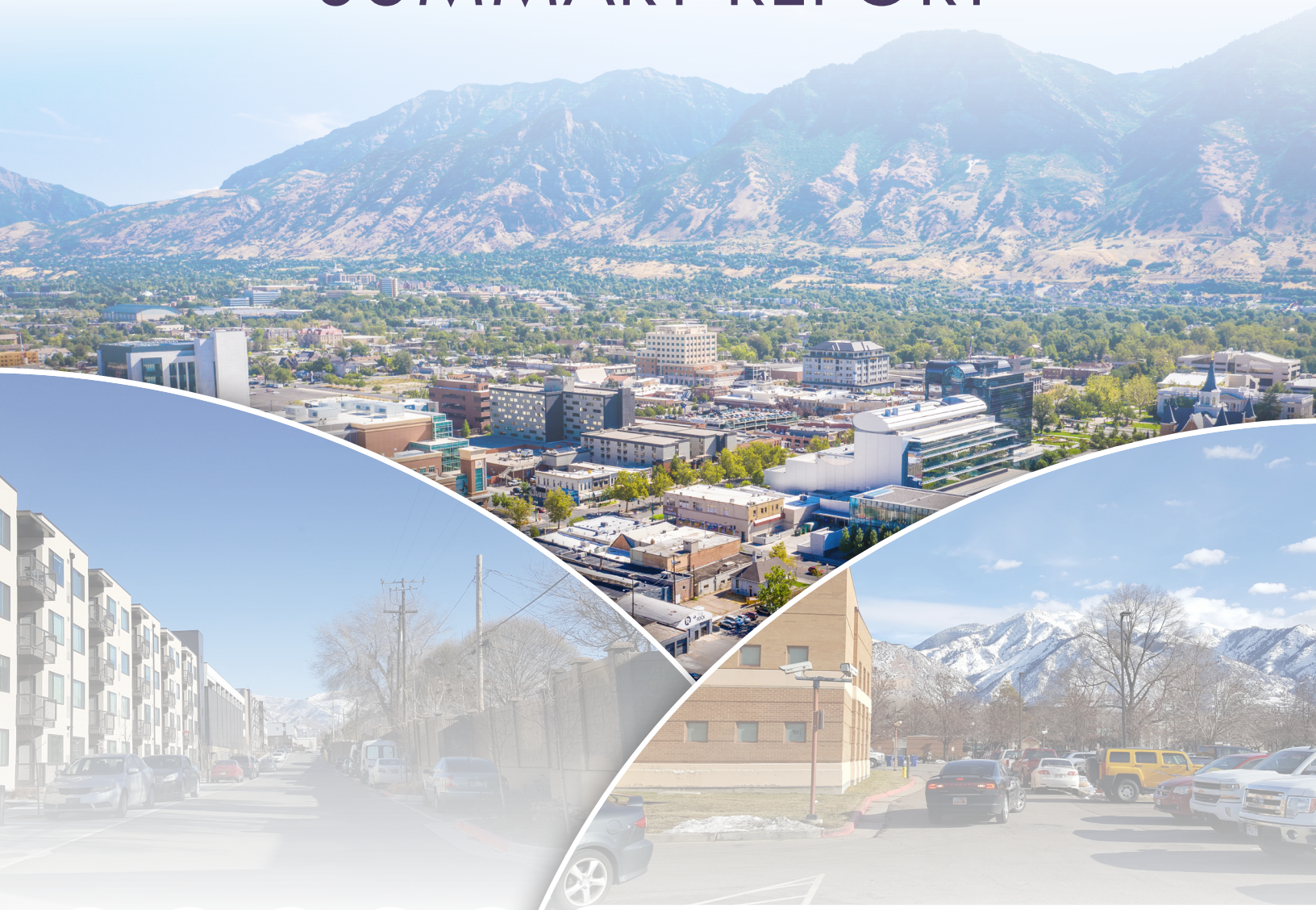
# PHASE 1

## SUMMARY REPORT



UTAH PARKING MODERNIZATION INITIATIVE

April 2021

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# 1. Executive Summary

# 1. Executive Summary

The Wasatch Front is comprised of many communities, of varying sizes and character. Each has their own unique history and want different things for their future. Add to that, the nature of transportation is changing rapidly. Transportation Network Companies, such as Uber and Lyft have added to the already high demands on curb space, but these companies have created a focus on both how the curb is managed to accommodate increased and sporadic passenger loading. These companies, as well as scooter and bike share companies have incorporated technology to cover everything from tracking usage to transactions. Technological advances beyond a service app have boomed as well, using smartphone devices to locate and pay for parking. Then there are the impacts of COVID-19 and how teleworking became a normal and sometimes preferred option for some, businesses have been negatively impacted in many communities, bicycle sales and usage has boomed across the nation, and curbside use has become even more diverse with more drop-off/pick-ups locations or as restaurants and stores expand their space to the curb.

Cities are growing in different and faster ways than they have before. It is easy to consider all of these changes or advances in isolation. However, they impact each other and have larger implications on how a city grows. For instance, as more people work from home, or use bikes and transit to commute, or TNCs to go out with friends, this means that there are less cars that need to be parked at these destinations. As these transportation trends evolve, how can cities ensure their parking codes and regulations are modernized to support what is existing as well as what will come in the future?

The Parking Modernization Initiative looks at the interrelated nature of parking and identifies strategies that will help cities across the region modernize their approach to parking management.

**Modernization of parking regulations and policy is necessary to:**

## Partnership Study Findings

A review of parking in two partnership cities – Ogden City and City of South Salt Lake – was conducted as part of the Initiative. The intention of doing parking studies for two cities in the Region was to examine local practices, travel patterns, and identify localized strategies for the Region.

Many communities will rely on antiquated parking codes or national standards. Neither option is ideal for helping cities face the current transportation trends. Local data is necessary to help the Region modernize parking practices and regulations.

In both Ogden City and South Salt Lake, the parking occupancies were found to be low, indicating that the parking Codes for land uses requires developers to build too much parking. The impact those requirements create has both cities in a reactive state with development with regard to provision of parking, rather than proactive. For both cities, a number of strategies were identified to align parking requirements with the localized demand. Strategies were also identified to help the cities create a comprehensive and proactive management approach to parking.

## Parking Management Strategies

Based on the findings of the Partnership Studies, Peer City Roundtable, developer discussion, and best practices literature review, a number of strategies were identified that would guide the communities in the Region to modernize their approach to parking management. A key takeaway for this Initiative is that while these strategies are effective in their own right, implementing many of them to create a comprehensive parking will be more successful and sustainable.

| Strategy | Description | Impact[1] |
|---|---|---|
| Right-Size Parking Requirements | Aligns parking requirements with actual parking needs in the community and to transition to a system that utilizes shared and leased parking supply. | • Encourages development feasibility<br>• Supports infill development<br>• Encourages high density, mixed-use land use development – which encourages alternative modes and trip reduction<br>• 10-30% reduced parking demand[1] |
| Plan for Mobility Hubs | Transit stations or centers that bring together many different forms of transportation in one location. They may also have other forms of land uses as well to provide convenience for users. | • Enhances mobility by connecting many forms of transportation in one location<br>• Encourages multimodal transportation<br>• 5-15% reduced parking demand[1] |
| Enforcement | Enforcement ensures compliance with parking regulations, which improve overall system efficiency. | • Encourages compliance with parking regulations, which encourages parking efficiency<br>• Impact varies with regard to parking demand |
| Transit Station Parking Planning | Managing transit station parking supports and encourages transit ridership by preserving adequate parking spaces for transit users. | • Supports transit ridership by securing parking for riders<br>• 10-30% reduced parking demand[1] |

| Strategy | Description | Impact[1] |
|---|---|---|
| Curb Lane Management | Operate and manage the various curb uses effectively to provide access for a variety of users. | • Efficient use of curb space for all users<br>• 10-30% reduced parking demand[1] |
| Data-Based Decision Making | Use of local data to monitor the parking system and inform policy and practice changes. | • Tracks and monitors parking program trends<br>• No parking demand impacts |
| Annual Reporting | An annual report communicates data analyses and changes to the parking system. Used as a monitoring and communication tool. | • Tracks and monitors parking program trends<br>• Effective parking program communication tool<br>• No parking demand impacts |
| Flexible Shared Parking | Shared parking is meant to optimize the use of the parking facility by providing more opportunities for use by various properties, which optimizes the use of the parking facility and allows properties to meet their parking demands. | • Distribution of parking demand to optimize use of existing assets<br>• Encourages high density, mixed-use land use development – which encourages alternative modes and trip reduction<br>• 10-30% reduced parking demand[1] |
| Repurpose Underutilized Parking and Infill Opportunities | Lots that are underutilized can be repurposed temporarily or slated for infill development. | • Encourages clustered land use development – which encourages alternative modes and trip reduction<br>• 10-30% reduced parking demand[1] |
| Parking Permit Program | Parking permit programs protect parking spaces for people parking for long periods of time consistently, such as residents or employees. | • Distribution of parking demand to optimize use of existing assets<br>• 10-30% reduced parking demand[1] |
| New Parking Supply for Economic Development | Development of a comprehensive approach to planning parking infrastructure investment as a key element of community and economic development. | • Improves development feasibility<br>• Encourages “Right-Sized” parking for new development<br>• Impact varies – new parking supply encourages the use of vehicles, however, if “right-sized” and planned to optimize existing parking supply, parking demand can be reduced |
| Time Limit Restrictions | Time limits regulate how long vehicles can park in spaces to encourage the turnover of spaces. | • Distribution of parking demand to optimize use of existing assets<br>• Encourages turnover, which improves access to businesses<br>• 10-30% reduced parking demand[1] |

| Strategy | Description | Impact[1] |
|---|---|---|
| Paid Parking | Use of meters or smartphone applications to collect a fee to park. Implemented in high demand areas to encourage turnover. | • Distribution of parking demand to optimize use of existing assets<br>• Encourages turnover, which improves access to businesses<br>• 10-30% reduced parking demand[1] |
| Wayfinding | Themed wayfinding parking directs people to desired parking locations, effectively distributing parking demands. | • Distribution of parking demand to optimize use of existing assets<br>• 5-15% reduced parking demand[1] |
| Plan for Technology | With the wide range of technologies, and new ones continuously emerging, it is important to research and pilot test technologies prior to making the large investment and implementation. | • Distribution of parking demand to optimize use of existing assets<br>• Encourages compliance of parking regulations, which makes parking more available and efficient<br>• Impacts vary due to the wide range of technology options and extent of their implementation and use |
| Transportation Demand Management and Mobility | Transportation Demand Management (TDM) strategies consist of programs, services, and policies designed to encourage transportation alternatives. | • Improves overall mobility<br>• Supports reduced parking ratios<br>• Encourages higher density, mixed-use development<br>• 5-30% reduced parking demand[1]– varies widely depending on the type of strategy and extent of implementation |

[1] *Victoria Transport Policy Institute, https://www.vtpi.org/tdm/tdm28.htm#_Toc128220476*

# 2. Introduction


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A partnership of the Wasatch Front Regional Council (WFRC), Mountainland Association of Governments (MAG), Salt Lake County, the Utah Department of Transportation (UDOT), and the Utah Transit Authority (UTA), with the communities along the Wasatch Front have launched the Utah Parking Modernization Initiative (Initiative).

Parking dynamics in our cities are in flux with the revolutionary changes underway in how people live, work, and get around. The “telework transformation”, Uber and Lyft, “Amazonization”, the COVID-19 bike boom, scooters and Greenbike are some of the words we use now that were largely not around just a decade ago. Communities and developers need to re-assess approaches to parking in order to better fit these new conditions. In other words, we all need to modernize our parking.

The Utah Parking Modernization Initiative starts with a re-assessment of parking data and strategies to help communities in Utah:

- Catch up on new trends that affect parking and mobility
- Identify ways to make parking more efficient
- Modernize their approach to managing parking consistent with their own unique goals for the future

Additionally, each community is at a different stage in their management process, ranging from the metropolitan center of Salt Lake City to more rural communities with less pressure to update parking strategies. Each community shares a desire to ensure that parking fits that needs of their community while not detracting from their community’s quality of life, whatever their starting point is. Many of these challenges stem from changes in technology, travel behaviors, development patterns, and population growth.

It is important to note that this Initiative, including the data collection, began prior to the COVID-19 pandemic. At the completion of the Initiative, the full economic and transportation impacts of the pandemic have yet to be realized. Impacts to parking and mobility from COVID-19 further strengthen the point that communities need to be flexible and adapt to both minor and extreme changes to their parking system. The parking management strategies presented in this Initiative are intentionally flexible with guidance, arming communities with the knowledge and tools necessary to make informed, data-driven decisions.

## Utah Parking Modernization Initiative Goals

The goals of the Utah Parking Modernization Initiative are to:

- Reassess parking issues and opportunities for Utah communities given new and emerging conditions.
- Enable communities across the Wasatch Front to proactively manage parking and mobility.
- Use the Partnership Studies to localize data rather than relying on national standards.
- Align parking strategies with various land use typologies found within the Region.
- Determine the relative impact of strategies on land uses and development requirements to support economic development and improve housing opportunities.
- Provide a number of parking and broader mobility strategies to improve access to area businesses and develop a catalyst for community growth.
- Understand the impact of parking on mode share, housing affordability, economic development, and collective quality of life.

Development of the Utah Parking Modernization Initiative included discussions with identified peer cities, developer discussion, a review of industry best practices, and two Partnership City Studies. The two Partnership Cities, South Salt Lake and Ogden City, were selected for a more focused review of their specific parking demands and policies to identify recommendations for their respective cities. The lessons learned from those individual studies are then folded into this larger Initiative so that the Region has two case study examples of modernizing parking and mobility.

This document includes the following sections:

- Summary of literature review and peer research, including lessons learned from a peer roundtable discussion and a developer discussion
- Overview of the methodology and recommendations for each Partnership City
- Overview of parking studies and why modernization is important for communities
- Definition of performance metrics and terms used in evaluations, as well as what data is necessary to inform the performance metrics
- Compilation of strategies for the Region

# 3. Literature Review: Research and Lessons from Peers

# 3. Literature Review: Research and Lessons from Peers

As part of project initiation, a literature review was conducted of current best parking management practices. The research identified effective practices, noted challenges to implementation, identified potential community benefits, and detailed the relative impact the adoption of such practices could have on parking and/or transportation demand. The literature review also identified peer parking programs comparable to the Wasatch Front Region that could provide insight about how to best respond to growing pains and other challenges. The initial research was used to create questions for peer parking professionals and five peer cities were selected as project partners:

- Park City, Utah
- Salt Lake City, Utah
- Boise, Idaho
- Beaverton, Oregon
- Gresham, Oregon

Selection criteria included:

- Robust and active parking programs OR relative stage in parking program development
- Similar growth and parking/mobility challenges
- Comparable development environments

Initial research provided snapshots of each community, including data about their:

- On- and off-street parking inventory
- Enforcement practices
- Parking rates
- Use of parking meters and mobile apps
- Permit programs
- Ordinances

Representatives from all five peer cities participated in a virtual roundtable in the spring of 2020. The roundtable allowed the integration of the literature review with specific experiences. Representatives from Park City (UT), Salt Lake City (UT), Boise (ID), Beaverton (OR), and Gresham (OR) participated virtual roundtable.

- **Boise:** The CCDC organization is responsible for Boise's urban renewal, which includes eliminating blight, stimulating economic development, and managing parking. Boise has made a commitment to be the premiere place to live in the Treasure Valley and CCDC takes that commitment seriously. Participants included Max Clark and Matt Edmond of Boise CCDC.
- **Salt Lake City:** Parking for Salt Lake City is split into two major pieces: transportation, which is responsible for planning and studies and compliance, which handles parking enforcement. The participant included Jorge Chamorro of Salt Lake City.
- **Beaverton:** Having a parking manager is new to Beaverton and they do not currently have much enforcement. Parking management sits within the community development department, which works closely with existing enforcement. The densest area of town is the downtown core with an occupancy rate around 85% and there is a plan to build a new parking garage adjacent to a regional theatre. There are no substantive parking regulations outside of downtown. The participant was Molly Rabinovitz of Beaverton.

- **Gresham:** The City has never had parking enforcement due to limited resources and the lack of political will to create a paid parking program. They are not at the point of demand to require a formal parking program, but occupancy is telling them it is time to start planning for one. Gresham is experiencing an influx of new development in the downtown core and they are approaching a 75% occupancy tipping point that will require them to implement time limits. Participants included Katherine Kelly and Jay Higgins of Gresham.

## Key Focus Areas

### Development and Lender Experiences

The following is a summary of responses from each peer participant regarding parking strategies and actions to support new developments and businesses.

- Beaverton has been focusing on how to utilize existing inventory. Beaverton can appear to be "one big parking lot" but most parking is privately owned, and shared parking options are desirable. Beaverton is also looking at revising their downtown parking codes. A Parking Action Plan is scheduled but has been halted by COVID-19 and the City is reviewing strategies and regulations for existing supply before adding new facilities. The developer community is very active, collaborative, and keen to work on shared parking amongst themselves, existing property owners, and the City.
- Gresham's priority is curbside management and making sure a holistic approach is taken so that everything that happens at the curb is integrated with parking practices and policy – this is a new paradigm for how they talk and think about parking for the City and they are committed to taking a broader perspective versus a conventional perspective that focuses only on percentages and code. Gresham is working hard to not just look at demand and need but to see how parking impacts and fits into the bigger picture for the City and the future.
- Boise has three potential garage projects in the works and there is one developer currently building with no parking included. Boise has a difficult time with transit – there are high property values in the area and people commute in cars. There is no dedicated funding source for transit, Boise receives only 20-25% of transit funding compared to peer cities, and there are not a lot of alternatives to driving.

### Paid Parking

The following is a summary of the discussion focused on paid parking obstacles and opportunities.

- Boise City Council and the CCDC Board have invested in making Boise the most-desired location to live in the Treasure Valley and that includes having paid parking. Newcomers generally arrive from areas that also have paid parking, so it isn't a surprise or problem for them. There is a first hour free program and they were also considering adjusting rates across all garages pre-COVID-19. Boise offers off-street parking and first hour free validation programs.
- Boise is not aware of any neighboring communities charging for parking as a result of Boise charging for parking, but there is enforcement in some areas. Some communities are also considering structured parking as an incentive to build new housing and office buildings.
- Beaverton has not had paid parking since the 1980s, so people do not remember ever having to pay for parking. Paid parking is a topic of conversation as downtown reaches an 85% occupancy threshold. Beaverton is still a car-centric area but there is a desire to have more centralized parking and fewer parking lots. They are only seven miles from Portland and the concept of paid parking is not new, but it is new to consider it for the downtown core. They receive many transplants from California who are used to paid parking.

- Salt Lake City has enforcement of limited parking areas and is always looking for ways to encourage visits to downtown. In the past they have explored validation programs specifically. Validation programs have the potential to only benefit a few and should be carefully considered, implemented, and assessed.

## Shared Parking

- Beaverton recommended having a land use process for share parking where property owners can provide documents about their parking and show how hours and supply offset to serve both purposes. The City has also teamed up with the downtown association for a voluntary (no compensation) after hours program. Through this program, a daytime use business like a bank can share parking with an evening use business such as a restaurant. Pre-COVID-19, they had gained around 30 spaces with a potential of about 60 more. The City provided signage to the participants that included their desired branding elements, program hours, and legal terms. There is not as much private parking in the busiest area of downtown, so they are still figuring out ways to utilize city-owned lots.

## Curb Space / Micromobility / TNCs

Following the development discussion, the group turned to the topic of managing curb space and the presence of micromobility and transportation network companies (TNCs) in their communities.

- Beaverton does not currently have micromobility; they are wary of it arriving and are staying aware of trends and the experiences of others. They currently have more curb space in the right-of-way and less sidewalk space with no immediate pressing demands for curb lane management strategies. Their main concern is safety around the curb space.
- Gresham is thinking of how to change the conversation with elected officials and the community about what curb space means and expanding the view to consider what micromobility impacts could be. These conversations were starting pre-COVID-19 and they have also been closely observing the impacts these factors have had on Portland.
- Boise has invested heavily in creating a safe bicycle environment despite the auto-centric culture. When scooters arrived in 2018, they reduced the bikeshare numbers considerably. The City manages the scooters – used mainly between downtown and the university – and have done an effective job. There were initially some challenges with vandalism and scooter speed and numbers recede during the winter. Use has also declined because downtown Boise is empty due to COVID-19.
- Salt Lake City's Council is focused on micromobility safety and curb use. They have a base ordinance that allows the City to enter into agreements with companies and dynamically adjust the terms of agreement as needed. This helps them be responsive to micromobility trends and changes specifically. One sticking point that has come to light is that the fees to cover the cost of the City managing the micromobility and curb lane programs needs to be figured out and included in the policies.

The group agreed that micromobility solutions are challenging because the infrastructure is hard to define – cities value safety but don't want the technologies to become obsolete and even then the microtransit may not be the issue, it may be the vehicles operating with them simultaneously.

## Community Impact

Participants shared information about decisions and projects that have been especially impactful on their community.

- Six years ago, Beaverton created their Development Division to work closely with economic development agencies in the community. This successful partnership has allowed the City and those agencies to move many projects forward and has put Beaverton on the map (instead of just being Portland-adjacent). Their Restaurant Row is an example of their success and has become a destination district. People are taking notice and moving from or expanding into Beaverton from Portland to be a part of the scene, all because of the economic and social benefit of the successful partnership between the City and the economic development community.
- Gresham is especially proud of their Rockwood District, their most diverse district with over 70 languages spoken. Rockwood is in the heart of a transit center and development in partnership with that diversity is critical. They are looking at potential micromobility access points to enhance the district while keeping its culture.
- Boise shared that biting the bullet and automating their parking system was hard but worth it. The decision to automate is providing big cost savings on labor and was worth the $2 million-dollar investment. They were concerned about losing some of the friendly feel of downtown, but they are around seven years into the change, and everything is working well and they're able to move people in and out of parking much faster.
- Salt Lake City is proud of their recent enforcement approach transition. They shifted from being revenue-focused to courtesy-focused to enhance user experience. Their goal is to instill a different mentality about parking in both the staff and the community.

### Key Takeaways

- Build a strong and open relationship with developers. Include their perspective in larger projects and major changes, such as revision of the codes.
- Implement paid parking only when the data dictates the need for change with consistently high parking demands. Before making the change, communicate the intentions with the public. Know their preferences and concerns and discuss them. It may be beneficial to offer incentive programs at first, such as a first hour free program.
- Include a standard shared parking procedure as part of land use processes for property owners.
- Micromobility solutions are challenging because the infrastructure is hard to define – cities value safety but don't want the technologies to become obsolete and even then, the microtransit may not be the issue, it may be the vehicles operating with them simultaneously.

# 4. Lessons from Developers

# 4. Lessons from Developers

After hearing from the peer cities, the Steering Committee met with a developer, active in both the region and other parts of the country, to have a more in-depth discussion from the developer perspective.

The biggest takeaway from the developer discussion is the idea that parking is always a moving target and it takes continuous effort to make sure it is being optimized for a community. Developers face two critical considerations when making decisions: 1) affordability and 2) marketability.

Parking is a cost for developers, and it is a constant balance between providing enough parking for the intended tenant while also not increasing the cost of the project. Costs vary by type of parking provided and costs in the Wasatch Front Region, according to the developer, are reflected below:

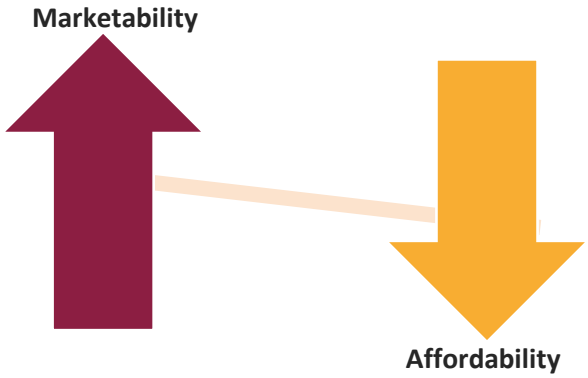
- Surface Lot - $10,000-$15,000 per space
- Structure - $15,000-$30,000 per stall
- Underground - $40,000 per stall

Each space added to a project directly impacts the cost of rent. For instance, for a surface stall equates to an additional $75 per month to cover the cost of that parking stall. Furthermore, developments in more urbanized areas are more expensive than in suburban or rural areas, generally. Having additional costs for parking decreases opportunities for affordability.

Developers will adhere to the requirements put forth in a municipality's code. However, sometimes these codes do not reflect the impacts of a connected transportation network. Developers determine the right balance for parking in their projects. Finding the ideal parking ratio while providing adequate parking is a challenge to each project. Many developers will studiously and repeatedly perform occupancy counts on their properties to determine the appropriate ratio based on type of development, development setting, market, size, and proximity to transit. A typical breakeven point for parking is 80% occupancy, which generally aligns with the optimal parking occupancy thresholds described in the Parking Study Performance Metrics section of this report. This data can be used to help justify a deviation from a municipal parking requirement and to help plan accordingly for the next development.

The second main consideration for developers is marketability. There needs to be enough parking provided to support the leasing of space. Developers cannot lease apartments or commercial/office space if there are not enough parking spaces for tenants. However, as discussed, the more parking spaces provided, the greater the impacts to the cost of the project, and therefore rents. In conclusion, increasing marketability through the provision of more parking discourages affordability.

It is important to note that lenders play a key role in determining the amount of parking for a development. In some cases, lenders will not provide funding to developers if parking is not provided. The development must be marketable, and provision of parking is a key component of that. However, as success for developments is being realized in many cities across the country, lenders, in some instances, have become less strict about parking provision obligations for developments.

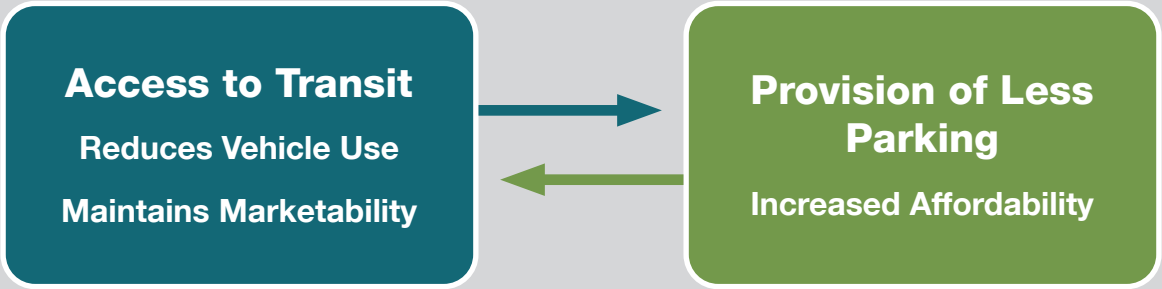


Developers see changing mobility trends from personal vehicles to multimodal opportunities. According to AAA data, the average individual spends approximately $900 per month to own an average, reliable, fuel-driven car. This includes the cost of gas, maintenance, registration, and insurance. Over the years, there has been a trend of people owning fewer cars. The reduced ownership of cars impacts the need to provide more parking for developments.

This trend is most prevalent in urban areas where fewer people rely on and own a personal vehicle. In an urbanized setting, a ratio of one car per three apartment units is typical for the developer. If the apartment building is in close proximity to transit (within a one-to-two-block walking distance), then the ratio is 1.2 cars per unit. Residents will let go of their second vehicle if they have easy access to transit. In a suburban setting, the ratio is 1.1 to 1.2 cars per apartment unit depending on the unit mix.

Access to transit is a major factor in balancing the marketability and affordability concerns. Having access to transit, as stated, can encourage renters to let go of one of their vehicles. This means that the next apartment development can plan to provide less parking per unit while still being able to lease their apartments. Less parking means more affordable rents.

Decoupling parking fees from rent cost is also an important strategy for making developments affordable for tenants. The monthly cost is less if the tenant opts not to pay for a dedicated parking space. The trade-off is that those tenants are typically not able to park in the facilities. Unbundled parking allows developers to potentially construct less parking and places the decision on whether or not to pay for parking in the hands of renters, which makes the rent more affordable for renters and also encourages use of transit. Therefore, access to transit and multimodal transportation at or near the development site is necessary for success.




An important takeaway from the conversation is that developers should be included in conversations regarding parking requirements and incentives. Since each community is different, there is no one simple solution for meeting developer needs and community needs. Open and frequent conversations to build strong relationships with the development community is key to successful growth that aligns with the community's plans and goals.

# 5. Partnership Parking Studies

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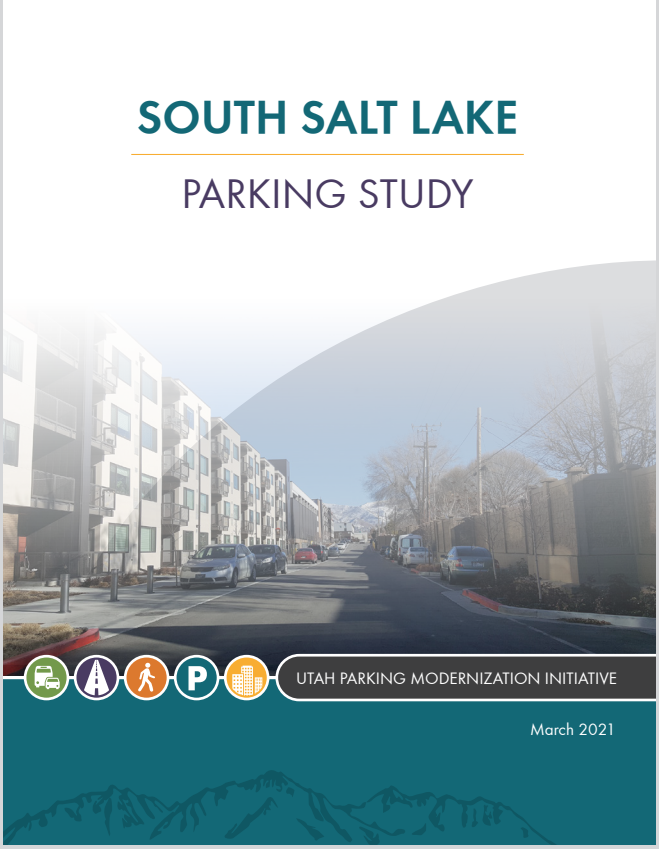
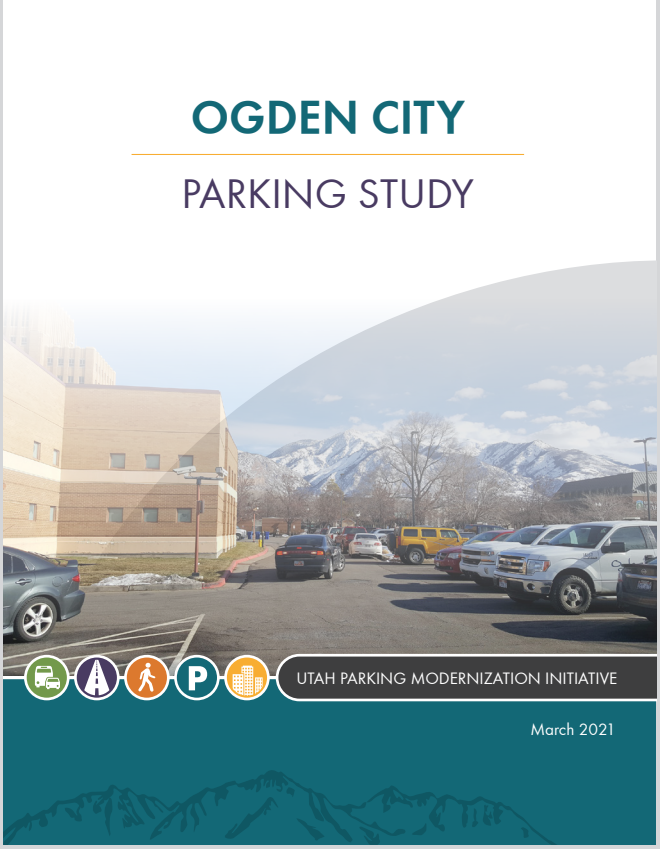
The Utah Parking Modernization Initiative includes two case studies - Ogden and South Salt Lake. Insights from these efforts can inform other cities looking to modernize their parking systems.



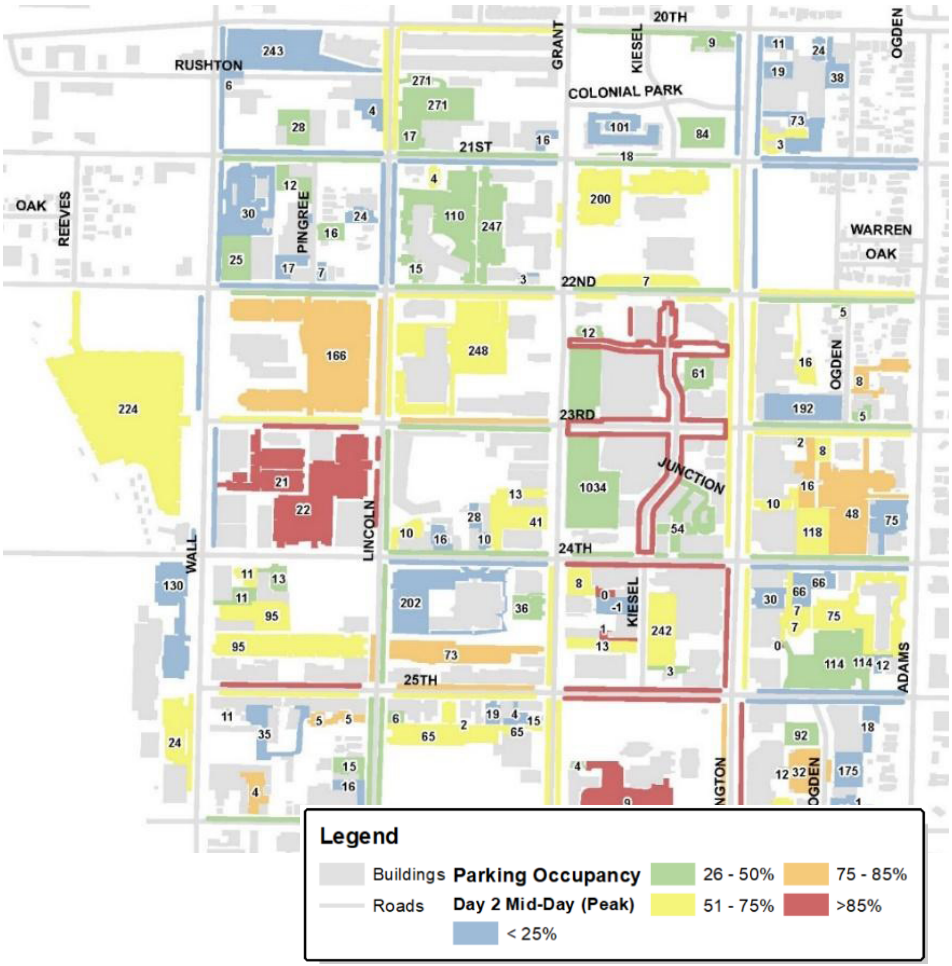



## Ogden Findings

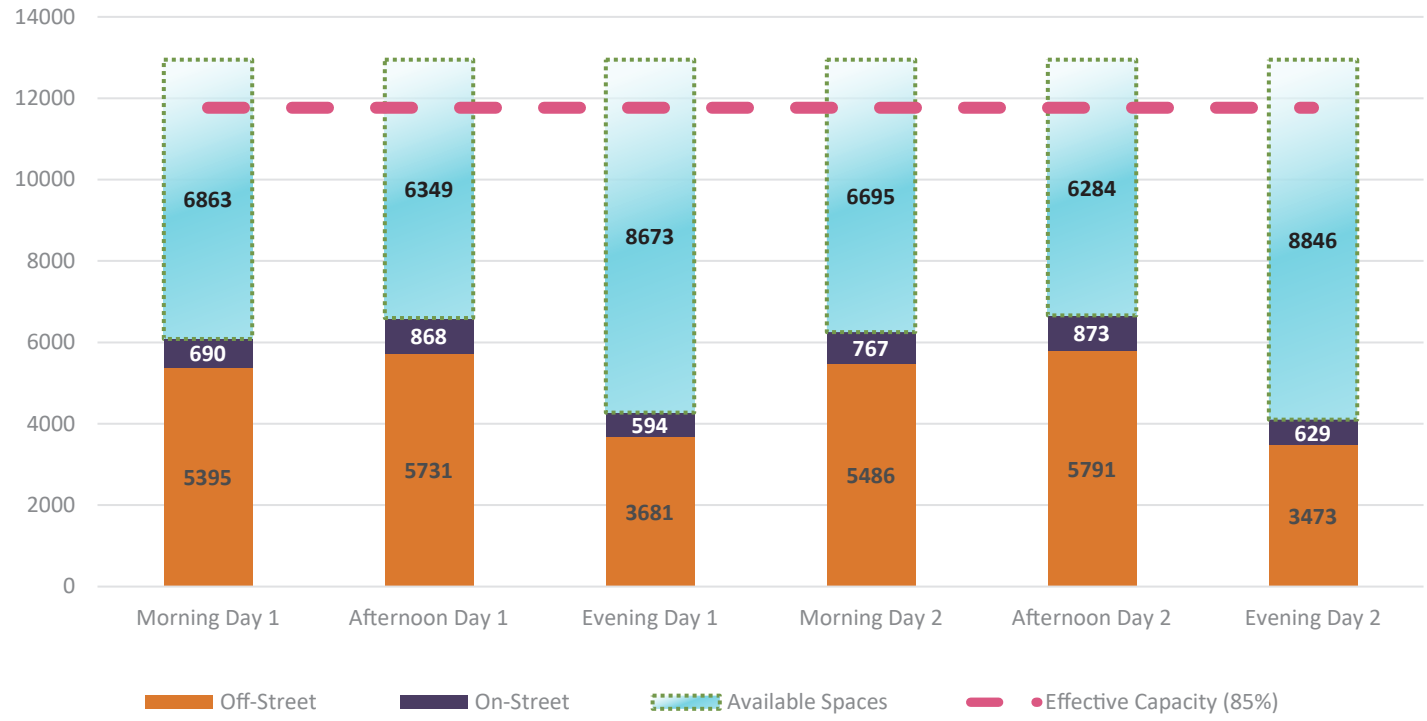
Ogden City has an active Downtown with a mixture of residential uses, retail, hotels, government and private offices, and land slated for new development. The Downtown has access to a number of multimodal options, such as commuter rail, bus, bike, scooter, sidewalks for pedestrians. The major concerns, and reasons for the study, are to examine the actual need for parking for various land use typologies and recommend a comprehensive set of parking strategies that will allow the City to proactively manage their parking supply – helping them plan for growth appropriately, maintain the unique Downtown character, and have the tools necessary to adapt to Global, National, and Regional crises.

Summary of Findings: Despite the overall low occupancy in Downtown Ogden, there are pockets of high occupancy that can result in a perceived parking problem by visitors or employees who park in those facilities. The following findings were made for Ogden:

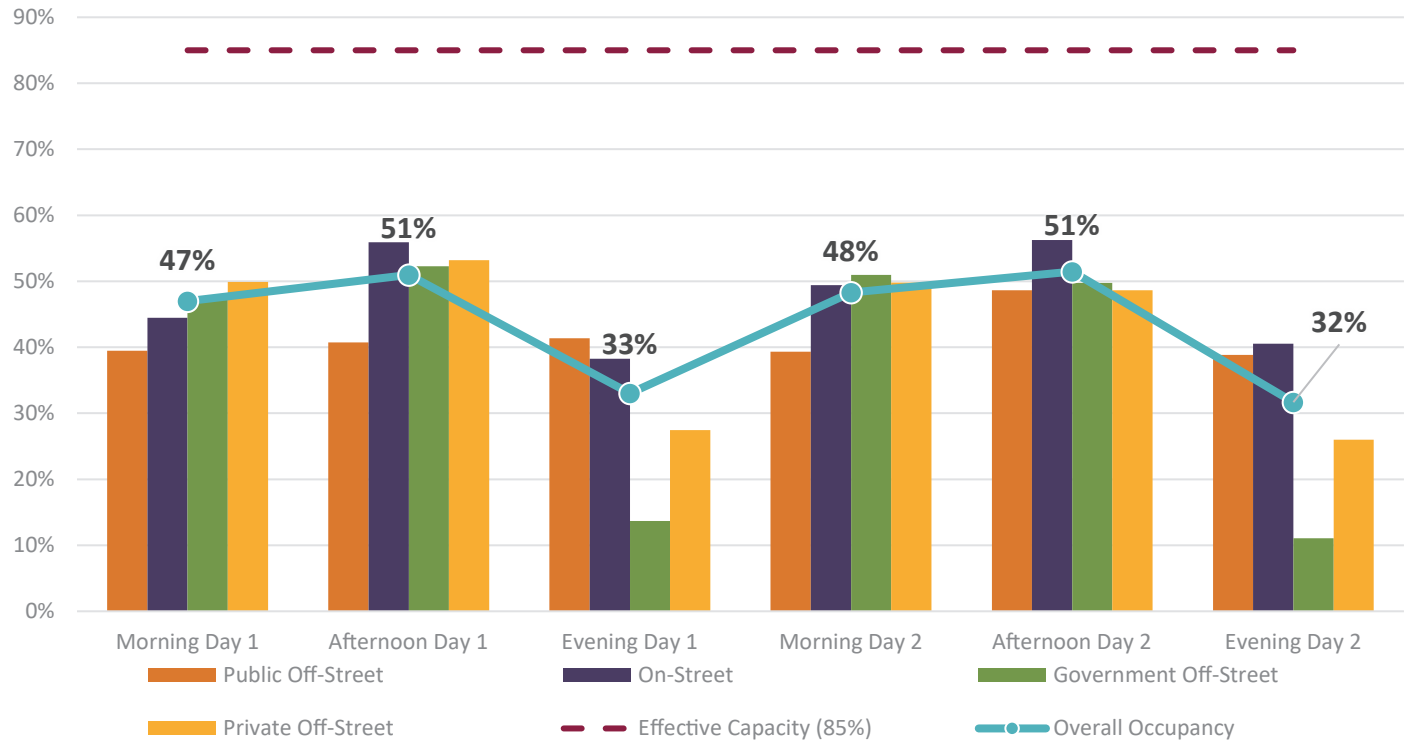
- Overall parking occupancy in the Downtown is underutilized, with an overall parking occupancy of 51%. However, there are a number of facilities that are at or over the effective capacity threshold, as shown in the map. This indicates that the parking system needs some balancing, but also that the system is able to absorb more demand from land use changes or new development.
- Parking management strategies can be implemented to encourage users to park in the public off-street garage and/or on adjacent blocks that have lower occupancies.
- High parking demands for both on-street and off-street parking are areas where parking regulations should be adjusted.

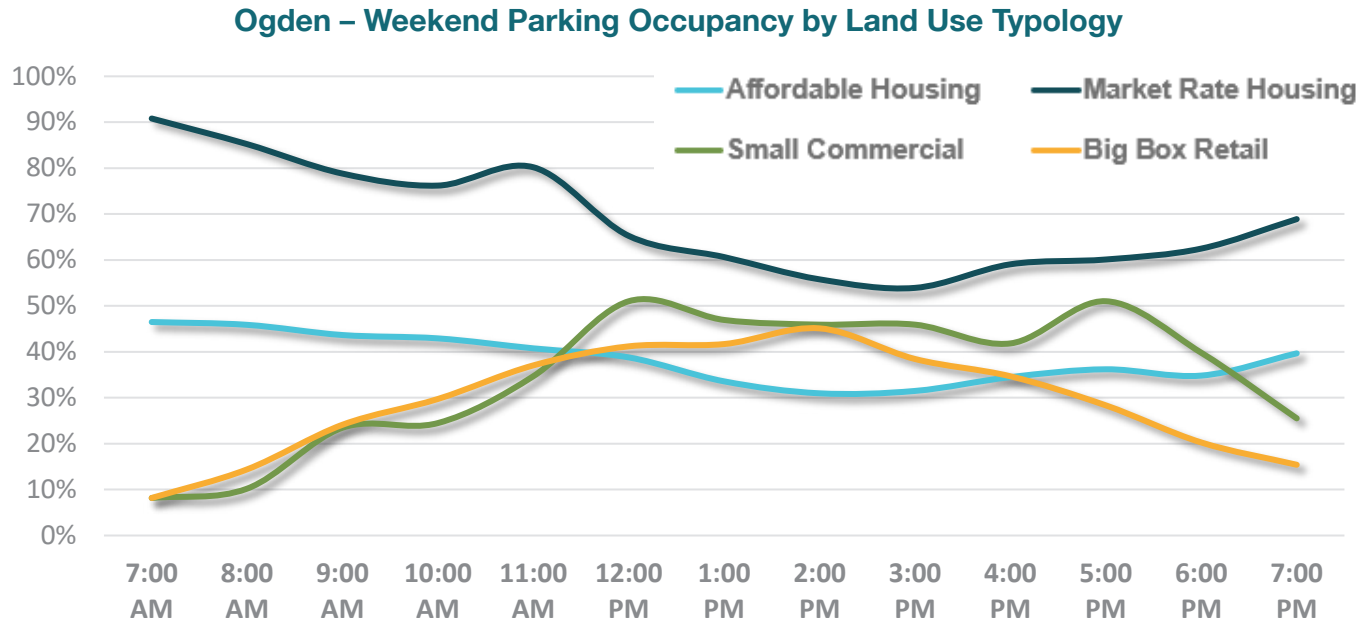


## Ogden – Number of Parked Vehicles vs. Available (Unoccupied) Spaces




## Ogden – Occupancy by Type and Time of Day






## Summary of Recommendations:

- Continue to use time limits to encourage turnover of on-street parking. On block faces with high occupancies and two-hour time limits, the time limits should be reduced to one-hour. If there is high demand and no time limits, time limits should be added.
- Parking requirements per the City Code are the same throughout the entire City. Special exceptions can be made for Downtown requirements on a case-by-case basis. It is recommended that a specific set of parking requirements should be established for the Downtown area that are reduced from the rest of the City requirements.
- Flexible shared parking requirements are a recommended strategy to allow developers to use existing underutilized parking. This could improve affordability of developments while optimizing the use of the existing parking supply. Flexibility should include a longer distance for shared parking – it is currently at 500-feet and should be increased to 1,000-1,300 feet.
- COVID-19 has exacerbated the issue of vacant parking lots in communities as people worked remotely. The Study recommends monitoring occupancies in underutilized lots or on-street spaces. It also recommends having a continuous and open dialogue with business owners and developers to re-purpose underutilized lots, either temporarily or permanently with new development.
- Develop an annual report template to record and report parking data and changes to the parking system on an annual basis
- Mid- to longer-term recommendations focus on using continued data to streamline curb management policies, improve enforcement practices, incorporation of technology, and leveraging existing or expanded multimodal options.

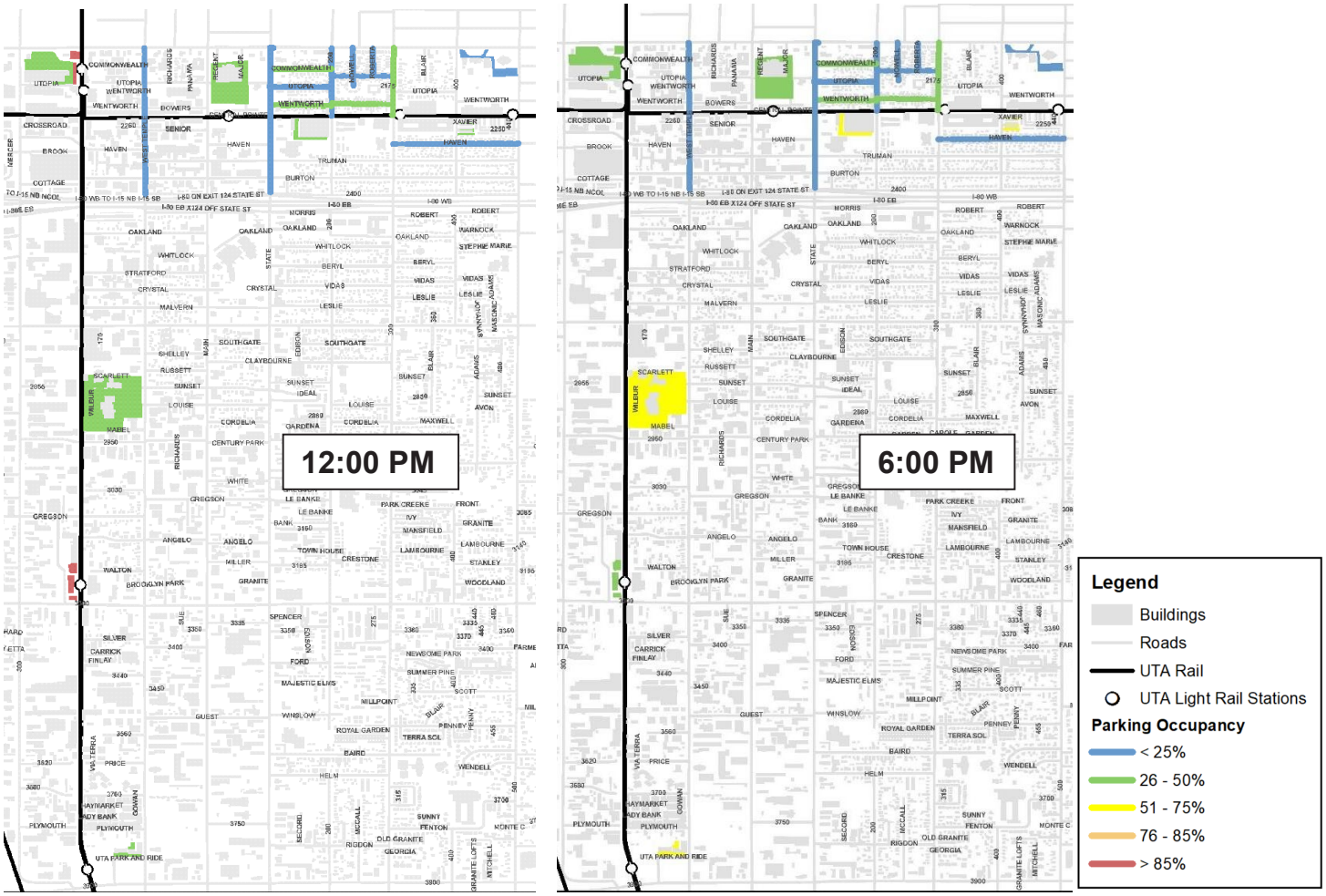
Further details of the study and recommendations can be found in **Appendix A: Ogden City Partnership Parking Study.**

## South Salt Lake Findings

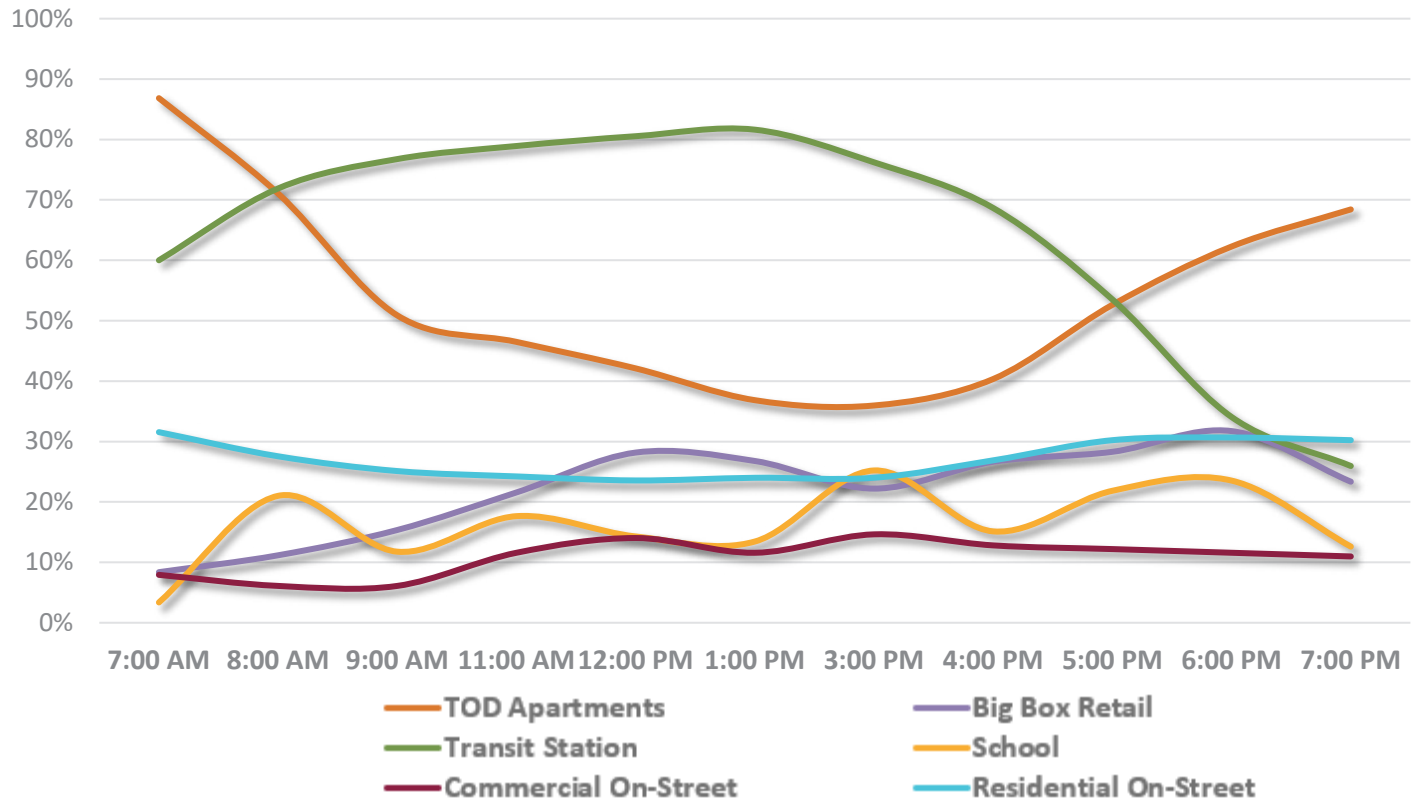
South Salt Lake is in an interesting position of redevelopment in their Downtown area. Many of the existing warehouse type land uses are slated for redevelopment. Additionally, there are multiple TRAX light rail stations, S-Line streetcar stations, and high frequency bus service providing transit connections throughout the City and to the surrounding communities. Due to the abundance of frequent, high-quality transit, one of the popular new development land uses is Transit-Oriented Development (TOD) style housing. The Partnership Study for South Salt Lake compared the parking requirements for TOD style housing and various retail sizes and types to observed parking demands for these land uses. The purpose of the comparison was to determine whether the parking requirements should be adjusted to reflect modern trends in transportation.

### Summary of Findings: The following is a summary of findings based on the data collected and analyzed.

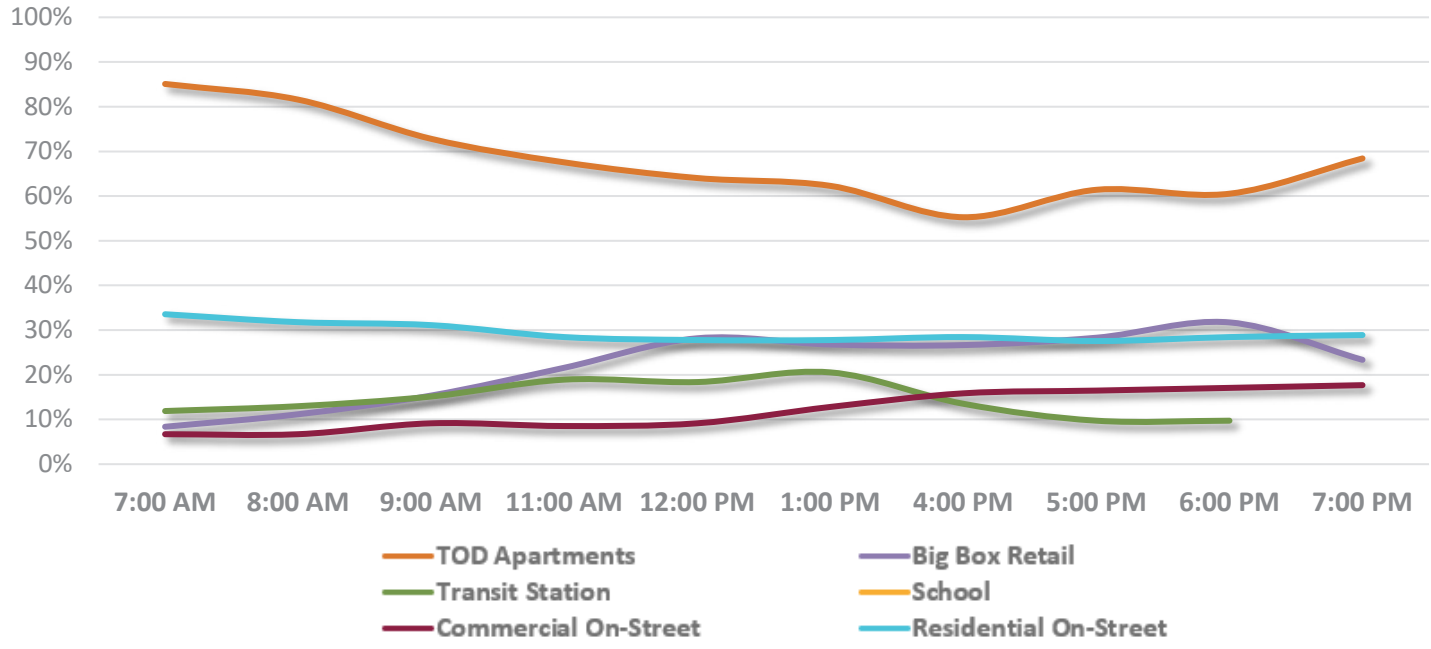
- Parking occupancy is generally low for all of the land uses observed, especially the retail land uses, where only 30% of the parking was being used at peak hour.
- The City's parking requirements for Transit-Oriented Development were found to provide adequate parking to support the residents.



## South Salt Lake – Weekday Parking Occupancy by Land Use Typology




## South Salt Lake – Weekend Parking Occupancy by Land Use Typology



## Summary of Recommendations:

- The retail land uses observed in the Downtown area were also underutilized. Furthermore, the retail is in the Downtown area and adjacent to the transit stations, meaning there are opportunities to leverage the transit to justify adjusting the parking requirements, so parking is not oversupplied. It is recommended to reduce the parking requirements in the City's Code for retail land uses so that the land can be used for other alternatives. This could include more development or using that parking as a centralized, shared resource between many Downtown land uses – not just those on the site.
- As the Downtown area redevelops with retail and housing, the existing neighborhoods adjacent to the Downtown may experience parking conflicts as people spillover into the neighborhoods to park. It is recommended to set up the policies and practices for a parking permit program in preparing for this occurrence. The parking permit would exclude non-residents from parking in the neighborhoods at certain times of day.
- The distance for properties to share parking under the current Code is fairly restricted. The distance for shared parking is recommended to be increased to 1,000-1,300 feet to allow more flexibility on using existing parking. This will also allow new developments to make more flexible agreements with partners to satisfy their parking needs.
- A standardized shared parking agreement is also recommended to make a streamlined and consistent process. The agreement enables the City to have standard protocols for agreements, however, they would provide developers and property owners flexible accommodations to meet their needs. The City would be the broker for all agreements.
- A number of mid- to long-term recommendations specific to South Salt Lake were also included that focus on using continued data to streamline curb management policies, improve enforcement practices, incorporation of technology, and leveraging existing or expanded multimodal options.

Further details of the study and recommendations can be found in **Appendix B: South Salt Lake Partnership Parking Study.**

# 6. What Does It Mean to Modernize Parking?

# 6. What Does It Mean to Modernize Parking?

## History of Parking and Impacts on the Built Environment

Parking modernization is a concept for identifying parking strategies that reflect the world today and are flexible to grow with the future. It investigates and updates the antiquated regulations and policies that has guided parking in many communities across the Region and country since the 1950s. Since the car became a popular mode of transportation, city codes have attempted to identify and require the proper number of parking spaces necessary for development based on the type of land use and its size.

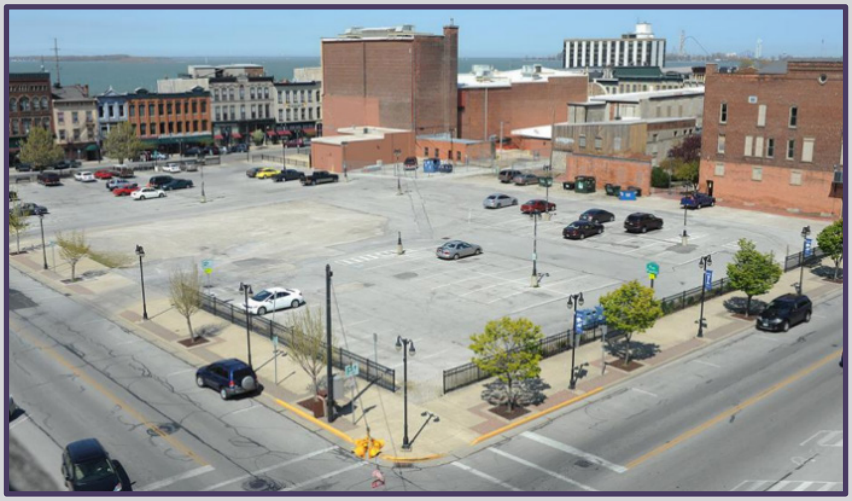
Parking policy has largely been reactive to changes in the community - meaning the parking codes change only after a problem has been identified. A proactive approach would involve identifying growth trends and goals within the community and adjusted to prepare for those changes and guide growth in a manner that supports larger community goals. Over time, complaints about a parking shortage (typically for a peak period despite a large supply otherwise), often led to parking policies and economic practices that shaped cities in ways that are now considered a detriment. These images show how parking has been handled historically across the country.

**Parking in the 1920s**

- Traffic laws and regulations were starting to emerge
- Cars become common but streets still mixed with cars and pedestrians
- Historic downtown building rows added space for parking on-street.
- Parking lots were starting to form around land uses to accommodate cars

**Parking in the 1950s – 1980s**

- Cars are favored over transit and many local transit services abandoned
- Parking codes adopted to ensure parking around land uses
- Piecemeal approach, by project
- Encouraged the pattern of isolated buildings ringed with parking familiar to us today



### Parking in the 1980s – 2000s

- Surface lots are prominent feature in downtowns and suburbs
- Encourage vehicle travel and discourage walking
- Deteriorating community attractiveness and connectivity
- Reliance on ITE and ULI National Standards
- Awareness growing that surface parking lots often negatively impact net revenues

### Parking Today

- Focus on connectivity and multimodal travel to reduce vehicle travel and parking
- Emphasis on building patterns that enhance walkability, character, and attractiveness
- Parking seen as tool to support economic growth and viability
- Growth and transportation intertwined
- Changing nature of retail
- High land costs and shift toward parking garages make parking an expense
- Willingness to share and manage parking cooperatively
- Redevelopment agencies and cities negotiate parking requirements to suit both project and neighborhood goals
- Using parking studies and monitoring to balance supply and demand

*South Lake City Project. Source: The Salt Lake Tribune, December 2019*

## New Utah Parking Dynamics

Communities across Utah are experiencing an evolution of city design. Commutes, shopping patterns and personal transportation habits are changing. Parking needs to evolve, too. Some commonly faced challenges include:

- An oversupply of parking for many land uses. This is particularly concerning in downtown areas or areas with mixed uses or higher density, such as areas near transit stations. Parking codes tend to cater to suburban style development patterns. Requiring parking for every individual land use in close proximity does not adequately reflect how mixed-use, higher density areas operate.
- Concern for downtown/city character, economic success, and diversity where parking may act as a barrier.
- Little to no management and control of existing parking assets, both public and private, creating an imbalance between supply and demand.
- Concern for increasing costs feasibility of new projects, due in part to the high cost of providing parking and its impact on affordability.
- Lingering resistance to paying for parking. However, this is giving way to paid parking in highly desirable areas.
- Reliance on national standards or standards from other communities that don't match the unique character, growth goals for the community.

To modernize parking is to take a fresh assessment of parking issues and solutions while considering the community's various contexts and overall community goals.

The following graphic illustrates various goals for a parking system. These are not goals traditionally thought of when thinking of parking. However, parking is now recognized as a part of the larger fabric of the community, often with a substantial influence on the community's economy, people, environment, and community character.

**Overarching Parking Program Goals**

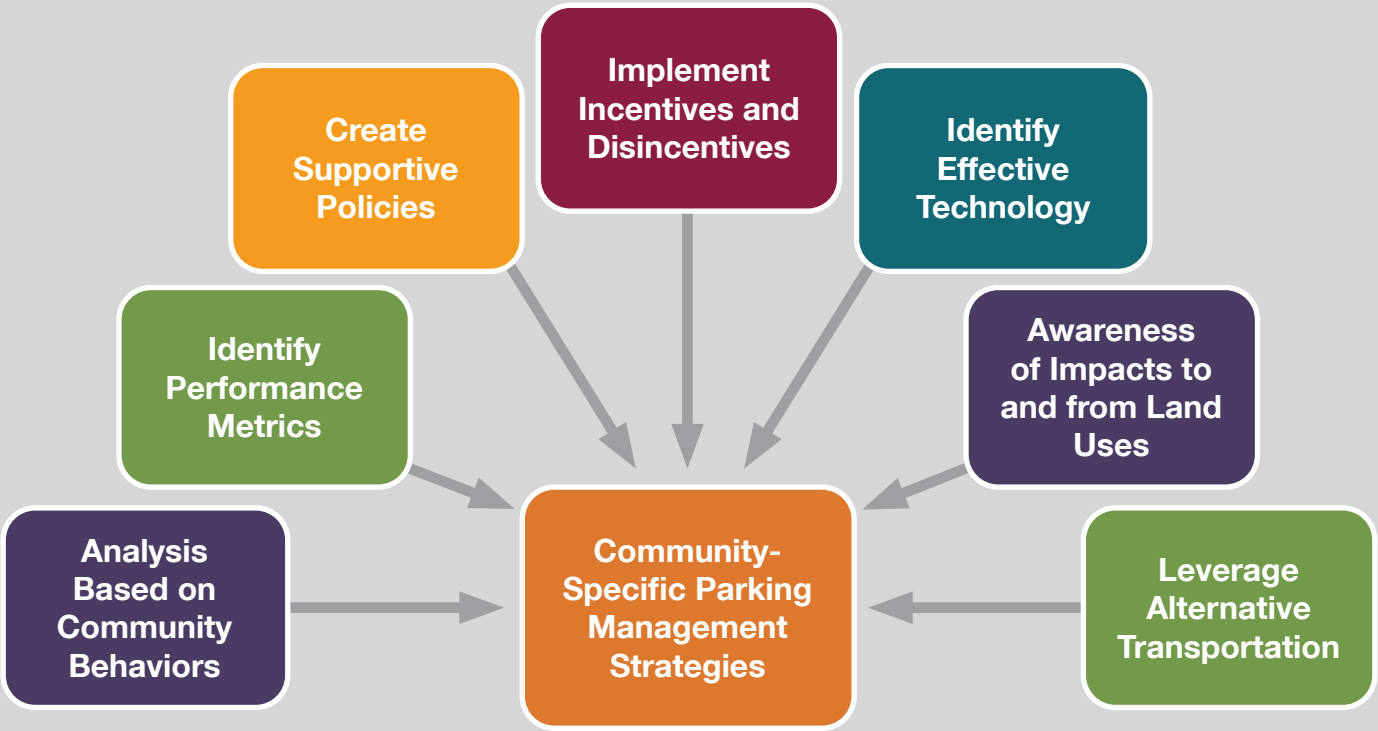
- Support Existing Businesses and Residents
- Create Attractive Places
- Promote Equity
- Promote Alternative Transportation
- Promote Economic Growth
- Enhance Safety
- Promote Sustainability

There are several elements about the community that can be studied to get an accurate depiction of the parking system as well as the community characteristics that impact the parking system. The graphic below demonstrates many of the community-specific data that could be collected, analyzed, and/or reviewed as part of the study process. The depth to which these are all analyzed can vary depending on the goals, time, and money available to study them. However, the main takeaway is that these are all community-specific attributes, not data taken and applied from another community or from national standards.

**A successful parking system should…**

1. Support connectivity to transportation, land use, and economic development;
2. Provide access to businesses and destinations, linking parking to the economic enhancement of the community;
3. Serve as a transition point where alternative modes of transportation can cross paths and connect; and
4. Play a role in sustainability, measured by reducing traffic, congestion, and, therefore, greenhouse gas emissions.

**Community-Specific Attributes for Parking Modernization**



# 7. Parking Study Performance Metrics

# 7. Parking Study Performance Metrics

Parking occupancy is a key performance measure used to evaluate the effectiveness of the parking requirements and observed demand. The industry-accepted thresholds for parking occupancy are shown below. The ideal goal is to have a parking system, site, or urban center where 70% to 85% of the available parking spaces are occupied during the peak conditions. If too many spaces are occupied, then the remaining spaces are too hard to find. If too few spaces are occupied, then the land is not being used to its greatest potential and the parking can absorb more demand.

| Under 70% Occupancy | 70-85% Occupancy | Over 85% Occupancy | Over 90-95% Occupancy |
|---|---|---|---|
| Under Capacity | Optimum Capacity | Effective Capacity | Residential Effective Capacity |

An exception to the 85% effective capacity threshold is for residential land uses. Residents are extremely familiar with their parking options and will habitually park in the same location year after year. Therefore, the parking occupancy threshold can be increased to 90%, or even 95% in some cases, for these types of land uses.

The following are broad examples of parking management strategies that can be introduced as parking occupancies increase. The intention is to not immediately jump to more intense parking management strategies. This can cause pushback and concern from businesses and residents. Rather, strategies should be implemented gradually, giving time to analyze trends and make minor adjustments that improve the parking program that are based on data and informed by the community's needs.

| | |
|---|---|
| **No/Minimal Regulations** | • No concerns about the amount of parking<br>• No concern from residents and businesses |
| **Time Restrictions** | • Promote efficient use of parking through turnover, encouraging long-term parkers to look for other spaces or arrival options<br>• Managed through signage and enforcement |
| **Permit Parking Protections** | • Introduce permit parking system that restricts who can park in specific lots or streets (e.g. residential neighborhoods)<br>• Helps manage the overflow of parking from adjacent commercial areas |
| **Transportation Demand Management** | • Improvements to cycling, walking, transit, micro-mobility amenities over parking improvements |
| **Introduce Paid Parking** | • After resources are exhausted and parking demand in area grows past the acceptable threshold (85%), paid parking should be introduced |
| **Introduce Additional Parking** | • If parking demands continue to exceed the acceptable threshold (85%), more parking should be provided |

## Data Needed to Assess Performance Metrics

Data is a critical part of tracking and monitoring all aspects of the parking program. Having data, especially historical data, helps a city and the public understand what, why, and how decisions should be made for improving the system. The following is a list of data that should be collected on a regular basis. The data should be collected annually and included in the parking program's Annual Report, which is strategy #16 in the Regional Implications section of this report.

### Parking Inventory

Provides the baseline for analysis and allows the City to track changes to the parking system over time and the impacts of those changes (e.g., removal/addition of parking, regulatory changes).

### Parking Occupancy

Indicates how well the system is being used and when parking strategies need to be implemented or adjusted. Time-limit policies can be adjusted to either encourage or discourage use.

### Parking Duration

Indicates how long people are staying in given locations. Timing, and eventually pricing, policies can be adjusted based on the surrounding uses and turnover rate. Collect only in high-demand areas.

### Parking Citation Volume and Type

Indicates how many citations are issued and whether violations are occurring in isolated areas over a given period of time and whether citations are increasing. Further analysis could figure out why that is and whether an adjustment to parking strategies and policies are needed.

### Program Revenue and Expenditures

Changes in revenue, when viewed granularly, can define how parking demands are shifting, and the success of policy changes. Revenue should include citations and permit revenues.

### Customer Satisfaction

Conducting customer satisfaction surveys periodically can define how patrons are reacting to changes in the program. The City should consider satisfaction levels of residents, businesses, employees, and customers at a minimum.

### Vehicle Congestion

Reduction in vehicle miles traveled and localized congestion is an indicator that parking management strategies are effective at redistributing demand and overall access to the community.

### Mode Split and Transit Ridership

Mode split in the community is a key characteristic in defining shifting behavioral and access patterns. Reductions in drive-alone rates can be a clear indicator that parking policies are working.

## Data Collection Plan

Data should be collected in a consistent manner each year to ensure that the metrics are comparable. Therefore, a city should develop a data collection plan that specifies the staff necessary to collect each data point, equipment needed (cameras, GPS, pen/paper, water, etc.), the timeframe necessary to complete the task, specific instructions on how to collect the data, analysis standards, and reporting standards. When first initiating, staff should also be trained before entering the field to collect data. This ensures consistency in the collection methodology.

## How to Use the Data

The following provides further details on how to use the data that is collected.

### Parking Inventory

Create an inventory database that can be updated annually. The database should include:

- Type of space (on-street, lot, garage)
- Ownership (pubic or private)
- Regulations (time limits, enforcement hours)
- Location
- Number of spaces (total and by type if it's a shared facility)
- Other information (such as, is the facility shared? Is the parking for transit riders only?)

The database should also track what spaces were lost or changed in some way (no longer shared but total spaces in the same, lot removed, block experiencing construction so there is no parking that year, etc.). The inventory is a baseline metric that helps provide context for the other data metrics.

### Parking Occupancy

Regardless of what is being evaluated, whether it's time limits, permit system, parking requirements, curb management, etc., parking occupancy is the key metric used to determine when the next level of change is necessary. Ogden should consider making parking management adjustments once a set of adjoining parking spaces (e.g., a continuous block face or more) or a parking lot or garage is consistently experiencing the following:

- Parking occupancies reach or exceed 85% or more for three or more hours over at least two weekdays (measured in separate weeks)
- Parking occupancies reach or exceed 70% five or more hours over at least two weekdays (measured in separate weeks)

Once those thresholds are reached, the City should consider implementing the next phase in a recommended strategy.

### Parking Duration

Parking duration should be collected in high-demand areas only so that time limit regulations can be adjusted. The intention is to encourage turnover of spaces, creating more availability. Duration data does not need to be collected each hour of the day, like occupancy data, but rather only the hours surrounding and including the peak times of day.

### Parking Citations

Enforcement officers can collect and share this information on a regular basis in an interval that is agreed upon with the City planning staff (monthly, quarterly, annually). While there are no specific metrics, this data will help determine hotspot locations for certain types of violation types. After a couple of years of consistently collected data, the City can set thresholds for making improvements to the enforcement practices.

## Parking Revenue and Expenditures

Knowing how much money is spent on parking helps to inform conversations about how impacts to parking will also impact other areas of City planning. For instance, as various departments review budgets, it is a good opportunity to have conversations about how parking has impacted transit or development and so on. It is also useful for when there are conversations about how to price parking, such as permits or parking at transit stations, if and when the parking program matures to that point. A parking revenue report also helps establish budgets to help support other interventions, such as signage, collections, or technology.

## Customer Satisfaction

Survey the community on an annual basis to gauge feedback from customers, business owners, property owners, developers, residents, and other representatives. The survey should ask similar questions year over year to display historic trends.

## Vehicle Congestion

Vehicle congestion data is available from WFRC and can be cross-analyzed with other data that the City collects. The data can be added to the reports to help draw conclusions about how the implementation of the recommendations has impacted the number of vehicles on the road.

## Mode Split and Transit Ridership

Data collected by WFRC and UTA can be used to build this dataset to track the percentage of those who travel by single-occupancy vehicle, bike, pedestrian, and transit. In this category, the City could also track the usage of bike-share programs and other mobility programs. UTA can provide detailed ridership data for each station within Ogden as well.

# 8. Parking Management Strategies

# 8. Parking Management Strategies

Based on the findings of the Partnership Studies, Peer City Roundtable, developer discussion, and best practices literature review, a number of strategies were identified that would guide the communities in the Region to modernize their approach to parking management.

The literature review was conducted to identify industry best management practices with regard to parking management and policy. Early in the Initiative process, the agency-led Steering Committee identified a number of topics that were of interest to their agency, the Region, and Utah. The team then conducted research to identify the latest benefits, challenges, and impacts for those strategies. The Peer City discussion provided further depth to these strategies by identifying lessons learned and/or practical implementation ideas.

There are a number of industry best practices for improved management of parking resources and to decrease parking demand, however, how they are applied and why they are applied vary for each community. Through the process, three recommendation buckets were identified to categorize various parking strategies.

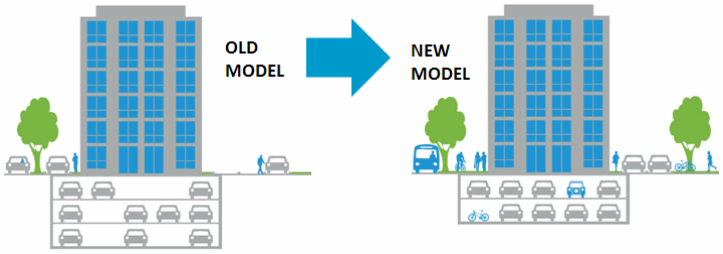
- Practices and Policies – This group of strategies focus on programmatic and policy changes to support the parking management program. Other strategies can be implemented, but the policies and procedures of the community staff are what keep the program moving forward and successful.
- Manage Parking Assets – This group of strategies focus on the parking resources within the community and how to get the most benefit from these resources. If the use of parking resources is optimized, then more spaces can be made available in high-demand locations. As a result, there is less need to construct expensive new parking supply. However, planning for new supply and managing it properly is important to maximize its use. This bucket also includes strategies to help plan for new parking supply with intention and a transparent process.
- Manage Parking Demand – This group of strategies focus on people and enabling or encouraging them to choose different travel behaviors that reduce the demand on parking supply. This includes encouraging multimodal transportation, as well as using management strategies to redistribute where people park. Allocation of parking, which is the focus of Managing Parking Assets, dictates where people can park by the City or a private entity. The strategies for Reducing Parking Demand put the decision on where to park on the user by using incentives and disincentives to move people into low-demand parking areas.


For each strategy, there is a description of the strategy and why it is a useful tool for improving parking and mobility, benefits, and challenges to recognize, and best practices for implementation to consider. The strategies are not prioritized since prioritization is contingent upon the needs of the individual communities. However, these strategies offer guidance for many communities as they begin to analyze their parking and mobility conditions.

## Strategies for Practices and Policies

### Strategy #1 – Right-Size Parking Requirements

Parking requirements define the amount of on-site parking that various developments must provide. Traditionally, these requirements have been applied to ensure that specific land uses have adequate parking supply to meet demand. Although common in many communities, the requirement for each land use to provide a minimum amount of parking could become detrimental to the economic growth and preservation of pedestrian-friendly character in the Village and beach area. The intent of establishing reduced parking requirements is to better align parking requirements with actual parking needs in the community and to transition to a system that utilizes shared and leased parking supply. Shared and leased parking in combination with reduced parking requirements for new development would optimize the use of existing parking while still allowing developers new developments to provide necessary parking on-site. A reduced number of spaces required encourages mixed-use, pedestrian-scaled development, and can stimulate economic growth in a community.




**Strategy Best Practices**

- Involve developers in conversations.
- Consider:
  - Development type and size
  - Population and development density
  - Availability of transportation choices
  - Surrounding land use mix

**Benefits:**

- Creates a balanced parking system that can accommodate the needs and vision of the City.
- Encourages infill development as well as multimodal transportation.
- Adequate parking requirements reduces the cost of development, which also increases affordability for tenants.

**Challenges:**

- Monitor annually but adjust 5-10 years depending on what the data dictates and the group discussions with developers. This time also allows the City to observe true trends in occupancies for land uses.

**Successful Implementation**
Beaverton, OR

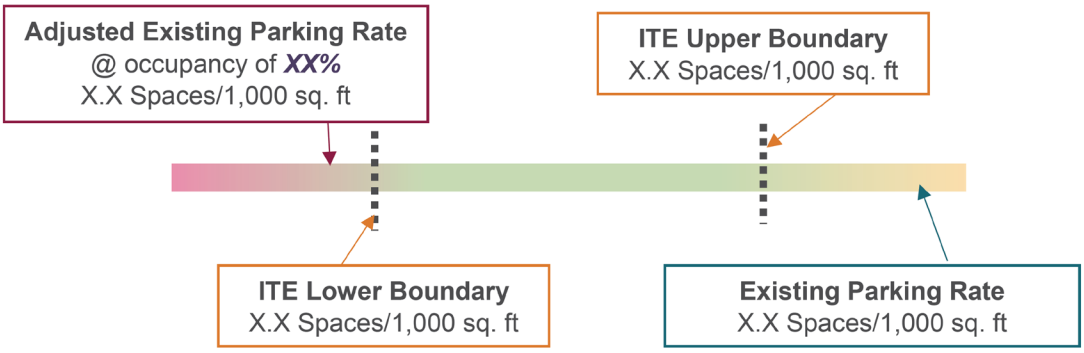
Beaverton's developer community has enthusiastically embraced parking because they see that they can build more densely if less parking is required. Structured parking in Beaverton is expensive because their water table is only four feet down and the price is astronomical for underground parking. People want to build in Beaverton, proven by the response they receive for projects, and they seem to have effective development standards in place that people are willing to build to.

## *How to Use Occupancy Data to Monitor Your System and Right-Size Requirements*

Evaluating the parking requirements with the use of local parking occupancy and inventory data is important to make sure those requirements are sufficiently able to support new development without overparking the system. As previously mentioned, the parking requirements in the code shouldn't be updated annually because it will create confusion for developers and lenders and City/town staff. However, occupancy and inventory should be evaluated annually in comparison to land use parking requirements to gauge and track how changes to parking and transportation are impacting the requirements. The historic data can be used to update the code's parking requirements if necessary. The data can also be used to determine what incentives provided to developers are most used and effective.

The following graphics were developed to demonstrate how to compare existing code requirements, national standards, and an adjusted rate based on occupancy data collected in the community. National standards are typically from the Institute of Transportation Engineers (ITE) Parking Generation Manual (latest version is the 5th Edition). These are for illustrative purposes that may help communities compare different data points and help inform discussions and decisions.

| Symbol Key | | Impacts to Urban Form |
|---|---|---|
| **Balanced** |  | The code is adequately providing parking. The parking system is balanced and allows for opportunity for continued growth. |
| **Overparked** |  | The code requires too much parking and is resulting in parking that is not used. The urban from is vacant and properties are disconnected. The land use is not being used to its greatest economic potential. |
| **Underparked** |  | The code does not require enough parking and results in spillover parking. New investments and development can be deterred because the parking availability is constrained. |




As communities review their parking, they can determine whether the requirements for a particular land use are balanced, overparking, or underparking that land use. If the occupancies were below 70%, then it would fall in the yellow portion of the bar. If it was above effective capacity, then it would fall on the red side. If it was within the optimal range of 70%-85%, then it will be in the green. The ITE boundaries can be used to identify the national standards in comparison to the existing requirements and how they compare. Based on the observed occupancies, a community can have discussions with developers and other departments to discuss appropriate changes or other development incentives to provide the right level of parking for that land use in the area it is being developed.

## Strategy #2 – Plan for Mobility Hubs

Multimodal transportation use has been gradually increasing over the years, especially in urban or mixed-use areas, as people find it easier to move around using other means of transportation besides their cars. Transit centers offer a natural connection point that brings together many different forms of transportation in one location (bikeshare, ride hailing, E-scooters, vehicle charging, wayfinding, etc.). These are called mobility hubs.

The Victoria Transport Policy Institute (VTPI) notes that mobility hubs include walking, cycling, taxi, ride hailing, ridesharing, carsharing, bikesharing, E-scooters, local delivery services, public transit, vehicle parking, bike parking, and pedestrian connectivity. Mobility hubs can include other amenities such as convenience stores or other land uses that support commuters and travelers. They can also be an opportunity to initiate or expand place-making in a community, with use of public art, signage, parklets, landscaping, fountains, lighting, and community and transportation information.

Mobility hubs may be thought of as a "big City" concept, it is a flexible concept that can be successfully adapted in many locations, from small towns, downtown areas, near campuses, resorts, etc. At its core, it is a place where many forms of transportation are centralized for easy connections between modes.

**Benefits:**

- Promotes multimodal transportation and transit ridership.
- Creates a sense of place within the community.
- Supports transit-oriented development and downtowns.
- Can be built on and expanded overtime to grow with the community.

**Challenges:**

- Requires intentional planning and investment – locate multimodal amenities.
- Coordinate with transit providers to ensure the hub aligns with transit plans and investments.

### Strategy Best Practices

- Build upon existing strong transit stops.
- Leverage and encourage transit-oriented development.
- Incorporate electrification to support eVehicles.
- Enhance safety features, such as good lighting, visibility, cleanliness
- Incorporate placemaking elements.
- Add transportation options and amenities.
- Make improvements so users experience seamless transfers between travel options.
- Provide hub information on the community's website and travel information.

### Successful Implementation

San Diego, CA

The Mid-Coast Mobility Hub Implementation Strategy evaluated ways to enhance access to 10, under construction, light-rail stations in San Diego with the ultimate goal of increasing transit ridership. The Strategy utilized a data-driven existing conditions analysis with robust outreach to local communities to develop a program of context-specific mobility hub improvements ranging from interactive wayfinding kiosks and dynamic message signage to dedicated pick-up/drop-off zones and secure group bike parking. Using the findings of the study, the designs of several stations were modified to include low-cost improvements and prepare for future enhancements.

## Strategy #3 – Enforcement

Enforcing existing and proposed parking regulations is critical to the success of the program. Parking enforcement should be conducted regularly and consistently and with a focus on customer service. For instance, if an area has two-hour time limits, the route for the enforcement personnel needs to be completed in two hours. Active enforcement encourages compliance with the parking regulations through education and citations, thus maximizing the use of the existing parking resources.

**Options for enforcement include:**

- Self-Operation – The City/town operates the parking program itself. Enforcement can be conducted by the police department or City/town staff.
- Management Contract – The City/town contracts a private parking management firm to handle day-to-day operations and maintenance through a management contract.
- Concession Agreement – The City/town contracts a parking management firm to assume full responsibility for all aspects of the operation, including expenses, and the parking management firm pays the City/town a guaranteed amount and/or a percentage of gross revenues (or a combination).

**Benefits:**

- Efficient enforcement practices establish a culture of compliance with parking regulations.
- Enforcement practices can produce key indicators for the parking system.

**Challenges:**

- Enforcement must be consistent
- Producing enforcement practices requires adequate signage and notices that allow users to know what is required to park properly.

### Strategy Best Practices

- Review fee structures for citations. Consider warnings for first time offenders, and a graduated fee structure for repeat offenders. Same theory of graduated fee structure for payment of citations – becomes more expensive the longer the citation is unpaid.
- Establish performance measurement tools and standards for communicating data collected.
- Frequency and location of violations by type
- Capture rate (20% rate wanted)
- Deploy enforcement officers as ambassadors. Parking enforcement personnel should be trained to serve as community ambassadors, serving the dual role of enforcing parking time limit regulations and providing friendly customer service.
- Sporadic Enforcement – To minimize the presence of enforcement, enforcement can be conducted on sporadic schedules. The same pattern of enforcement should not be repeated each day. Rather, a few days a week of intensive, targeted enforcement should occur in the study area. The sporadic nature of enforcement keeps the public from learning the enforcement pattern. The public is then more likely to comply with parking regulations and use the parking spaces as intended.

### Successful Implementation

Salt Lake City, UT

Enforcement has recently shifted from revenue-focused to customer friendly focused. The intention behind the shift is to improve the customer experience and therefore satisfaction with the parking system. It is an intentional effort to improve the image of parking staff and parking in general. Improved image can later lead to a more collaborative decision-making process that reflects the customer's needs.

## Strategy #4 – Transit Station Parking Planning

Managing transit station parking supports and encourages transit ridership by preserving adequate parking spaces for transit users. Management of transit parking should only occur once the parking occupancy has reached effective capacity of 85% or higher for at least two weekdays on differing weeks. Management strategies can vary from station to station depending on the goals and characteristics of that station.

For some transit stations, managing parking lots can also be seen as a deterrent to the access of stations - for people accessing stations without a car. This is because transit riders are already paying a transit pass. To add the cost of a parking permit may inadvertently push people to drive their personal vehicle rather than take transit. This is not the intent of managing parking at a transit station. The goal is to make parking more available so that riders are not frustrated with the parking situation and still have transit as a feasible option. Implementing any management strategies should only be at stations where the associated parking is above effective capacity and riders and other customers are disgruntled with the lack of available parking.

***Management strategies can vary from station to station depending on the goals and characteristics of that station. This is a long-term strategy and is requires more detailed analyses than this study performed to determine the need and appropriate level of parking management.***

**Benefits:**

- This strategy will reduce per capita vehicle travel.
- Identifying these management practices will encourage transit and multimodal travel.
- Management supports affordable housing and diverse land use mix.

**Challenges:**

- Spillover parking into surrounding neighborhoods may occur and lead to regulations in those facilities.
- Work with UTA to set prices associated with permits or paid parking. Any costs for transit users must be balanced with the cost of a transit pass. If parking and transit are more expensive than driving, this could become a deterrent to using transit.

### Strategy Best Practices

- Use a permit system that restricts non-transit riders from parking in the transit parking at peak times (early morning)
- Monitor and assess the parking occupancy, parking duration, and ridership at the transit station(s) annually.
- Conduct a survey of people accessing transit via the station to determine how to best meet their needs.
- Pedestrian and bicycle amenities and connectivity are critical for attracting non-vehicle use at transit stations. Multimodal access can help maintain ridership for transit while reducing parking demand.
- 85%-90% is the effective capacity threshold (the range depends on the comfort level of the community the transit station is in). Management strategies should be implemented once this threshold is reached.
- Build a strong relationship with transit providers. May be beneficial to set up a committee to exchange data, discuss mutual issues, and plan future improvements and investment strategies.

### Successful Implementation

Sound Transit, Seattle, WA

At the busiest park-and-ride locations, Sound Transit offers permits for carpool and single occupancy vehicles for weekday mornings. Half of the spaces in the permitted lots are reserved for permit holders only from 4-8 a.m. The other half of the parking spaces, and the permitted spaces outside of those hours, are open to the public on a first-come, first-serve basis. 90% vehicle occupancy is the threshold used to determine which lots will be permitted. Eligibility for a permit requires a transit pass and use of the pass at least 12 days per month.

## Strategy #5 – Curb Lane Management

Since the arrival of cars onto the landscape, most US cities have used the curbs of their urban areas primarily for the short-term storage of privately-owned vehicles. However, with the growth of new modes of transportation - including micromobility options, TNCs, and carshare services, balancing existing uses – such as parking, loading, and transit, and a growing awareness of well-designed streetscapes, most cities are increasingly rethinking how best to utilize this valuable real estate.

Two other recent trends are also helping to fuel this revolution. First, a growing interest in outdoor seating has led many cities to remove parking spaces to allow for additional dining space in small parklets. Second, the ongoing rise in internet shopping has in turn fueled significant growth in parcel delivery companies, such as FedEx and UPS, not to mention the United States Postal Service and Amazon.

Furthermore, many of these users desire free and unimpeded access to curb space, and like other public resources, cities must operate and manage the curb effectively to provide access for a variety of users, while optimizing overall public benefit.

A curb lane management strategy can arm communities with a way to be flexible and respond to real-time issues such as the COVID-19 pandemic. Many cities and parking operators shifted short-term spaces or other inventory into pick-up only sites to help with physical distancing and to support convenient pick-ups.

### Strategy Best Practices

- Compile and review existing curb management policies and practices.
- Collect curb use inventory data (and occupancy if feasible, though not necessary).
- Prioritize curb lane uses. See an example from Seattle Department of Transportation for how various curb uses can be prioritized based on the type of street.
- Use pilot studies to test curb improvements
- Solicit feedback from the public and business owners.

| | Residential | Commercial & Mixed Use | Industrial |
|---|---|---|---|
| 1 | Support for Modal Plan Priorities | Support for Modal Plan Priorities | Support for Modal Plan Priorities |
| 2 | Access for People | Access for Commerce | Access for Commerce |
| 3 | Access for Commerce | Access for People | Access for People |
| 4 | Greening | Activation | Storage |
| 5 | Storage | Greening | Activation |
| 6 | Activation | Storage | Greening |

*Source: http://www.seattle.gov/transportation/projects-and-programs/programs/parking-program/parking-regulations/flex-zone/curb-use-priorities-in-seattle*

**Benefits:**

- The program prioritizes and manages often competing curb uses by location, day of week, type of user, and time of day.
- The program articulates objectives for different curb uses and different parts of the City.

**Challenges:**

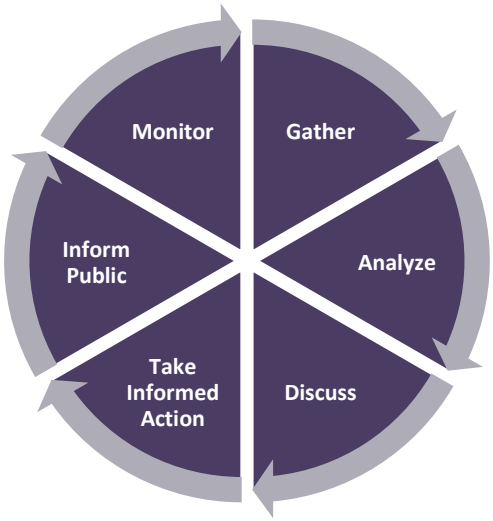
- Involves significant and transparent coordination with business owners, public, and other stakeholders.

### Successful Implementation

Gresham, OR

Gresham is working to prioritize curb lane management and incorporate those policies into broader parking and land use policies. This is a comprehensive, paradigm shift from how parking is traditionally thought of in the city. Parking is traditionally looked at in a supply/demand capacity. Comprehensive curb lane policies will allow the city to proactively plan for parking and accommodate new development.

## Strategy #6 – Data-Based Decision Making




One of the central tenets of the modernized approach to parking and mobility management is the use of community parking system data to support better policy and practice decisions that are consistent with the intended vision and outcomes of the program. The data can be used to have informed communication with developers, business owners, and the public, as well as internally with various departments or across agencies. Data enables informed, proactive management, rather than reactive to problems that are already present.

Data should be collected in a consistent manner each year. This means that data should cover the same area(s) each year. If there is an expansion, then that expanded area should also be included along with the original area(s). Similarly, the time of day should be the same, unless there is a compelling reason to change them. For instance, if activity picks up for evening activities, or a new event comes to the community, or there have been increasing complaints of spillover parking at certain times, then the collection times can and should be adjusted.

As the data is collected, the community will build a database of historic information that can identify trends and help the community make correlations between changes in the community, growth, and transportation impacts. The metrics discussed previously should be used to help communities assess their parking and mobility system.

**Benefits:**

- Data-based decision making improves the ability to track the impact of changes made to the system.
- This strategy can be used to improve communication and marketing for the parking system.
- This type of decision making will establish trusted baseline metrics for making year-over year transportation and mobility enhancements.

**Challenges:**

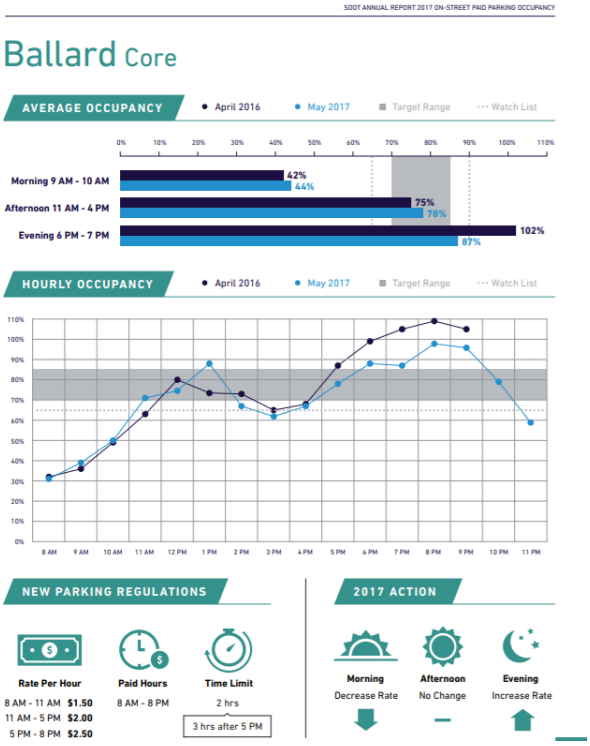
- This strategy requires intentional consideration of data collection process to create consistent sets of data and meaningful analysis.

### Strategy Best Practices

- Establish protocols, expectations, and methodology for annual data collection and analysis to define impacts of performance.
- Conduct a comprehensive parking occupancy data collection effort to establish a baseline for cataloguing parking inventory and occupancies. Inventory should include the type of facility (on-street, lot, garage), ownership (public or private), number of spaces for each facility or block, and any regulations (time limits).
- Create analysis and reporting templates that can be used annually or as frequently as desired. The template and analysis should be folded into the annual report (see next strategy).
- Define intervals for adjusting the system (annually, semi-annually, quarterly, etc.). Combine with marketing and education campaign when changes are made.

## Strategy #7 – Annual Reporting

Communication of information is a part of nearly all previously mentioned strategies. Whether it's the communication of data and analysis, communication of growth and development changes in the community, communication of regulatory or policy changes. The public, business owners, developers, and agencies should systematically and consistently share information. An annual report is a way for communities to communicate all of these facets for the parking system. Many strategies need to be monitored annually to determine their impacts and whether or not adjustments need to be made. An annual report is a great way to consistently monitor the data year over year.




*Source: Seattle Department of Transportation, Annual Report 2017 On-Street Paid Parking Occupancy, Performance-Based Parking Pricing Program, October 2017*

**Benefits:**

- Developing an annual report will allow for consistent analysis of the parking system.
- Provides a means of tracking metrics so that historical databases are established
- Allows planners to draw conclusions about what community-wide changes have impacted the parking system. Changes such as transit or transportation additions or modifications, new development, and economic growth

**Challenges:**

- Initial development of an annual report requires significant coordination amongst parking management staff to determine metrics and elements to report on each year.
- Requires data to be collected annually in order to report on it each year in the annual report
- Must devote a certain amount of staff time each year to prepare the annual report

### Successful Implementation

Seattle, WA

The Seattle Department of Transportation releases an annual report each year for their on-street paid parking system. The report defines common terms, explains the need for the analysis and how the analyses are performed, and the policy that dictates the need for the analyses. The report then examines the parking occupancy and current pricing for the numerous neighborhoods in the city. Each city is evaluated in the same manner. As new neighborhoods are added or boundaries change, the annual report will incorporate those changes but will keep with the overall reporting theme and mechanisms. The data in the annual report is used to communicate and explain parking pricing changes for each neighborhood, using data to inform the decisions.

## Strategies for Managing Parking Assets

### Strategy #8 - Flexible Shared Parking

Many parking codes across the country allow for shared parking, however, the opportunities for property owners to share parking is limited. Often times there has to be a parking study to prove the partnering land uses have opposing peak demands. However, this restricts land uses with an excess of parking supply from sharing their resources. Additionally, many parking codes state that shared parking can only occur between two properties that are directly adjacent to the parking resource to be shared or that the parking resource has to be within 300-500-foot distance from the land uses wishing to share. These types of codes are restrictive in downtown or mixed-use areas because people will likely walk more than those distances in these areas. Therefore, the walking distance can be expanded so the use of existing parking resources is optimized.

Not all land uses reach their peak parking needs at the same time of day or on the same day of any given week. Restaurants tend to be busiest during lunch and dinner hours, while offices are typically busiest in the middle of the weekday, and hotels and residential uses experience peak demands overnight. Similarly, on weekdays, office and service industry land uses experience their peak demands, whereas restaurants and retail will experience peak demands on the weekends. Understanding these varying peaks for land uses allows for more flexible shared parking opportunities.

**Strategy Best Practices**

- Update ordinance so that the distance to shared parking resources is between 1,000-1,300 feet to allow for greater flexibility and encourage centralized parking.
- Create a standard, yet flexible, template for shared parking agreements.
- Use signage or markings to indicate the shared parking rules and regulations.
- Use parking occupancy metrics for evaluating effectiveness of shared parking arrangements. Evaluate annually.
- Underutilized parking facilities will be identified on an annual basis as part of the annual data collection.

Shared parking is meant to optimize the use of the parking facility by providing more opportunities for use by various properties, which optimizes the use of the parking facility and allows properties to meet their parking demands. The parking location must be within reasonable walking distance of the land uses in which it serves. Rather than spaces being used part time for a land use, these unused spaces can be used towards parking for another development. The degree in which the parking is shared can differ. This can relate to employees and customers sharing parking or multiple facilities sharing parking.

**Benefits:**

- Reduces the cost of development which increases affordability
- Promotes development by optimizing the use of land
- City/Town is the keeper and facilitator of all agreements

**Challenges:**

- Requires verification, and enforcement.
- This strategy should be in accordance with a minimum of annual monitoring of parking demands.

**Successful Implementation**
Beaverton, OR

Shared parking is part of a land use process where property owners can provide documents about their parking and show how hours and supply offset to serve both purposes. The city provided signage to the participants that included their desired branding elements, program hours, and legal terms.

## Strategy #9 - Repurpose Underutilized Parking and Infill Opportunities

The impacts of COVID-19 have made the need to repurpose underutilized parking more prevalent, with the sudden empty lots and garages and on-street spaces. However, even before COVID-19, in communities across the country there was a need to repurpose parking facilities or development as an infill opportunity. In the past, parking lots and garages in downtowns or mixed-use areas have deadened a block or half block as places for storing vehicles. As part of modernizing, parking facilities can be used more efficiently so that other underutilized parking facilities can then be repurposed for another use or infill opportunities.

In the wake of COVID-19, many opportunities for temporary (and sometimes more permanent) uses for underutilized parking emerged. On-street parking became expanded drop-off/pick-up zones for quick visits to restaurants or other services. They also became areas where businesses could expand their store area into the street, whether it was restaurant seating, or expanded area for a gym class, or a place to expand inventory racks for retail stores. Parking lots and garages were similarly repurposed. Many became testing locations, distribution centers, and vaccine locations.

**Strategy Best Practices**

- Establish a procedure for applying for repurposing a lot or public spaces, such as on-street parking. Applicants should prove severe and consistent underutilization (less than 50% occupied for more than 8 hours a day for the last month).
- Require frequent status reports from the property or facility owner to monitor parking utilization.
- City should identify underutilized facilities and identify these locations as infill opportunities. Use incentives to encourage development of these locations.

These are examples of possible temporary repurposing of parking facilities. There is a need for communities to have a standardized process for repurposing underutilized facilities (if temporary) and/or identifying them as infill opportunities (if long-term). Temporary repurposing underutilized parking allows parking facilities to be utilized as a new entity until the parking is in demand again. This is an especially important strategy as the community faces the continued impacts of COVID-19.

The intention of this strategy is to provide flexibility into the code to allow for lots or portions of garages or on-street parking to be repurposed as another use, such as the extension of business space, parklets, or some other necessary use.

**Benefits:**

- Optimizes the use of existing parking facilities
- Promotes development with infill opportunities

**Challenges:**

- This strategy may require the development of a permitting system specifically geared towards repurposing parking facilities.
- This strategy should be complimented with a minimum of annual monitoring of parking demands

## Strategy #10 - Parking Permit Program

It is very common for residential areas surrounding downtowns or mixed-use or commercial areas to see high numbers of visitors and employees seeking free and unrestricted on-street parking spaces. While this may not be an issue while parking in the downtown or mixed-use areas remains underutilized, as the parking is optimized, new development occurs, and parking management restrictions are implemented, the parking will overflow into free, unrestricted areas. Permit programs ensure that people are parking where they should and therefore make parking more available.

Parking permit programs protect parking spaces for those parking long periods of time consistently, such as residents or employees, so that these users are able to park in areas that are convenient and are not blocked by visitors. Permits require users to prove they are either residents or employees so that they can obtain a pass.

**Strategy Best Practices**

- Permits can be used for employees, residents, and transit commuters to allow these users to park longer than the time regulations allow.
- If permitted areas already exist within a city, make sure their location and associated permit restrictions or allowances are posted online.
- Collect parking occupancy and inventory data annually to proactively designate permit areas and adjust as necessary.

- Employee Permits – can be set up to be purchased by the employer or the employee. Designated employee areas should not be on-street, unless it is on a block that is underutilized. The number of permits allowed per business or per employee will have to be determined, as it will vary depending on the needs of the community.
- Residential Permits – purchased by the resident. Designated areas should cover a residential area (may be a few blocks). It should also be made clear that residents are not entitled to the space directly in front of their residence. The permit simply allows them to park outside of the established regulations.

A permit system is not the same as a space reservation. Permits do not guarantee an available space, rather they give the user the right to while restricting other users from parking in a designated area or at a designated time of day. The regulations should deter non-residents or non-employees from parking in an area, which then makes parking more available for the residents or employees who need to park there.

Permit programs can be flexible so that each neighborhood has their own regulations. For instance, one neighborhood restricts non-residential parking between 5pm and 6am, whereas another may allow non-permit holders but only for 2-hour time limits. The regulation should be tailored to mitigate the demand concerns.

**Benefits:**

- The program protects parking assets for residents and employees when they need parking most.
- Strengthening permitting allows visitors or short-term users access to appropriate locations.
- This strategy will optimize the use of underutilized parking facilities.

**Challenges:**

- Enforcement is required to encourage compliance to the parking permit program.
- The parking program must allow for flexibility and growth within the program to make beneficial changes to businesses and residents.

## Strategy #11 - New Parking Supply for Economic Development

New parking supply is a community asset that can support both new and existing development in a community. This strategy encourages cities and towns to develop a comprehensive approach that emphasizes leveraging parking infrastructure investment as a key element of community and economic development.

To promote the effective management of existing and future public parking resources a downtown area or central business area, a parking district approach which can coordinate and manage parking and mobility related issues is beneficial for success. Parking districts offer a mechanism to invest and manage parking resources within a defined geographic area.

**Benefits:**

- This strategy will create a standard procedure for the City and developers to follow to ensure parking supply matches the pace of growth.
- Parking for economic development proactively engages departments and developers in the decision-making process.

**Challenges:**

- A clear vision and goals are required to determine how to identify and locate new parking supply.
- This strategy requires the parking management staff to look beyond parking and incentivize economic growth while determining how parking fits with other strategies

### Strategy Best Practices

- Form a committee between city departments and developers to guide the process.
- A shared parking process is important to success since it offers developers flexibility to meet their parking needs.
- If new parking is not needed, identify underutilized facilities (See Strategy #2).
- Identify investment strategies:
  - Invest in transformation project
  - Parking investment district
  - Identify properties to infill or become parking

### Successful Implementation

Boise, ID (specifically the Capital City Development Corporation or CCDC) utilized an approach of building strategically located mixed-use parking structures to support downtown businesses since the CBD area did not have a minimum parking requirement. Bond debt for these structures was largely paid through Tax Increment Financing funds. They did not see this approach as a giveaway to developers, but rather as an agency investment strategy through which they targeted a five to one return on any parking or related infrastructure development.

Beaverton, OR created a Development Division to work closely with economic development agencies in the community. This successful partnership has allowed the city and those agencies to move many projects forward. Their Restaurant Row is an example of their success and has become a destination district.

## Strategies for Managing Travel Behavior

### Strategy #12 – Parking Time Limit Restrictions

One of the basic initial tools to manage parking allocation and demand is to implement parking regulations in the form of time limits. Time limits regulate how long vehicles can park in spaces, with appropriate times set to support adjacent uses. The intent is to encourage the turnover of spaces, so more parking is available for customers, thereby providing better access to businesses. The use of time limits also encourages short-term parkers to use on-street parking and directs people who will park for longer periods of time (e.g., employees, residents, transit users, etc.) to off-street parking facilities. The intent is to create more parking availability in the prime spaces and make more efficient use of the entire system.

This strategy also helps balance demands between short- and long-term users and allocate demand appropriately among resources. This technique is particularly effective in the on-street parking environment, where spaces need to turnover to support short-term transactions at retail and commercial businesses. An example of a long-term user is an employee, who will be parked for multiple hours, if not all day.

The technique is only as effective as the enforcement practices that support the policies. If enforcement is consistent, the time limits will promote turnover. If enforcement is inconsistent, the public will take more chances because they know they are likely to get away with parking violations.

**Strategy Best Practices**

- Post time limit information and locations on the city or town website.
- Establish annual, consistent, and transparent communication with the public and business owners regarding changes to parking time limits. Patrons and business owners will want to know what is changing, when, and why. An annual report (discussed later) can be used as this messaging tool.
- Conduct annual inventory and occupancy data collection to monitor and track parking occupancies in the area. Adjust parking time limits as parking occupancy data dictates. As demand increases, consider shortening time limits in certain areas. Extend hours of enforcement (if it is found that higher demands are occurring outside enforcement hours)

**Benefits:**

- Using or updating time limits encourages utilization of underutilized parking while reducing the need for new parking development.
- This strategy encourages turnover and shifts long-term parking users to less convenient facilities.

**Challenges:**

- Areas with time limited parking must have access to viable transportation choices.
- This strategy should be complimented by annual monitoring of parking demands.

Shared parking approaches can change based on parking type and can obtain different benefits from each.

1. On-street parking on commercial streets. These are the most convenient parking spaces and produce the most turnover to be utilized for short stops.
2. Off-street public parking facilities & on-street parking outside the commercial streets. These parking facilities are less convenient than on-street parking, so they are more suitable for longer stops. This can include employee parking or resident parking.
3. Off-street private parking facilities. This parking facility type provides parking that is often most convenient for a specific land use but can also be convenient for nearby uses. They can also serve nearby facilities that may have different peaks.

## Strategy #13 – Paid Parking

When parking demands in a community or downtown area of a community become so high that parking facilities (on- and off-street) operate above the system's effective capacity (85% occupancy), paid parking becomes a highly effective way to influence behavior, redistribute parking demands, and promote economic activity through turnover of parking spaces. The fee for parking encourages people to choose between the priced transaction, parking further away in a free or lower priced facility or use an alternative transportation option to reach their destination. The result is creation of available spaces in high-demand areas and facilitating access to businesses.

It is important to understand that even when parking in a community may be free, there is still a cost that is passed onto people unbeknownst to them. It requires money to construct, designate, regulate, and manage parking, whether it is on the street, in a lot, or a garage. These costs are absorbed by private property owners, store tenants, facility managers, and the City. As a result, these costs are usually passed on to the customers through marked up prices on goods and services and rents. By managing parking appropriately and providing a cost to it, the consumer is able to make informed decisions on how they spend their money.

Implementing paid parking develops an on-going funding mechanism to support parking and mobility programmatic and infrastructure investment. Paid parking revenue can be used for general operating and management expenses for a community's parking program, streetscape enhancements, operation and maintenance of smart parking meters and mobile apps, public art, and other essential and/or desired projects.

### Strategy Best Practices

- Offer lower-cost or free parking options further away from high-demand areas encourages people to park further away, thus distributing parking demand in existing parking assets.
- On-street pricing should be more expensive than off-street pricing so that people are encouraged to park for longer periods of time in off-street locations, increasing availability of on-street spaces.
- Invest in multimodal transportation so that people have alternative options available to them for travel.
- Ongoing and consistent monitoring of the paid parking system to evaluate pricing changes or system expansion.
- Review and pilot test latest technology with regard to payment options.
- Transparent communication with business owners, residents, and public on implementing paid parking.

**Benefits:**

- Effectively distributes demand and optimizes use of existing parking assets.
- Encourages vehicle turnover, which increases access to businesses.

**Challenges:**

- There are usually negative feelings from business owners and the public with initial implementation. Be transparent, be proactive in communication, and use data and metrics to make system decisions. Incorporate feedback from the public and business owners into the development and rollout of the paid parking program.
- Identify funding for technology and software investment. If multiple technologies are selected, ensure platform integration is compatible.
- Training of staff and public on use and maintenance of the system (for staff) will be needed.

## Strategy #14 – Wayfinding

Parking wayfinding is extremely helpful in directing people to desired parking locations. Effective means of conducting wayfinding is through stationary signage, dynamic signage (electronic signs that change messages to indicate how many spaces are open in a facility), digital maps posted on websites, and smartphone applications.

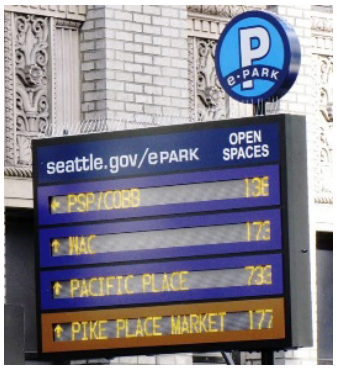
Consistently themed branding and messaging of wayfinding and regulatory signage is a critical component of reducing visitor confusion on where, when, and how to park. The images on this page are from Seattle Department of Transportation (SDOT) and illustrate how the regulatory signage for on-street, parking availability for off-street, and direction signage has a coordinated theme.


**Benefits:**

- Wayfinding helps distribute parking demand, which improves parking availability.
- Encourages parking regulation compliance.
- Wayfinding increases communication with residents and visitors.

**Challenges:**

- Introducing wayfinding requires coordination and production of new signage or technology.
- Wayfinding may be considered as more of an investment than other strategies depending on static or dynamic signs as well as the number of signs needed.


### Strategy Best Practices

- Conduct an inventory of existing wayfinding signs, destination signs, parking signs, and associated messaging.
- Conduct a survey of business owners, employees, visitors, residents, and other stakeholders and user groups to solicit input on what is or is not working with existing signage.
- Coordinate wayfinding and branding ideas with private off-street owners so garage/lot signage fits with the city's theme.
- Develop a wayfinding plan that incorporates a common brand theme and identifies types of signage and specific location needed to direct visitors to parking areas efficiently.
- Create a map in the branding and post on the community's website
- Manufacture and add new signage in the new theme according to a Wayfinding Plan

## Strategy #15 – Plan for Technology

New technologies are emerging that will greatly change the parking landscape in ways that would have been hard to imagine even a few years ago. The impact of smart meters, wireless sensors, web-based parking availability data, on-line parking reservation systems, and satellite-based mechanisms that employ GPS and GIS geo-fencing technologies will combine to create Smart Parking Systems. The technology will help to reduce greenhouse gas emissions, improve parking availability, and make paying for parking easier and more customer friendly. This data-rich world of smart parking will allow communities to better utilize parking resources and recapture some of the value inherent in the over-built parking supply from the past. The technology can also be used to provide better designed parking facilities that are integrated with a variety of mixed-uses and that better complement the urban fabric of a community.

### Strategy Best Practices

- Conduct a SWOT analysis of existing procedures for collecting and processing parking and enforcement data.
- Identify goals for the community where technology can potentially help with collection of performance metrics for those goals.
- Pilot test various technologies to determine how well they perform and whether they help the city or town meet its goals

With the wide range of technologies, and new ones continuously emerging, it is important to research and pilot test technologies prior to making the large investment and implementation. Technology is most efficient when the community understand what it hopes to gain by using the technology. For instance, is the goal to distribute users more efficiently (real-time parking availability, in-app navigation), or to improve enforcement (handheld GPS, LPR, on-line permitting), or streamline collection of data to help make informed decisions (backend reporting and platform for using data from various data sources). It is easy to get sucked into bells and whistles that technology has to offer. Knowing the need for technology can streamline and whittle down the technology options. It is also important to pilot test technologies before implementing.

**Benefits:**

- Enhancement of the user experience.
- Increases convenience for data collection, parking management, and transaction processing.
- Reduces staff time for permitting and payment administration and management.
- Balances parking access and utilization.

**Challenges:**

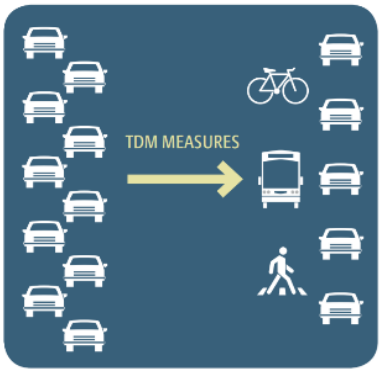
- Having a clear goal for how technology will be used can help whittle down what technology is really needed and useful.
- Introducing technology requires training for staff who will utilize the new technology.
- Messaging and educational campaigns for the public on how to use the technology will be necessary.

### Successful Implementation

Boise, ID

Boise decided to invest in technology to automate their system approximately seven years ago. While it was a large investment ($2 million) and there was concern about losing the friendly feel of downtown, they have found that the system is more efficient.

## Strategy #16 – Transportation Demand Management & Mobility



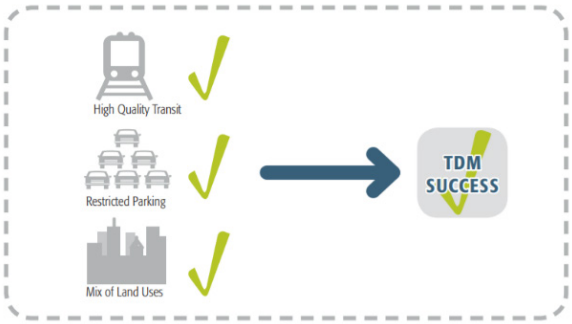

Transportation Demand Management (TDM) strategies consist of programs, services, and policies designed to encourage transportation alternatives. Implementation of TDM measures helps mitigate traffic impacts and parking demand associated with single occupancy vehicle (SOV) trips. TDM measures vary and can include bicycle- and pedestrian-facility improvements; promotion of vanpool, carpool, and transit; provision of other shared mobility services like on-demand rideshare and shuttle services; and commute incentive programs to encourage employees to use transit, bike, or walk to work.

TDM complements parking management strategies and is a cost-effective approach to improve mobility within the area. Enhancement of mobility options within a community will create more options for moving both people and goods. By leveraging the existing multimodal options available within the City, bikes, scooters, transit, sidewalks, etc., communities can reduce its reliance on single occupancy vehicles while maintaining the same level of mobility and access.

The basic concept is to provide a service that helps employers access a range of parking and trip reduction tools and programs. Connecting developers to resources that can help them reduce parking demands (and therefore potentially lower the amount of parking they would be required to provide) is win-win scenario. The key is having a well-developed program that offers a range of choices that developers or businesses can choose from depending on the type of business or development they are providing.

**Benefits:**

- Reduces reliance on single occupancy vehicle
- Provides commuter options for easier travel
- Can be more cost efficient since TDM strategies have a wide-ranging impact




**Challenges:**

- Enhancing and leveraging mobility options requires funding.
- This strategy will always be evolving and changing. Must track usage of mobility options in conjunction with parking data to draw conclusions about how multimodal changes impact parking demand and vice versa.

### Strategy Best Practices

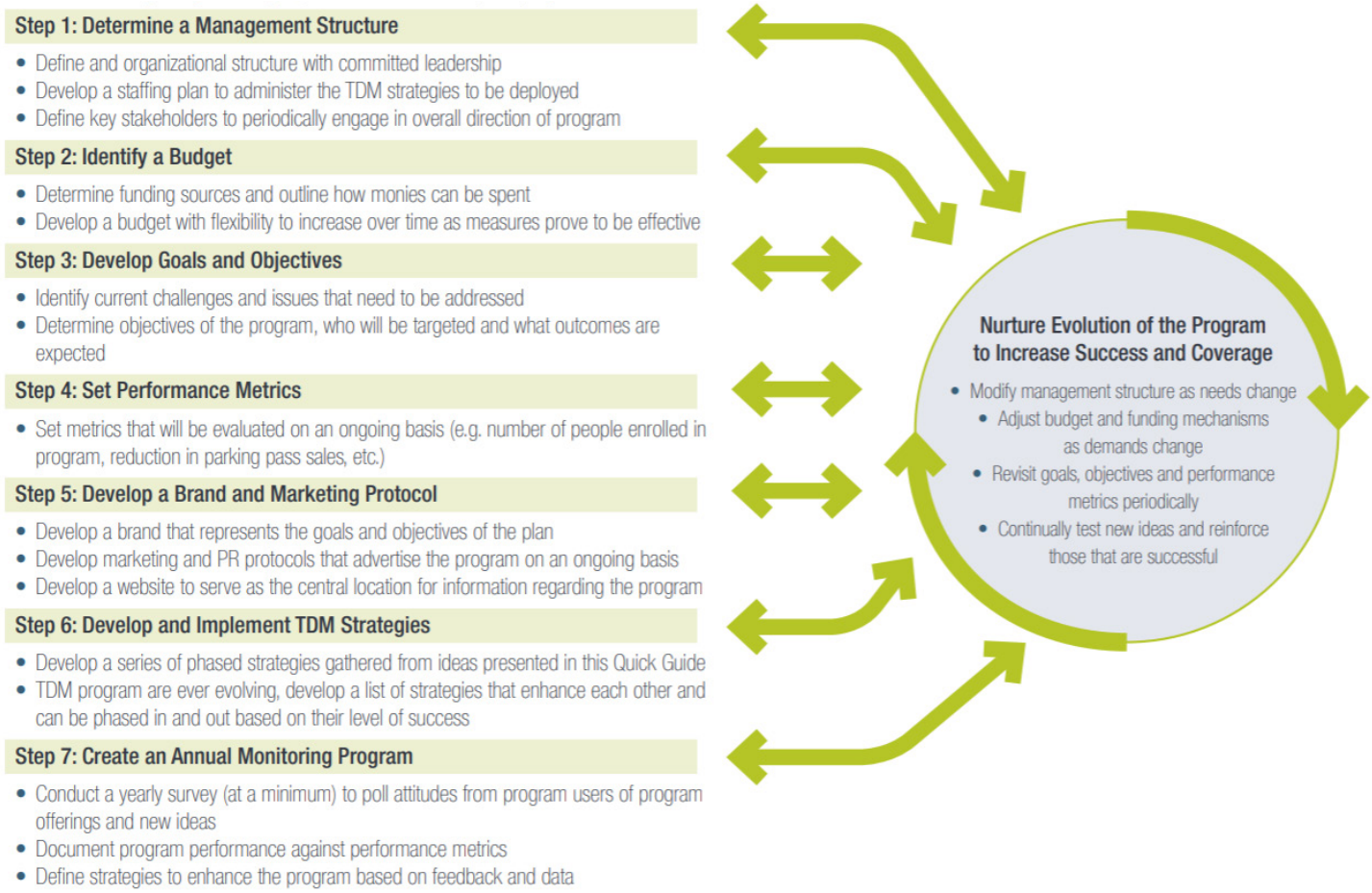
- Develop a TDM Program (see following page) that identifies specific community goals for mobility.
- Assess annual usage of bikes, scooters, transit, and pedestrian volumes, and compare to parking occupancy to identify connectivity gaps and opportunities.
- Consider programs or invest in technologies to reach mobility goals i.e. Complete Streets, transit hub, bus services, bike facilities, etc.
- Ordinances should be updated to reflect and promote new mobility goals and associated programs and technology as appropriate.
- Identify investment opportunities early to plan, design, and construct multimodal projects for enhanced connectivity.

## *Developing a TDM Program*

Developing a TDM program is the first step towards intentional planning and investing in improvements. With planned intention and a comprehensive vision, there will likely be greater success in building a viable network for people to move to and through a community without relying on a personal vehicle. Agencies across the region have started the work already:

- The WFRC maintains a Congestion Management Process (CMP), which is an analysis tool that supports the Regional Transportation Plan and Transportation Improvement Program. While the CMP has a number of uses, one of them is its support of TDM strategies. If additional capacity in the region is deemed necessary, TDM measures are incorporated to minimize or eliminate the need for additional capacity.
- Salt Lake County and Mountainland Association of Governments each have an Active Transportation Plan that identifies and prioritizes specific investments for bicycle connectivity throughout the county.
- As a transit agency, Utah Transit Authority is inherently promoting TDM programs to get people out of their vehicles. UTA promotes transit use, as well as rideshare, vanpool, microtransit, and provides coordinated mobility services.

Local communities can develop their own TDM program that enhances and builds off of the precedent that regional and state agencies have established. The following diagram outlines steps for implementing a local TDM program.



## Summary of Strategies and Relative Impact

Many of the impacts cannot be objectively measured because of the high variability in application of each strategy from city to city. However, according to the Victoria Transport Policy Institute, a comprehensive parking management program, which includes the strategies included in the table below, can reduce parking demand by 30-50%. This is compared to programs that have minimum parking requirements, free and unregulated parking, and parking that is restricted to specific users (private parking).

There are also general financial benefits for implementing a comprehensive parking program. If less parking is needed because of the parking management strategies implemented, more development can occur, people can reduce the number of vehicles they own, and rents for apartment, office, or retail space can be reduced.

The following is a summary of the strategies and their relative impacts that should be included in a comprehensive parking program for a city within the Region.

| Strategy | Description | Impact[1] |
|---|---|---|
| Right-Size Parking Requirements | Aligns parking requirements with actual parking needs in the community and to transition to a system that utilizes shared and leased parking supply. | • Encourages development feasibility<br>• Supports infill development<br>• Encourages high density, mixed-use land use development – which encourages alternative modes and trip reduction<br>• 10-30% reduced parking demand[1] |
| Plan for Mobility Hubs | Transit stations or centers that bring together many different forms of transportation in one location. They may also have other forms of land uses as well to provide convenience for users. | • Enhances mobility by connecting many forms of transportation in one location<br>• Encourages multimodal transportation<br>• 5-15% reduced parking demand[1] |
| Enforcement | Enforcement ensures compliance with parking regulations, which improve overall system efficiency. | • Encourages compliance with parking regulations, which encourages parking efficiency<br>• Impact varies with regard to parking demand |
| Transit Station Parking Planning | Managing transit station parking supports and encourages transit ridership by preserving adequate parking spaces for transit users. | • Supports transit ridership by securing parking for riders<br>• 10-30% reduced parking demand[1] |
| Curb Lane Management | Operate and manage the various curb uses effectively to provide access for a variety of users. | • Efficient use of curb space for all users<br>• 10-30% reduced parking demand[1] |
| Data-Based Decision Making | Use of local data to monitor the parking system and inform policy and practice changes. | • Tracks and monitors parking program trends<br>• No parking demand impacts |

| Strategy | Description | Impact[1] |
|---|---|---|
| Annual Reporting | An annual report communicates data analyses and changes to the parking system. Used as a monitoring and communication tool. | • Tracks and monitors parking program trends<br>• Effective parking program communication tool<br>• No parking demand impacts |
| Flexible Shared Parking | Shared parking is meant to optimize the use of the parking facility by providing more opportunities for use by various properties, which optimizes the use of the parking facility and allows properties to meet their parking demands. | • Distribution of parking demand to optimize use of existing assets<br>• Encourages high density, mixed-use land use development – which encourages alternative modes and trip reduction<br>• 10-30% reduced parking demand[1] |
| Repurpose Underutilized Parking and Infill Opportunities | Lots that are underutilized can be repurposed temporarily or slated for infill development. | • Encourages clustered land use development – which encourages alternative modes and trip reduction<br>• 10-30% reduced parking demand[1] |
| Parking Permit Program | Parking permit programs protect parking spaces for people parking for long periods of time consistently, such as residents or employees. | • Distribution of parking demand to optimize use of existing assets<br>• 10-30% reduced parking demand[1] |
| New Parking Supply for Economic Development | Development of a comprehensive approach to planning parking infrastructure investment as a key element of community and economic development. | • Improves development feasibility<br>• Encourages “Right-Sized” parking for new development<br>• Impact varies – new parking supply encourages the use of vehicles, however, if “right-sized” and planned to optimize existing parking supply, parking demand can be reduced |
| Time Limit Restrictions | Time limits regulate how long vehicles can park in spaces to encourage the turnover of spaces. | • Distribution of parking demand to optimize use of existing assets<br>• Encourages turnover, which improves access to businesses<br>• 10-30% reduced parking demand[1] |
| Paid Parking | Use of meters or smartphone applications to collect a fee to park. Implemented in high demand areas to encourage turnover. | • Distribution of parking demand to optimize use of existing assets<br>• Encourages turnover, which improves access to businesses<br>• 10-30% reduced parking demand[1] |

| Strategy | Description | Impact[1] |
|---|---|---|
| Wayfinding | Themed wayfinding parking directs people to desired parking locations, effectively distributing parking demands. | • Distribution of parking demand to optimize use of existing assets<br>• 5-15% reduced parking demand[1] |
| Plan for Technology | With the wide range of technologies, and new ones continuously emerging, it is important to research and pilot test technologies prior to making the large investment and implementation. | • Distribution of parking demand to optimize use of existing assets<br>• Encourages compliance of parking regulations, which makes parking more available and efficient<br>• Impacts vary due to the wide range of technology options and extent of their implementation and use |
| Transportation Demand Management and Mobility | Transportation Demand Management (TDM) strategies consist of programs, services, and policies designed to encourage transportation alternatives. | • Improves overall mobility<br>• Supports reduced parking ratios<br>• Encourages higher density, mixed-use development<br>• 5-30% reduced parking demand[1]– varies widely depending on the type of strategy and extent of implementation |

*[1]Victoria Transport Policy Institute, https://www.vtpi.org/tdm/tdm28.htm#_Toc128220476*

# 9. Appendices

# 9. Appendices

## Appendix A – Ogden City Parking Study

## Appendix B – South Salt Lake Parking Study

APPENDIX A

# OGDEN CITY

# PARKING STUDY

UTAH PARKING MODERNIZATION INITIATIVE

March 2021

# Table of Contents

# 1. Introduction


# 1. Introduction

The Wasatch Front Regional Council (WFRC) in partnership with the Mountainland Association of Governments (MAG), Salt Lake County, the Utah Department of Transportation (UDOT), and the Utah Transit Authority (UTA) are leading the Utah Parking Modernization Initiative (Initiative) to localize parking data and strategies so that communities within the Region are able to identify parking inefficiencies and appropriate solutions to proactively manage parking. As part of this Initiative, two Partnership Cities, South Salt Lake and Ogden City, were identified to conduct parking studies for their cities. The process and findings of these studies could then be used to localize data rather than relying on national standards.

The purpose of this Ogden City Partnership Parking Study is to assess existing parking demand in Downtown Ogden and for various land uses within the city. The land use data will be compared to the parking requirements identified in the City's parking code as well as national standards. The Study identifies strategies that aim to improve parking and transportation throughout the city. The Study concludes with an implementation plan for for Ogden City that will integrate both parking strategies and travel demand management strategies that support the City's growth and development goals.

This study is also part of a regional effort to identify challenges and solutions that may be highly effective today along the Wasatch Front. The upcoming "best practices" guide for the region can be used to support these decisions.

***It is important to note that this Study, including the data collection, was started prior to the shutdowns and economic impacts of COVID-19 in 2020. At the completion of the study, the full economic impacts and transportation impacts have yet to be realized. The recommendations for this Study are intentionally flexible with guidance, arming the City with the knowledge and tools necessary to make informed, data-driven decisions. The impacts of COVID-19 are not fully known at the conclusion of this report, and will require a second look at development trends, transportation habits, and parking patterns under "new normal" future conditions.***

## History of Parking and Impacts on the Built Environment

Parking modernization is a concept for identifying parking strategies that reflect the world today and are flexible to grow with the future. It investigates and updates the antiquated regulations and policies that have guided parking in many communities across the Region and country since the 1950s. Since the car became a popular mode of transportation, city codes have attempted to identify and require the proper number of parking spaces necessary for development based on the type of land use and size.

Parking policy has largely been reactive to changes in the community—meaning the parking codes change only after a problem has been identified. A proactive approach would involve identifying growth trends and goals within the community, adjusting to prepare for those changes, and guiding growth in a manner that supports larger community goals. Over time, complaints about a parking shortage (typically for a peak period despite a large supply otherwise), often led to parking policies and economic practices that shaped cities in ways that are now considered a detriment. The following images show how parking has been handled historically across the country.

### Parking in the 1920s

- Traffic laws and regulations were starting to emerge
- Cars become common but streets still mixed with cars and pedestrians
- Historic downtown building rows added space for parking on-street.
- Parking lots were starting to form around land uses to accommodate cars

### Parking in the 1950s – 1980s

- Cars are favored over transit and many local transit services abandoned
- Parking codes adopted to ensure parking around land uses
- Piecemeal approach, by project
- Encouraged the pattern of isolated buildings ringed with parking familiar to us today

### Parking in the 1980s – 2000s

- Surface lots are prominent feature in downtowns and suburbs
- Encourage vehicle travel and discourage walking
- Deteriorating community attractiveness and connectivity
- Reliance on ITE and ULI National Standards
- Awareness growing that surface parking lots often negatively impact net revenues

### Parking Today

- Focus on connectivity and multimodal travel to reduce vehicle travel and parking
- Emphasis on building patterns that enhance walkability, character, and attractiveness
- Parking seen as tool to support economic growth and viability
- Growth and transportation intertwined
- Changing nature of retail
- High land costs and shift toward parking garages make parking an expense
- Willingness to share and manage parking cooperatively
- Redevelopment agencies and cities negotiate parking requirements to suit both project and neighborhood goals
- Using parking studies and monitoring to balance supply and demand

*Source: https://www.ogdencity.com/965/Community-Economic-Development*

## Parking on the Wasatch Front

Communities across the Wasatch Front are experiencing an evolution of city design. Commutes, shopping patterns, and personal transportation habits are changing. Parking needs to evolve, too. Some commonly faced challenges include:

- An oversupply of parking for many land uses. This is particularly concerning in downtown areas or areas with mixed uses or higher density, such as areas near transit stations. Parking codes tend to cater to suburban-style development patterns. Requiring parking for every individual land use in close proximity does not adequately reflect how mixed-use, higher density areas operate.
- Concern for downtown/city center character, economic success, and diversity where vacant parking may act as a barrier.
- Little to no management and control of existing parking assets, both public and private, creating an imbalance between supply and demand.
- Concern for increasing costs and feasibility of new projects, due in part to the high cost of providing parking and its impact on affordability.
- Lingering resistance to paying for parking. However, this is giving way to paid parking in highly desirable areas.
- Reliance on national standards or standards from other communities that don't match the unique character, and growth goals for the community.

## What Does It Mean to Modernize Parking?

Modernizing parking regulations, standards, and practices can mean many things depending on the community. However, generally speaking, to modernize parking management means to consider a number of community elements, beyond parking demand and land use.

First, a number of goals for the City must be recognized. The following graphic depicts various goals for a parking system. These are not goals traditionally thought of when thinking of parking, at least not 10 to 20 years ago. Today, parking is considered part of the larger fabric of the community, integrating and connecting land use, transportation, and community character.

**Overarching Parking Program Goals**

- Support Existing Businesses and Residents
- Create Attractive Places
- Promote Equity
- Promote Alternative Transportation
- Promote Economic Growth
- Enhance Safety
- Promote Sustainability

## What is a Parking Study?

A parking study presents information on a community's parking system. First, an area is designated to study. This can be a downtown area or any area that is of interest to monitor for the community. The study process includes collection of pertinent data. At its base, this includes parking inventory and number of parked vehicles to determine occupancy for each facility in the defined area. The study should also evaluate existing policies that dictate parking regulations and practices for enforcing those regulations. Based on the analysis, the study will draw conclusions on what is working well and what can be improved with regard to parking. The data informs what strategy to implement next to make the improvements and what strategies to plan for in the future.

Once complete, the data compiled in the study is now a baseline of information for conducting updates to the data annually and continuing to implement recommendations as the data dictates.

**A successful parking system should…**

1. Support connectivity to transportation, land use, and economic development;
2. Provide access to businesses and destinations, linking parking to the economic enhancement of the community;
3. Serve as a transition point where alternative modes of transportation can cross paths and connect; and
4. Play a role in sustainability, measured by reducing traffic, congestion, and, therefore, greenhouse gas emissions.

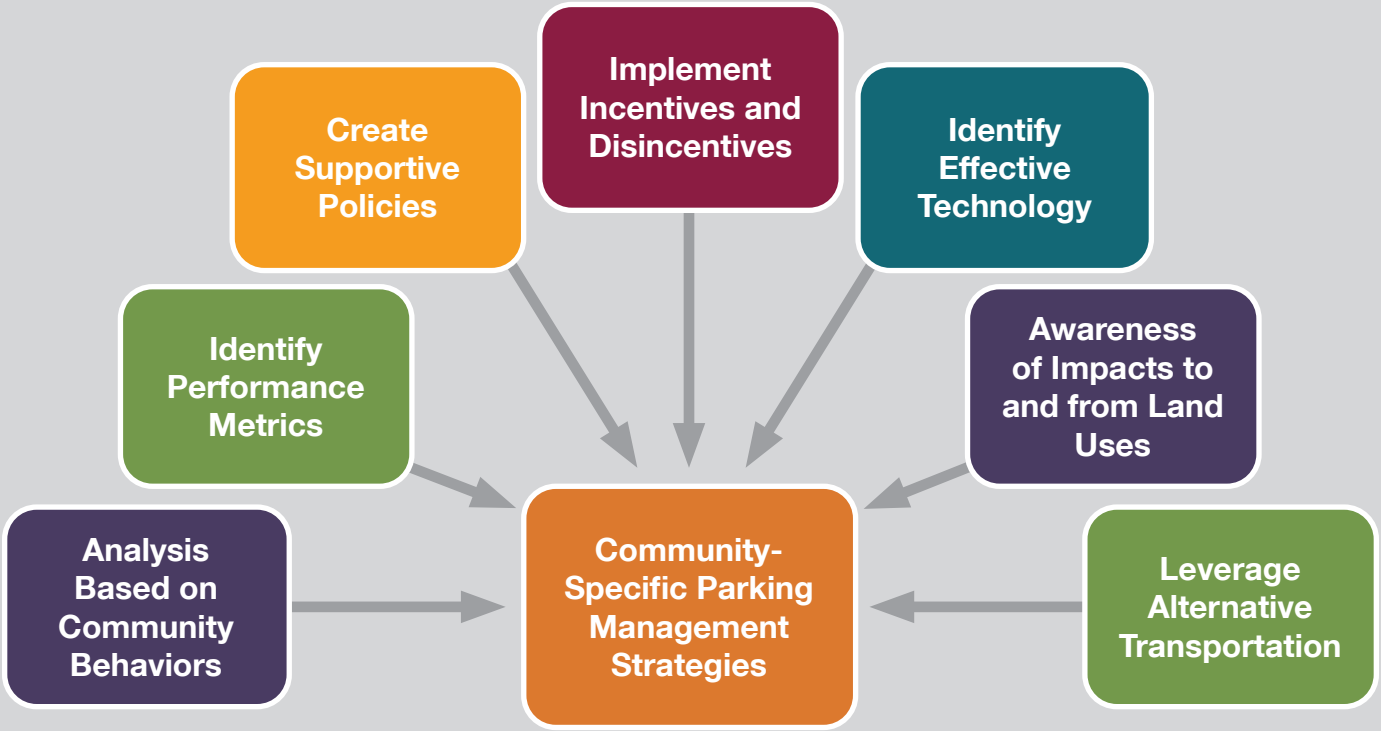
Second, several elements about the community can be studied to get an accurate depiction of the parking system as well as the community characteristics that impact the parking system. The graphic below demonstrates many of the community-specific data that could be collected, analyzed, and/or reviewed as part of the study process. The depth to which these are all analyzed can vary depending on the goals, time, and money available to study them. These are all community-specific attributes, not data taken and applied from another community or from national standards, thus creating a more customized solution.

## Planning Process

For this study, each of the below attributes were reviewed and analyzed in some capacity. This document includes the following sections:

- Background information on the City's planning efforts and definitions for this study
- Review of existing data for Downtown Ogden and a review of land-use-specific demand observations
- Summary of how Transportation Demand Management can improve parking demand
- Summary of a peer roundtable discussion
- Recommendations by category
- Data collection plan and metrics
- Implementation timeline

**Community-Specific Study Attributes**



# 2. Planning Context

# 2. Planning Context

Ogden City has completed various plans to outline goals and framework for the City's future development. The following plans are notable to consider when modernizing the parking initiative in the City.

### *1977 Downtown Plan*

The 1977 Downtown Plan had as an objective to make the Downtown competitive with regional shopping malls. One major action was to transform the existing Downtown parking facilities, comprising meters, paid parking lots, and business lots, into a more Downtown and user-friendly parking system. The Plan determined that parking needed to be free. The Plan also developed strategic parking areas for Downtown Ogden. The Plan created 2,971 additional stalls between the City of Ogden and the Ogden RDA.

### *2002 General Plan*

The most recent General Plan for the City of Ogden highlights key visions for the future development of the City, including information on community identity, economic development, housing, land use, open space, and transportation. The following goals are implemented for the future of Ogden in the 2002 General Plan:

- Implement community facilities and services that provide users with a healthy and safe community.
- Identify a community identity powered by an environment that is people-friendly, historic, artistic, and architectural.
- Enhance economic development with the intention of revitalizing older business areas and improving the standard of living, promoting a business-friendly environment.
- Enhance environmental resources throughout the City of Ogden.
- Maintain housing adequately, providing a vast diversity in cost and density while improving safety and stability in neighborhoods.
- Maintain park and recreation facilities so that they are safe, clean, and accessible, providing a citywide network of multi-use paths in addition to other facilities for users.
- Provide safe transportation methods that are accessible throughout the entirety of the city.

### *2009 Central Business District Community Plan*

The Central Business District (CBD) Community Plan analyzed the existing conditions of the CBD in Ogden and comprised community and political commentary to identify future objectives and goals for the District. The Plan aims to enhance community identity, land use, and transportation, focusing on the improvement of land use for parking, development of alternative methods of transportation, improvement of vehicular movement, and enhancement of the District's urban identity in the Downtown area.

The following are overarching goals for Ogden based on the documents referenced in the Planning Context.

- Goal 1: Enhance economic development through revitalization of older business areas.
- Goal 2: Improve housing opportunities and safety in communities.
- Goal 3: Emphasize land use revitalization within the city.
- Goal 4: Provide improved access to alternative methods of transportation.

These goals all work to improve the quality of life within Ogden City through focusing on the transportation system and land use, and how this connects with the economy.

The focus of this study is to examine the existing parking demand in the Downtown area and for various land use sites around the city. The results of the observed demand for the land use sites will be compared to the existing code requirements as well as national standards so that the City can right-size their parking requirements.

# 3. Existing Parking Conditions

# 3. Existing Parking Conditions

This section explores the data realities from sources to assess the existing parking conditions from two analyses:

1. Downtown parking analysis
2. Parking occupancy data from sites that represent land uses within the city

The existing parking conditions are analyzed through the identification of parking inventory as well as occupancy at various times. Identifying trends of the existing parking conditions will aid in identifying challenges and opportunities in the parking system and producing strategies to improve it.

## Definition of Terms

The following terms and concepts are used throughout this initiative report to describe the performance of the parking system or individual components of the City's system.

**Effective Capacity:** Effective capacity is an industry-accepted occupancy threshold for parking facilities that indicates the efficiency of a facility of system. Based on industry standards, the primary threshold for effective capacity is at 85 percent of the total capacity of the parking system or facility in question. Greater detail on this term is provided on the next page.

**Parking Demand:** Parking demand is the projected number of vehicles generated by visitors or tenants of a land use. Each business or land use generates a specific quantity of demand for parking spaces to accommodate their users. The total number of spaces generated by business or land use is based on the land use intensity (often building square footage or number of dwelling-units).

**Parking Facility:** A parking facility refers to any on- or off-street location designated for vehicular parking.

**Parking Occupancy:** Parking occupancy is the percentage of occupied spaces in a parking facility at any given time. This ratio is calculated by dividing the number of observed vehicles parking in a facility by the number of total spaces in that facility.

**Parking System:** A parking system refers to the entire collection of parking spaces, parking facilities, technologies, equipment, policies, regulations, and personnel that work cohesively to provide parking in a given area.

**Transportation Demand Management (TDM) Program:** A TDM program is a set of measures including policies, economic incentives, and programmatic measures that aims to reduce vehicle miles traveled and, in turn, improve traffic congestion, and parking demand. TDM strategies often impact environmental, conservation and sustainability efforts as well. They can include measures that work to reduce single-occupancy vehicle trips, increase vehicle occupancy, and/or shift travel to other modes or non-peak travel periods. This is often achieved through financial incentives and local infrastructure and land use policies that constrain parking supply, densifies uses, and provides a convenient suite of transportation options, including walking, bicycling, transit, and rideshare.

## Performance Metrics and Thresholds

Parking occupancy is a key performance measure used to evaluate the effectiveness of the parking requirements and observed demand. The industry-accepted thresholds for parking occupancy are shown below. The ideal goal is to have a parking system, site, or urban center where 70% to 85% of the available parking spaces are occupied during the peak conditions. If too many spaces are occupied, then the remaining spaces are too hard to find. If too few spaces are occupied, then the land is not being used to its greatest potential and the parking can absorb more demand.

| Under 70% Occupancy | 70-85% Occupancy | Over 85% Occupancy | Over 90-95% Occupancy |
|---|---|---|---|
| Under Capacity | Optimum Capacity | Effective Capacity | Residential Effective Capacity |

An exception to the 85% effective capacity threshold is for residential land uses. Residents are extremely familiar with their parking options and will habitually park in the same location year after year. Therefore, the parking occupancy threshold can be increased to 90%, or even 95% in some cases, for these types of land uses.

The following are broad examples of parking management strategies that can be introduced as parking occupancies increase. The intention is not to immediately jump to more intense parking management strategies. This can cause pushback and concern from businesses and residents. Rather, strategies should be implemented gradually, giving time to analyze trends and make minor adjustments that improve the parking program that are based on data and informed by the community's needs.

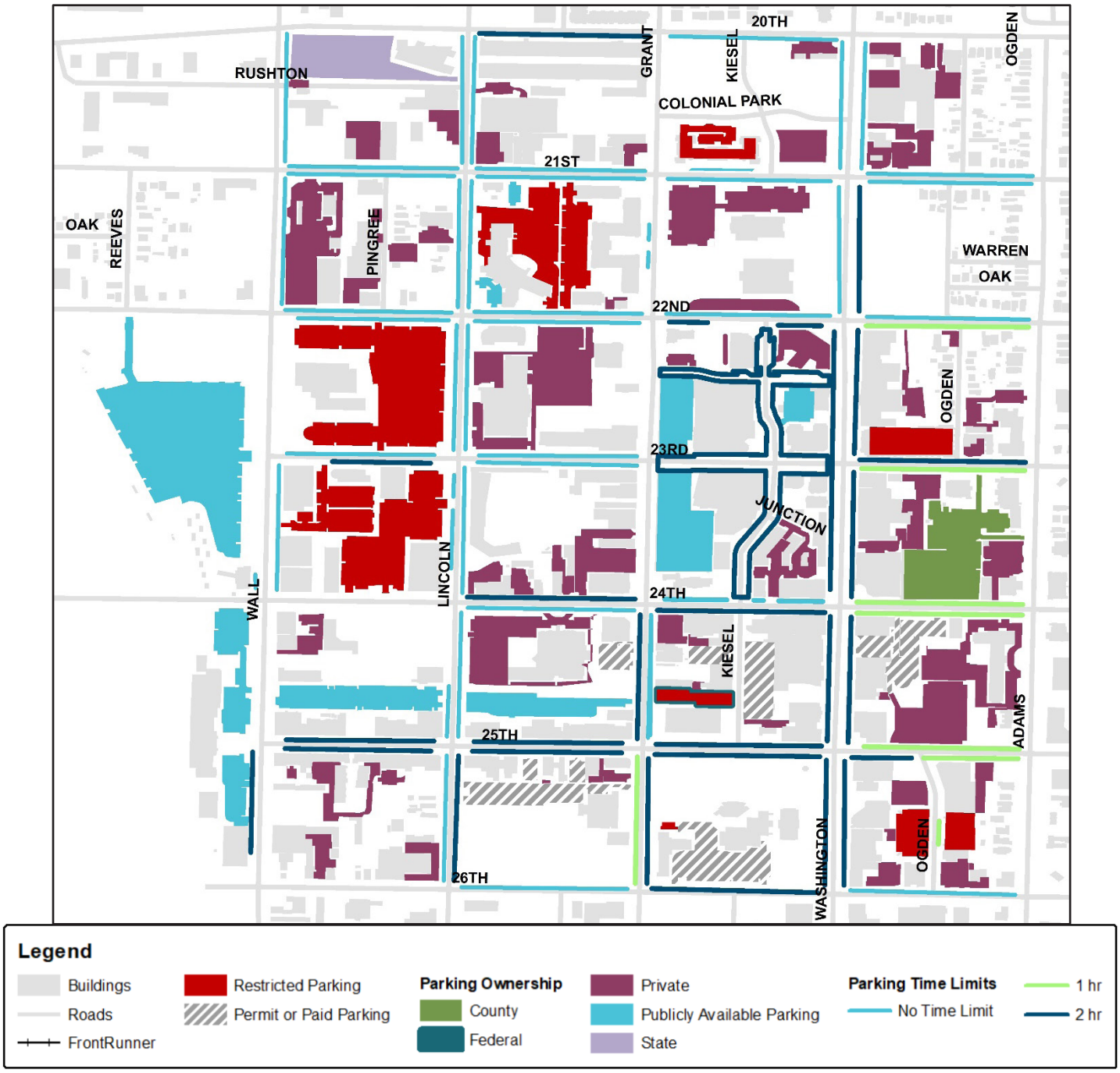
| | |
|---|---|
| **No/Minimal Regulations** | • Parking is available and abundant<br>• No concern from residents and businesses |
| **Time Restrictions** | • Promote efficient use of parking through turnover, encouraging long-term parkers to look for other spaces or arrival options<br>• Managed through signage and enforcement |
| **Permit Parking Protections** | • Introduce permit parking system that restricts who can park in specific lots or streets (e.g., residential neighborhoods)<br>• Helps manage the overflow of parking from adjacent commercial areas |
| **Transportation Demand Management** | • Improvements to cycling, walking, transit, micro-mobility amenities over parking improvements |
| **Introduce Paid Parking** | • After resources are exhausted and parking demand in area grows past the acceptable threshold (85%), paid parking should be introduced |
| **Introduce Additional Parking** | • If parking demands continue to exceed the acceptable threshold (85%), more parking should be provided |

## Downtown Ogden Parking Analysis

Ogden City Planning staff conducted parking occupancy and inventory counts in the Downtown public and private parking facilities in Fall 2019. Data was collected over two weekdays, during morning, afternoon, and evening periods for all facilities in the Downtown.

Ogden City's Downtown parking facilities, on-street and off-street, public and private, are shown in the study area map below, **Figure 1**. The Downtown area experiences the highest concentration of users and is also considered a hub of development and entertainment for the City. The inventory of the study area is divided by parking ownership.

**Figure 1 – Downtown Ogden Study Area and Parking Facilities by Type**



For each facility and block shown in **Figure 1** above, the number of spaces was counted by parking type. **Figure 2** below provides a breakdown of the parking inventory. As the figure shows, the majority of the parking in the Downtown area is private, meaning only certain patrons or employees can park in those lots. Less than half of all parking, on-street and off-street, is available to the public. A look at the parking occupancy in the next few graphs and maps will indicate whether the parking supply is adequate for those parking in Downtown Ogden.

**Figure 2 – Downtown Ogden Parking Inventory**

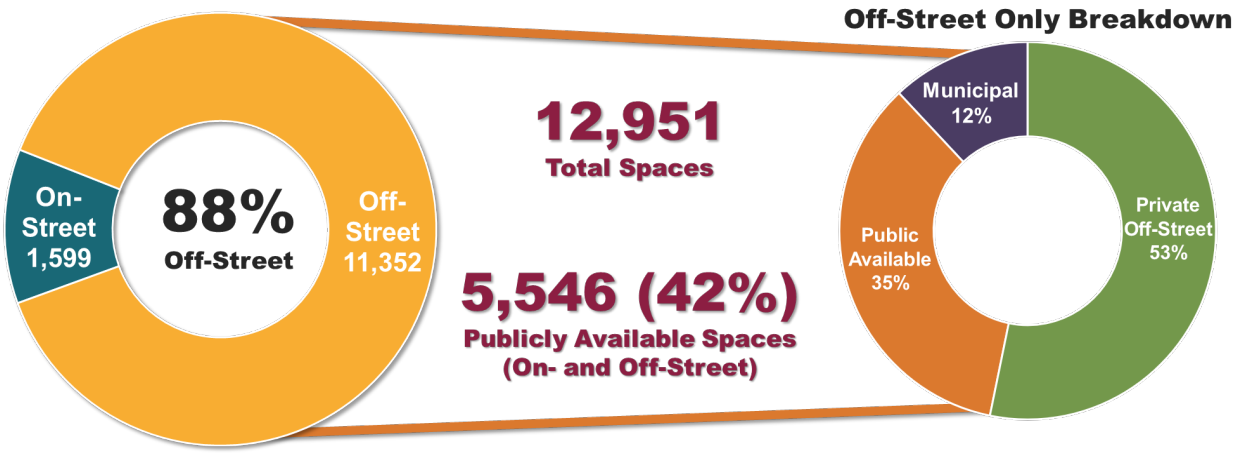
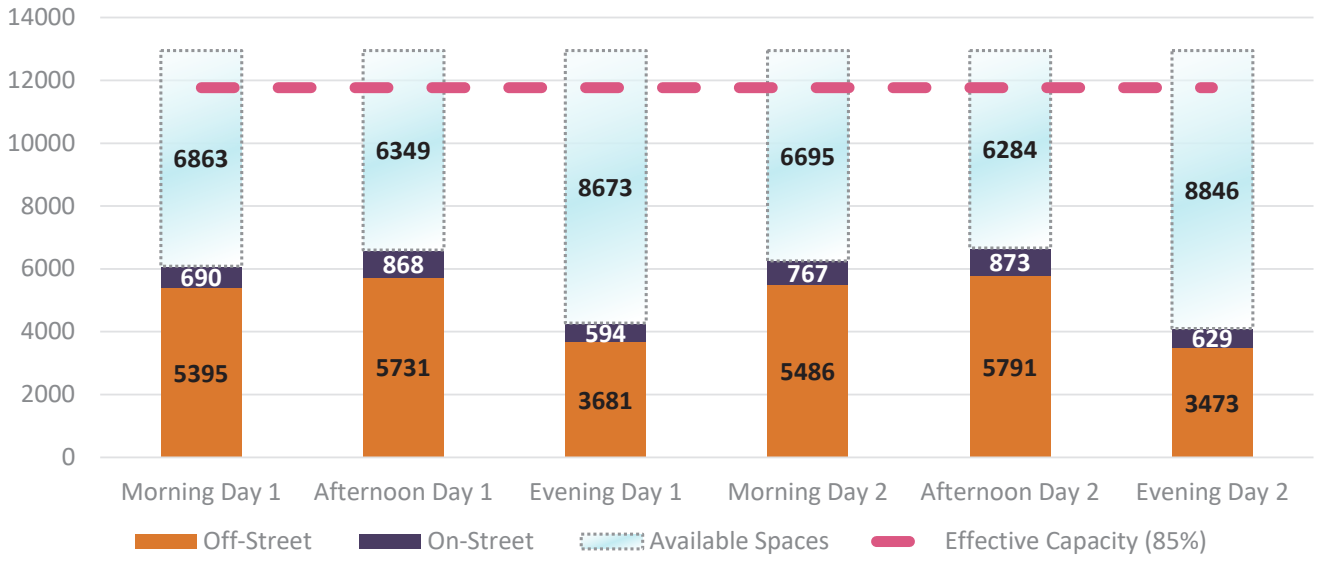



**Figure 3** displays the number of parked vehicles in Ogden's Downtown on-street and off-street facilities. **Figure 3** also shows the number of spaces that were observed to be available. Again, the Effective Capacity line is included as a reference that indicates when the Downtown would be experiencing reduced capabilities. As demonstrated in the graph, the number of parked vehicles is significantly lower than the Effective Capacity line, indicating that the Downtown, as a whole, is underparked.

**Figure 3 – Number of Parked Vehicles vs. Available (Unoccupied) Spaces**



Based on the number of vehicles parked compared to the total number of spaces, the parking occupancies for different parking types was calculated. **Figure 4** and **Figure 5** display this occupancy data in different breakdowns by parking type and time of day. The occupancies in both graphs are compared to effective capacity, where 85% capacity represents a system where users will have a difficult time finding the remaining 15% of open spaces throughout the system.

**Figure 4 – Off-Street and On-Street Occupancy by Time of Day**

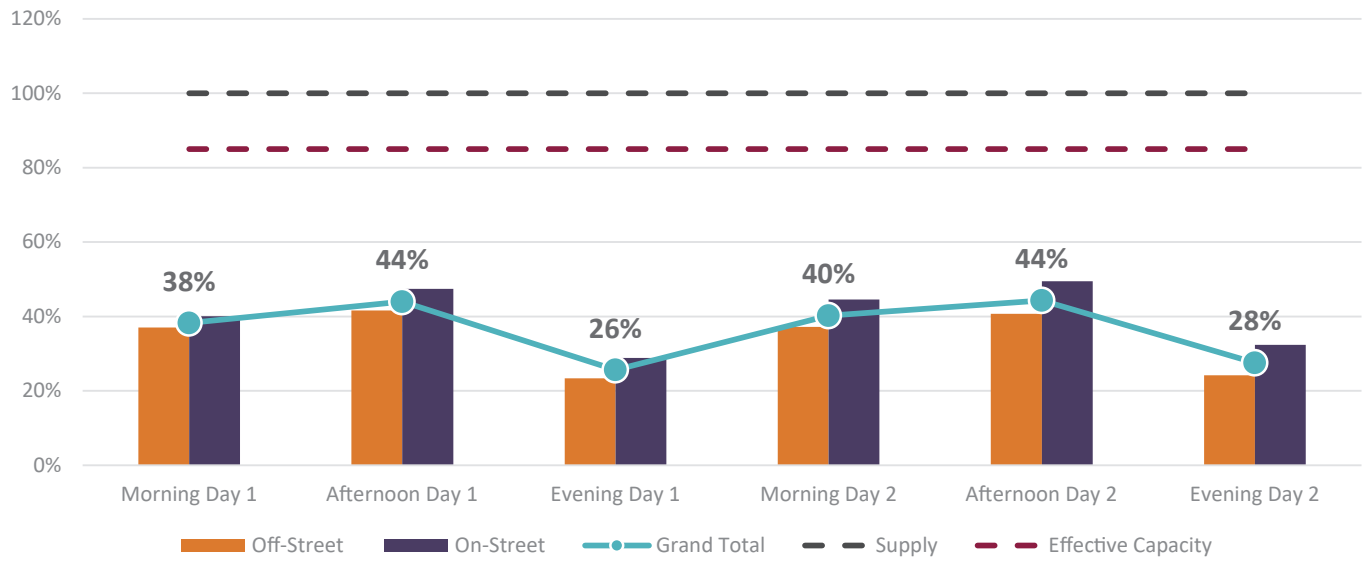
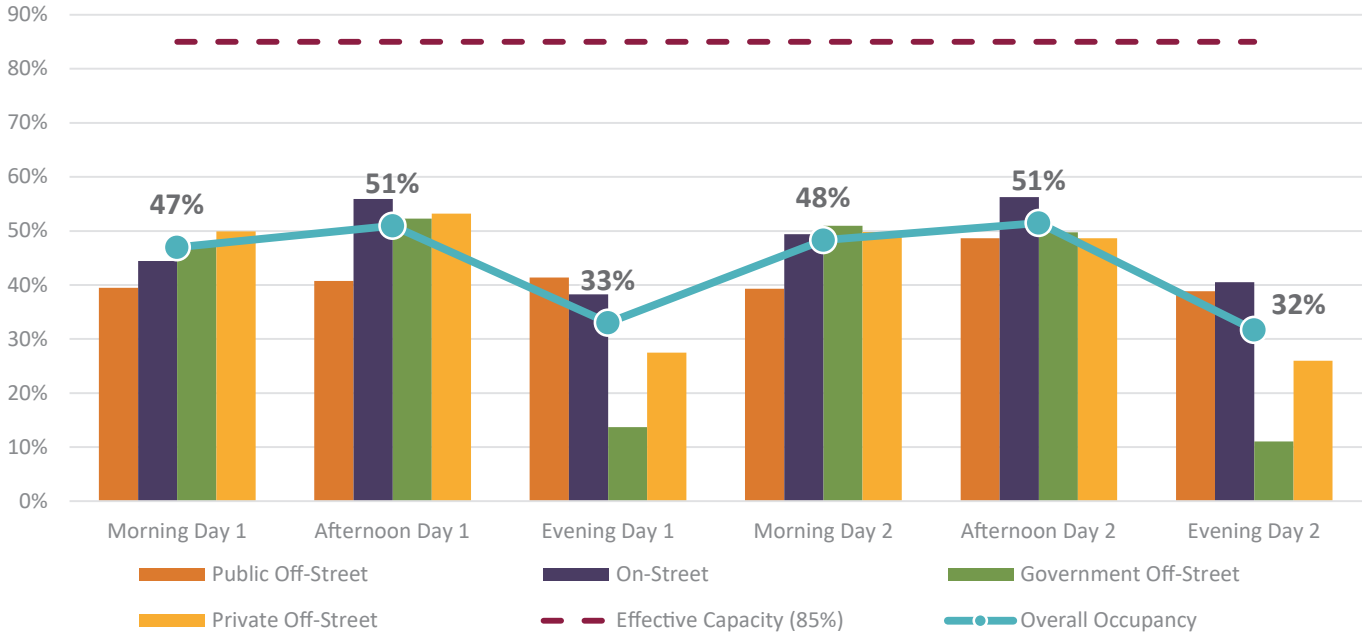
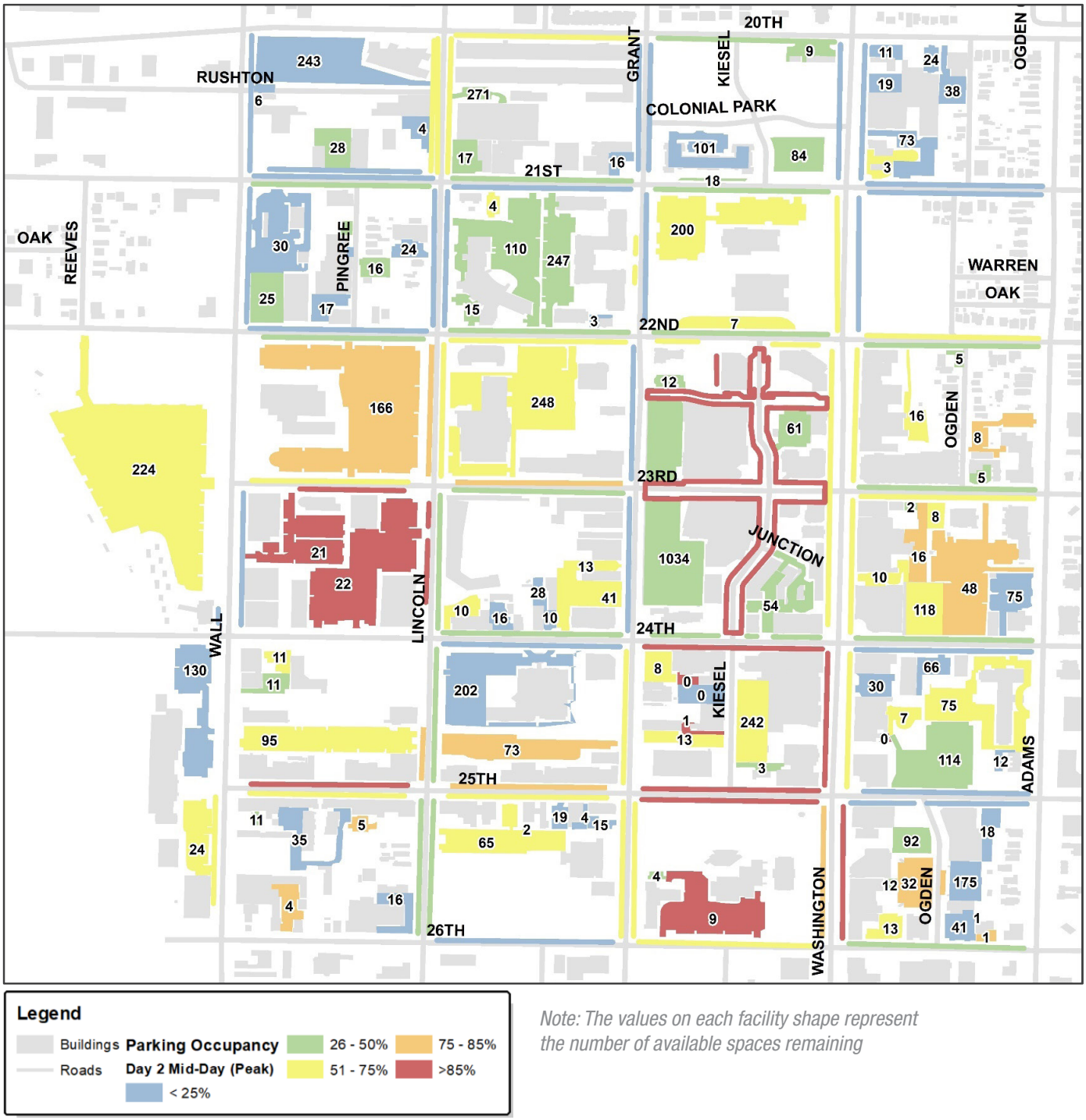



**Figure 5 – Occupancy by Type and Time of Day**



The graphs show that, overall, parking is available in Downtown Ogden. In fact, during the peak, which was found to be mid-day, the parking occupancy for all parking observed in the Downtown was 50%. However, this does not mean that there are no facilities or blocks where parking has reached or exceeded the effective capacity threshold. **Figure 6** illustrates the observed parking occupancy for each facility in the Downtown during the peak hour, which was afternoon of Day 2.

**Figure 6 – Peak Parking Occupancy Map**




*Note: The values on each facility shape represent the number of available spaces remaining*

## Downtown Ogden Parking Analysis Findings

Despite the overall low occupancy in the Downtown, there are pockets of high occupancy that can result in a perceived parking problem by visitors or employees who park in those facilities. The following findings were made for the Downtown area:

- High on-street and low off-street parking are seen between 22nd and 25th and Grant and Washington. Much of the off-street parking in these blocks is private or restricted, with the exception of the Junction parking garage spanning 2250 to 24th Street along Grant. Parking management strategies can be implemented in this area to encourage users to park in the public off-street garage and/or on adjacent blocks that have lower occupancies.
- The historic commercial corridor along 25th also experiences optimal to high parking demands for both on-street and off-street parking. This is an area where parking regulations should be adjusted.
- Downtown parking facilities can absorb more demand, either from infill development or increased patronage to the Downtown. There are incentives that can encourage both types of demand; however, it must balance with the needs of employees who are already finding it difficult to find available parking.
- The two public lots north of 25th between Wall and Grant have a total of 584 spaces. However, during the peak period, the two lots have 186 spaces available between them. Furthermore, these lots allow those with an employee parking permit to park longer than the 2-hour time limit. Businesses in the area have requested approximately 600 permits for their employees for the 584 stalls. However, these permits are not all in use at the same time of day or day of the week. The current occupancy suggests that maintaining the current regulations (2-hour time limit unless there is a valid permit) is appropriate. These are two lots to watch each year, however, both in terms of occupancy and employee permit sales. The parking occupancy is optimal, however, it could quickly shift to effective capacity with both the public and employees parking there. Assessing the lots annually will allow the city to make necessary adjustments to spaces, permits, or surrounding facilities to ensure there is adequate parking for all users.

## Land Use Typology Parking Analysis

Land use typologies were chosen to be observed and evaluated against the existing parking code and national parking standards. The intention of the comparison is to modernize the parking standards for the City so that new development has right-sized parking associated with it. The land use typologies selected for this analysis included:

- **Small Commercial:** Mix of commercial land uses along a corridor. Small commercial land use typically varies in size between 1,000 and 16,000 square feet, requiring approximately 1,870 parking spaces.
- **Big Box Retail:** Box commercial site that is surrounded by parking. If there are other small land uses on the same site (i.e., gas station), they will be included as part of the site. This land use is commonly between 130,000-140,000 square feet requiring 450-890 parking spaces.
- **Urban Housing:** Housing units (e.g., apartments or condos) that are located in an urban or downtown setting. The housing can be in a standalone building or in a mixed-use building. Due to the urban setting of the housing, the likelihood of having a close proximity to transit stop or station is also high.
- **Suburban Neighborhood:** Multi-family residential, not in a mixed-use building. Often low density.
- **Affordable Housing:** Affordable housing may be located in both a suburban and urban setting. There is typically a lower parking requirement for affordable housing compared to market rate housing.
- **Transit Station:** Each transit station presents unique challenges and opportunities based on its surroundings and characteristics. The transit station typology is evaluated on type of service, ridership, surrounding land use, street network and walkability, and land constraints. The size of this typology is 1,300 monthly weekday average boardings throughout Ogden with 600 affiliated parking spaces.

**Parking inventory and parked vehicle counts were collected over:**

**1 Weekday** | Tuesday, March 17th

**1 Weekend Day** | Saturday, March 7th

**7:00 am - 7:00 pm** | Both Days

*It is important to note that the data was collected prior to government-mandated shutdowns related to COVID-19. The analysis that results from this data is pre-COVID and does not reflect the reduced parking and traffic and transit demands experienced from March 2020 through December 2020.*

## Parking Occupancy

This section of the report examines the parking occupancies observed at sites that represent the above-listed land use typologies. **Figure 7** and **Figure 8** below present the parking occupancy trends for each land use typology by weekday and weekend, respectively.

**Figure 7 – Weekday Parking Occupancy by Land Use Typology**

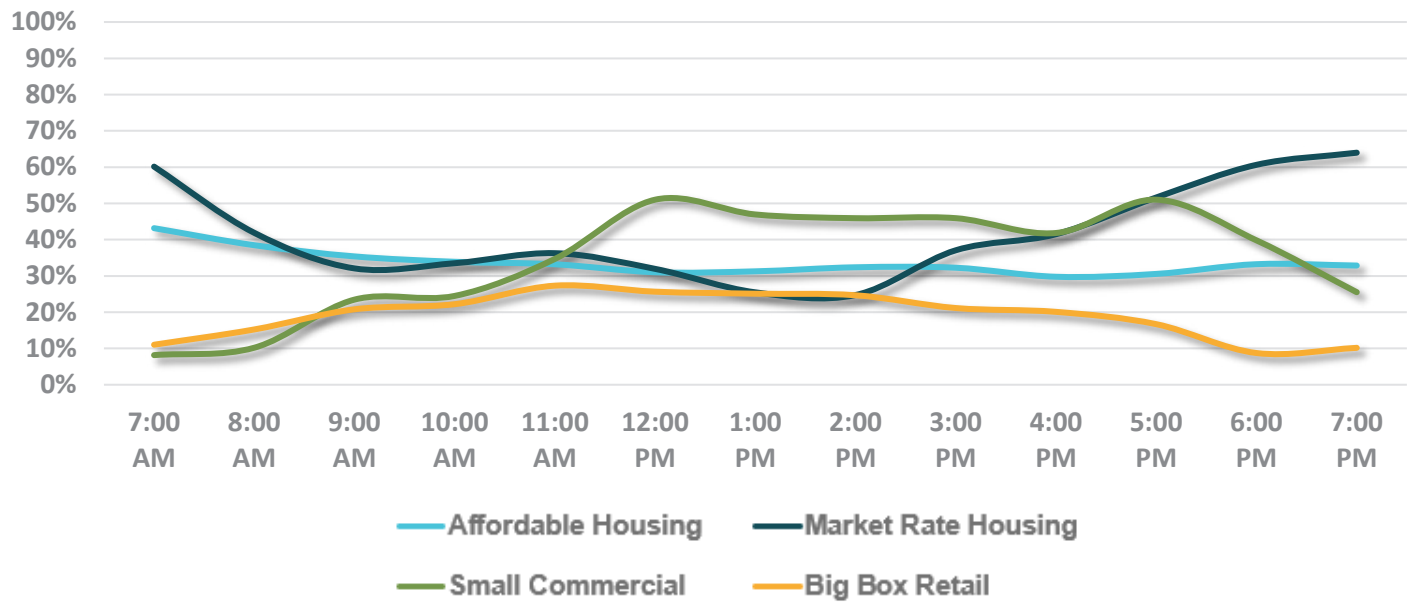
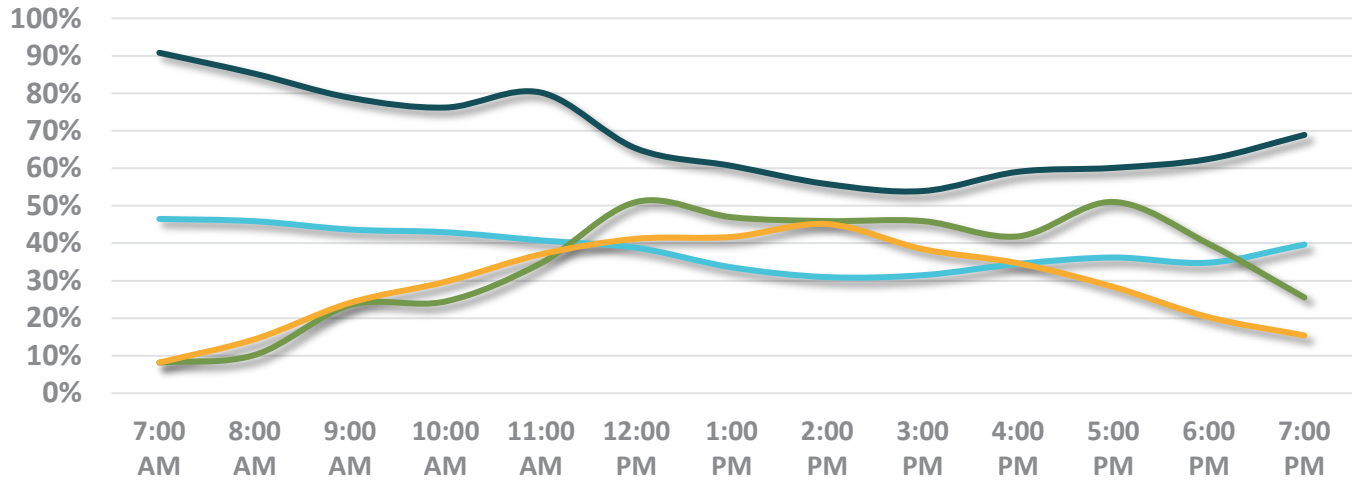



**Figure 8 – Weekend Parking Occupancy by Land Use Typology**




The graphs show that parking occupancies for the above-listed land uses were primarily below the 85% effective capacity threshold, with the exception of market rate housing. Market rate housing follows a typical trend for that land use with higher demand in the mornings and evenings and dipping during the workday. During the peak mornings and evenings for this use, the parking occupancy is at 90%, which is acceptable for this land use. The other land uses, including affordable housing, have relatively consistent occupancies at all times.

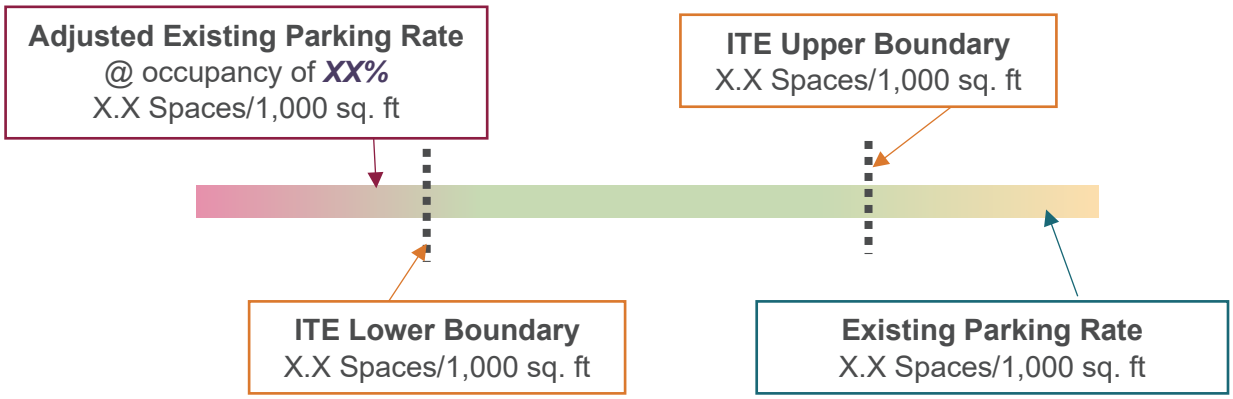
## Occupancy Data Comparison by Land Use Typology

This section compares the observed parking occupancies, as described in the previous section, to what is required in Ogden City Code (Existing Parking Requirement) and national standards as defined by the Institute of Transportation Engineers (ITE). For this comparison, the ITE Parking Generation, 5th Edition was used, as well as the Ogden City Code 15-12-3A and 15-34-4.

The following symbols are used to indicate whether the code for that land use provides adequate parking. One of the symbols will be shown for each land use to depict the performance of the land use.

| Symbol Key | | Impacts to Urban Form |
|---|---|---|
| **Balanced** |  | The code is adequately providing parking. The parking system is balanced and allows for opportunity for continued growth. |
| **Overparked** |  | The code requires too much parking and is resulting in parking that is not used. The urban from is vacant and properties are disconnected. The land use is not being used to its greatest economic potential. |
| **Underparked** |  | The code does not require enough parking and results in spillover parking. New investments and development can be deterred because the parking availability is constrained. |

In addition, each land use will also have a bar (like the example shown below) that depicts a range from underparked (red), optimum (green), and overparked (yellow). The national (ITE) standards (upper and lower standard boundaries when available) are also shown to highlight the national optimum range for parking rates. The bar will also callout the existing parking rate per the code, so it can be visually compared to the ITE standard. Another callout along the bar will be an adjusted existing parking rate. This adjusted rate takes into account the observed occupancy and the 85% threshold. The adjusted rate reflects a rate that would provide optimum level of parking for the land uses observed.

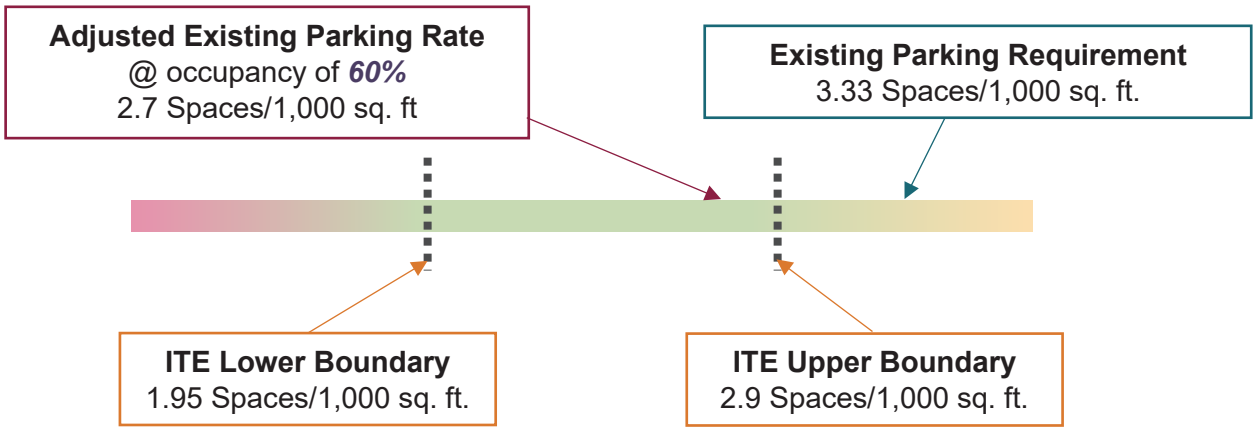


## *Small Commercial*


The small commercial land use typology is a variety of types and sizes of commercial, retail, office, and service land uses. There is sometimes on-street parking or a small parking lot in the front of the building and perhaps in the back as well. The sizes of the buildings vary, but they are typically within 2,000 sq.ft. to 16,000 sq.ft.

The observed parking occupancy for the small commercial land use typology saw a peak demand of 60%, showing that the parking is somewhat underutilized. When examining the existing parking requirements for this type of land use in Ogden, they were found to exceed national requirements set by ITE.

If the existing City rate was adjusted to reflect the 60% parking demand, taking into account the 85% threshold so as not to maximize parking, the resulting rate would be 2.7 spaces/1,000 sq. ft. This adjusted rate is within the boundaries of the national standard that ITE sets.



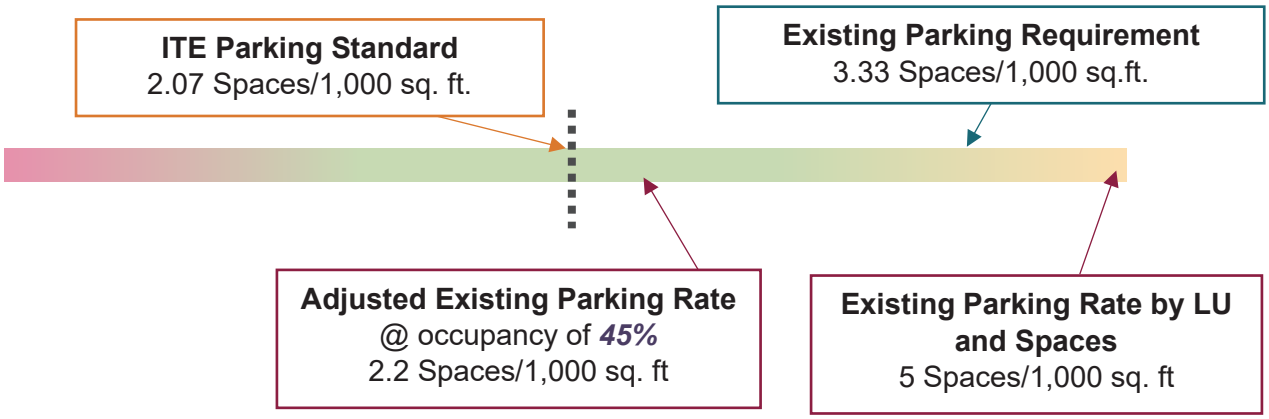

***The required parking rate for this land use should be reduced from 3.33 to 2.9 or lower, especially in higher-density areas like Downtown or areas within a 1-2 block distance from Union Station, so that the land uses are optimized and parking supply does not detract from the Downtown experience.***

## *Big Box Retail*

Big box commercial retail land use typology includes large single-use retail buildings, approximately 80,000 sq.ft. or larger. This use is characterized by having a large parking lot in the front of the building.

The existing parking inventory for this land use produces a parking rate of 5 spaces per 1,000 sq.ft. which is almost two spaces over the City's current parking requirements. The observed parking demand was 45% at the peak. Together, this data indicates that big box developers are building parking in excess of what is being required.

If the existing City rate was adjusted to reflect the 45% parking demand, taking into account the 85% threshold so as not to maximize parking, the resulting rate would be 2.2 spaces/1,000 sq. ft. This rate is below the national standard that ITE sets. This measure further shows that the current parking requirement not only surpasses ITE's recommended parking ratios but results in heavily underutilized parking and an excess of spaces.



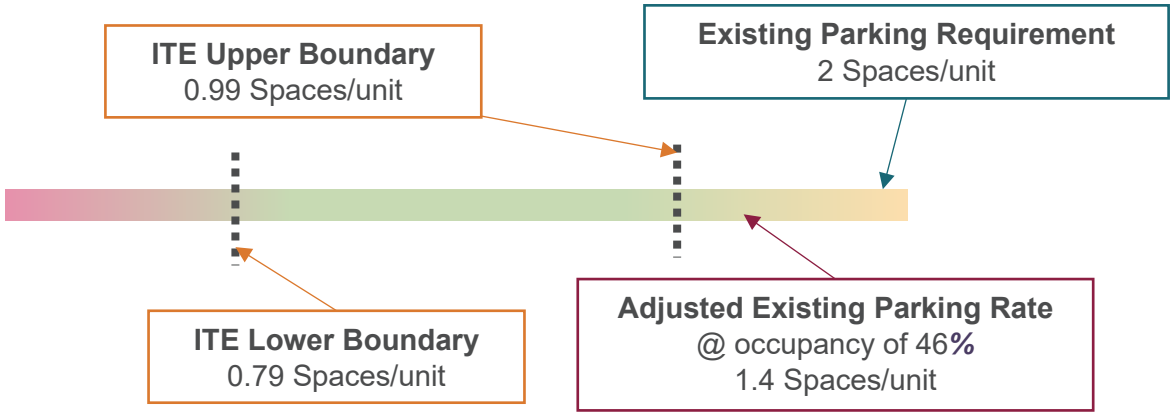

***The required parking rate for this land use should be adjusted and developers should be discouraged from providing excess parking unless there is valid justification, such as an understanding that the parking will be partially developed in the future and the parking will be shared among tenants.***

## *Affordable Housing*

Affordable housing are residential condominiums or apartments or town homes that have rents that are set below market rate values.

The observed occupancy for the affordable housing for this study was 46% at the peak, showing that the parking is underutilized. When examining the existing parking requirements for this type of land use in Ogden, they were found to exceed national requirements set by ITE.

If the existing City rate was adjusted to reflect the 46% parking demand, taking into account the 85% threshold so as not to maximize parking, the resulting rate would be 1.4 spaces/unit This adjusted rate is higher than the national standard that ITE sets; however, it reflects the utilization of this land use for the City.



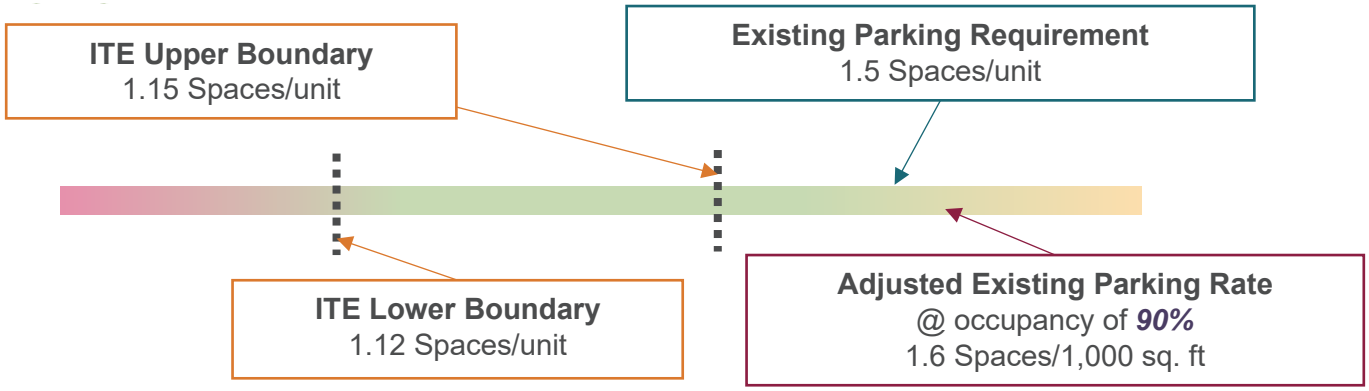

***The required parking rate for this land use should be reduced from 2 spaces/unit to 1.4 spaces/unit, especially in higher-density areas like Downtown or areas within a 1-2 block distance from Union Station, so that the land uses are optimized and parking supply does not detract from the neighborhood character.***

## *Market Rate Housing*


Market rate housing are multifamily residential condominiums or apartments or town homes that are priced at rates determined by the market. For this study, the market rate housing was in an urbanized setting.

The observed occupancy for market rate housing for this study was 90%. As discussed previously, this is an acceptable level of occupancy for residential land uses because residents are familiar with the parking on the site and will habitually park in the same location.

Based on the observed occupancy for this land use typology, the existing parking requirement is found to be balanced. If the existing City rate was adjusted to reflect the observed parking demand, the resulting rate would be 1.6 spaces/1,000 sq. ft.



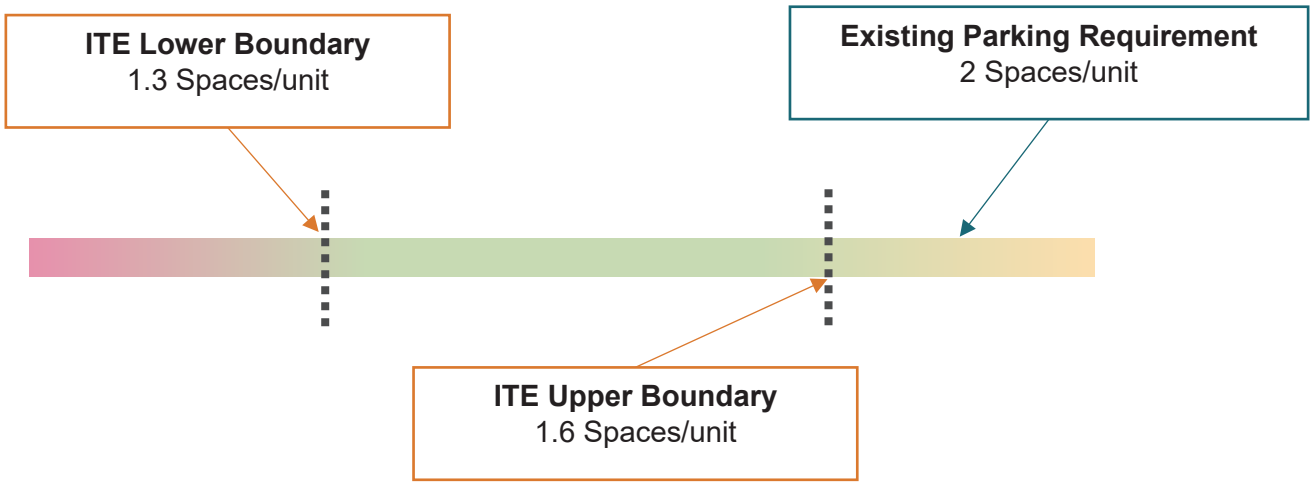

***The existing parking requirement for the City is found to be balanced for this land use. However, at a 90% parking occupancy at peak, the parking should be monitored closely. Small changes could result in needing to increase the rate to 1.6 spaces/1,000 sq. ft. in the future as the population grows or if new urban housing developments are constructed.***

## *Suburban Neighborhood*

The suburban neighborhood land use typology is characterized by single-family residential housing located outside of the Downtown and urbanized areas of the city.

The observed occupancy for suburban neighborhood housing for this study was 90%. As discussed previously, this is an acceptable level of occupancy for residential land uses because residents are familiar with the parking on the site and will habitually park in the same location. The suburban neighborhood typology has an existing parking requirement of 2 spaces per unit, exceeding the ITE parking standard by 0.4 spaces per unit.

Based on the observed occupancy for this land use typology, the existing parking requirement is found to be balanced. Due to the suburban nature of the housing and the adequacy of the observed parking demand, an adjusted existing parking rate was not calculated for this land use.

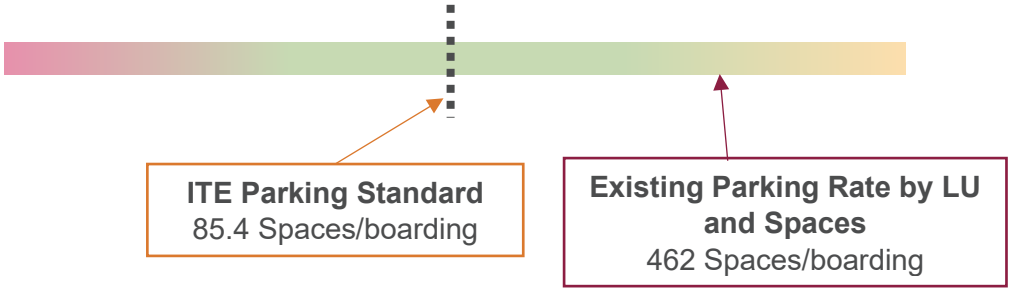



***The existing parking requirement for the City is found to be balanced for this land use and adjustments to the parking code is not recommended.***

## *Transit Station*


The transit station land use typology is characterized by a large transit stop where multiple lines and types of transit (light rail, bus) converge. Ogden's Intermodal Transit Center, north of Union Station, located on the west side of Downtown Ogden was the observed site. The transit station is served by UTA's FrontRunner commuter rail and bus services. It is adjacent to the historic 25th Street.

The peak parking demand at the Intermodal Transit Center was observed to be 70%, which is within the optimal range. Unlike other land uses observed, transit stations often don't have a building size or number of units to evaluate against. Therefore, the number of spaces per boardings was used. Because this land use is considered to be balanced, an adjusted parking rate was not calculated.




***The existing City parking requirement for transit stations is found to be adequate and no recommended changes are suggested.***

## Ogden City Ordinances

Other policies within the Code impact the amount of parking that is required by a developer. On a case-by-case basis, agreements are made between property owners to share parking. Developers are also allowed modifications to what is required by the Code in the Downtown area. A summary of both of these policies are provided below.

The following existing ordinances support the parking initiatives of Ogden City.

- **Time Limits (10-5-4):** On-street parking in Downtown Ogden is regulated by one-hour and two-hour time limits. The Code (10-5-4) provides flexibility by allowing the City to adjust the location and length of these time limits so long as the messaging on the signs is clear. Enforcement hours of these regulations is 8am to 6pm Mondays through Saturday.
- **Overlapping and Shared Parking Allowances (15-12-7):** Shared parking in a commercial or manufacturing zone (where land uses are not on the same lot) is allowed if it can be established the uses characteristically result in peak accumulations of parked vehicles at different hours, days, or seasons. The properties must be within a 500-feet distance.
- **Parking Reductions (15-12-7):** General parking reductions are allowed throughout the city if the uses have mixed peak accumulations of parked vehicles at different hours, days, or seasons, or if there are ten individual businesses on the lot. Reductions are also allowed on a case-by-case basis in the CBD.
- **General Development Requirements (15-39-4):** Buildings in a mixed-use design need to be clustered so that they are easily accessible for pedestrians and to shared parking areas. Clustering occurs by having the buildings tightly grouped along the street frontage or pedestrian access.
- **Parking Permits (10-9-8 through 10-9-13):** Parking permits are provided for residential guests, business owners, and employees. A valid permit is required to park in any municipal building parking facility; however, other employees can apply for a permit as well. Permits are valid for one year, with the exception of the temporary visitor permit, and cannot be transferred between vehicles. The annual permit is $20 and the renewal price is $10. Guest permits are $5 (one-day permit), $10 (two-day permit), and $15 (temporary visitor permit). Valid permit holders are not limited to the posted parking regulations.

## Key Takeaways

- Adjust parking rates to right-size parking:
  - Small commercial: adjust from 3.33 spaces/1,000 sq. ft. to 2-2.7 spaces/1,000 sq. ft.
  - Big box retail: adjust from 3.33 spaces/1,000 sq. ft. to 2-2.5 spaces/1,000 sq. ft.
  - Affordable housing: adjust from 2 spaces/unit to 1-1.5 spaces/unit
  - Market rate housing: maintain current rate of 1.5 spaces/unit
  - Suburban neighborhood: maintain current rate of 2 spaces/unit
  - Transit station: maintain current rate
- Downtown: create separate set of modifications in the code that offer clear reductions for shared parking, proximity to transit, inclusion of access to multimodal connectivity (bike lanes, bike parking, sidewalks, lighting, bike share, etc.), and for employers who offer Transportation Demand Management programs for their employees (discussed in the next section).
- Expand the shared parking ordinance to increase the walking distance to 1,000-1,300 feet to allow developers to utilize existing underutilized parking rather than building more private parking.

# 4. Transportation Demand Management

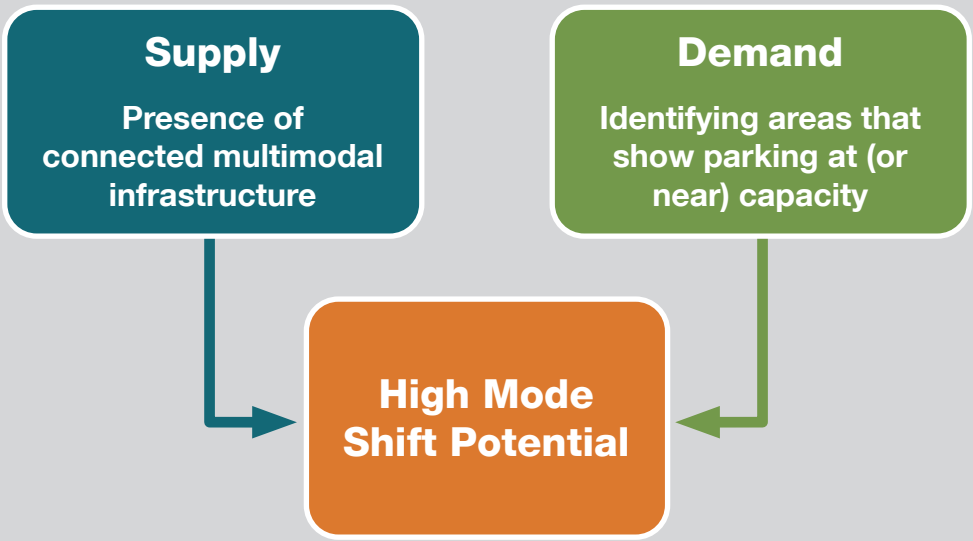
# 4. Transportation Demand Management

Transportation Demand Management (TDM) strategies provide people with a variety of mobility options rather than driving alone in a personal vehicle. The intention behind TDM is to reduce vehicle miles traveled (VMT) and congestion, as well as gain environmental, conservation, and sustainability benefits. These strategies often do not require large infrastructure investments.

TDM also includes a "park once" mentality. This means you drive to the Downtown area, park in a single location, and are then able to visit many locations in a single visit. You don't get back in your car and re-park to visit a store, then a restaurant, then run an errand. There are sidewalks, bikes, scooters, or other means that help you move in the area that don't require a personal vehicle.

TDM strategies are most successful in areas where new mobility technologies can be more strategically leveraged and where parking supply management can be successfully modernized.

**Components for Influencing Mode Shift**




Example of TDM strategies include the following. Please note, these are not necessarily recommended for this parking study, but are included here to provide examples of what is included and meant by TDM.

- Guaranteed Ride Home
- Shuttles
- Wayfinding and Branding
- Teleworking
- Remote school options
- Compressed or Flex Work Schedules
- Restricted Parking
- Bike/Walk Subsidy
- Transit Subsidy
- Carpool Incentives
- Parking Fees
- In-Kind Incentives
- Bike/Pedestrian Infrastructure
- Traffic Calming
- Passenger Loading Areas
- Alternative Mode Visibility
- Land Use Changes

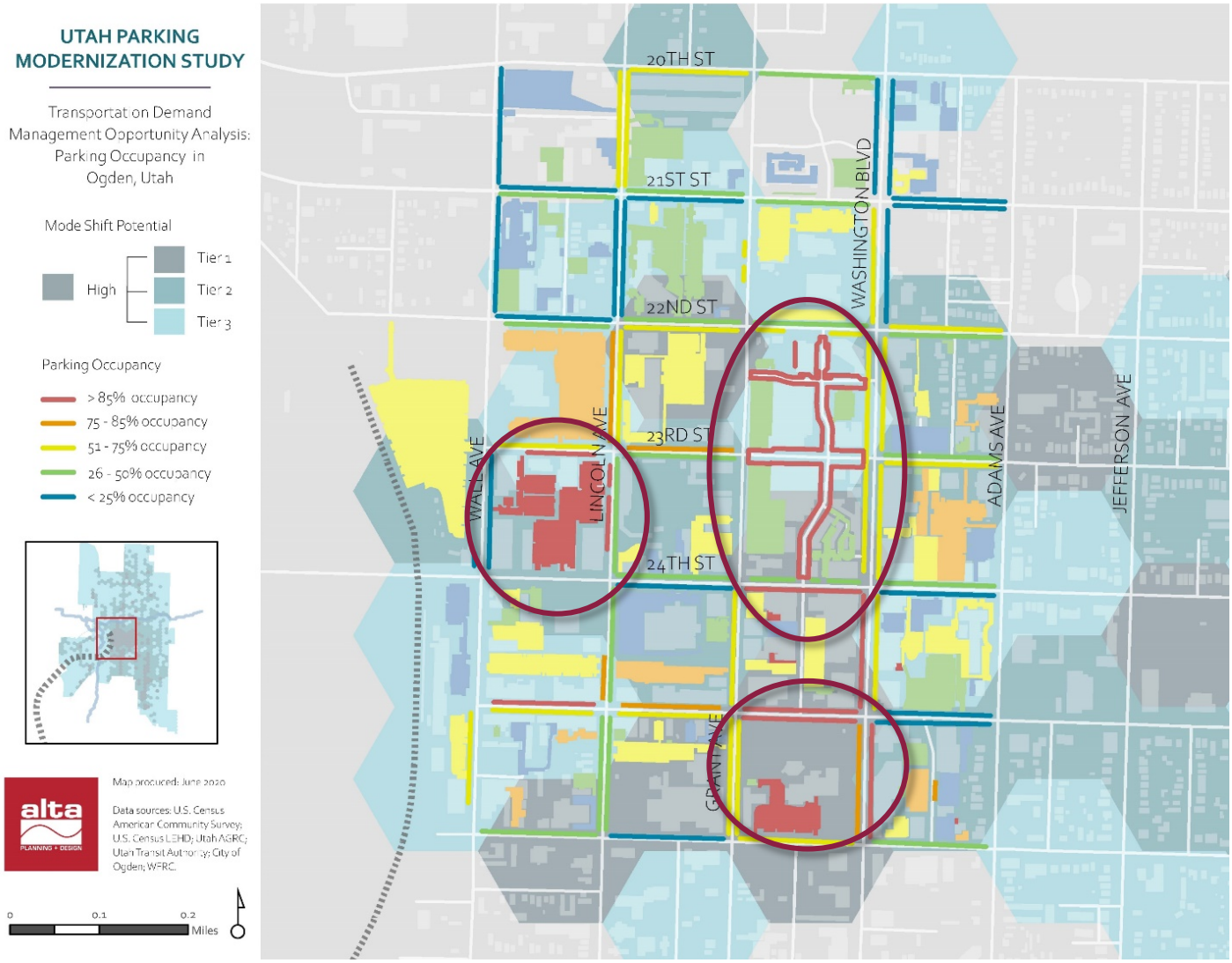
## TDM Potential and Parking Occupancy

As part of the study, an analysis was conducted comparing the density of land uses and access to alternative transportation modes to parking occupancy. As shown previously, these factors are instrumental in encouraging a shift in behavior from driving alone to using alternative transportation options.

As shown below in **Figure 9**, the Ogden multi-use core has parking facilities that have reached or exceed the Effective Capacity. The Downtown falls within the top demand tier and TDM strategies are likely to have a positive effect in this area. The Downtown tier was broken-down further to identify key locations where TDM strategies can relieve parking demand or optimize the use of parking assets.

Downtown Ogden contains higher density commercial and residential use and low parking capacity. Areas that experience high parking demand and have high land use density would experience an impact from the implementation of TDM strategies. These locations are shown in **Figure 9**. An added benefit is that these areas are already near a transit station, bike network, and sidewalks. These amenities can be leveraged to encourage travel that is not the use of a personal vehicle.

**Figure 9 – Ogden TDM Mode Shift Potential and Parking Occupancy at 12pm Peak**



# 5. Peer Roundtable

# 5. Peer Roundtable

As part of this project, best parking management practices were identified through discussions with peer cities. Six peer cities were selected based on what practices they could share that would be applicable to Ogden and the project partners. Peer cities were selected with robust and active parking programs, are facing similar challenges, have similar development environments, and are in similar stages in developing a parking program as many communities are across the Wasatch Front region.

Initial research provided snapshots of each community, including data about:

- On- and off-street parking inventory
- Enforcement practices
- Parking rates, meters, and mobile apps
- Permit programs
- Ordinances

Representatives from Park City (UT), Salt Lake City (UT), Boise (ID), Beaverton (OR), and Gresham (OR) participated in a virtual roundtable.

- **Boise:** The Capital City Development Corporation (CCDC) organization is responsible for Boise's urban renewal, which includes eliminating blight, stimulating economic development, and managing parking. Boise has made a commitment to be the premier place to live in the Treasure Valley, and CCDC takes that commitment seriously. Participants included Max Clark and Matt Edmond of Boise CCDC.
- **Salt Lake City:** Parking for Salt Lake City is split into two major pieces: transportation, which is responsible for planning and studies, and compliance, which handles parking enforcement. The participant included Jorge Chamorro of Salt Lake City.
- **Beaverton:** They do not currently have much enforcement and the role of parking manager is new, and that position sits within the community development department, which works closely with existing enforcement. The densest area of town is the downtown core with an occupancy rate around 85%, and there is a plan to build a new parking garage adjacent to a regional theatre. There are no substantive parking regulations outside of downtown. The participant was Molly Rabinovitz of Beaverton.
- **Gresham:** The City has never had parking enforcement due to limited resources and the lack of political will to create a paid parking program. They are not at the point of demand to require a formal parking program, but occupancy is telling them it is time to start planning for one. Gresham is experiencing an influx of new development in the downtown core and they are approaching a 75% occupancy tipping point that will require them to implement time limits. Participants included Katherine Kelly and Jay Higgins of Gresham.

## Key Topics

The follow sections summarize the discussion around key topic areas as determined by the Steering Committee.

### Development and Lender Experiences

The following is a summary of responses from each peer participant regarding parking strategies and actions to support new developments and businesses.

- Beaverton has been focusing on how to utilize existing inventory. Beaverton can appear to be "one big parking lot" but most parking is privately owned, and shared parking options are desirable. They are also looking at parking code for Downtown to see what should be revised. A Parking Action Plan is scheduled but has been halted by COVID-19, and the City is reviewing strategies and regulations for existing supply before adding new facilities. The developer community is very active, collaborative, and keen to work on shared parking amongst themselves, existing property owners, and the City.
  - Beaverton's developer community has enthusiastically embraced parking because they see that they can build more densely if less parking is required. Structured parking in Beaverton is expensive because their water table is only four feet down and the price is astronomical for underground parking. People want to build in Beaverton, proven by the response they receive for projects, and they seem to have effective development standards in place that people are willing to build to.
- Gresham's priority is curbside management and making sure a holistic approach is taken so that everything that happens at the curb is integrated with parking practices and policy. This is a new paradigm for how they talk and think about parking for the City and they are committed to taking a broader perspective versus a conventional perspective that focuses only on percentages and code. Gresham is working hard to not just look at demand and need, but also to see how parking impacts and fits into the bigger picture for the City and the future.
- Boise has three potential garage projects in the works and there is one developer currently building with no parking included. Boise has a difficult time with transit—there are high property values in the area and people commute in cars. With no dedicated funding source for transit, Boise receives only 20-25% of transit funding compared to peer cities, and there are not a lot of alternatives to driving.

### Paid Parking

The following is a summary of the discussion focused on paid parking obstacles and opportunities.

- Boise City Council and the CCDC Board have invested in making Boise the most-desired location to live in the Treasure Valley and that includes having paid parking. Newcomers generally arrive from areas that also have paid parking, so it isn't a surprise or problem for them. There is a first hour free program, and they were also considering adjusting rates across all garages pre-COVID-19.
- Boise is not aware of any neighboring communities charging for parking as a result of Boise charging for parking, but there is enforcement in some areas. Some communities are also considering structured parking as an incentive to build new housing and office buildings.
- Beaverton has not had paid parking since the 1980s, so people do not remember ever having to pay for parking. Paid parking is a topic of conversation as Downtown reaches an 85% occupancy threshold. Beaverton is still a car-centric area but there is a desire to have more centralized parking and fewer parking lots. Beaverton is only seven miles from Portland, and the concept of paid parking is not new, but it is new to consider it for the Downtown core. They receive many transplants from California who are used to paid parking.

- Salt Lake City has enforcement of limited parking areas and is always looking for ways to encourage visits to Downtown. In the past they have explored validation programs specifically. Validation programs have the potential to only benefit a few and should be carefully considered, implemented, and assessed.

## Shared Parking

- Beaverton recommended having a land use process for shared parking where property owners can provide documents about their parking and show how hours and supply offset to serve both purposes. The City has also teamed up with the Downtown association for a voluntary (no compensation) after hours program. Through this program, a daytime-use business like a bank can share parking with an evening-use business such as a restaurant. Pre-COVID-19 they had gained around 30 spaces with a potential of about 60 more. The City provided signage to the participants that included their desired branding elements, program hours, and legal terms. There is not as much private parking in the busiest area of Downtown, so they are still figuring out ways to utilize City-owned lots. The group agreed that shared-use solutions can look different for resort towns.

## Curb Space / Micromobility / TNCs

Following the development discussion, the group turned to the topic of managing curb space and the presence of micromobility and transportation network companies (TNCs) in their communities.

- Beaverton does not currently have micromobility; they are wary of it arriving and are staying aware of trends and the experiences of others. They currently have more curb space in the right-of-way and less sidewalk space with no immediate pressing demands for curb lane management strategies. Their main concern is safety around the curb space.
- Gresham is thinking of how to change the conversation with elected officials and the community about what curb space means and expanding the view to consider what micromobility impacts could be. These conversations were starting pre-COVID-19, and they have also been closely observing the impacts these factors have had on Portland.
- Boise has invested heavily in creating a safe bicycle environment despite the auto-centric culture. When scooters arrived in 2018, they reduced the bikeshare numbers considerably. The City manages the scooters—used mainly between Downtown and the university—and have done an effective job. There were initially some challenges with vandalism and scooter speed, and numbers recede during the winter. Use has also declined because Downtown Boise is empty due to COVID-19.
- Salt Lake City's Council is focused on micromobility safety and curb use. They have a base ordinance that allows the City to enter into agreements with companies and dynamically adjust the terms of agreement as needed. This helps them be responsive to micromobility trends and changes specifically. One sticking point that has come to light is that the fees to cover the cost of the City managing the micromobility and curb lane programs needs to be figured out and included in the policies.

The group agreed that micromobility solutions are challenging because the infrastructure is hard to define. Cities value safety but don't want the technologies to become obsolete and even then the microtransit may not be the issue, it may be the vehicles operating with them simultaneously.

## Community Impact

The last moments of the peer city roundtable were open for participants to share decisions and projects that have been especially impactful to their community.

- Beaverton shared that around six years ago, the City created their Development Division to work closely with economic development agencies in the community. This successful partnership has allowed the City and those agencies to move many projects forward and has put Beaverton on the map (instead of just being Portland-adjacent). Their Restaurant Row is an example of their success and has become a destination district. People are taking notice and moving from or expanding into Beaverton from Portland to be a part of the scene, all because of the economic and social benefit of the successful partnership between the City and the economic development community.
- Gresham is especially proud of their Rockwood District, their most diverse district with over 70 languages spoken. Rockwood is in the heart of a transit center, and development in partnership with that diversity is critical. They are looking at potential micromobility access points to enhance the district while keeping its culture.
- Boise shared that biting the bullet and automating their parking system was hard but worth it. The decision to automate is providing big cost savings on labor and was worth the $2 million investment. They were concerned about losing some of the friendly feel of Downtown, but they are approximately seven years into the change, and everything is working well and they're able to move people in and out of parking much faster.
- Salt Lake City is proud of their recent enforcement approach transition. They shifted from being revenue-focused to courtesy-focused to enhance user experience. Their goal is to instill a different mentality about parking in both the staff and the community.

### Key Takeaways

- Build a strong and open relationship with developers. Include their perspective in larger projects and major changes, such as revision of the codes.
- Implement paid parking only when the data dictates the need for change with consistently high parking demands. Before making the change, communicate the intentions with the public. Know their preferences and concerns and discuss them. It may be beneficial to offer incentive programs at first, such as a first hour free program.
- Include a standard shared parking procedure as part of land use processes for property owners.
- Micromobility solutions are challenging because the infrastructure is hard to define. Cities value safety but don't want the technologies to become obsolete and even then, the microtransit may not be the issue, it may be the vehicles operating with them simultaneously.

# 6. Lessons for Developers

# 6. Lessons from Developers

After hearing from the peer cities, the Steering Committee met with a developer, active in both the region and other parts of the country, to have a more in-depth discussion from the developer perspective.

The biggest takeaway from the developer discussion is the idea that parking is always a moving target and it takes continuous effort to make sure it is being optimized for a community.

Developers face two critical considerations when making decisions: 1) affordability and 2) marketability.

Parking is a cost for developers, and it is a constant balance between providing enough parking for the intended tenant while also not increasing the cost of the project. Costs vary by type of parking provided, and costs in the Wasatch Front Region are reflected below:

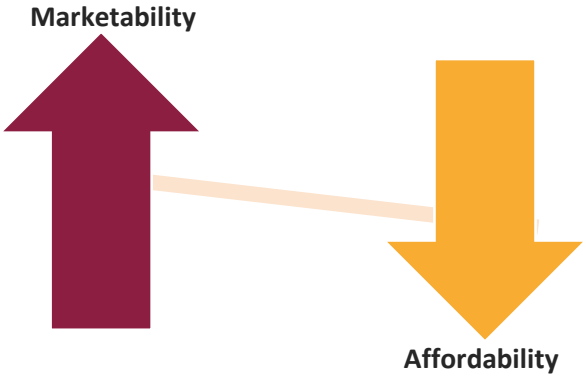
- Surface Lot - $12,000-$15,000 per space
- Structure - $15,000-$30,000 per stall
- Underground - $40,000 per stall

Each space added to a project directly impacts the cost of rent. For instance, a surface stall equates to an additional $75 per month to cover the cost of that parking stall. Furthermore, developments in more urbanized areas are more expensive than in suburban or rural areas, generally. Having additional costs for parking decreases opportunities for affordability.

Developers will adhere to the requirements put forth in a municipality's code. However, sometimes these codes do not reflect the impacts of a connected transportation network. Developers determine the right balance for parking in their projects. Finding the ideal parking ratio while providing adequate parking is a challenge for each project. Many developers will studiously and repeatedly perform occupancy counts on their properties to determine the appropriate ratio based on type of development, development setting, market, size, and proximity to transit. A typical break-even point for parking is 80% occupancy, which generally aligns with the optimal parking occupancy thresholds described in the Parking Study Performance Metrics section of this report. This data can be used to help justify a deviation from a municipal parking requirement and to help plan accordingly for the next development.

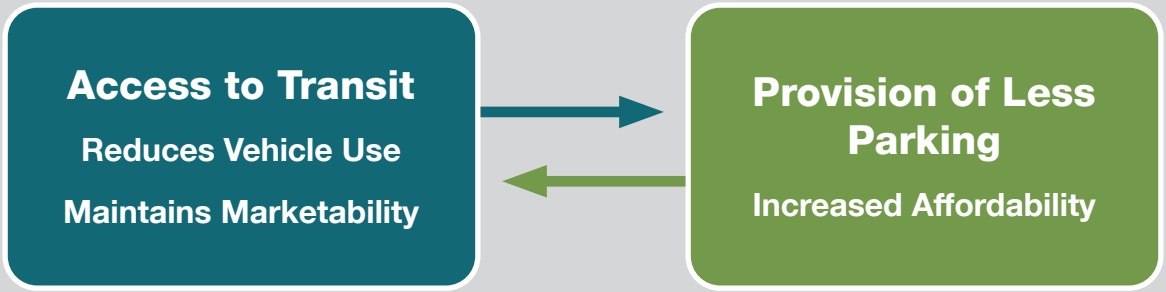
The second main consideration for developers is marketability. There needs to be enough parking provided to support the leasing of space. Developers cannot lease apartments or commercial/office space if there are not enough parking spaces for tenants. However, as discussed, the more parking spaces provided, the greater the impacts to the cost of the project, and therefore rents. In conclusion, anything that encourages marketability (more parking spaces for tenants) discourages affordability (adding more spaces increases the cost of rent).

Developers see changing mobility trends from personal vehicles to multimodal opportunities. According to AAA data, the average individual spends approximately $900 per month to own an average, reliable, fuel-driven car. This includes the cost of gas, maintenance, registration, and insurance. Over the years, there has been a trend of people owning fewer cars. The reduced ownership of cars impacts the need to provide more parking for developments.



This trend is most prevalent in urban areas where fewer people rely on and own a personal vehicle. In an urbanized setting, a ratio of one car per three apartment units is typical for the developer. If the apartment building is in close proximity to transit (within a one-to-two-block walking distance), then the ratio is 1.2 cars per unit. Residents will let go of their second vehicle if they have easy access to transit. In a suburban setting, the ratio is 1.1 to 1.2 cars per apartment unit depending on the unit mix.

Access to transit is a major factor in balancing the marketability and affordability concerns. Having access to transit, as stated, can encourage renters to let go of one of their vehicles. This means that the next apartment development can plan to provide less parking per unit while still being able to lease their apartments. Less parking means more affordable rents.




An important takeaway is that developers should be included in conversations regarding parking requirements and incentives. Since each community is different, there is no one simple solution for meeting developer needs and community needs. Open and frequent conversations to build strong relationships with the development community is key to successful growth that aligns with the community's plans and goals.

# 7. Recommendations, Data Collection, and Implementation

# 7. Recommendations, Data Collection, and Implementation

The final sections of the report are divided into the following topics.

### Recommended Strategies

**Description of each strategy along with benefits, challenges, steps for continued implementation. and identification of complementary strategies**

### Data Collection – Methods and Metrics

**Identifies data that should be collected, why it should be collected, how to use each of the data metrics, and alternative methods for collecting data**

### Implementation Timeline

**Matrix that indicates when strategies should be initiated and frequency of monitoring the strategy to initiate the next implementation step**

The recommended strategies for Ogden City are broken into three parking management strategy buckets, as shown below, and are presented in this order in this section.

### Practices and Policies

- Right-Size Parking Requirements
- Efficient Enforcement Practices
- Manage Transit Station Parking
- Proactive Curb Lane Management
- Data-Based Decision-Making
- Develop an Annual Report

### Manage Parking Assets

- Flexible Shared Parking
- Repurpose Underutilized Parking
- Enhance Parking Permit Program
- Invest in Parking for Economic Development

### Manage Travel Behavior

- Update Time Limits
- Incorporate Wayfinding
- Efficient Use of Technology
- Enhance and Leverage Mobility Options

The intention is to group similar recommendations based on how they manage parking. However, it is also important to understand the implementation priority of each recommended strategy. The initial implementation of each strategy is presented below. However, the Implementation Timeline that concludes the report indicates the frequency of monitoring for continued implementation. The specific timing of continued implementation for each strategy is contingent upon the year-over-year data collection and analysis. The data will help drive implementation decisions and timing. It is also important to note that once initiated, each strategy will continue to evolve into the next planning horizon and beyond.

### Short-Term (Now to Two Years)

- Right-Size Parking Requirements
- Data-Based Decision-Making
- Update Time Limits
- Develop an Annual Report
- Enhance Parking Permit Program
- Flexible Shared Parking
- Repurpose Underutilized Parking

### Mid-Term (Three to Five Years)

- Proactive Curb Lane Management
- Efficient Enforcement Practices
- Incorporate Wayfinding
- Invest in Parking for Economic Development

### Long-Term (More Than Five Years)

- Enhance Mobility Options
- Efficient Use of Technology
- Manage Transit Station Parking

# 8. Recommended Strategies

# 8. Recommended Strategies

The following section discusses each recommended strategy for Ogden City. The strategies are organized by bucket type. Later in the document, the strategies will be organized by implementation priority.

For each strategy, a description is provided, along with benefits, challenges, and specific implementation steps for the City. The implementation steps are presented as guidance for the City for long-term continuation of that recommended strategy. Moving to the next implementation step for each strategy is contingent upon parking system data. Details on what data should be collected and how to collect it are described in the section following this one.

## Strategies for Practices and Policies

This subsection describes recommendations that will initiate programmatic and policy changes to support the parking management program. The policies and procedures of the community staff are what keep the program moving forward and set the stage for success.

The recommendations within this bucket are below.

- **Update and Right-Size Parking Requirements**
- **Efficient Enforcement Practices**
- **Manage Transit Station Parking**
- **Proactive Curb Management Policies**
- **Data-Based Decision-Making**
- **Develop an Annual Report for Parking System**

## Update and Right-Size Parking Requirements

As previously discussed, parking codes often require too much parking for an urbanized area because people will park once and walk to multiple destinations, will use multimodal options more readily, or will not use a vehicle to get around. Updating and right-sizing the Code ensures that new parking supply associated with new development doesn't provide a surplus of unnecessary parking while still supporting the new development. Adjustments would need to be made to the citywide development code, including parking requirements, shared parking policies, and separate Downtown parking requirements from the rest of Ogden.

1. Establish a committee with City planners, transportation planners, and developers and lenders to meet regularly (once a year to start). Keep an open dialogue on barriers and opportunities for development within Ogden.

2. Adjust the current parking requirements to the recommended requirements suggested on page 30 of this report.

   Differentiate parking ratios for small retail and big box retail land uses.

3. Adjust the walking tolerance from 500' to 1,000-1,300' in the shared parking ordinance. See other recommended changes to shared parking ordinances in the shared parking recommendation.

4. Evaluate parking demands annually for both public and private parking to establish trends.

5. Eventually, consider shift to minimum/maximum combination, maximum only, or no parking restrictions to further right-size parking supply in Downtown.

Benefits of updating parking requirements include:

- Creates a balanced parking system that can accommodate the needs and vision of the City.
- Reduced subsidization of auto trips.
- Increased reliance on centralized parking system.
- Reduced underutilized restricted parking.
- Encourages infill development as well as multimodal transportation.
- Adequate parking requirements reduces the cost of development, which also increases affordability for tenants.

Challenges that may be associated when updating parking requirements including:

- Design guidelines should require features to enable bike and pedestrian travel to and around new development.
- This strategy should be partnered with annual monitoring of parking demands. Don't adjust annually as that will create confusion with developers and lenders. Rather, evaluate every five to ten years depending on what the data dictates and the group discussions with developers. This time also allows Ogden to observe true trends in occupancies for land uses.

### Complementary Strategies

- Repurpose Underutilized Parking
- Update Time Limits
- Incorporate Wayfinding

## Efficient Enforcement Practices

Enforcement is a critical component of any parking system. People will only comply with parking regulations and rules if they are enforced. Ideally, enforcement should monitor the areas with regulations as frequently as those regulations dictate. For instance, if there is an area with two-hour parking time limits, then enforcement should come around every two-hours each day for all hours of enforcement. This can be daunting for the City in terms of budget and staffing when the enforced parking areas expand or time limits change. However, an effective means of enforcing parking without having to massively increase staff is by implementing sporadic enforcement at first. As budget allows, staffing can be increased to perform more regular enforcement.

1. Compile any existing enforcement logistics (e.g., areas covered, number of enforcement officers, protocols and procedures, responsibilities of enforcement staff, and budgets).

2. Review fee structures for citations. Warnings for first-time offenders, graduated fee structure for repeat offenders. Same time of graduated fee structure for payment of citations – becomes more expensive the longer the bill is unpaid.

3. Establish performance measurement tools and standards for communicating data collected
   - Frequency of violations by type
   - Capture rate (20% rate wanted)
   - Location of violations by type

4. Consider an ambassador-style approach to enforcement where enforcement officers are knowledgeable about the City and surrounding attractions to help visitors find their destinations.

5. If staff can't cover new enforcement areas, pilot test changing enforcement practices so that sporadic enforcement is conducted.

   Don't establish a set route or schedule in the new areas of enforcement. Rather stagger them so the area is covered, but it is not predictable.

Benefits associated with producing efficient enforcement practices include:

- Establishing a culture of compliance with parking regulations.
- Producing key indicators for the parking system.

Challenges that should be considered when implementing this strategy include:

- Enforcement must be frequent.
- Producing enforcement practices requires adequate signage and notices that allow users to know what is required to park properly.

### Complementary Strategies

- Promote Shared Parking
- Update Time Limits
- Incorporate Wayfinding

## Manage Transit Station Parking

Managing transit station parking supports and encourages transit ridership by preserving adequate parking spaces for transit users. However, transit lots are often managed by the transit provider. In Ogden, the transit station is managed by UTA. The strategies for management will have to be coordinated between the City and UTA.

Management of transit parking should only occur once the parking occupancy has reached effective capacity of 85% or higher for at least two weekdays on differing weeks. Management strategies can vary from station to station depending on the goals and characteristics of that station. However, this strategy is a long-term strategy and is focused on performing more detailed analyses than this study was able to perform to determine the need and level of transit parking management.

1. Monitor and assess the parking occupancy, parking duration, and ridership at Ogden's Intermodal Transit Center. A survey of riders and those parking should be conducted.
2. Partner with transit providers to ensure they are supportive of data necessary to determine the transit station activity (ridership by station, by time of day, by day of the week, and by month of the year).
3. Continue to invest in improvements for bicycle and pedestrian connectivity to the transit station. Improvements should focus on new paths or routes, lighting, seating, parking, wayfinding signage, etc.
4. Once parking occupancy reaches or exceeds 85% occupancy, implement restrictions that encourage commuters only between morning peak hours and open to the public after that time. Use permits to regulate. The partnership with transit providers will help establish price for permit (if any), and other protocols.
5. Continuously monitor and evaluate parking for transit stations. Share and discuss the findings with the transit providers through the partnership. Make adjustment as needed based on data metrics.

Benefits associated with managing transit station parking include:

- Encourages transit and non-motorized travel.
- Supports affordable housing and diverse land-use mix.

Challenges that may arise when implementing this strategy include:

- Both high transit ridership AND parking demand is a necessity before implementing parking regulations, so transit ridership isn't discouraged.
- Balance any parking costs and transit costs. If parking and transit combined are more expensive than driving, this could deter transit use.

### Complementary Strategies

- Leverage Mobility Options
- Update Parking Requirements
- Promote Shared Parking

## Proactive Curb Management Policies

Demand for curb space is increasing as cities work to balance transit demand, on-street parking, truck loading/unloading, personal deliveries (e.g., package delivery such as UPS, FedEx, and Amazon, and food delivery services such as GrubHub), dockless, and on-demand mobility devices such as bikes and scooters, emergency services, pedestrian streetscape amenities, and other users. All these users want free and unimpeded access to curb space, and like other public resources, cities must operate and manage the curb effectively to provide access for a variety of users, while optimizing overall public benefit.

| | Residential | Commercial & Mixed Use | Industrial |
|---|---|---|---|
| 1 | Support for Modal Plan Priorities | Support for Modal Plan Priorities | Support for Modal Plan Priorities |
| 2 | Access for People | Access for Commerce | Access for Commerce |
| 3 | Access for Commerce | Access for People | Access for People |
| 4 | Greening | Activation | Storage |
| 5 | Storage | Greening | Activation |
| 6 | Activation | Storage | Greening |

*Source: http://www.seattle.gov/transportation/projects-and-programs/programs/parking-program/parking-regulations/flex-zone/curb-use-priorities-in-seattle*

Cities, such as Seattle, have implemented curb management programs to manage the curb uses. The graph to the right demonstrates their curb use priorities by street-type.

1. Compile and review existing curb management policies and practices. Map out and understand how all curb uses in the city are regulated. If they are conflicting, identify ways to align them.
2. Develop curb lane priorities for different street types, as demonstrated in the example from Seattle DOT.
3. Produce a strategy for curbside management that will act as a framework to guide decisions around the curb supply and use.
4. Conduct a pilot study to test optimal curb uses based on the priorities and framework previously established. Incorporate findings of the pilot into the policy and implement curb uses.
5. Monitor and make changes or additions as data from analyses and community feedback dictates.

Benefits of implementing proactive curb management policies include:

- Prioritizes and manages often competing curb uses by location, day of week, type of user, and time of day.
- Articulates objectives for different curb uses and different parts of the city.
- Clearly outlines when, where, and how to implement changes to curb use designations.

Challenges that can arise with the implementation of proactive curb management policies can include:

- Involves significant and transparent coordination with business owners, public, and other stakeholders.

### Complementary Strategies

- Promote Shared Parking
- Update Parking Requirements
- Parking for Economic Development

## Data-Based Decision-Making

One of the central tenets of the new approach to parking and mobility management should be the use of system data to support better policy and practice decisions that are consistent with the intended vision and outcomes of the program. This will include the frequent collection of data, ongoing analysis of data, and use of performance metrics and thresholds to define when and how to make changes. Thresholds are identified in the Data Collection section of this report. Specific data collection mechanisms for Ogden are described in the last section of this report.

1. Continue to conduct a comprehensive parking occupancy data collection annually by cataloguing parking inventory and occupancies. Inventory should include the type of facility (on-street, lot, garage), ownership (public or private), number of spaces for each facility or block, and any regulations (time limits).

2. Use this study's recommendations to define data thresholds, location characteristics, and intended policy outcomes.

3. Establish protocols, expectations, and methodology for annual data collection and analysis to define impacts of performance.

4. Create analysis and reporting templates that can be used annually or as frequently as desired. The template and analysis should be folded into the annual report (see next strategy).

5. Define intervals for adjusting the system (annually, semi-annually, quarterly, etc.) Combine with marketing and education campaign when changes are made.

Benefits of implementing data-based decision making include:

- Improves the ability to track the impact of changes made to the system.
- Improves communication and marketing for the parking system.
- Establishes trusted, baseline metrics for making year-over-year transportation and mobility enhancements.

Challenges that may be associated with data-based decision making include:

- Requires intentional consideration of data collection process to create consistent sets of data and meaningful analysis.
- Due to staff availability, time, or funds, it may not be feasible to conduct annual data collection. If that is the case, select known area hot-spots and collect data for a limited period of time.

### Complementary Strategies

- All Recommendations

## Develop an Annual Report for Parking System

The development of an annual report to assess the parking system of the City ensures that the system is consistently being analyzed under equivalent analysis. Many strategies need to be monitored annually to determine their impacts and whether or not adjustments need to be made. An annual report is a great way to consistently monitor the data year over year.

1. Identify key report goals and overarching topics for annual report including setting the scene, innovation/new developments, education and enforcement, and finance.
2. Develop a storyboard template that outlines report sections based on defined topics, graphics to be used, and maps and tables to communicate results.
3. Identify what data collection and analyses are necessary to produce the report based on the storyboard.
4. Produce a report outline to be followed for each annual report with the goals and key takeaways of the report in mind.
5. Develop a theme for the report that matches the brand of the City. Coordinate maps, graphics, and tables with the theme.
6. Perform annual data collection. Data collection mechanisms are described in the last section of this report.

Benefits of developing an annual report for the parking system include:

- Allows for consistent analysis of the parking system.
- Provides a means of tracking metrics so that historical databases are established.
- Allows planners to draw conclusions about what community-wide changes have impacted the parking system, such as transit or transportation additions or modifications, new development, and economic growth.

Challenges that may arise when developing an annual report include:

- Requires significant coordination amongst parking management staff to determine metrics and elements to report on each year.
- Requires data to be collected annually.
- Must devote a certain amount of staff time each year to prepare the annual report.

### Complementary Strategies

- All Recommendations

## *Alternatives for Annual Data Collection and Reporting*

Comprehensive data collection may not be feasible each year due to staff availability, other City projects, available funds to make resources available, etc. While collecting comprehensive data is the ideal situation, it is not imperative to the success of the parking system management. There are alternatives so that meaningful data can be collected without the need to dedicate valuable staff time and City resources.

The following are a few alternative options for data collection and reporting.

- **Extended Collection Period:** The entire study area does not have to be collected all at once as long as the collection days are typical (meaning there are no events or other disruptions to normal commute and parking patterns). For weekdays, the best days to collect typical data is Tuesday, Wednesday, and Thursday. Mondays and Fridays are often slightly abnormal because those are days when stores may be closed or employees extend their weekends, etc. Mondays are an acceptable alternative, but Fridays should be avoided if possible.

  Staff can spread out the collection period over a number of weeks, only collecting data a few hours each day for a few facilities, until the area is collected.

- **Reduce Study Area and Times:** Identify areas with known high demands from previous studies. Identify the peak hour(s) from those studies as well. Only collect data in those areas at those times of day. This can be conducted over a number of weekdays (or weekends if that is a peak period), until the data is collected for the selected area.

  If a significant change in occupancy is discovered between the years data was collected, the City can continue to do spot checks of occupancy in different parts of the Downtown area to confirm how widespread the changes are.

- **Collect Every Other Year:** Collecting data every other year will provide the City with updated baseline data that can help the City make meaningful changes to the system. This collection can be conducted on the full Downtown area or in smaller portions.

- **Maintain a Parking Database:** If maintaining and updating a full report is time consuming for the available staff, maintaining and updating a database is always helpful. A database can be kept in an Excel file or ArcMap shapefile. The database should include a facility name or number, a map with each facility identified by the correlating name or number, regulatory and enforcement information, number of spaces, and occupancy at any time data was collected for that period.

  The City has already established this type of database in Excel and ArcMap. Maintaining and updating it year over year will allow the City to track changes, draw conclusions on why those changes occurred, and make data-based decisions. This type of tracking may be more useful for internal purposes, whereas an Annual Report would be something that is public facing and shared outside of the department.

Given staff levels and resources, the City may come up with other alternatives for collecting data. There are always lighter versions to collecting and reporting data. The key is to keep collecting, even if it's on sample-size data. The City should set a goal to conduct a comprehensive collection of data at least every 3-5 years as resources allow.

## Strategies for Managing Parking Assets

These strategies focus on the parking resources within the community. The intention of these strategies is to properly allocate and use parking resources more efficiently. If the use of parking resources is optimized, then more spaces can be made available in high-demand locations. As a result, there is less need to construct expensive new parking supply. However, planning for new supply and managing it properly is important to maximize its use. This bucket also includes strategies to help proactively plan for new parking supply with a transparent process. The parking recommendations within this section include:

- **Flexible Shared Parking**
- **Repurpose Underutilized Parking**
- **Enhance Parking Permit Program**
- **New Parking Supply for Economic Development**

## Flexible Shared Parking

Shared parking is a strategy that allows two or more property owners to share the spaces in a single parking facility. The facility is usually underutilized and the joint use of the lot allows two or more different properties to meet their parking demands without constructing expensive parking spaces for each individual property.

Ogden currently has a shared parking ordinance that allows properties within a 500-foot distance of shared parking assets to qualify for shared parking opportunities. Updating the current policy to improve shared parking and provide more shared parking opportunities would benefit the parking system. Action items for this strategy includes:

1. Expand shared parking distance to 1,000-1,300 feet to allow for greater flexibility in the Downtown area.
2. Establish a template for shared parking agreements. The templates should cover the main topics (liability, maintenance, number of spaces shared and time of day, etc.), while also providing flexibility to allow property owners to add their nuances to the agreement.
3. Require appropriate signage or markings to indicate who, when, and where people can park in shared facilities, especially if part of the lot is available for public parking.
4. Use parking occupancy metrics for evaluating effectiveness of shared parking arrangements. Evaluate annually.
5. Consider centralized shared parking facilities. Allow developers to invest in a centralized parking facility they can use to meet their parking needs. Can be accomplished with an in-lieu fee program or the City can construct it and developers pay a fee to park (as in Boise).

Benefits of updating policy to improve shared parking include:

- Updating policy will provide significant parking facility savings for developers and ultimately tenants.
- Shared parking policy encourages multimodal transportation.
- Shared parking reduces the cost of development while increasing affordability.
- Promotes development by optimizing the use of land
- City is the keeper and facilitator of all agreements

Challenges that can arise when updating this policy can include:

- The parking management department is accustomed to inflexible minimum parking standards.
- Shared parking policy requires flexible parking standards, verification, and enforcement.
- This strategy should be in accordance with a minimum of annual monitoring of parking demands.

### Complementary Strategies

- Wayfinding
- Repurpose Underutilized Parking
- Parking Requirements

## Repurpose Underutilized Parking

Repurposing underutilized parking allows parking facilities to be utilized as a new entity until the parking is in demand again. This is an especially important strategy as the community faces the continued impacts of COVID-19. The intention of this strategy is to provide flexibility in the Code to allow for lots or portions of garages or on-street parking to be repurposed as another use, such as the extension of business space, parklets, or some other necessary use. The following action items are recommended for the implementation of the strategy.

1. Develop policy changes that will allow a property owner with an underutilized lot or adjacent spaces to apply to use the spaces temporarily (six-months to one-year) for a new purpose.

2. Establish a procedure for applying for repurposing a lot or public spaces, such as on-street parking. Applicants should prove severe and consistent underutilization (less than 30% occupied for more than eight hours per day for the last month).

3. Require monthly status reports by the applicants to verify that parking occupancies are remaining low and the new use is not creating parking demand issues. Establish a timeframe (six months for instance) where the new use becomes more established and quarterly occupancy verifications are required.

4. Continually monitor parking occupancies throughout the city so that these underutilized parking arrangements can be modified as needed.

Benefits of repurposing underutilized parking include:

- Reduces underutilized parking facilities.
- Reduces facilities required for enforcement.
- Reduces the need for new parking facilities in the future since the repurposed facilities are temporary.

Challenges that can occur when implementing this strategy can include:

- Opportunities for repurposing may be difficult to obtain.
- May require the development of a permitting system specifically geared towards repurposing parking facilities.
- This strategy should be complemented with a minimum of annual monitoring of parking demands.

### Complementary Strategies

- Shared Parking
- Proactive Curb Management
- Parking Requirements

## Enhance Parking Permit Program

Parking permit programs protect parking spaces for different user groups, such as residents or employees, so that these users are able to park in areas that are convenient and are not blocked by visitors. Permit programs ensure that people are parking where they should and therefore make the system function more efficiently. It should be noted that a permit system is not the same as a space reservation. Permits do not guarantee an available space, rather they allow a valid permit holder to park in an area or for longer periods while restricting other users from parking in a designated area or at a designated time of day.

Ogden has an established permit program for employees, municipal building parking, and visitors, as discussed previously. The following are recommendations to maintain and strengthen the program.

1. Post a map on the City's website that shows permitted parking areas.

2. Encourage employees to park in off-street facilities. Designate lots and garages for employee parking. Communicate and coordinate with business owners for them to comply.

3. Permit parking areas should be contingent upon parking occupancy (lack of parking near destination and available parking in facilities to designate long-term permit parking areas).

4. Collect occupancy and inventory data annually to proactively designate employee permit areas and adjust as necessary.

Benefits associated with strengthening the City's parking permit program include:

- Protects parking assets for residents and employees when they need parking most.
- Allows visitors or short-term users access to appropriate locations.
- Optimizes the use of underutilized parking facilities.

Challenges that may result due to this strategy include:

- Meaningful enforcement is required to encourage compliance to the parking permit program.
- It is essential that the program is supported by business owners, employees, and residents.
- The parking program must allow for flexibility and growth within the program to make beneficial changes to businesses and residents.

### Complementary Strategies

- Shared Parking
- Leverage Mobility
- Parking Requirements

## New Parking Supply for Economic Development

Producing new parking facilities for the economic development of Ogden is meant to support both new and existing development. Parking is a community asset that can support the City's economic development strategy. This strategy establishes protocols for new parking supply so that it supports both planned and future economic growth. Action items for this strategy are displayed below.

**1** Bring together various City departments to identify opportunities and challenges with City processes to partnering on new parking opportunities.

**2** Form a committee between City departments and developers to guide the process. Establish design guidelines for garages and lots to help new facilities blend with surrounding development.

**3** Develop guidelines, protocols, and incentives:

- What portion of overall supply should be public?
- Safety and design
- Incentives for developers

**4** Identify investment strategies:

- Invest in transformation project
- Parking investment district
- Identify properties to infill or become parking

Benefits that arise with focusing parking growth on economic development include:

- Creates a standard procedure for the City and developers to follow to ensure parking supply matches the pace of growth.
- Proactively engages departments and developers in the decision-making process.

Challenges that are associated with the strategy include:

- A clear vision and goals are required to determine how to identify and locate new parking supply.
- This strategy requires the parking management staff to look beyond parking and incentivize economic growth while determining how parking fits with other strategies.

### Complementary Strategies

- Shared Parking
- Leverage Mobility
- Parking Requirements

## Strategies for Managing Parking Demand

This subsection discusses strategies that focus on vehicular trips, how people travel, and where they park to reach their destinations. This includes encouraging multimodal transportation, as well as using management strategies to redistribute where people park. Allocation of parking, which is the focus of Managing Parking Assets, dictates where people can park by the City or a private entity. The strategies for Managing Travel Behavior put the decision on where to park on the user by using incentives and disincentives to move people into low-demand parking areas.

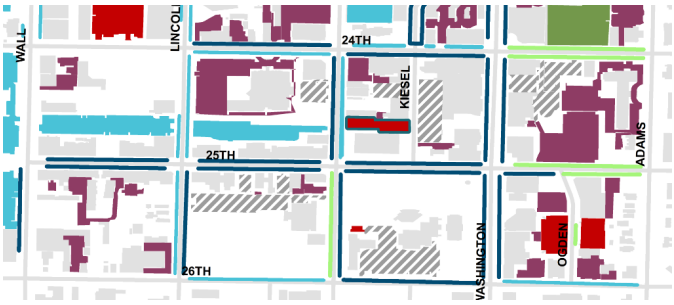
The strategies within this bucket are:

- **Update Time Limits**
- **Incorporate Wayfinding**
- **Efficient Use of Technology**
- **Enhance and Leverage Mobility Options**

## Update Time Limits in High-Demand Areas

Time limits restrict the length of time any single vehicle can park in a space. Most often time limits are seen in on-street spaces to encourage turnover in front of buildings. Changing time limits, especially in high-demand areas, should be adjusted to reflect the occupancy of the parking facility so that turnover is encouraged and therefore more parking availability is created.

Ogden has a number of time limits for on-street parking ranging from one-hour to two-hour limits. The maps below compare the time limit regulations (shown in dark blue) to the occupancy map shown previously in **Figure 6**. The data shows that blocks with time limit regulations have lower occupancies. However, the blocks adjacent to the time limited blocks have higher occupancies. The following are recommendations for using time limits to balance the parking.





**1** Consider reducing time limits along 25th Street to one-hour time limits. Also consider adding two-hour time limits to blocks along 24th Street that currently don't have time limits between Lincoln and Washington.

**2** Establish frequent, consistent, and transparent communication with the public and business owners regarding changes to parking time limits. Patrons and business owners will want to know what is changing, when, and why. An annual report (discussed previously) can be used as this messaging tool.

**3** Conduct annual inventory and occupancy data collection to monitor and track parking occupancies in the area. Adjust parking time limits as necessary. Blocks to watch are Lincoln and Grant adjacent to 25th Street due to their proximity to the high-demand area that already has time limits.

Benefits that arise with updating parking time limits include:

- Encourages use of underutilized parking while reducing the need for new parking development.
- Encourages turnover and shifts long-term parking users to less convenient facilities.

Challenges associated with updating parking time limits include:

- Areas with time-limited parking must have access to viable transportation choices.
- This strategy should be complemented by annual monitoring of parking demands.

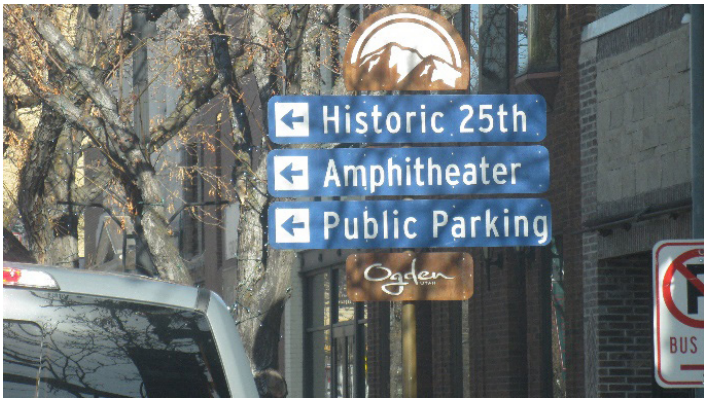
### Complementary Strategies

- Parking Requirements
- Leverage Mobility
- Enhance Enforcement

## Incorporate Wayfinding

Themed and branded wayfinding signage is an effective method for communicating parking demands throughout the area or city. The signs reduce confusion for visitors with clear indication of public parking (even parking that is privately owned, but available for public use). Signage helps visitor reduce their time hunting for a parking space.

Ogden currently has a wayfinding system in place in the Downtown area directing the public in a hierarchy system to public parking areas.




1. Create a parking map in the branded theme and post on the City's website.
2. Annually review the wayfinding signs for damage or development changes in the Downtown area.
3. Consider creating an incentive program for private parking owners that offer public parking to opt into the branded parking theme. Private facilities with the public branding may be more attractive for customers because it is recognizable.
4. Consider technology, such as smartphone applications that provide real-time parking availability or parking regulations.

Benefits that are observed with incorporating wayfinding include:

- Helps distribute parking demand while encouraging parking regulation compliance.
- Aids parking utilization in making available parking easier to find for user.
- Increases communication with residents and visitors.

Challenges that may be associated with incorporating wayfinding into the parking system include:

- Introducing wayfinding requires coordination and production of new signage or technology.
- Wayfinding may be considered as more of an investment than other strategies depending on static or dynamic signs as well as the number of signs needed.

### Complementary Strategies

- Parking Requirements
- Leverage Mobility
- Technology

## Efficient Use of Technology

Technology can vary widely depending on what it will be used for. Smartphone applications and dynamic messaging and real-time parking availability are technologies that direct users to available parking. Other technologies include those used to collect transactions, manage permits, and enforce. Introducing the use of technology into the parking system can improve access to parking facilities and improve overall circulation. However, it is important to first know what goal you wish to achieve before investing in technology because there are many options and they can be expensive.

1. Assess the current procedures for processing parking and enforcement data. Conduct a benefit and challenges analysis to determine areas of opportunity and improvement.

2. Establish goals of the City that may be reached through implementing technology (e.g., data collection, real-time availability, permitting). Consider software platforms and integration barriers or opportunities.

3. Determine what metrics can be pulled from using technology, such as parking occupancy and duration from real-time counting systems, or citation data from handheld GPS for enforcement officers.

4. Conduct a pilot study to test technology performance
   - Identify pilot period and metrics vendors need to collect
   - Public survey to gauge customer satisfaction

   Select preferred technology(ies) based on results.

5. Train staff on the adopted technology. Training should include how the technology works, backend data management, maintenance, and operations.

6. Conduct a messaging campaign to advertise the changes and how to use the technology.

Benefits that are observed with using technology efficiently includes:

- Enhances the user experience.
- Increases convenience for City parking duties, such as data collection, parking management, and transaction processing.
- Reduces City staff overhead time for permitting and payment administration and management.
- Better balances parking access and utilization.

Challenges that may arise when implementing technology into the parking system include:

- Many technologies are available with lots of “bells and whistles.” They are also expensive to implement. Having a clear goal for how technology will be used can help whittle down what technology is really needed and useful.
- Introducing technology requires training staff who will utilize the new technology.

### Complementary Strategies

- Permit Parking
- Enhance Enforcement
- Incorporate Wayfinding

## Enhance and Leverage Mobility Options

Enhancement of mobility options within the city will create more options for moving both people and goods. By leveraging the existing multimodal options available within the city, such as bikes, scooters, transit, sidewalks, etc., Ogden can reduce its reliance on single-occupancy vehicles while maintaining the same level of mobility and access.

1. Assess annual usage of bikes, scooters, transit, and pedestrian volumes, and compare to parking occupancy to identify connectivity gaps and opportunities.
2. Identify specific mobility goals and objectives for Ogden City that promote improvements and relies on data to make planning and investment decisions.
3. Establish programs, projects, or technologies to reach mobility goals, e.g., Complete Streets, transit hub, bus services, bike facilities, bike and pedestrian connectivity, bike parking, lighting, etc.
4. Update ordinances to reflect and promote new mobility goals and programs as appropriate.
5. Identify investment opportunities to plan, design, and construct multimodal projects for enhanced connectivity.

Benefits that come from enhancing and leveraging mobility options include:

- Encourages shared mobility options.
- Reduces commute impacts and improves commute knowledge.
- Redefines how users move throughout Downtown Ogden.

Challenges associated with this strategy include:

- Requires funding.
- This strategy will always be evolving and changing. Must track this data in conjunction with parking data to draw conclusions about how multimodal changes impact parking demand and vice versa.

### Complementary Strategies

- Parking Requirements
- Parking Permit Program
- Transit-Oriented Development

# 9. Data Collection – Methods and Metrics

# 9. Data Collection – Methods and Metrics

Data is a critical part of tracking and monitoring all aspects of the parking program. Comprehensive data, especially historical data, helps the City and the public understand what, why, and how decisions should be made for improving the system. The following is a list of data that should be collected on a regular basis. The data should be collected annually and included in the parking program's Annual Report.

### Parking Inventory

Provides the baseline for analysis and allows the City to track changes to the parking system over time and the impacts of those changes (e.g., removal/addition of parking, regulatory changes).

### Parking Occupancy

Indicates how well the system is being used and when parking strategies need to be implemented or adjusted. Time-limit policies can be adjusted to either encourage or discourage use.

### Parking Duration

Indicates how long people are staying in given locations. Timing, and eventually pricing, policies can be adjusted based on the surrounding uses and turnover rate. Collect only in high-demand areas.

### Parking Citation Volume and Type

Indicates how many citations are issued and whether violations are occurring in isolated areas over a given period of time and whether citations are increasing. Further analysis could figure out why that is and whether an adjustment to parking strategies and policies are needed.

### Program Revenue and Expenditures

Changes in revenue, when viewed granularly, can define how parking demands are shifting, and the success of policy changes. Revenue should include citations and permit revenues.

### Customer Satisfaction

Conducting customer satisfaction surveys periodically can define how patrons are reacting to changes in the program. The City should consider satisfaction levels of residents, businesses, employees, and customers at a minimum.

### Vehicle Congestion

Reduction in vehicle miles traveled and localized congestion is an indicator that parking management strategies are effective at redistributing demand and overall access to the community.

### Mode Split and Transit Ridership

Mode split in the community is a key characteristic in defining shifting behavioral and access patterns. Reductions in drive-alone rates can be a clear indicator that parking policies are working.

## Data Collection Plan

Data should be collected in a consistent manner each year to ensure that the metrics are comparable. Therefore, Ogden should develop a data collection plan that specifies the staff necessary to collect each data point, equipment needed (cameras, GPS, pen/paper, water, etc.), the timeframe necessary to complete the task, specific instructions on how to collect the data, analysis standards, and reporting standards. When first initiating, staff should also be trained before entering the field to collect data. This ensures consistency in the collection methodology.

With a major disruption, such as recently experienced with COVID-19, the City may need to pause on data collection efforts for a year or at least until the extent of the disruption is apparent. In the case of COVID-19, the extent is ambiguous, and the baseline may have shifted. As the City feels more comfortable in conditions stabilizing (not necessarily returning to normal), data collections can be performed. In fact, as things start to come back in increments, it would be prudent of the City to do more frequent collections in sample locations. The sample locations should be in high-demand areas or areas where the City is experiencing change. The frequency of collection of the sample areas should be every six months to gauge how things are changing.

## How to Use the Data

The following provides further details on how to use the data that is collected.

### Parking Inventory

Create an inventory database that can be updated annually. The database should include:

- Type of space (on-street, lot, garage)
- Ownership (pubic or private)
- Regulations (time limits, enforcement hours)
- Location
- Number of spaces (total and by type if it's a shared facility)
- Other information (such as, is the facility shared? Is the parking for transit riders only?)

The database should also track what spaces were lost or changed in some way (no longer shared but total spaces in the same, lot removed, block experiencing construction so there is no parking that year, etc.). The inventory is a baseline metric that helps provide context for the other data metrics.

### Parking Occupancy

Regardless of what is being evaluated, whether it's time limits, permit system, parking requirements, curb management, etc., parking occupancy is the key metric used to determine when the next level of change is necessary. Ogden should consider making parking management adjustments once a set of adjoining parking spaces (e.g., a continuous block face or more) or a parking lot or garage is consistently experiencing the following:

- Parking occupancies reach or exceed 85% or more for three or more hours over at least two weekdays (measured in separate weeks)
- Parking occupancies reach or exceed 70% five or more hours over at least two weekdays (measured in separate weeks)

Once those thresholds are reached, the City should consider implementing the next phase in a recommended strategy.

### Parking Duration

Parking duration should be collected in high-demand areas only so that time limit regulations can be adjusted. The intention is to encourage turnover of spaces, creating more availability. Duration data does not need to be collected each hour of the day, like occupancy data, but rather only the hours surrounding and including the peak times of day.

## Parking Citations

Enforcement officers can collect and share this information on a regular basis in an interval that is agreed upon with the City planning staff (monthly, quarterly, annually). While there are no specific metrics, this data will help determine hotspot locations for certain types of violation types. After a couple of years of consistently collected data, the City can set thresholds for making improvements to the enforcement practices.

## Parking Revenue and Expenditures

Knowing how much money is spent on parking helps to inform conversations about how impacts to parking will also impact other areas of City planning. For instance, as various departments review budgets, it is a good opportunity to have conversations about how parking has impacted transit or development and so on. It is also useful for when there are conversations about how to price parking, such as permits or parking at transit stations, if and when the parking program matures to that point. A parking revenue report also helps establish budgets to help support other interventions, such as signage, collections, or technology.

## Customer Satisfaction

Survey the community on an annual basis to gauge feedback from customers, business owners, property owners, developers, residents, and other representatives. The survey should ask similar questions year over year to display historic trends.

## Vehicle Congestion

Vehicle congestion data is available from WFRC and can be cross-analyzed with other data that the City collects. The data can be added to the reports to help draw conclusions about how the implementation of the recommendations has impacted the number of vehicles on the road.

## Mode Split and Transit Ridership

Data collected by WFRC and UTA can be used to build this dataset to track the percentage of those who travel by single-occupancy vehicle, bike, pedestrian, and transit. In this category, the City could also track the usage of bike-share programs and other mobility programs. UTA can provide detailed ridership data for each station within Ogden as well.

# 10. Implementation Timeline

# 10. Implementation Timeline

The timeline for implementing strategies recommended in this plan is divided into three planning horizons: short-term (now to two years), mid-term (three to five years), and long-term (more than five years). The matrix below indicates when each of the strategies should be initiated, guided by the principle of taking steps appropriate to the size and complexity of the problem. The implementation plan is ordered in a way to firmly establish the groundwork for a parking program. Many of the tasks initiated in the short-term planning horizon will still be continued for years as a part of the program.

The matrix does not specify each action item for each strategy. This is because implementation of the various action items of those strategies will vary and will be dependent upon the changing conditions of the community and the ability to implement successive strategies. Once a strategy is initiated, it is assumed that the specific action items for the associated strategy will also eventually be initiated.

| Strategy | Type of Strategy | Evaluation Cycle |
|---|---|---|
| **Short-Term Planning Horizon (0-2 years)** | | |
| Right-Size Parking Requirements | Practices and Policies | Every 5-10 years |
| Data-Based Decision-Making | Practices and Policies | Annually |
| Update Time Limits | Manage Travel Behavior | Every 1-2 years |
| Develop an Annual Report | Practices and Policies | Annually |
| Enhance Parking Permit Program | Manage Parking Assets | Every 5-10 years |
| Flexible Shared Parking | Manage Parking Assets | Annually |
| Repurpose Underutilized Parking | Manage Parking Assets | Quarterly (site specific) |
| **Mid-Term Planning Horizon (3-5 years)** | | |
| Proactive Curb Lane Management | Practices and Policies | Every 5-10 years |
| Efficient Enforcement Practices | Practices and Policies | Becomes daily/weekly practice |
| Incorporate Wayfinding | Manage Travel Behavior | Every 5-10 years |
| Invest in Parking for Economic Development | Manage Parking Assets | Annually |
| **Long-Term Planning Horizon (over 5 years)** | | |
| Enhance Mobility Options | Manage Travel Behavior | Annually |
| Efficient Use of Technology | Manage Travel Behavior | Annually |
| Manage Transit Station Parking | Practices and Policies | Annually |

APPENDIX B

# SOUTH SALT LAKE

## PARKING STUDY

UTAH PARKING MODERNIZATION INITIATIVE

March 2021

# Table of Contents

# 1. Introduction


# 1. Introduction

The Wasatch Front Regional Council (WFRC) in partnership with the Mountainland Association of Governments (MAG), Salt Lake County, the Utah Department of Transportation (UDOT), and the Utah Transit Authority (UTA), led the Utah Parking Modernization Initiative (Initiative) to localize parking data and strategies so that communities within the Region are able to identify parking inefficiencies and appropriate solutions to proactively manage parking. As part of this Initiative, two partnership cities, South Salt Lake and Ogden City, were conducted parking studies specifically for their cities. The process and findings of these studies could then be used to localize data rather than relying on national standards.

The purpose of this South Salt Lake Parking Study is to assess existing parking demand within the City and compare to the parking requirements identified in the city's parking code as well as national standards. The Study identifies strategies that aim to optimize parking and transportation throughout the South Salt Lake. The Study concludes with an implementation plan for the City of South Salt Lake that integrates both parking strategies and travel demand management strategies to meet the goals of the City.

This study is also part of a regional effort to identify challenges and solutions that may be highly effective today along the Wasatch Front. The upcoming "best practices" guide for the region can be used to support these decisions.

***It is important to note that this Study, including the data collection, was started prior to the shutdowns and economic impacts of COVID-19 in 2020. At the completion of the study, the full economic impacts and transportation impacts have yet to be realized. The recommendations for this Study are intentionally flexible with guidance, arming the City with the knowledge and tools necessary to make informed, data-driven decisions. The impacts of COVID-19 are not fully known at the conclusion of this report, and will require a second look at development trends, transportation habits, and parking patterns under "new normal" future conditions.***

## History of Parking and Impacts on the Built Environment

Parking modernization is a concept for identifying parking strategies that reflect the world today and are flexible to grow with the future. It investigates and updates the antiquated regulations and policies that has guided parking in many communities across the Region and country since the 1950s. Since the car became a popular mode of transportation, city codes have attempted to identify and require the proper number of parking spaces necessary for development based on the type of land use and its size.

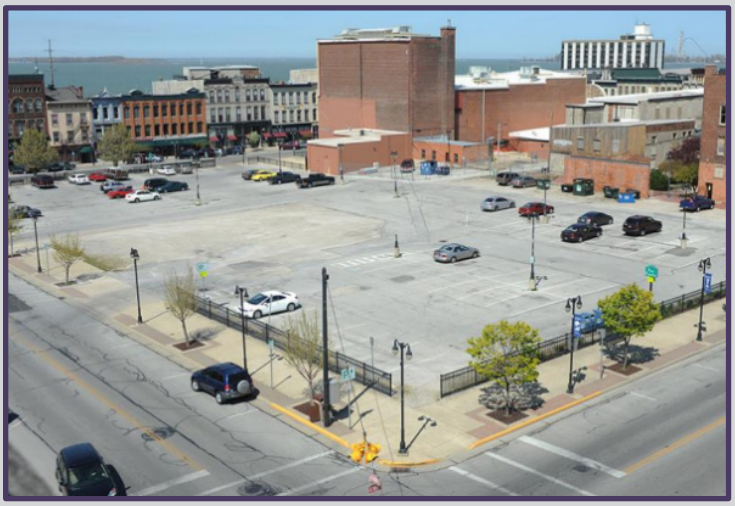
Parking policy has largely been reactive to changes in the community - meaning the parking codes change only after a problem has been identified. A proactive approach would involve identifying growth trends and goals within the community and adjusted to prepare for those changes and guide growth in a manner that supports larger community goals. Over time, complaints about a parking shortage (typically for a peak period despite a large supply otherwise), often led to parking policies and economic practices that shaped cities in ways that are now considered a detriment. These images show how parking has been handled historically across the country.

### Parking in the 1920s

- Traffic laws and regulations were starting to emerge
- Cars become common but streets still mixed with cars and pedestrians
- Historic downtown building rows added space for parking on-street.
- Parking lots were starting to form around land uses to accommodate cars

### Parking in the 1950s – 1980s

- Cars are favored over transit and many local transit services abandoned
- Parking codes adopted to ensure parking around land uses
- Piecemeal approach, by project
- Encouraged the pattern of isolated buildings ringed with parking familiar to us today



### Parking in the 1980s – 2000s

- Surface lots are prominent feature in downtowns and suburbs
- Encourage vehicle travel and discourage walking
- Deteriorating community attractiveness and connectivity
- Reliance on ITE & ULI National Standards
- Awareness growing that surface parking lots often negatively impact net revenues

### Parking Today

- Focus on connectivity and multimodal travel to reduce vehicle travel and parking
- Emphasis on building patterns that enhance walkability, character and attractiveness
- Parking seen as tool to support economic growth and viability
- Growth and transportation intertwined
- Changing nature of retail
- High land costs and shift toward parking garages make parking a expense
- Willingness to share and manage parking cooperatively
- Redevelopment agencies and cities negotiate parking requirements to suit both project and neighborhood goals
- Using parking studies and monitoring to keep a balanced supply and demand

*South Lake City Project. Source: The Salt Lake Tribune, December 2019*

## New Utah Parking Dynamics

Communities across Utah are experiencing an evolution of city design. Commutes, shopping patterns and personal transportation habits are changing. Parking needs to evolve, too. Some commonly faced challenges include:

- An oversupply of parking for many land uses. This is particularly concerning in downtown areas or areas with mixed uses or higher density, such as areas near transit stations. Parking codes tend to cater to suburban style development patterns. Requiring parking for every individual land use in close proximity does not adequately reflect how mixed-use, higher density areas operate.
- Concern for downtown/city center character, economic success and diversity where vacant parking may act as a barrier.
- Little to no management and control of existing parking assets, both public and private, creating an imbalance between supply and demand.
- Concern for increasing costs feasibility of new projects, due in part to the high cost of providing parking and its impact on affordability.
- Lingering resistance to paying for parking. However, this is giving way to paid parking in highly desirable areas.
- Reliance on national standards or standards from other communities that don't match the unique character, growth goals for the community.

## What Does It Mean to Modernize Parking?

Modernizing parking regulations, standards, and practices can mean many things depending on the community. However, generally speaking, it means to consider and incorporate a wide range of community elements and goals, beyond parking demand and land use.

A number of goals for the city must be recognized. The following graphic depicts various goals for a parking system. These are not goals traditionally thought of when thinking of parking. Today, parking is recognized as a part of the larger fabric of the community, often with an outsized influence. South Salt Lake can include any or all of these goals in its modernization effort – to drive investments and policies that achieve more than just housing a vehicle for part of a day.

**Overarching Parking Program Goals**

- Support Existing Businesses and Residents
- Create Attractive Places
- Promote Equity
- Promote Alternative Transportation
- Promote Economic Growth
- Enhance Safety
- Promote Sustainability

## What is a Parking Study?

A parking study presents information on a community's parking system. First, an area is designated to study. This can be a Downtown area or any area that is of interest to monitor for the community. The study process includes collection of pertinent data. At its base, this includes parking inventory and number of parked vehicles to determine occupancy for each facility in the defined area. The study should also look at existing policies that dictate parking regulations and practices for enforcing those regulations. Based on the analysis, the study will draw conclusions on what is working well and what can be improved with regard to parking. The data informs what strategy to implement next to make the improvements and what strategies to plan for in the future.

Once complete, the data compiled in the study is now a baseline of information for conducting updates to the data annually and continuing to implement recommendations as the data dictates.

**A successful parking system should…**

1. Support connectivity to transportation, land use, and economic development;
2. Provide access to businesses and destinations, linking parking to the economic enhancement of the community;
3. Serve as a transition point where alternative modes of transportation can cross paths and connect; and
4. Play a role in sustainability, measured by reducing traffic, congestion, and, therefore, greenhouse gas emissions.

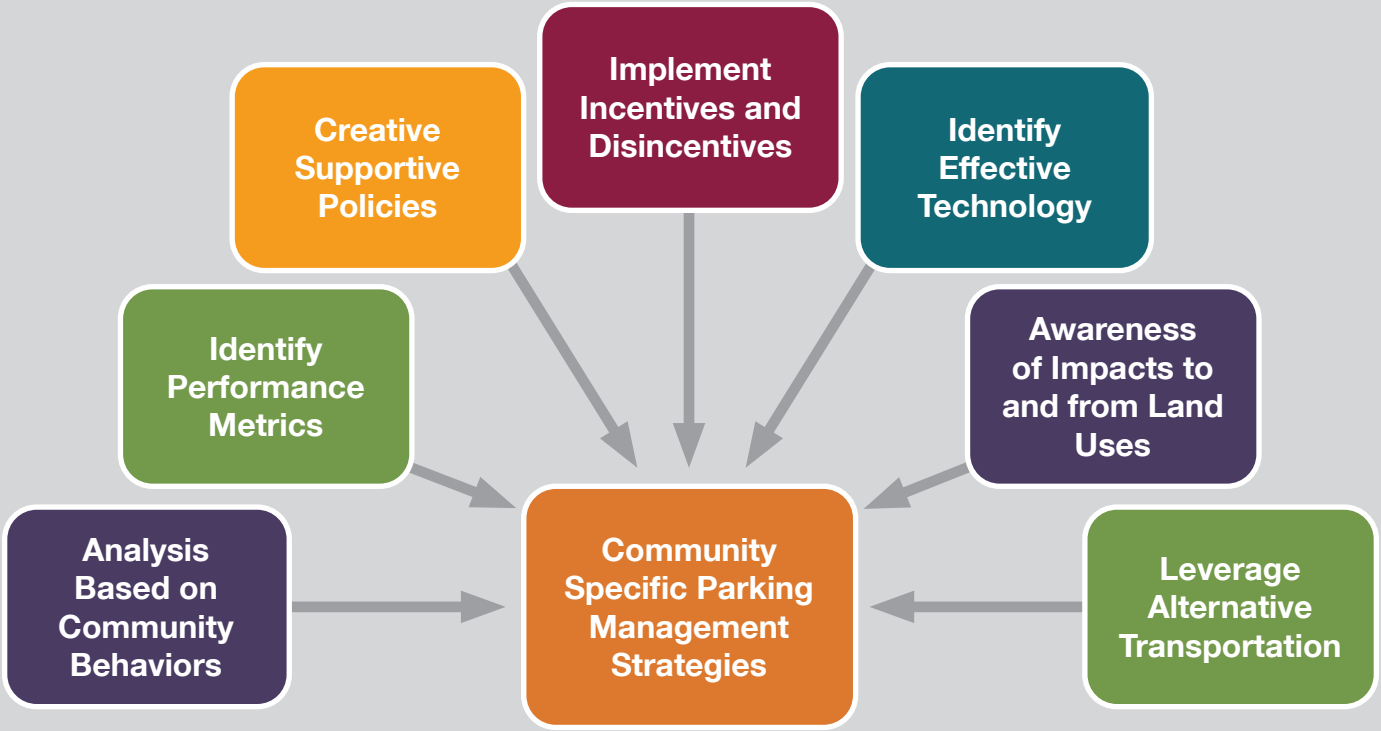
Second, several elements about the community can be studied to get an accurate depiction of the parking system as well as the community characteristics that impact the parking system. The graphic below demonstrates many of the community-specific data that could be collected, analyzed, and/or reviewed as part of the study process. The depth to which these are all analyzed can vary depending on the goals, time, and money available to study them. These are all community-specific attributes, not data taken and applied from another community or from national standards, thus creating a more customized solution.

## Planning Process

For this study, each of the above attributes were reviewed and analyzed in some capacity. This document includes the following sections:

- Background information on the City's planning efforts and definitions for this study
- Review of existing data for Downtown Ogden and a review of land use specific demand observations
- Summary of how Transportation Demand Management can improve parking demand
- Summary of a peer roundtable discussion
- Recommendations by category
- Data collection plan and metrics
- Implementation timeline

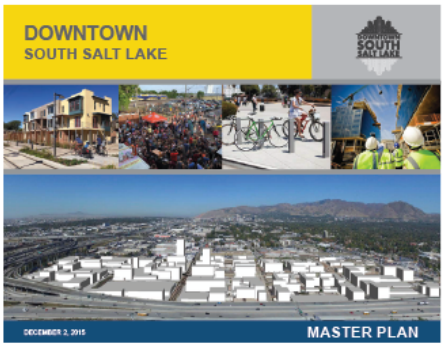
**Community-Specific Study Attributes**

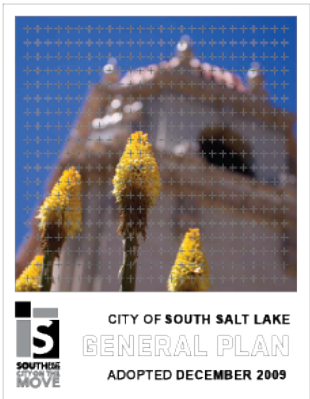


# 2. Planning Context

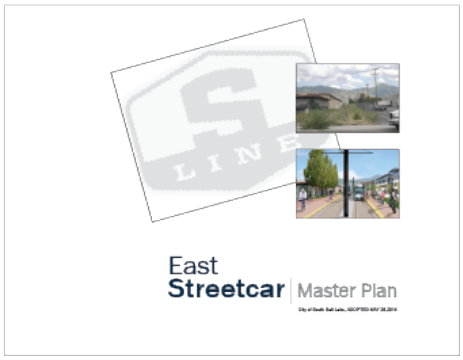
## 2. Planning Context

The City of South Salt Lake has several key master plans and zoning documents that support and form their City's future and growth. These documents include its General Plan and more specific neighborhood planning efforts, including the Crossing Master Plan, East Streetcar Master Plan and Zoning, and Downtown South Salt Lake Master Plan and Zoning. The City also has specific zoning for transit-oriented development areas, as well as for the expansive commercial, industrial and institutional uses within its boundaries.








The following are overarching goals for Ogden based on the documents referenced in the Planning Context:

- **Goal 1:** Improve housing opportunities through revitalization of existing housing and development of high-density housing opportunities
- **Goal 2:** Enhance requirements for parking, development, and enforcement to support goals of the City
- **Goal 3:** Amplify alternative transportation infrastructure to create a transit-oriented community
- **Goal 4:** Improve existing roadways while enhancing efficiency and safety for both main roadways and residential areas
- **Goal 5:** Enhancing bicycle/pedestrian infrastructure and safety
- **Goal 6:** Redevelopment of industrial and commercial areas to transition to transit oriented development
- **Goal 7:** Enhancing open space, parks, streetscapes and gateways

The above goals act as parameters for the development of parking recommendations to ensure those recommendations align with the larger goals for the City.

The City of South Salt Lake is experiencing a surge of redevelopment and transit-oriented development along the TRAX light-rail line and along the S-Line streetcar line. City zoning has encouraged leveraging the close proximity to transit provide less parking and encourage transit and active transportation instead. As a result, South Salt Lake looked to this study to assess the balance of supply and demand in these new developments. It also wanted to understand the depth of the imbalance for parking in commercial, institutional areas that are known for large parking lots. In some cases, the supply far exceeds even the requirements due to changing uses in a given building.

This Study will examine the existing parking demand at various land use sites around the City and compare the results to the existing code requirements, as well as national standards, so that the City can right-size their parking requirements where needed. Additionally, travel demand management strategies are suggested where they could help reduce demand.

# 3. Existing Parking Conditions

# 3. Existing Parking Conditions

This section explores the data to assess the existing parking conditions. The existing parking conditions are analyzed through analyzing parking inventory as well as occupancy at various times of the day and week. Identifying trends of the existing parking conditions will aid in identifying opportunities in the parking system and producing strategies to improve it.

## Definition of Terms

The following terms and concepts are used throughout this report to describe the performance of the parking system or individual components of the system.

**Effective Capacity:** Effective capacity is an industry-accepted occupancy threshold for parking facilities that indicates the efficiency of a parking facility, shown as a percentage of spaces occupied. Greater detail on this term is provided on the next page.

**Parking Demand:** Parking demand is the projected number of vehicles generated by visitors or tenants of a land use. Each business or land use generates a specific quantity of demand for parking spaces to accommodate their users. The total number of spaces generated by business or land use is based on the land use intensity (often building square footage or number of dwelling-units).

**Parking Facility:** A parking facility refers to any on- or off-street location designated for vehicular parking.

**Parking Occupancy:** Parking occupancy is the percentage of occupied spaces in a parking facility at any given time. This ratio is calculated by dividing the number of observed vehicles parking in a facility by the number of total spaces in that facility.

**Parking System:** A parking system refers to the entire collection of parking spaces, parking facilities, technologies, equipment, policies, regulations, and personnel that work cohesively to provide parking in a given area.

**Transportation Demand Management Program (TDM):** A Transportation Demand Management program is a set measure including policies, economic, and programmatic measures that aims to reduce vehicle miles traveled. Thisin turn reduces traffic congestion and parking demand. TDM Strategies often improves environmental, conservation and sustainability efforts as well. They can include measures that work to reduce single-occupancy vehicle trips, increase vehicle occupancy, and shift travel to other modes or non-peak travel periods. This is often achieved through financial incentives, local infrastructure and land use policy that constrains parking supply, densifies uses, and provides a suite of convenient transportation options, including walking, bicycling, transit, and rideshare.

## Performance Metrics and Thresholds

Parking occupancy is a key performance measure used to evaluate the effectiveness of the parking requirements and observed demand. The industry-accepted thresholds for parking occupancy are shown below. The ideal goal is to have a parking system, site, or urban center where 70% to 85% of the available parking spaces are occupied during the peak conditions. If too many spaces are occupied, then the remaining spaces are too hard to find. If too few spaces are occupied, then the land is not being used to its greatest potential and the parking can absorb more demand.

| Under 70% Occupancy | 70-85% Occupancy | Over 85% Occupancy | Over 90-95% Occupancy |
|---|---|---|---|
| Under Capacity | Optimum Capacity | Effective Capacity | Residential Effective Capacity |

An exception to the 85% effective capacity threshold is for residential land uses. Residents are extremely familiar with their parking options and will habitually park in the same location year after year. Therefore, the parking occupancy threshold can be increased to 90%, or even 95% in some cases, for these types of land uses.

The following are broad examples of parking management strategies that can be introduced as parking occupancies increase. The intention is to not immediately jump to more intense parking management strategies. This can cause pushback and concern from businesses and residents. Rather, strategies should be implemented gradually, giving time to analyze trends and make minor adjustments that improve the parking program that are based on data and informed by the community's needs.

| | |
|---|---|
| **No/Minimal Regulations** | • Parking is available and abundant<br>• No concern from residents and businesses |
| **Time Restrictions** | • Promote efficient use of parking through turnover, encouraging long-term parkers to look for other spaces or arrival options<br>• Managed through signage and enforcement |
| **Permit Parking Protections** | • Introduce permit parking system that restricts who can park in specific lots or streets (e.g. residential neighborhoods)<br>• Helps manage the overflow of parking from adjacent commercial areas |
| **Transportation Demand Management** | • Improvements to cycling, walking, transit, micro-mobility amenities over parking improvements |
| **Introduce Paid Parking** | • After resources are exhausted and parking demand in area grows past the acceptable threshold (85%), paid parking should be introduced |
| **Introduce Additional Parking** | • If parking demands continue to exceed the acceptable threshold (85%), more parking should be provided |

## Data Collection Methodology

Although the South Salt Lake study area is City-wide, site specific data collected on representative land use typologies was conducted. The City of South Salt Lake is experiencing significant development in Downtown and transit-oriented development areas. These sites were chosen to assess the parking system in the most crucial areas and types of development.

The data collection revealed parking occupancy that indicated parking behaviors by the land use types, which could then be compared to city code requirements and national standards. The land use typologies that were selected for this analysis were:

- **Commercial Corridor:** Mixed-use commercial land uses along a corridor. This land use normally ranges from 1,000 to 16,000 square feet and can be a combination of public, private, and on-street parking.
- **Big Box Commercial:** Box commercial sites that are surrounded by parking. If there are other small land uses on the same site (i.e., gas station) they are included as part of the site. An average size for Big Box Commercial areas is approximately 82,600 square feet, which requires about 420 parking spaces (according to city code?).
- **Urban/TOD Housing:** High-density housing units such as apartments or condos. These can be in a mixed-use building and may also be near transit (TOD).
- **Transit Station:** Light rail transit station for the UTA TRAX system. Each transit station presents unique challenges and opportunities based on its surroundings and characteristics. The transit station typology is evaluated on type of service, ridership, surrounding land use, street network, and walkability. This typically requires approximately 80 to 100 parking spaces, however, the parking provided at SSL stations varies widely
- **School:** K-8 school with small periods of high demand each day for drop-off and pick-up activity. In this land use, there are an estimated 270 students and 120 parking spaces.

**Parking inventory and parked vehicle counts were collected over:**

**1 Weekday | Wednesday, March 11th**

**1 Weekday | Saturday, March 14th**

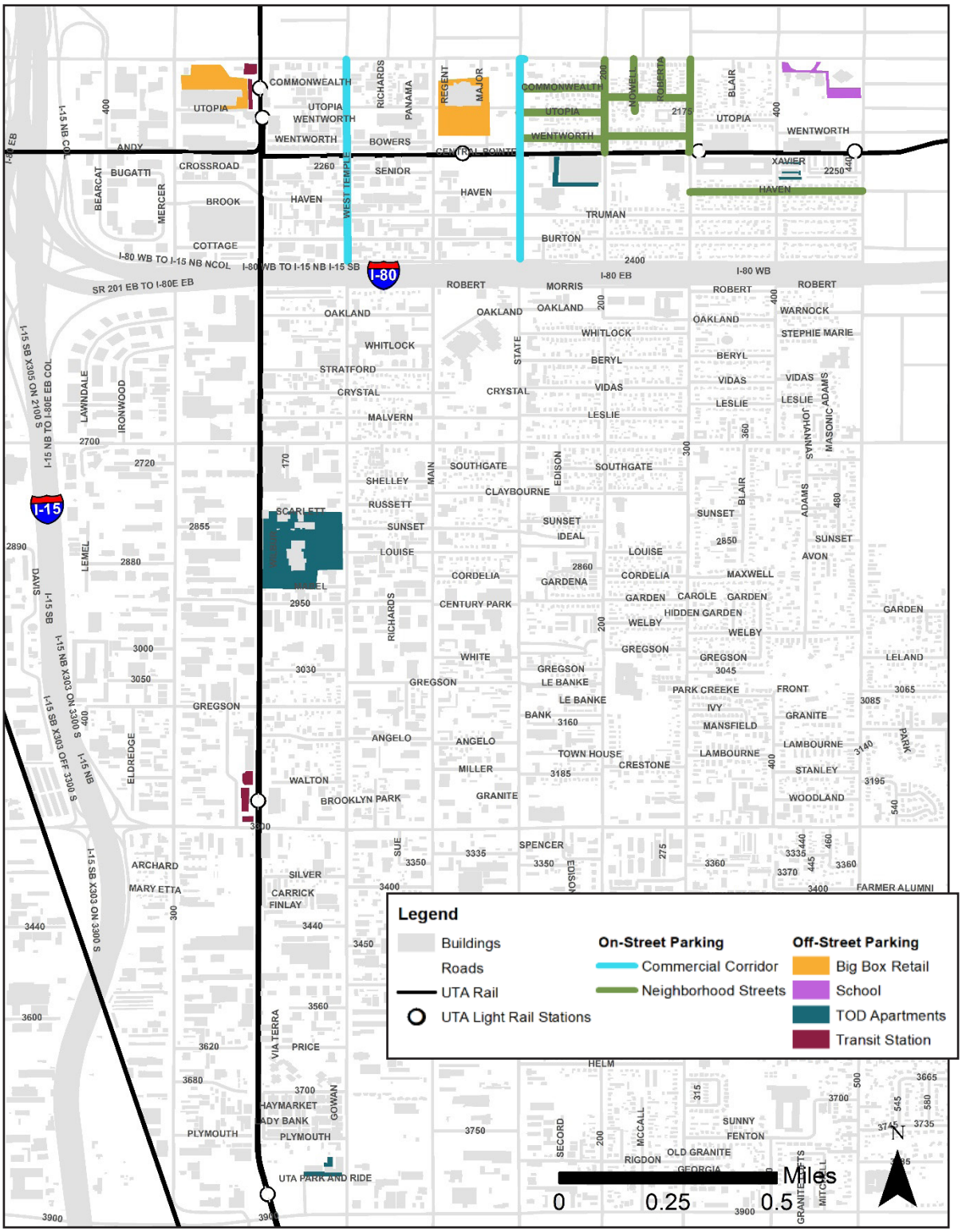
**7:00 am - 7:00 pm | Both Days**

***It is important to note that the data was collected prior to government mandated shutdowns related to COVID-19. The analysis that results from this data is pre-COVID and does not reflect the reduced parking and traffic and transit demands experienced from March 2020 through December 2020.***

## South Salt Lake Parking Study Area

The map below in **Figure 1** displays the data collection area with the associated land use typologies that were studied.

**Figure 1 – Study Area**

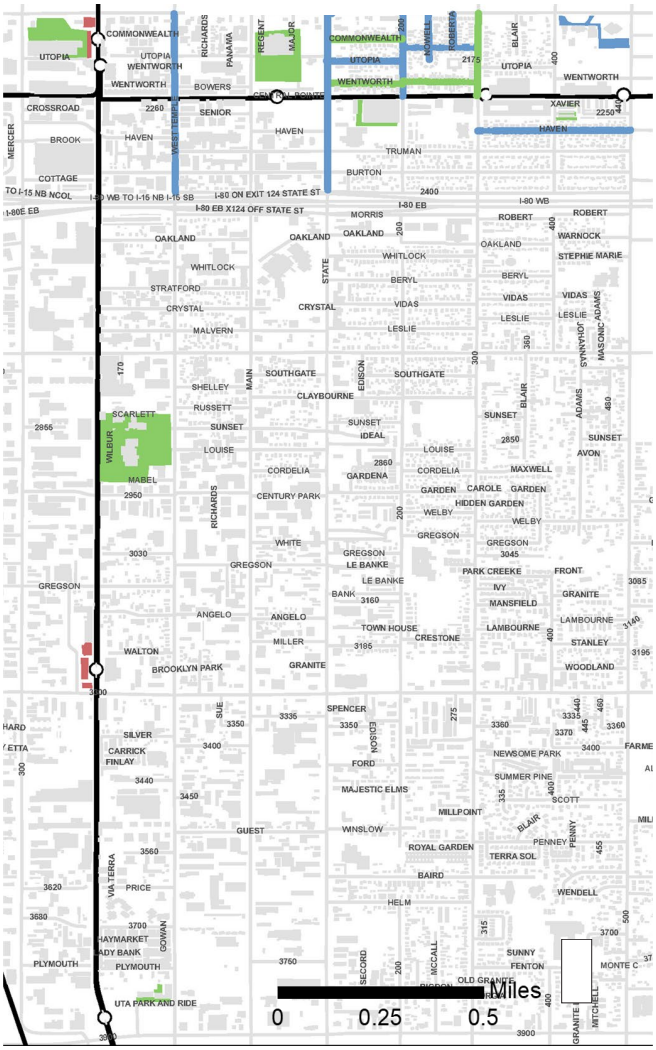


## Parking Occupancy

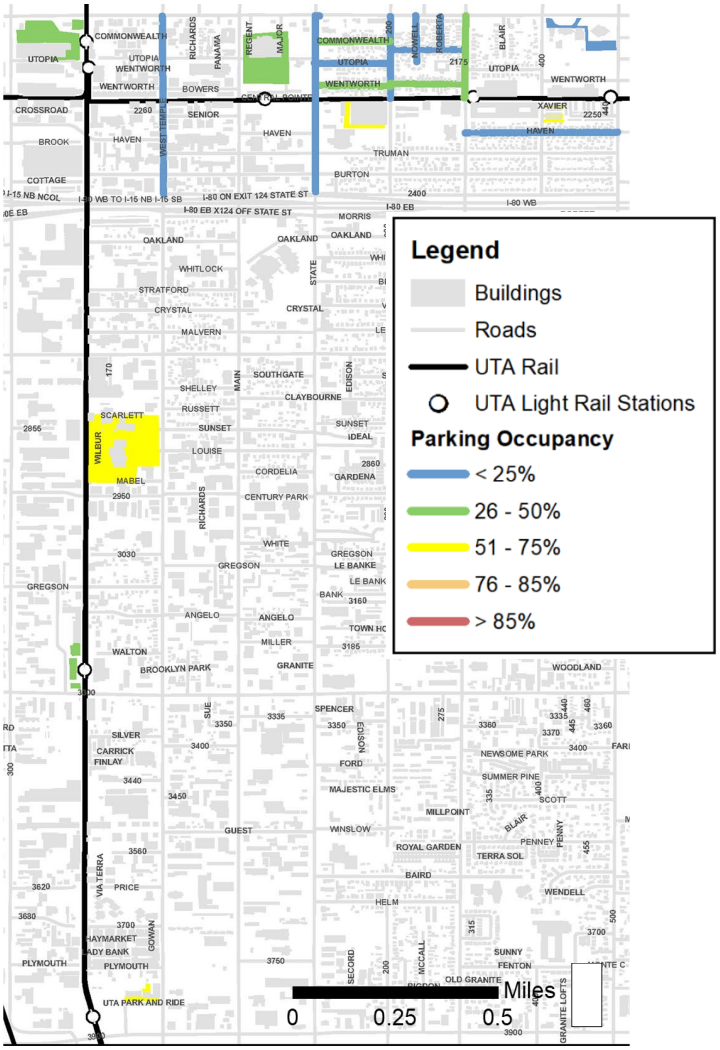
A combined parking occupancy for all sites observed was found to be at 12:00 PM and 6:00 PM, as shown in **Figure 2** below. The overall peak was not determined since the parking occupancy was being evaluated at specific sites rather than the entirety of the study bounds. The peak occupancy reached 31% occupancy where the 12:00 PM peak is driven by the demand of the transit station and where the 6:00 PM peak is driven by the parking demand of the housing land use as well as the big box land uses.

**Figure 2 – Peak Parking Occupancies**

**12:00 PM Peak**




**6:00 PM Peak**



## Parking Occupancy

The graphs below – **Figure 3** and **Figure 4** – present the parking occupancy trends for each land use typology by weekday and weekend, respectively.

**Figure 3 – Weekday Parking Occupancy by Land Use Typology**

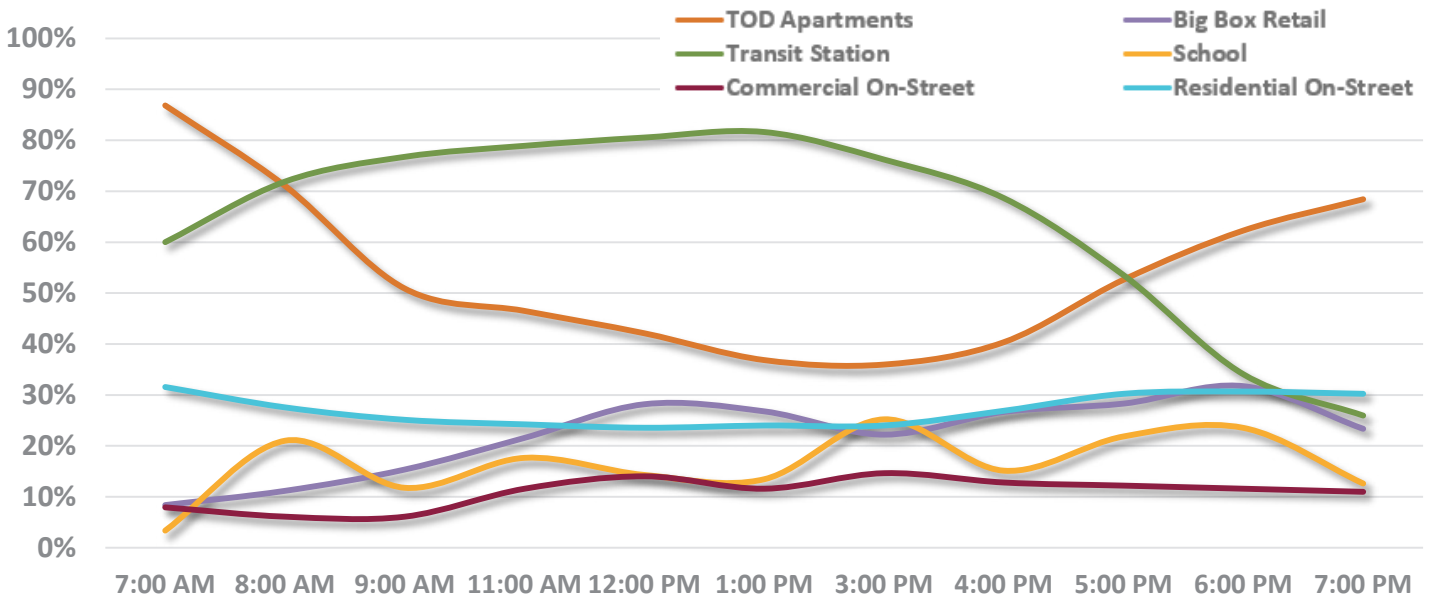
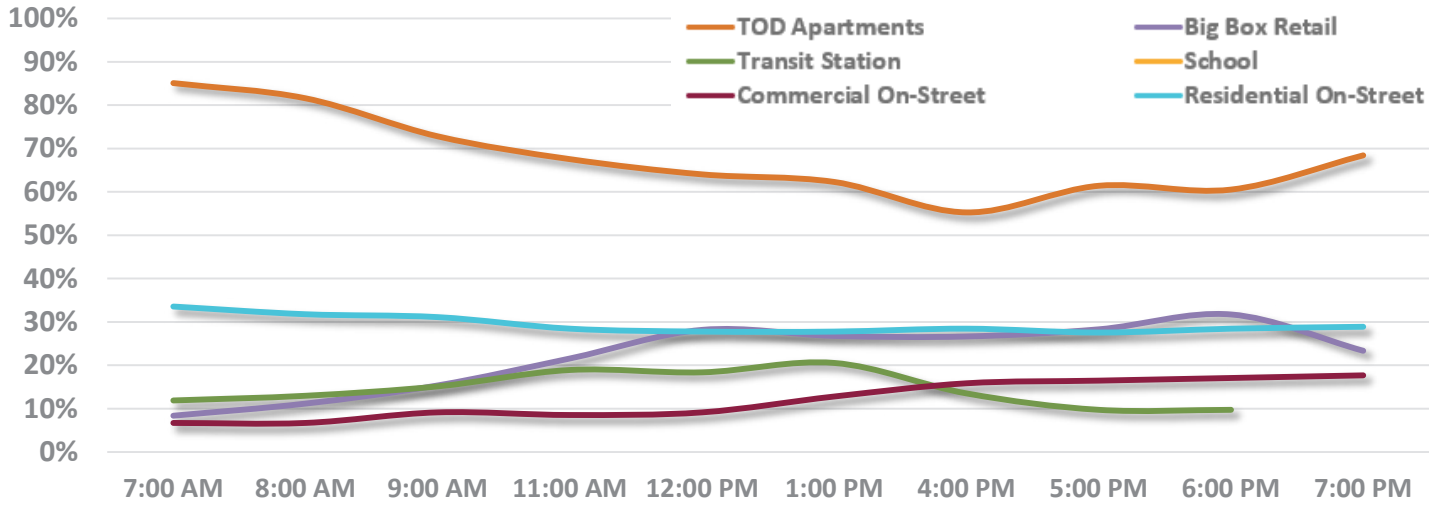



**Figure 4 – Weekend Parking Occupancy by Land Use Typology**




The TOD apartments follow typical trends expected, being higher in the early morning and evening time on weekdays as well as on weekends. The transit station parking is highly utilized during work hours and sees reductions during evenings and weekends. Because of this, there is a potential opportunity for shared parking during these low-occupancy times. The City's TOD Modifications allow for right-size parking of developments – effective for housing but oversupply for retail. Parking associated with the school, big box retail, and on-street have a consistent low utilization.

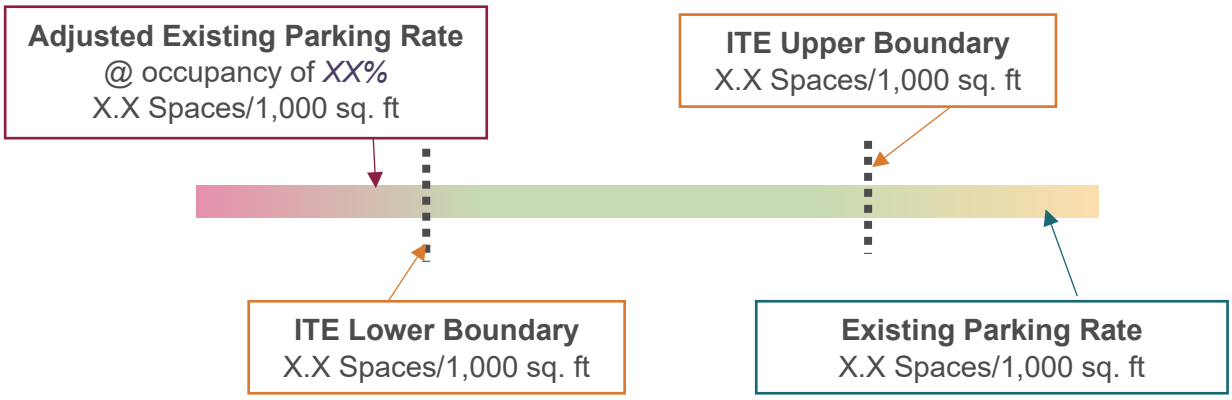
## Parking Standard Comparison

This section compares the observed parking occupancies, as described in the previous section, to what is required in the code (Existing Parking Requirement) and national standards as defined by the Institute of Transportation Engineers (ITE). For this comparison, the ITE Parking Generation, 5th Edition was used, as well as the Salt Lake City Code 17.06.160.

The following symbols are used to indicate whether the code for that land use provides adequate

| Symbol Key | | Impacts to Urban Form |
|---|---|---|
| **Balanced** |  | The code is adequately providing parking. The parking system is balanced and allows for opportunity for continued growth |
| **Overparked** |  | The code requires too much parking and is resulting in parking that is not used. The urban from is vacant and properties are disconnected. The land use is not being used to its greatest economic potential |
| **Underparked** |  | The code does not require enough parking and results in spillover parking. New investments and development can be deterred because the parking availability is constrained |

In addition, each land use has a bar (like the example shown below) that depicts a range from underparked (red), optimum (green), and overparked (yellow). The upper and lower national (ITE) boundaries are shown to highlight the national optimum range for parking rates. The existing parking rate per City Code is shown on the graph and another callout point along the bar shows an adjusted existing parking rate. This adjusted rate is the point of optimal parking provided for that land use. It takes into account the observed occupancy and the 85% threshold.

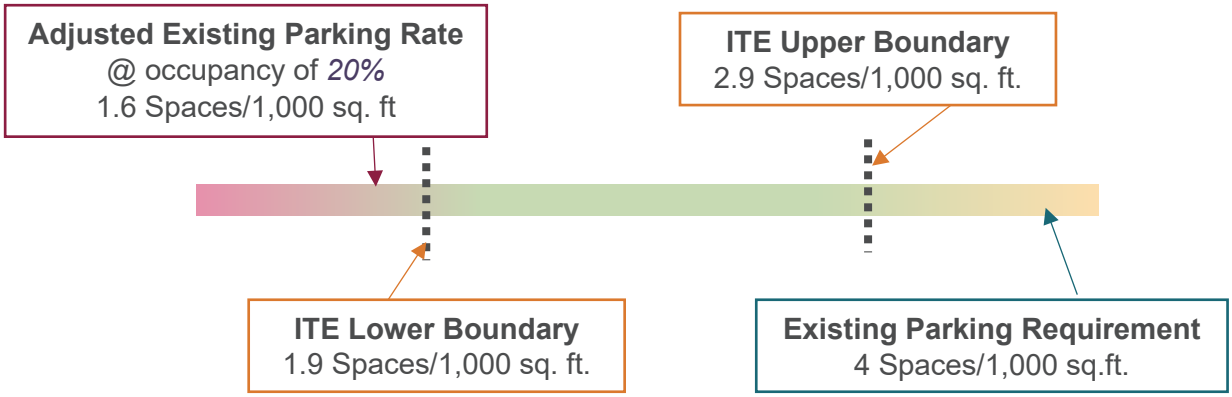


## *Commercial Corridor*


A commercial corridor is a length of roadway that is lined with various types and sizes of commercial, retail, office, and service land uses. There is sometimes a small parking lot in the front of the building and perhaps in the back as well. The sizes of the buildings vary, but they are typically within 2,000 sq.ft. to 16,000 sq.ft. There may also be on-street parking adjacent to the buildings or a vehicle travel lane. The selected commercial corridor for this Study was along West Temple and State Street from 2100 S to I-80.

The observed parking occupancy for the Commercial Corridor land use typology saw a peak demand of 20%, showing that the parking is significantly underutilized. When examining the existing parking requirements for this type of land use in South Salt Lake, existing parking requirements were found to exceed national requirements set by ITE.

If the existing City rate was adjusted to reflect the 20% parking demand, at and the 85% threshold the resulting rate would be 1.6 spaces/1,000 sq. ft. This rate is below the national standard that ITE sets. This measure further shows that the current parking requirements in the Code not only surpasses ITE's recommended parking ratios but results in heavily underutilized parking and an excess of spaces.



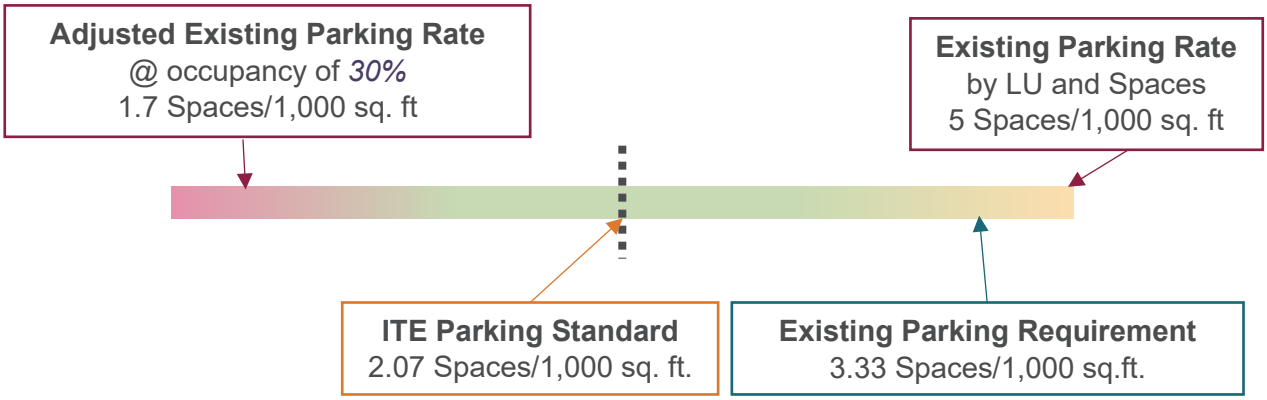

***The required parking rate for this land use should be adjusted, especially in higher-density areas or areas within a one to two block distance from the TRAX station, so that an oversupply of parking is discontinued.***

## *Big Box Commercial*


Big box commercial retail land use typology includes large single-use retail buildings, approximately 80,000 sq.ft. or larger. This use is characterized by having a large parking lot in the front of the building.

The Big Box Commercial land uses in South Salt Lake accounts for 82,600 square feet and 420 parking spaces, resulting in a parking rate of 5 spaces/1,000 square feet which exceeds both the ITE standards and existing parking requirement. The observed parking demand was 30%. Together, this data indicates that developers are building parking in excess of what is being required.

If the existing city rate was adjusted to reflect the 30% parking demand, and the 85% threshold, the resulting rate would be 1.7 spaces/1,000 sq. ft. This rate is below the national standard that ITE sets. This measure further shows that the current parking Code requirements not only surpasses ITE's recommended parking ratios but results in heavily underutilized parking and an excess of spaces.



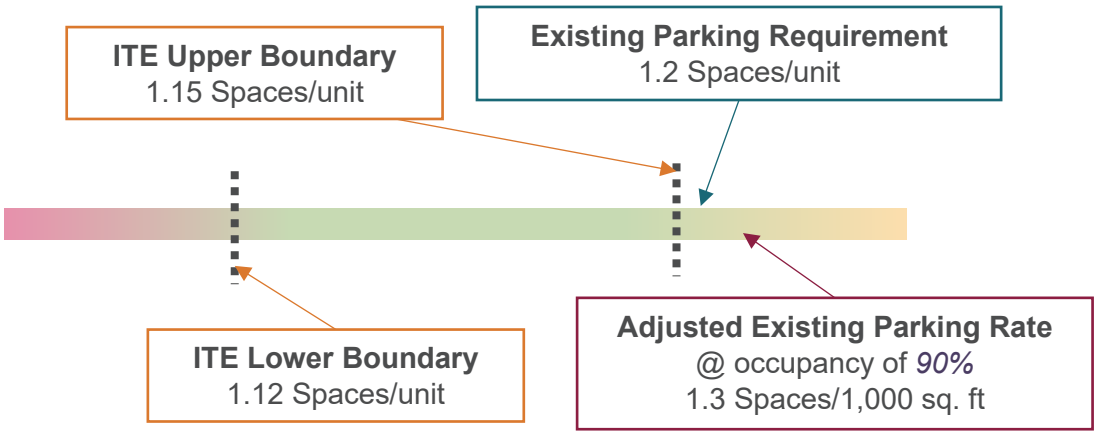

***The required parking rate for this land use should be adjusted, especially in higher-density areas or areas within a one to two block distance from the TRAX station, so that an oversupply of parking is discontinued. Another option would be to allow development in certain locations of the parking lot and share parking among the buildings to maximize the efficiency of the space.***

## *Transit-Oriented Development (TOD) Housing*


TOD housing are residential condominiums or apartments or town homes that are usually developed at a higher density and located adjacent to or within one to two blocks of a transit station. These types of housing are usually offered a lower parking requirement because of the proximity to the transit station. The intent is to have residents use the transit station for their trips and rely less on a personal vehicle.

The observed occupancy for the TOD housing for this study was 90%. As discussed previously, this is an acceptable level of occupancy for residential land uses because residents are familiar with the parking on the site and will habitually park in the same location.

The parking requirement for TOD housing is greater than the ITE Parking Standard by 0.05 spaces per 1,000 spaces. With its proximity to the ITE standard, the parking requirement is adequate for this land use. If the existing city rate was adjusted to reflect the observed parking demand, the resulting rate would be 1.3 spaces/1,000 sq. ft.

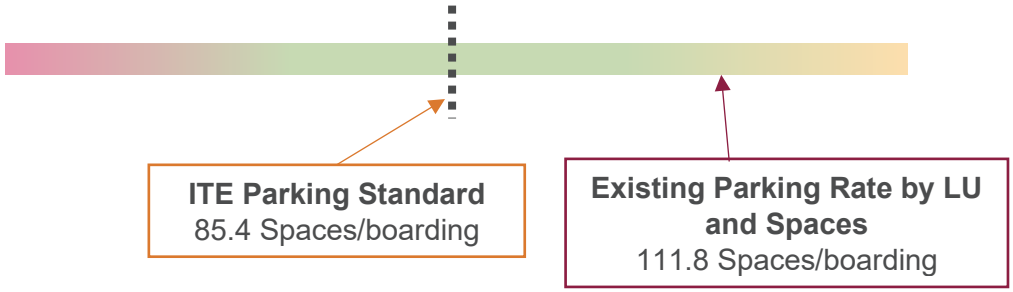



***The existing parking requirement for the City is found to be adequate for this land use. However, at a 90% parking occupancy at peak could warrant a need to increase the rate to 1.3 spaces/1,000 sq. ft. in the future as the population grows or if new TOD housing developments are constructed.***

## *Transit Station*

The transit station land use typology is characterized by a large transit stop where multiple lines and types of transit (light rail, bus) converge. At the stops located in South Salt Lake, parking lots for transit riders are adjacent to the stops.

Three transit stations and their adjacent parking lots were observed as part of this Study. The peak parking demand was observed to be 80%, which is optimal demand for these sites. Unlike other land uses observed, transit stations often don't have a building size or density to calculate parking demand. Therefore, the number of spaces per boardings was used. Because this land use is considered to be within the optimum parking demand range, an adjusted parking rate was not calculated.



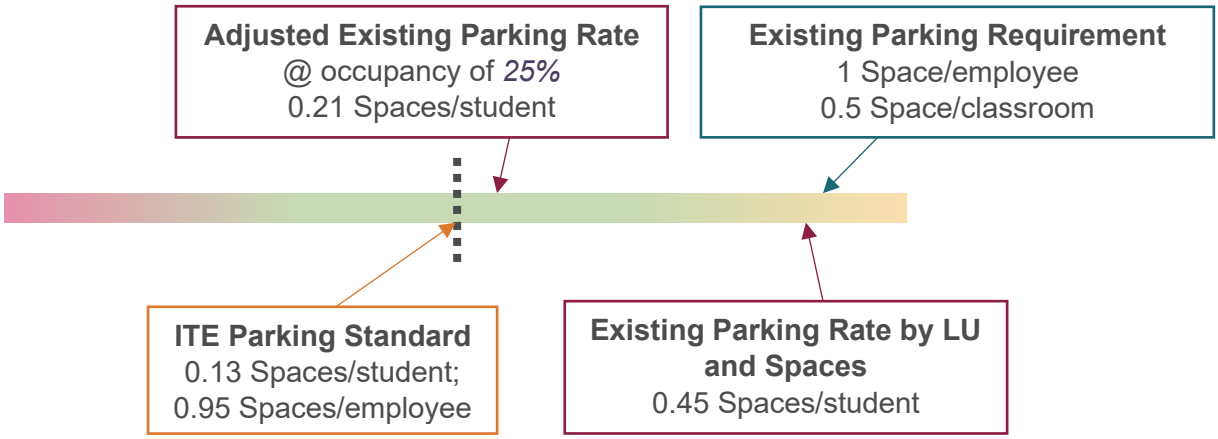

***The existing city parking requirement for transit stations is found to be adequate and no recommended changes are suggested.***

## *School*


Compared to other land uses, schools operate differently. They have morning and early afternoon peaks when students are dropped off or picked up. During this 20- to 30-minute time period there is typically heavy congestion as. However, the parking demand is not typically high because it is usually faculty and staff only who are parking, with some visitors, deliveries or maintenance as well.

The observed parking demand during the peak hour was 25%, indicating that the current parking is underutilized. Furthermore, the existing parking rate for the schools in South Salt Lake exceeds the standards set by ITE, indicating that the requirements for this land use are oversupplying parking. Many schools in South Salt Lake were built decades ago and parking supply and demand varies widely. Many students ride buses or walk due to the lower incomes found in the city as well.

If the existing city rate was adjusted to reflect the 25% parking demand, taking into account the 85% threshold so as not to maximize parking, the resulting rate would be 0.21 spaces/student.




***The required parking rate for this land use should be adjusted so that an oversupply of parking is discontinued.***

## South Salt Lake Supporting Ordinances

Other policies within the Code impact the amount of parking that is required. On a case-by-case basis, agreements can be made between property owners to share parking or modify requirements if a property to be developed is in the designated TOD area. A summary of both of these policies are provided below.

The following existing ordinances support the parking initiatives of the City of South Salt Lake.

- Shared Parking (17.06.160.D). Two or more uses to share the same parking lot if they have different parking patterns and peak demand hours. If there are different owners, parking must be within 300 feet from the nearest entrance to each use.
- TOD Modification (17.06.160.E). Modifications to required parking are allowed per a parking and traffic study that includes use, hours of operation, and anticipated parking demand. The ordinance requires ¼-mile of a light rail station and if the developer provides two of the following: pedestrian connectivity, car/vanpool program, secure bike parking, or transit subsidies to tenants and employees.
  - Residential: Reductions range between 0.05 to 0.2 stalls/units for providing the above listed elements
  - Commercial: 20% of reduction if sharing parking, mixed-use development, and the above listed elements

### Findings

- Adjust parking rates to right-size parking:

| Typology | Recommended Change to the Parking Code |
|---|---|
| Commercial corridor | adjust from 4 spaces/1,000 sq. ft. to 1.6-2 spaces/1,000 sq. ft. |
| Big box commercial | adjust from 3.33 spaces/1,000 sq. ft. to 1.7-2 spaces/1,000 sq. ft. |
| TOD housing | maintain current rate |
| Transit station | maintain current rate |
| School | adjust from 0.5 spaces/classroom to 0.13-0.2 spaces/ student |

- Adjust the shared parking ordinance to increase the walking distance to 1,000-1,300 feet to allow developers to utilize existing underutilized parking rather than building more private parking.

# 4. Transportation Demand Management

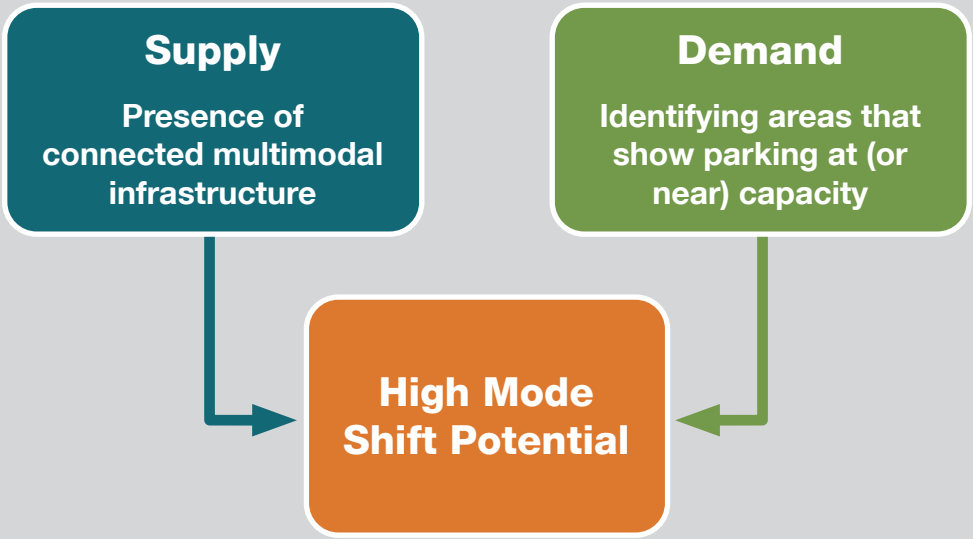
# 4. Transportation Demand Management

Transportation Demand Management (TDM) strategies provide people with a variety of mobility options rather than driving alone in a personal vehicle. The intention behind TDM is to reduce vehicle miles traveled (VMT) and congestion, as well as gain environmental, conservation, and sustainability benefits. These strategies often do not require large infrastructure investments.

TDM also includes a "Park Once" mentality. This means you drive to the Downtown area, park in a single location, and are then able to visit many locations in a single visit. You don't get back in your car and re-park to visit a store, then a restaurant, then run an errand. There are sidewalks, bikes, scooters, other means that help you move in the area that don't require a personal vehicle.

TDM strategies are most successful in areas where new mobility technologies can be more strategically leveraged and where parking supply management can be successfully modernized.

**Components for Influencing Mode Shift**



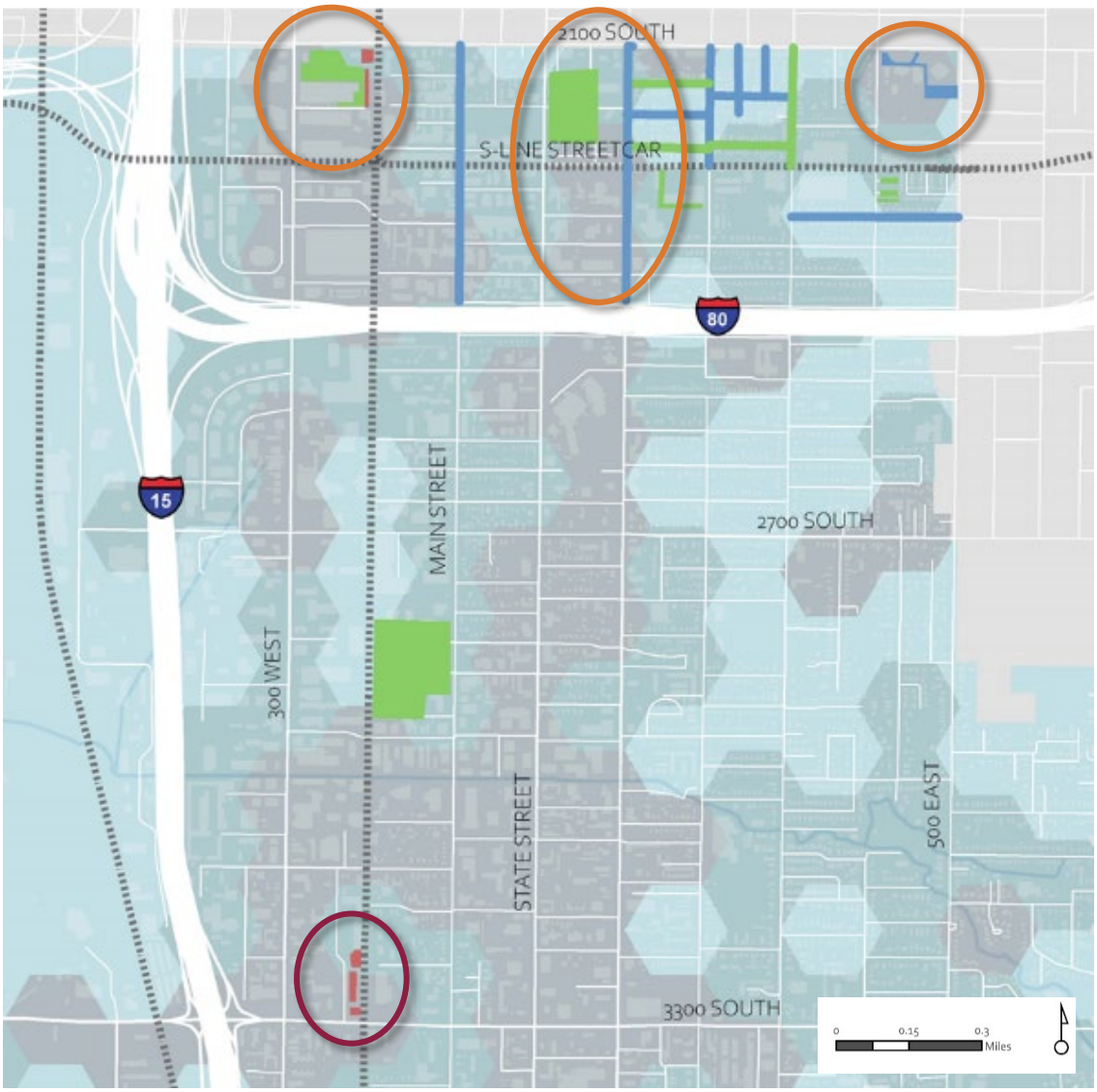

TDMs include a wide variety of strategies. The city is advised to review each for its effectiveness in each unique situation and location.

- Guaranteed Ride Home
- Shuttles
- Wayfinding and Branding
- Teleworking
- Remote school options
- Compressed or Flex Work Schedules
- Restricted Parking
- Bike/Walk Subsidy
- Transit Subsidy
- Carpool Incentives
- Parking Fees
- In-Kind Incentives
- Bike/Pedestrian Infrastructure
- Traffic Calming
- Passenger Loading Areas
- Alternative Mode Visibility
- Land Use Changes

## TDM Potential & Parking Occupancy

The map shows the observed parking occupancy at the locations in the study area as well as density of land uses and access to alternative transportation modes. The areas in the four circles are the areas where there is greatest potential to encourage TDM strategies because of the combined factors of higher parking occupancy and access to alternative modes of transportation.

**Figure 5 – South Salt Lake TDM Mode Split Potential and Parking Occupancy at 12pm Peak**




The parking facilities highlighted by an orange oval represents areas that show high demand and low parking occupancies. In these locations, it is possible for parking reclamation to occur. The parking facility highlighted by the red oval shows an area with high demand and a resulting high parking occupancy.

The TDM analysis for South Salt Lake has identified areas that have the potential support other modes of transportation, rather than a personal vehicle, and therefore potentially have success with implementing TDM strategies. Because of this, there may be opportunity to implement future-looking TDM policy to allow the City to get ahead of demand before it occurs. Establishing benchmarks that trigger the application of TDM strategies may be another approach to utilizing the potential seen in these areas.

# 5. Peer Cities

# 5. Peer Cities

As part of this project, best parking management practices were identified through discussions with peer cities. Six peer cities were selected based on what practices they could share that would be applicable to Ogden and the project partners. Peer cities were selected with robust and active parking programs, are facing similar challenges, have similar development environments, and in similar stages in developing a parking program as many communities are across the Wasatch Front region. A more detailed overview of the discussion can be found in **Appendix A** of this document.

Representatives from Park City (UT), Salt Lake City (UT), Boise (ID), Beaverton (OR), and Gresham (OR) participated virtual roundtable.

- **Boise:** The CCDC organization is responsible for Boise's urban renewal, which includes eliminating blight, stimulating economic development, and managing parking. Boise has made a commitment to be the premiere place to live in the Treasure Valley and CCDC takes that commitment seriously. Participants included Max Clark and Matt Edmond of Boise CCDC.
- **Salt Lake City:** Parking for Salt Lake City is split into two major pieces: transportation, which is responsible for planning and studies and compliance, which handles parking enforcement. The participant included Jorge Chamorro of Salt Lake City.
- **Beaverton:** They do not currently have much enforcement and the role of parking manager is new, and that position sits within the community development department, which works closely with existing enforcement. The densest area of town is the downtown core with an occupancy rate around 85% and there is a plan to build a new parking garage adjacent to a regional theatre. There are no substantive parking regulations outside of downtown. The participant was Molly Rabinovitz of Beaverton.
- **Gresham:** The City has never had parking enforcement due to limited resources and the lack of political will to create a paid parking program. They are not at the point of demand to require a formal parking program, but occupancy is telling them it is time to start planning for one. Gresham is experiencing an influx of new development in the downtown core and they are approaching a 75% occupancy tipping point that will require them to implement time limits. Participants included Katherine Kelly and Jay Higgins of Gresham.

## Key Takeaways

- Build a strong and open relationship with developers. Include their perspective in larger projects and major changes, such as revision of the codes.
- Implement paid parking only when the data dictates the need for change with consistently high parking demands. Before making the change, communicate the intentions with the public. Know their preferences and concerns and discuss them. It may be beneficial to offer incentive programs at first, such as a first hour free program.
- Include a standard shared parking procedure as part of land use processes for property owners.
- Micromobility solutions are challenging because the infrastructure is hard to define – cities value safety but don't want the technologies to become obsolete and even then, the microtransit may not be the issue, it may be the vehicles operating with them simultaneously.

# 6. Lessons From Developers

# 6. Lessons from Developers

After hearing from the peer cities, the Steering Committee met with a developer, active in both the region and other parts of the country, to have a more in-depth discussion from the developer perspective.

The biggest takeaway from the developer discussion is the idea that parking is always a moving target and it takes continuous effort to make sure it is being optimized for a community.

Developers face two critical considerations when making decisions: 1) affordability and 2) marketability.

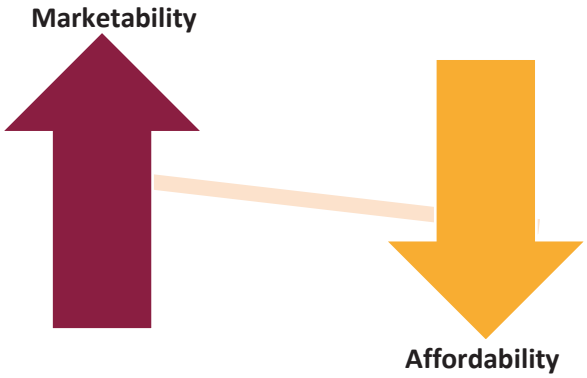
Parking is a cost for developers, and it is a constant balance between providing enough parking for the intended tenant while also not increasing the cost of the project. Costs vary by type of parking provided and costs in the Wasatch Front Region are reflected below:

- Surface Lot - $12,000-$15,000 per space
- Structure - $15,000-$30,000 per stall
- Underground - $40,000 per stall

Each space added to a project directly impacts the cost of rent. For instance, for a surface stall equates to an additional $75 per month to cover the cost of that parking stall. Furthermore, developments in more urbanized areas are more expensive than in suburban or rural areas, generally. Having additional costs for parking decreases opportunities for affordability.

Developers will adhere to the requirements put forth in a municipality's code. However, sometimes these codes do not reflect the impacts of a connected transportation network. Developers determine the right balance for parking in their projects. Finding the ideal parking ratio while providing adequate parking is a challenge to each project. Many developers will studiously and repeatedly perform occupancy counts on their properties to determine the appropriate ratio based on type of development, development setting, market, size, and proximity to transit. A typical breakeven point for parking is 80% occupancy, which generally aligns with the optimal parking occupancy thresholds described in the Parking Study Performance Metrics section of this report. This data can be used to help justify a deviation from a municipal parking requirement and to help plan accordingly for the next development.

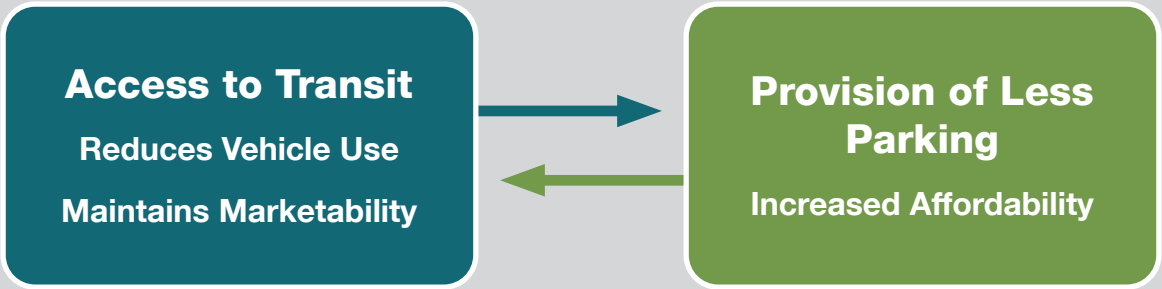
The second main consideration for developers is marketability. There needs to be enough parking provided to support the leasing of space. Developers cannot lease apartments or commercial/office space if there are not enough parking spaces for tenants. However, as discussed, the more parking spaces provided, the greater the impacts to the cost of the project, and therefore rents.
In conclusion, anything that encourages marketability (more parking spaces for tenants) discourages affordability (adding more spaces increases the cost of rent).




Developers see changing mobility trends from personal vehicles to multimodal opportunities. According to AAA data, the average individual spends approximately $900 per month to own an average, reliable, fuel-driven car. This includes the cost of gas, maintenance, registration, and insurance. Over the years, there has been a trend of people owning fewer cars. The reduced ownership of cars impacts the need to provide more parking for developments.

This trend is most prevalent in urban areas where fewer people rely on and own a personal vehicle. In an urbanized setting, a ratio of one car per three apartment units is typical for the developer. If the apartment building is in close proximity to transit (within a one-to-two-block walking distance), then the ratio is 1.2 cars per unit. Residents will let go of their second vehicle if they have easy access to transit. In a suburban setting, the ratio is 1.1 to 1.2 cars per apartment unit depending on the unit mix.

Access to transit is a major factor in balancing the marketability and affordability concerns. Having access to transit, as stated, can encourage renters to let go of one of their vehicles. This means that the next apartment development can plan to provide less parking per unit while still being able to lease their apartments. Less parking means more affordable rents.




An important takeaway from the conversation is that developers should be included in conversations regarding parking requirements and incentives. Since each community is different, there is no one simple solution for meeting developer needs and community needs. Open and frequent conversations to build strong relationships with the development community is key to successful growth that aligns with the community's plans and goals.

# 7. Recommended Strategies for South Salt Lake

# 7. Recommended Strategies for South Salt Lake

The final sections of the report are divided into the following topics.

### Recommended Strategies

**Description of each strategy along with benefits, challenges, steps for continued implementation. and identification of complimentary strategies**

### Data Collection - Methods and Metrics

**Identifies data that should be collected, why it should be collected, how to use each of the data metrics, and alternative methods for collecting data**

### Implementation Timeline

**Matrix that indicates when strategies should be initiated and frequency of monitoring the strategy to initiate the next implementation step**

The recommended strategies for South Salt Lake are broken into three parking management strategy categories, as shown here.

### Practices and Polices

- Update and Right-Size Parking Requirements
- Efficient Enforcement Practices
- Manage Transit Station Parking
- Proactive Curb Lane Management
- Data-Based Decision-Making
- Develop an Annual Parking Report

### Manage Parking Assets

- Flexible Shared Parking
- Repurpose Underutilized Parking
- Parking Permit Program
- Invest in Parking for Economic Development

### Manage Parking Demand

- Update Time Limits
- Incorporate Wayfinding
- Efficient Use of Technology
- Enhance and Leverage Mobility Options

The intention of the categorization is to group similar recommendations based on how they manage parking. However, it is also important to understand the implementation priority of each recommended strategy. The initial implementation of each strategy is presented below. However, the Implementation Timeline that concludes the report indicates the frequency of monitoring for continued implementation. The specific timing of continued implementation for each strategy is contingent upon the year-over-year data collection and analysis. The data will help drive implementation decisions and timing. It is also important to note that once initiated, each strategy will continue to evolve into the next planning horizon and beyond.

### Short-Term (Now to Two Years)

- Right-Size Parking Requirements
- Data-Based Decision-Making
- Efficient Enforcement Practices
- Develop an Annual Report
- Flexible Shared Parking
- Repurpose Underutilized Parking

### Mid-Term (Three to Five Years)

- Proactive Curb Lane Management
- Update Time Limits
- Incorporate Wayfinding
- Parking Permit Program
- Invest in Parking for Economic Development

### Long-Term (More Than Five Years)

- Enhance Mobility Options
- Efficient Use of Technology
- Manage Transit Station Parking

## Strategies for Practices & Policies

This subsection describes recommendations that will initiate programmatic changes to support the parking management program. The recommendations within this bucket are below.

- **Update and Right-Size Parking Requirements**
- **Efficient Enforcement Practices**
- **Manage Transit Station Parking**
- **Proactive Curb Management Policies**
- **Data-Based Decision-Making**
- **Develop an Annual Report for Parking System**

## Update and Right-Size Parking Requirements

Parking codes often require too much parking for an urbanized area. Some reasons include people that park once and walk to multiple destinations, use multimodal options more readily, or choose not to use a vehicle to get around. Updating and right-sizing the Code ensures that new parking supply associated with new development matches the demand. Adjustments would include parking requirements, shared parking policies, and separate downtown and TOD parking requirements.

1. Establish a committee with city planners, transportation planners, and developers and lenders to meet regularly (once a year to start). Keep an open dialogue on barriers and opportunities for development within South Salt Lake.

2. Adjust the current parking rates to the recommended rates suggested on pages 20-25 of this report.

   Differentiate parking ratios for small retail and big-box retail land uses.

3. Adjust the shared parking ordinance to raise the walking tolerance from 300' to 1,000'. See the Shared Parking recommended strategy.

4. Evaluate parking demands annually for both public and private parking to establish trends.

5. Evaluate shifting code for downtown and TOD areas to a more flexible option such as:
   - minimum/maximum combination
   - maximum only
   - no parking restrictions

Benefits:

- Creates a balanced parking system that can accommodate the needs and vision of the City.
- Reduces subsidization of auto trips.
- Increases reliance on centralized parking system.
- Reduces underutilized restricted parking.
- Encourages infill development as well as multimodal transportation.
- Reduces the cost of development, which also increases affordability for tenants.

Challenges:

- Design guidelines should require features to enable bike and pedestrian travel to and around new development
- This strategy should be partnered with annual monitoring of parking demands. Evaluate making major changes on a five to ten-year cycle, reflecting the data, land use trends, and developer and lenders needs. More frequent changes create confusion and mistrust.
- Public backlash if parking proves inadequate is a risk.

### Complimentary Strategies

- Repurpose Underutitlized Parking
- Transit-Oriented Development
- Shared Parking

## Efficient Enforcement Practices

Enforcement is a critical component of any parking system. People will only comply with parking regulations and rules if they believe they are enforced. Ideally, enforcement should monitor the areas with regulations as frequently as those regulations dictate. For instance, for an area with two-hour parking time limits, enforcement should check every two-hours each day during regulated hours. This can be daunting in terms of budget and staffing when the parking areas are widespread. However, a sporadic enforcement can be an effective means without having to massively increase staff. Gradually, over years, the enforcement program can expand. This will usually come when the program includes paid parking or other forms of revenue to support the increased staff. Action items for this strategy include:

1. Establish a partnership or committee with law enforcement to discuss parking concerns and opportunities. Keep both parties informed on parking actions and decisions. The group can plan changes together.

2. Compile any existing enforcement logistics (e.g.,. areas covered, number of enforcement officers, protocols and procedures, responsibilities of enforcement staff, and budgets).

3. Establish fee structures for citations. This may include Warnings for first time offenders, graduated fee structure for repeat offenders. Include a graduated fee structure for payment of citations that raise the fine the longer the bill is unpaid.

4. Establish performance measurement tools and standards for communicating data collected:
   - Frequency of violations by type
   - Capture rate (20% rate wanted)
   - Location of violations by type

5. Pilot test changing enforcement practices so that sporadic enforcement is conducted.

   Create a staggered route and schedule them so each area is covered, but it is not predictable.

5. Consider an ambassador style approach to enforcement as the program expands.

Benefits:

- Establishes a culture of compliance with parking regulations.
- Enforcement practices can produce key indicators and data for monitoring the parking system effectiveness.

Challenges that should be considered when implementing this strategy include:

- Enforcement must be frequent and consistent.
- Requires adequate signage and notices that allow users to know what is required to park properly.
- Effective communication for rollout of program.
- Potential public backlash.

### Complimentary Strategies

- Shared Parking
- Udate Time Limits
- Wayfinding

## Manage Transit Station Parking

Managing transit station parking supports and encourages transit ridership by preserving adequate parking spaces for transit users. Management of transit parking should only occur once the parking occupancy has reached effective capacity of 85% or higher for at least two weekdays on differing weeks. Management strategies can vary from station to station depending on the goals and characteristics of that station. This is a long-term strategy and is requires more detailed analyses than this study performed to determine the need and appropriate level of parking management. Action items for this strategy include:

1. Monitor and assess the parking occupancy, parking duration, and ridership at the transit stations within the City. Conduct a survey of riders and those parking.
2. Partner with transit providers to ensure they are supportive of data necessary to determine the transit station activity (ridership by station, by time of day, by day of the week, and by month of the year).
3. Invest in improvements for bicyclists and pedestrians to the transit station. Improvements should focus on enhanced connectivity, such as new paths or routes, lighting, seating, parking, wayfinding signage, etc.
4. Once parking occupancy reaches or exceeds 85% occupancy, implement restrictions that encourage commuters only between morning peak hours and open to the public after that time. Use permits to regulate. The partnership with transit providers will help establish price for permit (if any), and other protocols.
5. Continuous monitoring and evaluation of the parking for transit stations. Share and discuss the findings with the transit providers through the partnership. Make adjustment as needed based on data metric.

Benefits:

- Reduces per capita vehicle travel.
- Encourages transit and non-motorized travel.
- Supports affordable housing and diverse land use mix.
- Opportunity to incorporate parking technology to enhance rider experience – such as real-time parking availability within a transit smartphone application.

Challenges:

- Balancing ridership discouragement and/ or spillover parking into surrounding neighborhoods-
- High transit ridership is a necessity before implementing parking regulations.
- Potential to deter transit use if it becomes difficult or expensive to park.
- (This last one seems like a strategy not a benefit) Work with transit providers to set any price associated with permits or paid parking. Any costs for transit users must be balanced with the cost of a transit pass.

### Complimentary Strategies

- Leverage Mobility Options
- Update Parking Requirements
- Shared Parking

## Proactive Curb Lane Management

Demand for curb space is increasing as cities work to balance demand from transit stops, on-street parking, truck loading/unloading, personal deliveries (such as package delivery such as UPS, FedEx, and Amazon, and food delivery services such as GrubHub), dockless, on-demand mobility devices such as bikes and scooters, emergency services, streetscape amenities, and other users. All these users want free and unimpeded access to curb space. Cities must operate and manage the curb much like other public resources, to effectively provide access for a variety of users, while optimizing overall public benefit.

| | Residential | Commercial & Mixed Use | Industrial |
|---|---|---|---|
| 1 | Support for Modal Plan Priorities | Support for Modal Plan Priorities | Support for Modal Plan Priorities |
| 2 | Access for People | Access for Commerce | Access for Commerce |
| 3 | Access for Commerce | Access for People | Access for People |
| 4 | Greening | Activation | Storage |
| 5 | Storage | Greening | Activation |
| 6 | Activation | Storage | Greening |

*Source: http://www.seattle.gov/transportation/projects-and-programs/programs/parking-program/parking-regulations/flex-zone/curb-use-priorities-in-seattle*

Cities, such as Seattle, have implemented curb management programs to manage the curb uses. The graph to the right demonstrates their curb use priorities by street-type.

Implementing policies for proactive curb management will involve determining priorities for each stretch of curb and often varies by street, block or face. Action items for this strategy include:

1. Compile and review existing curb management policies and practices. Map out and understand how all curb uses in the city are regulated. If they are conflicting, identify ways to get them aligned.
2. Develop curb lane priorities for different street types, as demonstrated in the example chart from Seattle DOT on this page.
3. Produce a strategy for curbside management to guide decisions around the curb supply and use.
4. Conduct a pilot study to test optimal curb uses based on the priorities and framework established. Incorporate findings of the pilot into the policy and implement curb uses.
5. Monitor and make changes or additions as data from analyses and community feedback dictates.

Benefits:

- Efficiently prioritizes competing curb uses by location, day of week, type of user, and time of day.
- Articulates objectives for different curb uses and different parts of the city.
- Outlines when, where, and how to implement changes to curb use designations.

Challenges:

- Involves significant and transparent coordination with business owners, public, and other stakeholders.
- May need to change as land use and road users change.

### Complimentary Strategies

- Shared Parking
- Udate Parking Requirements
- Parking for Economic Development

## Data-Based Decision-Making

One of the central tenets of parking and mobility management is using system data to support better policy and practice decisions. These should support the intended vision and outcomes of the program and the community. This will include the frequent collection of data, ongoing analysis of data, and use of performance metrics and thresholds to define when and how to make changes. Specific data collection mechanisms are described in the last section of this report. The city should commit to making data the foundation for all parking decisions made to be fair, objective, and proactive. Action items for this strategy include:

1. Conduct a comprehensive parking occupancy data collection effort to establish a baseline for cataloguing parking inventory and occupancies. Inventory should include the type of facility (on-street, lot, garage), ownership (public or private), number of spaces for each facility or block, and any regulations (time limits).
2. Use this study recommendations to define data thresholds, location characteristics, and intended policy outcomes.
3. Establish protocols, expectations, and methodology for annual data collection and analysis to define impacts of performance.
4. Create analysis and reporting templates that can be used annually or as frequently as desired. The template and analysis should be folded into an annual report on parking.
5. Define intervals for adjusting the system (annually, semi-annually, quarterly, etc.) Combine with marketing and education campaign when changes are made.

Benefits:

- Improves the ability to track the impact of changes made to the system.
- Improves communication and marketing
- Establish trusted, baseline metrics for making year-over year transportation and mobility enhancements. This assists in policy-making and consistency.

Challenges:

- Care in establishing a data collection process to create consistent sets of data and meaningful analysis for the long-term.
- Ongoing, consistent funding is required.

### Complimentary Strategies

- All Recommendations

## Develop an Annual Report for Parking System

An annual report to assessment of parking facilities in the city ensures that the system is consistently being analyzed. Many strategies need to be monitored annually to determine their impacts and whether or not adjustments need to be made. A commitment to this process is a great way to consistently monitor and manage year over year. Action items for this strategy include:

1. Identify key report goals and overarching topics for including setting the scene (existing conditions), innovation/ new developments, education and enforcement, and finance.

   Identify who will review the report and how program recommendations are proposed.

2. Develop a storyboard template that outlines report sections based on defined topics, graphics to be used, and maps and tables to communicate results.

3. Identify what data collection and analyses are necessary to produce the report based on the storyboard.

4. Produce a report outline with the goals and key takeaways of the report in mind.

5. Develop a graphically interesting and branded report template. Coordinate maps, graphics, and tables with the theme.

6. Perform annual data collection. Data collection mechanisms are described in the Data Collection section.

Benefits:

- Allows for consistent analysis of the parking system.
- Provides a means of tracking metrics so that historical databases are established
- Allows planners to draw conclusions about what community-wide changes have impacted the parking system, such as transit or transportation additions or modifications, new development, and economic growth.
- Efficient parking management can reduce costs to all who provide parking. The cost of an annual report may be recaptured from parking revenue or other economic development sources.

Challenges:

- Initial development of an annual report requires significant coordination and commitment.
- Requires funding and/or for data to be collected and report written.

### Complimentary Strategies

- Parking for Economic Development
- Update Time Limits
- Update Parking Requirements

## *Alternatives for Annual Data Collection and Reporting*

Comprehensive data collection may not be feasible each year due to staff availability, other City projects that are taking time, available funds to make resources available, etc. While collecting comprehensive data is the ideal situation, it is not imperative to the success of the parking system management. There are alternatives so that meaningful data can be collected without the need to dedicate valuable staff time and City resources.

The following are a few alternative options for data collection and reporting.

- **Extended Collection Period:** The entire study area does not have to be collected all at once. As long as the collection days are typical (meaning there are no events or other disruptions to normal commute and parking patterns). For weekdays, the best days to collect typical data is Tuesday, Wednesday, and Thursday. Mondays and Fridays are often slightly abnormal because those are days when stores may be closed or employees extend their weekends, etc. Mondays are an okay alternative. Fridays should be avoided if possible.

  Staff can spread out the collection period over a number of weeks, only collecting data a few hours each day for a few facilities, until the area is collected

- **Reduce Study Area and Times:** Identify areas with known high demands from previous studies. Identify the peak hour(s) from those studies as well. Only collect data in those areas at those times of day. This can be conducted over a number of weekdays (or weekends if that is a peak period), until the data is collected for the selected area.

  If a significant change in occupancy is discovered between the years data was collected, the City can continue to do spot checks of occupancy in different parts of the Downtown area to confirm how widespread the changes are.

- **Collect Every Other Year:** Collecting data every other year will provide the City with updated baseline data that can help the City make meaningful changes to the system. This collection can be conducted on the full Downtown area or in smaller portions.

- **Maintain a Parking Database:** If maintaining and updating a full report is time consuming for the available staff, maintaining and updating a database is always helpful. A database can be kept in an Excel file or ArcMap shapefile. The database should include a facility name or number, a map with each facility identified by the correlating name or number, regulatory and enforcement information, number of spaces, and occupancy at any time data was collected for that period.

  The City has already established this type of database in Excel and ArcMap. Maintaining and updating it year over year will allow the City to track changes, draw conclusions on why those changes occurred, and make data-based decisions. This type of tracking may be more useful for internal purposes, whereas an Annual Report would be something that is public facing and shared outside of the department.

Given staff levels and resources, the City may come up with other alternatives for collecting data. There are always lighter versions to collecting and reporting data. The key is to keep collecting, even if it's on sample size data. The City should set a goal to try to do a comprehensive collection of data at least every three to five years as resources allow.

## Strategies for Managing Parking Assets

The subsection includes strategies meant to allocate existing parking resources appropriately to create space for users as well as planning for new parking supplies. The following parking strategies within this category are:

- **Flexible Shared Parking**
- **Repurpose Underutilized Parking**
- **Enhance Parking Permit Program**
- **New Parking Supply for Economic Development**

## Flexible Shared Parking

Shared parking is a strategy that allows two or more property owners to share the spaces in a single parking facility. If the facility is usually underutilized and the joint use of the lot allows two or more different properties to meet their parking demands without constructing expensive parking spaces for each individual property.

South Salt Lake currently has a shared parking ordinance. It requires properties to be within 300 to 500 feet of shared parking facility to qualify. Updates to the current policy could increase use of this tool. Action items for this strategy include:

1. Expand shared parking acceptable walking distance requirements. 1,000 feet (one to two blocks) is a more flexible distance than the current 300-500 foot standard.
2. Establish a template for shared parking agreements. The template should cover the main topics (liability, maintenance, number of spaces shared and time of day, etc.), while also providing flexibility to allow property owners to add their nuances to the agreement.
3. Require appropriate signage or markings to indicate who, when, and where people can park in shared facilities
4. Measure parking occupancy to assess effectiveness of shared parking arrangements. Evaluate annually.
5. Consider centralized shared parking facilities. Allow developers to invest in a centralized parking facility they can use to meet their parking needs. Can be accomplished with an in-lieu fee program or the city can construct it and developers pay a fee to park.

Benefits:

- Significant parking facility savings for developers and ultimately tenants.
- Encourages multimodal transportation.
- Promotes development by optimizing the use of land
- City retains control as the keeper and facilitator of all agreements

Challenges:

- Additional review and consideration during planning approvals. This requires flexible and varied parking standards, verification, and enforcement.
- Need to track effectiveness with annual monitoring of parking demands.

### Complimentary Strategies

- Shared Parking
- Transit-Oriented Development
- Parking Requirements

## Repurpose Underutilized Parking

Repurposing underutilized parking allows parking facilities to be utilized for other purposes until the parking is in demand again. This strategy was used by some communities during the coronavirus pandemic. The intention is to provide flexibility into the Code to allow for portions of parking lots, garages or on-street parking to be repurposed for another use, such as the extension of business space, parklets, or bike parking. Action items for this strategy include:

1. Develop policy to allow a property owner to apply for using an underutilized parking lot or spaces for a new purpose.
2. Establish standards and procedures for qualifying and applying. Applicants should prove severe and consistent underutilization of less than 30% occupied for more than eight hours per day for the last month.
3. Require monthly status reports by the applicants to verify that parking occupancies are remaining low and the new use is not creating parking demand issues. Establish a timeframe (six months, for instance) where the new use becomes more established and quarterly occupancy verifications are required.
4. Continually monitor parking occupancies throughout the City to modify arrangements as needed.

Benefits:

- Repurposing will reduce underutilized parking facilities.
- Repurposing underutilized parking will reduce facilities required for enforcement.
- The strategy will reduce the need for new parking facilities in the future since the repurposed facilities are temporary.

Challenges:

- Opportunities may be difficult to obtain or hard to keep for a significant time span.
- May require developing a permitting system specifically geared towards this purpose.
- Need to track impact and effectiveness with monitoring of parking demands.

### Complimentary Strategies

- Shared Parking
- Transit-Oriented Development
- Parking Requirements

## Standardize Parking Permit Program

Parking permit programs protect parking spaces for different user groups, such as residents or employees, so that these users are able to park in areas that are convenient and are not blocked by visitors. Permit programs encourage people to parking where they should (e.g. in their own apartment complex or at the transit station) and aim to make the system function more efficiently. It should be noted that a permit system is not the same as a space reservation. Permits do not guarantee an available space, rather they allow a valid permit holder to park in an area or for longer periods while restricting other users based on a designated area or time of day. This strategy will allow for long-term parking in locations that will not compete with visitors or short-term parking users. Action items for this strategy include:

1. Have discussions with business owners to identify locations where employees and residents park.

2. Determine parking occupancy in and around locations identified as employees and resident parking.

3. Identify on-street locations appropriate for long-term parking:
   - Low occupancy areas (on-street and off-street)
   - One to two blocks from employee destinations

4. Display signage to indicate when and where people can park with the appropriate permit displayed.

   Update city ordinances to reflect parking permit program.

Benefits:

- Protects parking assets for residents and employees when they need parking most.
- Allows visitors or short-term users access to appropriate locations.
- Optimizes the use of underutilized parking facilities.

Challenges:

- Meaningful enforcement is required to encourage compliance.
- It is essential that the program is supported by business owners, employees, and residents or it will not be accepted and utilized.
- The parking program must allow for adaptability and growth to ensure beneficial changes.
- Permit programs may not satisfy residents.

### Complimentary Strategies

- Shared Parking
- Transit-Oriented Development
- Parking Requirements

## New Parking for Economic Development

New parking facilities should support both new and existing development in South Salt Lake. Parking is a community asset that can support the City's economic development strategy. Partnerships and cooperation on parking infrastructure can help achieve a mix of project types and sizes and address existing and projected parking shortages. Action items for this strategy include:

**1** Bring together various city departments to identify opportunities and challenges to partnering on new parking opportunities.

**2** Form a committee between city departments and developers to guide the process.

Establish design guidelines for garages and lots to help new facilities blend with surrounding development.

**3** Develop guidelines, protocols, and incentives:

- What portion of overall supply should be public?
- Safety and design
- Incentives for developers

**4** Identify investment strategies:

- City investment in transformative projects
- Parking Investment District (PID)
- Identify properties to infill or become parking

Benefits:

- Creating a standard procedure for the City and developers to follow to ensure parking supply matches the pace of growth.
- Engages departments and developers in the decision-making process proactively.

Challenges:

- A clear vision and goals are required to determine how to identify and locate new parking supply.
- City staff must look beyond parking to incentivize economic growth while determining how parking fits with other strategies.
- Agreeing on an acceptable occupancy and understanding users perceptions may differ than the reality.
- Cost of building parking can be a barrier to desired projects and sometimes cannot be overcome.
- Future trends in both transportation and land use are unknown, and the system may require future adjustment.

### Complimentary Strategies

- Shared Parking
- Transit-Oriented Development
- Parking Requirements

## Strategies for Managing Travel Behavior

This subsection discusses strategies that focus on vehicular trips, how people travel, and where they park to reach their destinations. This is done by encouraging multimodal travel mode and incentives to redistribute parking demand. This strategies within this bucket are:

- **Update Time Limits**
- **Incorporate Wayfinding**
- **Efficient Use of Technology**
- **Enhance and Leverage Mobility Options**

## Update Time Limits

Time limits restrict the length of time any single vehicle can park in a space. This is especially important in high demand areas and where short visits for shopping and pickups are encouraged. Most often time limits are seen in on-street spaces to encourage turnover in front of buildings. Changing time limits, to reflect the occupancy of the parking facility encourages turnover and, therefore, creates more parking availability. Action items for this strategy include:

1. Conduct a comprehensive data collection effort in the downtown area and near transit stations.

   Record parking occupancy and collect duration also in high demand areas.

2. Implement parking time limits in areas with high parking occupancies. Start with one- or two-hour time limits only on blocks with occupancies over 85%.

3. Establish time-limit enforcement procedures – sporadic enforcement may be most efficient for ensuring compliance without adding more staff (discussed further in the next section).

4. Clearly communicate with the public regarding changes to parking time limits. (I would make this #4)

5. Monitor parking occupancies and adjust as needed.

Benefits:

- Updating time limits optimizes existing parking while reducing the need for new parking.
- Encourages turnover to support short term visits that generate revenue.
- Shifts long-term parking users to less convenient facilities where they don't negatively impact visitation.

Challenges:

- Pedestrian-oriented design must be a consideration to facilitate safe and accessible? (maybe not the right word) travelling without a vehicle.
- Areas with time-limited parking must have access to viable transit and active transportation choices (?).
- This strategy should be complimented by annual monitoring of parking demands.

### Complimentary Strategies

- Parking Requirements
- Transit-Oriented Development
- Enhance Enforcement

## Incorporate Wayfinding

Effective wayfinding signage can distribute parking demands throughout an area. The signs reduce confusion for visitors with clear indication of public parking, even for parking that is privately owned, but available for public use). Signage helps visitor reduce their time hunting for a parking space and helps them create new parking habits. It many cities, it has been observed that people searching for parking adds significant traffic congestion to local streets. Themed and branded graphics create a sense of confidence that the parking is easy to find and well managed. Action items for this strategy include:

1. Conduct an inventory of existing wayfinding signs, destination signs, parking signs, and associated messaging.
2. Conduct a windshield study to observe circulation throughout the area. Use current traffic studies/counts to supplement observations. Identify decision points and points of confusion, and how people circle through the area looking for parking/ destination.
3. Coordinate wayfinding and branding ideas with private off-street owners so garage/lot signage fits with the City's theme
   - In accordance with objective LU-12.1 in General Plan
4. Develop a wayfinding plan that incorporates a common brand theme and identifies types of signage and specific location needed to direct visitors to parking areas efficiently.
5. Create a map and post on the City's website and media channels.

   Create or add new signage in the new theme.
6. Consider technology, such as smartphone applications that provide real-time parking availability or parking regulations.

Benefits:

- Wayfinding encourages helps distribute parking demand while encouraging parking regulation compliance.
- Increases parking utilizationby making available parking easier to find.
- Increases communication visitors and reinforces positive brand.

Challenges:

- Requires coordination between public and private entities. May require significant negotiation and agreements with private parking facility operators.
- Investment in production of new signage or technology. Cost of sign installation and maintenance may be significant.

### Complimentary Strategies

- Parking Requirements
- Transit-Oriented Development
- Enhance Enforcement

## Efficient Use of Technology

Introducing the technology into the parking system can improve access to parking facilities and improve overall circulation. However, it is important to first know what goal you wish to achieve before investing in technology because there are many options and they can be expensive.

Technology can vary widely depending on the intended parking application. Smartphone applications and dynamic messaging and real-time parking availability direct users to available parking. Other technologies are used to collect payments, manage permits, and enforcement. Action items for this strategy include:

1. Assess the current procedures for processing parking and enforcement data. Conduct a SWOT analysis to determine areas of opportunity and improvement.

2. Establish goals of the city that may be reached through implementing technology (e.g., data collection, real-time availability, permitting)

   Consider software platforms and integration barriers or opportunities

3. Determine what metrics can be pulled from using technology, such as parking occupancy and duration from real-time counting systems, or citation data from handheld GPS for enforcement officers.

4. Conduct a pilot study to test technology performance
   - Identify pilot period and metrics vendors need to collect
   - Public survey to gauge customer satisfaction

   Select preferred technology(ies) based on result.

5. Train staff on the adopted technology. Training should include how the technology works, backend data management, maintenance, and operations.

6. Conduct a messaging campaign to advertise the changes and how to use the technology.

Benefit:

- Enhances of the user experience.
- Better balance parking access and utilization.
- Increases convenience for city parking duties, such as data collection, parking management, and transaction processing.
- Reduces city staff overhead time for permitting and payment administration and management.

Challenges:

- Selecting technology is time consuming and difficult. Many new technologies are out there with lots of “bells and whistles.” and significant cost.

  Having a clear goal for how technology will be used can help whittle down what technology is really needed and useful.
- Training and adoption by staff who will utilize the new technology.

### Complimentary Strategies

- Permit Parking
- Enhance Enforcement
- Incorporate Wayfinding

## Enhance and Leverage Mobility Options

Enhancing mobility within the City creates more options for moving both people and goods. By leveraging the existing multimodal options available within the City - bikes, scooters, sidewalks- South Salt Lake can reduce its reliance on single occupancy vehicles while maintaining the same level of mobility and access. Action items for this strategy include:

1. Assess current bike and pedestrian and scooter usage and conditions for South Salt Lake and compare against overutilized parking facilities.
2. Reaffirm mobility goals and objectives for bikes, pedestrians, and other non-vehicular modes from the Strategic Mobility Plan
3. Establish programs, projects, or technologies to reach mobility goals, e.g., Complete Streets, transit hub, bus services, bike facilities, bike and pedestrian connectivity, bike parking, lighting, etc.
4. Update ordinances to reflect and promote new mobility goals and programs.
5. Identify investment opportunities to plan, design, and construct multimodal projects for enhanced connectivity.

Benefits include:

- Encourages shared mobility options.
- Reduces commute impacts and improves commute knowledge.
- Redefines how users utilize and move throughout South Salt Lake.

Challenges include:

- Funding.
- Partnerships must be negotiated and refined.
- Evolving and changing technologies/devices and shifting landscape of companies offering mobility services.

### Complimentary Strategies

- Parking Requirements
- Parking Permit Program
- Transit-Oriented Development

# 8. Data Collection – Methods and Metrics

# 8. Data Collection – Methods and Metrics

Data is a critical part of tracking and monitoring all aspects of the parking program. Comprehensive data, especially historical data, helps the city and the public understand what, why, and how decisions should be made for improving the system. The following is a list of data that should be collected on a regular basis. The data should be collected annually and included in the parking program's Annual Report.

### Parking Inventory

Provides the baseline for analysis and allows the City to track changes to the parking system over time and the impacts of those changes (e.g., removal/addition of parking, regulatory changes).

### Parking Occupancy

Indicates how well the system is being used and when parking strategies need to be implemented or adjusted. Time limit policies can be adjusted to either encourage or discourage use.

### Parking Duration

Indicates how long people are staying in given locations. Timing, and eventually pricing, policies can be adjusted based on the surrounding uses and turnover rate. Collect only in high demand areas.

### Parking Citation Volume and Type

Indicates how many citations are issued and whether violations are occurring in isolated areas over a given period of time, whether citations are increasing. Further analysis could figure out why that is and adjust parking strategies and policies as needed.

### Program Revenue and Expenditures

Changes in revenue, when viewed granularly, can define how parking demands are shifting, and the success of policy changes. Revenue should include citations and permit revenues.

### Customer Satisfaction

Conducting customer satisfaction surveys periodically can define how patrons are reacting to changes in the program. The City should consider satisfaction levels of residents, businesses, employees, and customers at a minimum.

### Vehicle Congestion

Reduction in vehicle miles traveled and localized congestion is an indicator that parking management strategies are effective at redistributing demand and overall access to the community.

### Mode Split & Transit Ridership

Mode split in the community is a key characteristic in defining shifting behavioral and access patterns. Reductions in drive alone rates can be a clear indicator that parking policies are working.

## Data Collection Plan

As data should be collected in a consistent manner each year to ensure that the metrics are comparable, data collection plan is needed. The plan should specify the staff necessary to collect each data point, equipment needed (cameras, GPS, pen/paper, water, etc.), the timeframe necessary to complete the task, specific instructions on how to collect the data, analysis standards, and reporting standards. Staff should also be trained before entering the field to collect data to ensure consistency in the collection methodology.

## How To Use The Data

The following provides further details on how to use the data that is collected.

### Parking Inventory

Create an inventory database that can be updated annually. This inventory is a baseline metric that helps provide context for the other data metrics. The database should include:

- type of space (on-street, lot, garage)
- ownership (pubic or private)
- regulations (time limits, enforcement hours)
- location
- number of spaces (total and by type if it's a shared facility)
- other information (such as is the facility shared? is the parking for transit riders only?).
- record spaces that were lost or changed in some way, including no longer shared but total spaces, lot removed, construction that temporally or permanently eliminates parking, etc.).

### Parking Occupancy

Parking occupancy is the key metric used to determine when a change to the management plan is merited. - South Salt Lake should consider making parking management adjustments once a set of adjoining parking spaces (e.g., a continuous block face or more) or a parking lot or garage is consistently experiencing the following:

- Parking occupancies reach or exceed 85% or more for three or more hours over at least two weekdays (measured in separate weeks)
- Parking occupancies reach or exceed 70% five or more hours over at least two weekdays (measured in separate weeks)

### Parking Duration

Parking duration should be collected in high-demand areas only so that time limit regulations can be adjusted. The intention is to encourage turnover of spaces, creating more availability. Duration data does not need to be collected each hour of the day, like occupancy data, but rather only the hours surrounding and including the peak times of day.

### Parking Citations

Enforcement officers can collect and share this information on a regular basis in an agreed upon interval (monthly, quarterly, annually) to share with staff and decision makers. While there are no specific metrics, this data will help determine where hotspot locations are for certain types of violations. After a couple of years of consistently collected data, the City can set thresholds for making improvements to the enforcement practices.

## Parking Revenue and Expenditures

Knowing how much money is spent on parking helps to inform conversations about how impacts to parking will also impact other areas of city planning. For instance, as various departments review budgets, it is a good opportunity to have conversations about how parking has impacted transit or development and so on. Its also useful for when there are conversations about how to price parking, such as permits or parking at transit stations, if and when the parking program matures to that point. A parking revenue report also helps establish budgets to help support other interventions, such as signage, collections, or technology.

## Customer Satisfaction

Survey the community on an annual basis to gauge feedback from customers, business owners, property owners, developers, residents, and other representatives. The survey should ask similar questions year over year to display historic trends.

## Vehicle Congestion

Vehicle congestion data is available from WFRC and can be cross-analyzed with other data that the City collects. The data can be added to the reports to help draw conclusions about how the implementation of the recommendations has impacted the number of vehicles on the road.

## Mode Split and Transit Ridership

Data collected by WFRC and UTA can be used to build this dataset to track the percentage of those who travel by single occupancy vehicle, bike, pedestrian, and transit. In this category, the City could also track the usage of bike share programs and other mobility programs. UTA can provide detailed ridership data for each station within South Salt Lake as well.

# 9. Implementation Timeline

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The timeline for the implementing strategies recommended in this plan is divided into three planning horizons: short-term (now to two years), mid-term (three to five years), and long-term (more than five years). The matrix indicates when each of the strategies should be initiated, guided by the principle of taking steps appropriate to the size and complexity of the problem. The implementation plan is ordered in a way to firmly establish the groundwork for a parking program. Many of the tasks initiated in the short-term planning horizon will still be continued for years as a part of the program.

The matrix does not specify each action item for each strategy. This is because implementation of the various action items of those strategies will vary and will be dependent upon the changing conditions of the community and the ability to implement successive strategies. Once a strategy is initiated, it is assumed that the specific action items for the associated strategy will also eventually be initiated.

| Strategy | Type of Strategy | Evaluation Cycle |
|---|---|---|
| **Short-Term Planning Horizon (0-5 years)** | | |
| Update Parking Requirements | Practices and Policies | Every 5-10 years or as plans are updated |
| Data-Based Decision-Making | Practices and Policies | Annually |
| Enforcement Practices | Practices and Policies | Becomes daily/weekly practice |
| Develop an Annual Report | Practices and Policies | Annually |
| Shared Parking | Manage Parking Assets | Annually |
| Repurpose Underutilized Parking | Manage Parking Assets | Quarterly (site specific) |
| **Mid-Term Planning Horizon (5-10 years)** | | |
| Curb Management Policies | Practices and Policies | Every 5-10 years |
| Update Time Limits | Manage Travel Behavior | Every 1-2 years |
| Incorporate Wayfinding | Manage Travel Behavior | Every 5-10 years |
| Parking Permit Program | Manage Parking Assets | Every 5-10 years |
| New Parking Supply | Manage Parking Assets | Annually |
| **Long-Term Planning Horizon (over 10 years)** | | |
| Enhance Mobility Options | Manage Travel Behavior | Annually |
| Efficient Technology | Manage Travel Behavior | Annually |
| Manage Transit Station Parking | Practices and Policies | Annually |