demand and mitigate curbside impacts. The impact of these potential TDM programs is described in this section. These factors are intended to offer a range of options that can help achieve desired curbside operations in the future. While the internal capture and local context adjustments applied in this analysis were conservative, these factors are expected to grow into the future. The more comprehensively the elements described in this section are applied, the greater the ultimate parking reduction will be. Most of these strategies are complementary to one another and work best when implemented as part of a district wide TDM package. **These strategies are part of a toolset – they are not all expected to be implemented. Each strategy provides one option to further reduce parking in the future if needed. The findings of this study indicate that parking demand from the speculative future development program can be successfully accommodated even without accounting for the impacts of these potential demand management tools.**

## High Priority Demand Management Tools

High priority tools are expected to be the most feasible for implementation and achieve the greatest impacts.

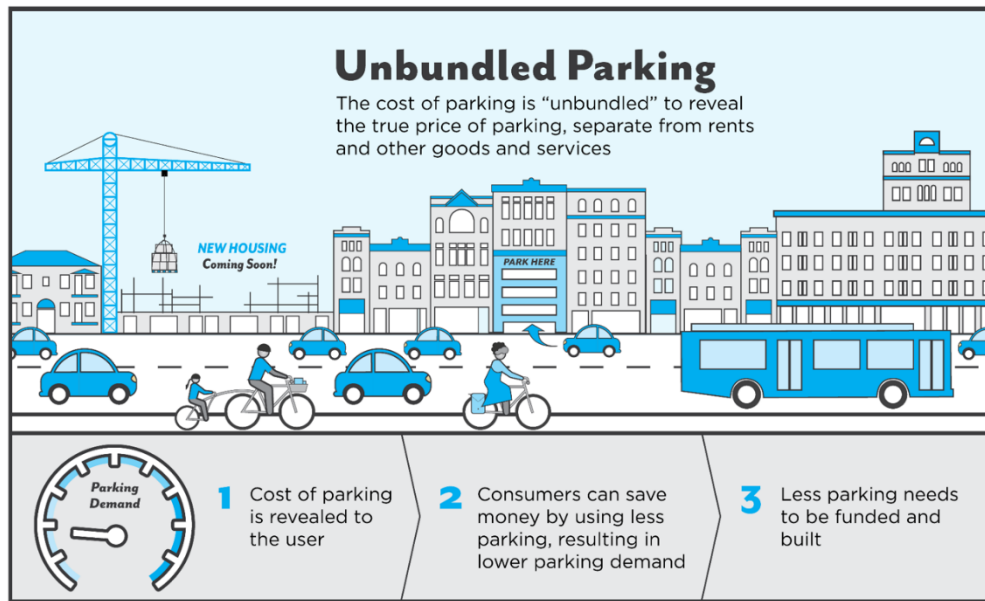
## Shared Parking

The future parking demand model prepared for this study assumes that 74% of development residential parking demand will be accommodated in reserved parking spaces. All other expected parking is assumed to be offered in a shared environment. To achieve the parking scenarios documented here, the I-195 District must require developers to offer shared parking arrangements. This includes opening up spaces to the public and requiring owners to lease spaces in new parking facilities for employee permit programs. **This is the most imperative parking demand management strategy documented in this report.**

## Unbundled Parking

The cost of providing parking is often hidden from the user. Separating the cost of parking from the cost of rent or purchase price is one of the simplest methods to reduce overall car trips, reduce traffic congestion, and reduce the cost of development. Traditionally, off-street parking provision is baked into the cost of commercial rental agreements and residential leases, driving up prices and resulting in an oversupply of parking spaces. Unbundled parking is leased separately from active uses and is not associated with one particular use. This format fits naturally into a shared parking environment, makes the true cost of parking visible to users, and enables more affordable housing by separating expensive parking from residential units.

Studies from major metropolitan areas have indicated that unbundling parking can reduce residential parking demand by 5-15%, particularly when offered alongside on-site carsharing. The I-195 District should require that incoming developers unbundle parking as described here.

**Figure 21 Unbundled Parking**

## Low Priority (Future) Demand Management Tools

Low priority demand management tools provide additional opportunities to manage and reduce parking demand in the future if needed. These tools are not expected to be implemented at this time, but should be considered as part of a long-term strategy to manage parking demands in the neighborhood.

## On-Site Carsharing

Car sharing services such as ZipCar offer residents and employees an alternative to using their own vehicles for trips that must take place by car. Car sharing allows individuals to forego owning a vehicle while retaining the comfort of knowing that they can always access a car on-site for special trips. When on-site car sharing is offered alongside unbundled parking, many tenants may choose to rely on car sharing and save money on parking and vehicle ownership costs. The impact of on-site car sharing is expected to range up to 15% when used alongside unbundled parking. The I-195 District should encourage developers to provide car sharing spaces on-site.

## On-Site Bike and Pedestrian Amenities

Modern tenants are more likely than those of previous decades to make use of pedestrian, bicycle, and other active transportation modes. Developments that incorporate facilities and amenities that support biking and walking are well positioned to attract tenants while also



reducing the demand for parking. Facilities such as bike lanes and sidewalks on adjacent streets, in-building bicycle parking, lockers and showers for non-resident tenants who bike, and in-unit bike storage options all increase the value of new developments and reduce parking demand. Typical elements of a bike- and pedestrian- friendly development include:

- Indoor and outdoor bike parking facilities for tenants and visitors
- In-unit bike storage features
- Bike lanes and other on-street facilities on adjacent streets
- Wide and well-maintained sidewalks
- Public showers and lockers for non-resident tenants and visitors
- Improvements to crosswalks adjacent to the development site

## Multimodal Transportation Access

The I-195 District's East Side parcels are in an area that is currently served by regional transit services. The significant scale of the proposed developments could support improved frequencies on these services in the future. The presence of premium regional transit would bolster the efficacy of many TDM programs and further reduce parking demand. External trips that would otherwise be completed by car could be completed via transit services. When combined with incentives programs such as subsidized transit passes, this type of service would greatly alter the parking demand landscape in the future.

Similarly, the development of regional bike facilities or on-street bike facilities on adjacent streets will further unlock the true benefits of TDM programming. Safe and comfortable bike facilities on key corridors will allow external trips to be completed by bike in much greater numbers than what may be possible under current conditions. Facilities such as the existing South Water Street cycle track already contribute to the bike-friendly atmosphere of the neighborhood.

The I-195 District should encourage developers to partner with the City of Providence and other agencies to invest in multimodal infrastructure in the neighborhood.

**Figure 22 Bus Operating on South Water Street**

## **Subsidized Transit and Micromobility Passes**

The I-195 District should push developers to offer subsidized transit passes, carshare memberships, or micromobility service memberships to their tenants, particularly commercial office and lab tenants. Many incoming office and lab tenants may already be engaged in such behaviors – requiring this as part of the development agreement for these uses will reduce parking demand and ensure that incoming employees have an incentive to use public transportation.

## **Advanced Off-Street Parking Management and Valet**

Advanced parking management techniques such as valet parking can allow a larger number of vehicles to fit within a parking facility of a given size. Valet parking handled by attendants allows vehicles to be stacked closer together and maximizes the available supply. The I-195 District should ensure that developer proposals demonstrate a familiarity with valet-style parking management and offer the ability to operate valet services in the future if these are needed.

## **Require Curb Infrastructure and Loading Studies**

The I-195 District must pay close attention to the internal and curbside loading needs of incoming developments. Even developments that provide adequate internal loading bays for

critical building services will still generate curbside demand due to the many forms of curbside delivery, loading, and passenger activity that comprise the modern transportation system. Providing adequate space for small package deliveries, food deliveries, ride-hails, and other curbside services is key to ensuring traffic operations do not deteriorate at new development sites.

Developers should be required to assess site-specific curb infrastructure, parking, and loading and these studies should be shared with the City of Providence to ensure that solutions align with the City's requirements.

**Figure 23 Commercial Truck Operating on South Water Street**



## Micromobility

The growth of shared micromobility platforms represents a new and rapidly changing force in parking demand. Technologies such as electric bikes, scooters, and other small vehicle innovations extend the non-car trip range for a typical user up to 2-4 miles. Access to these services within a mixed-use development site means that site users are much less likely to fall back on their personal vehicles for trips within this distance range. Given that the entire I-195 District falls within this radius, many internal trips can be shifted from cars to micromobility options if these emerging modes are made attractive and accessible.

While the potential impact of these services is great, they are primarily a force for reducing internal, rather than external, trips. Furthermore, the novelty and volatile nature of the micromobility industry makes it difficult to predict which services and modes will have true



staying power. Flexibility is key when integrating these services into a mixed-use development site. Developers should partner with Spin, the primary local micromobility vendor, to effectively integrate these options into site development. New developments may consider adding specific Spin drop zones or parking areas on-site.

**Figure 24 Scooter User on South Main Street**



## Other Emerging Mobility Trends

This analysis makes no assumptions regarding future mobility trends and the impact of the growth of transportation network companies (TNCs) such as Uber and Lyft, the emergence of autonomous vehicles, and the continued growth of micro-mobility services that offer dockless scooter and bike sharing. However, these trends will continue to mature and impact the expected parking demand of future land uses. Planning for the reduced parking demand that accompanies the growth of these platforms is an important consideration when constructing new parking.

Aggressive projections suggest that autonomous vehicles, both personally owned and shared, may reach 90% market saturation within thirty years. Unlike traditional personal vehicles, these vehicles do not need to remain static and parked when not in use. They can function as part of a ride-hailing system, a monthly subscription service, or be put to

alternative uses while the primary owner is absent. Autonomous vehicles can also park more efficiently than human drivers and may be “stacked” to maximize the efficiency of the parking supply. These functions mean that large amounts of parking will no longer be required at mixed-use development sites.

The continued growth of ride hailing services will further incent individuals to forego car ownership given the relatively low cost and easy access provided by Uber, Lyft, and others.

Ultimately, the key to planning for emerging mobility services is flexibility. Over-construction of parking now may require retrofitting later after parking demand falls. Modern tenants expect a variety of transportation options that will only grow as innovative services and technologies become more ubiquitous.

## Curbside Management Toolset

The Curbside Management Toolset includes a variety of strategies to improve the management, utilization, and operations of curbs in the study area. These recommendations are intended to be led by the City of Providence in coordination with the I-195 District and other stakeholders.

### Add Loading Zones

Parking utilization data and traffic counts indicate that adequate parking and vehicular capacity exist on roadways in the study area. However, on street / illegal loading activities contribute to congestion and poor roadway operations because adequate loading zones are not in place. This study recommends working directly with business owners in the study area to implement additional curbside loading zones. Implementing new loading zones may require removing some metered parking spaces – this is a worthwhile tradeoff if it means that loading activities no longer create safety and operational hazards.

Figure 25 Courier Services Loading on Main Street



Curbside loading zones can be configured to serve the following use cases:

- **Commercial vehicle loading.** Commercial vehicles including trucks require loading zones of adequate dimensions to ensure that they do not obstruct passing traffic or infringe on driveways or parking spaces. The dimensions required for such loading zones vary based on the expected vehicles which will use them. The City of Providence should work directly with local business owners to understand what vehicle types should be expected in the area, and design loading zones accordingly. Commercial loading zones may be regulated for 30-minute limits depending on the nature of the activity. Flexible zones that allow 30-minute parking for commercial deliveries and 15-minute parking for short-term deliveries and passenger activity allow multiple uses to coexist in the same space.
- **Short-term delivery.** A variety of goods increasingly travel through Providence on short-term delivery vehicles. These can include parcels delivered by courier services such as UPS, Amazon, and FedEx or food deliveries operated by on-demand services such as DoorDash and Grubhub.

These short-term deliveries may only require curb access for no more than five minutes and often as little as one minute – however, they are prone to double parking due to their short stay times if no loading zones are available. This study recommends adding specific short-term delivery zones in areas where high volumes of delivery traffic are expected, such as at popular restaurants which offer delivery service, including Plant City. The City of Providence should reach out directly to key business owners to understand where these zones might be needed. If a more comprehensive approach is desired, the City may consider implementing one 15-minute parking space per block on commercial streets.

Short-term delivery zones can be managed as 15-minute parking spaces, allowing deliveries to take place but also allowing for passenger pickup / drop-off and other short-term parking operations in a single flexible zone.

- **Passenger pickup / drop-off.** Passenger pickup / drop-off activities function similarly to short-term deliveries. They typically only require a few minutes at the curb but are prone to double parking if space is not available. These users can take advantage of 15-minute parking spaces. The City of Providence should consider adding these spaces where ride-hail activity is greatest. Ideally, these spaces will serve both passenger and short-term delivery uses.

Ride-hail services such as Uber and Lyft can also benefit from geofencing.

Geofencing indicates specific areas where Uber/Lyft drivers can begin and end trips and prevents trips from using other curb areas. It is managed directly by the ride-hail operators in their apps. The City of Providence should coordinate with these services to understand demand in the area and implement geofenced drop-off locations if



ride-hail activity continues to grow and/or creates operational issues as development continues.

## Limit Delivery Times

Commercial trucks can create operational issues when they are present during the busiest periods of the day on commercial streets. Limiting commercial truck traffic to specific times of day can be beneficial to roadway and curb operations.

The City of Providence should investigate the potential to limit truck traffic in the study area to morning hours (8 AM – 12 PM) to avoid conflicts with other street users. These temporal limits should be accompanied by appropriate signage and enforcement.

Implementing time-limited zones for trucks in this area may prove challenging due to local circulation patterns. South Water Street provides the only access to I-195 EB on the East Side of Providence. Trucks may not have an appropriate alternate route to reach their destinations if these temporal limits are put in place. The City should coordinate with truck operators to better understand their needs and the feasibility of this approach.

**Figure 26 Commercial Truck on Main Street**



## **Extend Meter Times and Simplify Regulations**

Meters in the study area are not enforced after 6 PM. Given the large amount of evening activity in the area, meter times should be extended to 8 PM to moderate this evening demand.

Time limits for meters should also be simplified. Rather than having many categories of time limit, the City should implement 4-hour and 10-hour zones across the study area. 4-hour meters can serve commercial and retail uses while 10-hour zones will support the small business and other employees who must park all day in the area.

In the future, the City should consider removing time limits altogether and switching to a graduated pricing system. This pricing structure would encourage turnover while allowing people to park all day if they absolutely need to. Graduated pricing means charging substantially more for each hour beyond a typical two- or four-hour limit to encourage turnover while preserving flexibility.

The City should also consider applying consistent time limits on non-metered streets. Rather than having multiple different time limits, select a consistent 2-, 3-, or 4-hour time limit for these non-metered areas to avoid confusion from users.

## **Add Meters to Commercial Streets**

The high utilization on Wickenden Street, and potential for high utilization on Benefit Street in the future, offers an opportunity to add more parking meters to the area. Parking meters will help to regulate demand, encourage turnover, and make it clear to users that these streets are intended to provide parking for commercial use. The City should consider adding meters to these streets in the future as development continues.

## **Increase Enforcement**

The City of Providence should add staff capacity and conduct focused enforcement in the study area to ensure that curb regulations are followed. Parking enforcement should not only address metered parking – enforcement must also ensure that loading zones, permit programs, and other curb regulations are used correctly, and that safety and operational issues such as double parking do not occur.

Effective enforcement is a tool to share information, increase compliance, and improve curb operations. First-time forgiveness can reduce the negative perception of parking enforcement and provide an opportunity to share information with curb users about how to use the curb in a way that is both compliant and meets their needs.

## **Implement Daytime Resident Permit Program**

No daytime resident permit program currently exists within the study area. Currently, spillover parking from retail uses does not appear to be causing high utilization on residential streets. However, additional commercial demand in the future may begin to impact residents. Implementation of a daytime resident permit program would ensure that residential streets are always available for residents and not overutilized by visitors. To remain flexible, the City could implement a regulation of “2-hours except by permit” which would allow for some commercial parking but preserve spaces over the long-term for permit holders. Permits could be offered for free to residents, with limits on the number of permits allocated per household, or offered for a fee.

## **Create a Long-Term Employee Parking Permit**

Many small business and institutional employees in the area currently park in the 10-hour metered spaces in the study area. These spaces may be better used in the future for short-term parking that supports local business visitors and retail customers. However, small business employees will still need a place to park. The City should consider establishing an employee parking permit program which would allow small business employees to park on neighborhood permit-controlled streets (see resident permit program above). This permit would include a monthly fee to encourage only those who truly need access to use it. The employee permit program could also be applied to off-street facilities. The City and the I-195 District should investigate the potential for off-street employee parking in nearby garages, including the Clifford Street Garage as well as future garages built by local developers, to provide this employee parking. The Clifford Street Garage is only 0.4 miles walk from the study area and would serve as an easy option for employees and free up additional on-street spaces for local business visitors.