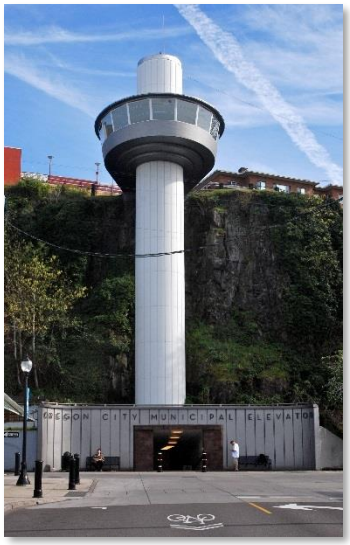
2017

City of Oregon City, Oregon
Transportation Demand Management Plan

PROJECT SUMMARY AND RECOMMENDATIONS FOR TRANSPORTATION DEMAND MANAGEMENT

FINAL REPORT

November 2017



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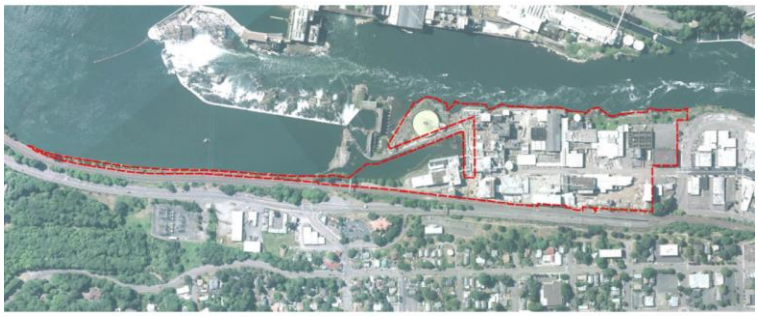
I. BACKGROUND

The City of Oregon City commissioned a Transportation Demand Management (TDM) Plan to examine opportunities and challenges in parking, access, and transportation related to the redevelopment of the Willamette Falls Legacy Project, which is directly adjacent to existing downtown Oregon City. The plan outlines and prioritizes TDM strategies for Oregon City, leveraging existing conditions and providing the flexibility to respond to opportunities for action as they arise. These strategies will help guide the City toward efficient," right sized" parking while integrating reasonable, attractive, and effective alternative mode options into the project study area. That area is bounded by the Willamette River and Oregon Route 99E, as illustrated in **Figure A**.

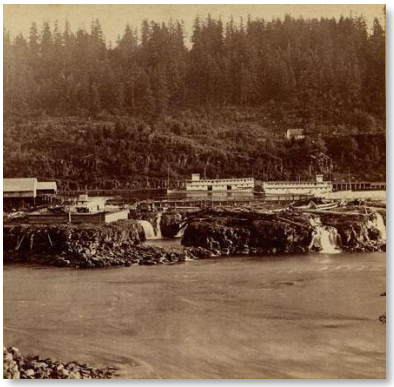
Figure A: Project Study Area



Incorporating industry best practices along with input from local stakeholders, the plan provides the foundation for a new multi-modal vision for the greater Oregon City downtown.

II. PROJECT SIGNIFICANCE

In addition to astounding natural beauty, Willamette Falls possesses a rich history that predates the establishment of Oregon City in 1842. Since time immemorial, the falls have been an important cultural and fishing site for Native American tribes. By the late 1800s the area around the Falls had been settled by pioneers and was home to numerous mills, including the Oregon City Paper Manufacturing Company. The company changed hands several times, then eventually closed. In 2014, privately owned Falls Legacy LLC purchased the 22-acre mill property out of bankruptcy.



Recognizing the tremendous potential of the Willamette Falls Legacy Project to redefine Oregon City, community groups and partners including Oregon City, Metro, Clackamas County, and the State of Oregon have been working together to develop a vision for the site that recognizes the significance of its past while embracing a bold and innovative future. Ensuring public access to the site is one of the four core values that underpin this vision. Public access will be established through the construction of a public riverwalk that offers views, connections to the river, and restored habitat along the shoreline.

The four public partners have adopted a design for the riverwalk, have obtained an easement on the property for the project, and have amassed almost $20 million to begin construction. The riverwalk will be built in phases and is expected to catalyze private redevelopment of the remainder of the former mill site.

Creating safe connections to the riverwalk and full site through multiple transportation modes and efficient parking standards will complement the Falls area and Downtown Oregon City for years to come.

> *"It was a beautiful sight when viewed from a distance, but it became grand and almost sublime as we approached it nearer.' John Kirk Townsend, 1835*

III. DECISION-MAKING ELEMENTS

The outline of the decision-making elements below is intended to summarize the important aspects that have influenced and guided the recommended multi-phased strategies. Again, these elements have helped place parameters on achieving realistic programs and projects that would be appropriate for the development site and its intended users.

City & Regional Improvements

Capitalizing on local and regional land use and transportation improvements as they occur allows for greater efficiencies and more successful TDM programs. Creating meaningful partnerships and tracking projects will be vital to the future of the Willamette Falls Legacy Project.

Proposed safety improvements include:

- Intelligent transportation systems designed to warn traffic approaching the 99E tunnel of hazardous conditions ahead.
- Prohibition of left turns northbound from OR 99E to Main Street, and modification of the right-turn geometry from 99E to Railroad Avenue to allow turning traffic to slow and maneuver outside the travel lanes on a curve with limited sight distance.

Figure B: 2016 Parking Study Area

- A pork-chop island (or raised median) at the intersection of Water Avenue and OR 99E to prevent unsafe movements and reinforce right-in, right-out access.

McLoughlin Boulevard Enhancement Plan – Phase 3

The McLoughlin Boulevard Enhancement Plan (2005) is a conceptual design for long-term roadway improvements that coordinate with property redevelopment to create a multi-modal friendly environment that connects downtown Oregon City to the Willamette River waterfront. The overall project will be implemented in several phases. Phase 1 – 10th to I-205 (2011) and Phase 2 – I-205 to Gladstone Bridge (2015) have been completed. The remaining phase (Union Pacific Tunnel to 10th Street) will be implemented as funds are available. During design of each phase, the City will work with pre-existing uses to develop access and design approaches that maintain and enhance safe access and circulation that will accommodate the needs of the pre- existing uses. However, as redevelopment occurs along the corridor, property orientation and access restrictions to McLoughlin Boulevard will be pursued to fully implement the conceptual design and meet ODOT access spacing requirements.

- **Highway 99E Viaduct repair/replacement**. The Highway 99E viaduct & partial viaduct structures are 75 years old and are currently identified as functionally obsolete due to width and deck geometry, as well as substandard railings. Highway 99E is a major arterial roadway, classified by ODOT as a Tier 2 Lifeline route with no accessible parallel routes, and a 4.7 mile detour to bypass. Unfortunately, the structures are also considered seismically vulnerable and the October 2014 Oregon Highways Seismic Plus Report identifies the viaducts in Phase 5 of the unfunded program. The proposed project would replace the viaducts with context sensitive modern bridges meeting all current standards and evaluating the opportunity to include: raised center medians, new pedestrian refuges and turn lanes, 8-foot parallel parking, 10-foot wide walk on southeast side and 18-foot wide multi-use path on the northwest side. Viaduct construction is preliminary estimated at $38M, the remaining Phase 3 is estimated to be an additional $8.5M.

These efforts will create a safer traffic flow in and around the development site.

Downtown Oregon City Parking Study (2016)

Building upon a similar effort in 2008, in 2016 Oregon City conducted a parking study that concentrated on the historic downtown area, as seen in **Figure B**. The study collected data for on- and off-street parking on both a weekday (Thursday, July 7th) and weekend (Saturday, July 9th). A comparison of the 2008 and 2016 findings was made, and a" high-occupancy node", a small portion of the study area demonstrating high parking use, was evaluated.

Given the proximity of the study area to the Willamette Falls Legacy Project site, findings from the study can provide valuable guidance on managing parking at the site. For additional information on the 2016 Oregon City Parking Study, please see the attached *Appendix – Parking Study Findings*.

Public Outreach Process (2017)

In coordination with Oregon City staff, a public outreach process was developed to understand and incorporate local stakeholders' views on transportation, access, and parking related to the Willamette Falls Legacy Project. Workshops and open houses provided a forum for local residents and business owners to share their thoughts and opinions.

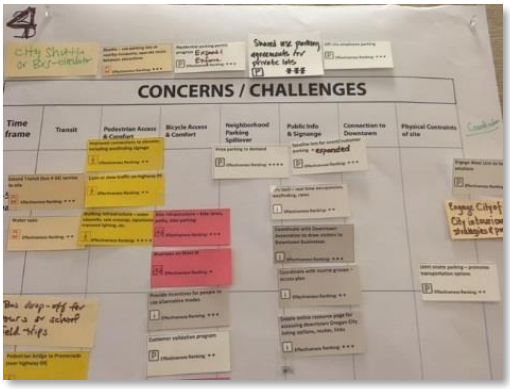
Workshop Schedule

	Meeting 1	Meeting 2	Meeting 3
Date	Wednesday, April 26th	Wednesday, May 24th	Wednesday, July 26th
Time	6:00-8:00PM	6:00-8:00PM	6:00-8:00PM
Location	Oregon City, City Hall	Oregon City, City Hall	Oregon City, City Hall

Open House Schedule

	Open House
Date	Wednesday, July 12th
Time	4:00-8:00PM
Location	Oregon City, City Hall

Outreach workshops began with an overview of the Willamette Falls Legacy Project. Participants were then given an introduction to TDM and parking best practices to help focus discussion and provide a common language from which to offer feedback on the site's strengths, weaknesses, opportunities, and challenges.



IV. INDUSTRY BEST PRACTICES

To help guide the stakeholder outreach effort, industry best practices were presented to inform the discussion on transportation, access and parking issues pertinent to the Willamette Falls Legacy Project site. An overview of applicable Transportation Demand Management (TDM) programs, projects and services were provided as a starting point from which the outreach effort evolved, with the notion that additional local ideas were welcome. Parking management best practices were also presented along with the 2016 Oregon City parking study results.

Below is an overview of both the best practices framework for TDM and parking management practices which helped guide the Oregon City outreach process for the Willamette Falls Legacy Project.

Transportation Demand Management (TDM) Strategies:

Transportation Demand Management increases the efficiency of transportation systems by shifting trips from single-occupant vehicles (SOV) to non-SOV modes, or from peak to non-peak periods. TDM seeks to increase the universe of trips by increasing travel options, encouraging individuals to modify their travel behavior, or reducing the need for travel through efficient land uses. TDM programs often cost little while yielding high impacts, and are typically implemented by employers or public agencies, or via public-private partnerships.

This section provides a summary of TDM strategies for consideration as applies to the Falls Legacy Project Development Strategy and future citywide demand management initiatives. Strategies were selected based on the development potential at the site, applicability to Oregon City and direction provided by Oregon City project and design team staff. The following strategies, as well as others, are presented as an introduction to TDM and used to facilitate/create a customized implementation timeline for prioritized projects/programs/services specific to the Willamette Fall Legacy Project site.
Summary of TDM Best Practices Categories

TDM Industry Best Practices	
Transit Connectivity and Frequency	
Transit Incentive Programs	
Bicycle Infrastructure and Access Network	

TDM Industry Best Practices	
Carsharing Services	
Parking Management	
Walkability and Wayfinding	
Transportation Management Association (TMA)	

Transit Connectivity and Frequency

Growth in employment and tourism at the Willamette Falls Legacy Project site will necessitate better connections to the regional transit network. Transit infrastructure likely cannot be provided through the project itself, and will require discussions and planning among the developers, Oregon City, Metro, and TriMet. At present, connections to transit service are not strong, with the transit center located at the eastern end of the downtown. Improved connections and frequencies between the transit center and the site could significantly augment other supportive TDM strategies that might include transit subsidies/incentives, parking pricing and right sized parking.

The following bus routes currently serve the transit center:

- 32-Oatfield
- 33-McLoughlin
- 34-River Rd
- 35-Macadam/ Greeley
- 79-Clackamas/ Oregon City
- 99-McLoughlin Express
- 154-Willamette

Opportunities	Challenges
Proximity to McLoughlin and Transit Hub. Extension of the 33 line along Main Street (in Willamette Falls Master Plan (CP 14-02)	Primary and secondary access from 99E Southbound

Transit Incentive Programs

Incentive programs are generally implemented at the local level by transit providers or individual employers, or through Transportation Management Associations (TMAs). The most common incentive is a discounted fare program. For example, TriMet's Universal Pass offers unlimited use of regional transit services at a highly discounted rate for employees whose employers purchase the program. The feasibility of such programs and their impact on parking demand are heavily influenced by both the amount of available parking and the out-of-pocket cost of transit versus the cost of parking for a similar trip.

Opportunities	Challenges
♦ Formation of TMA through development. ♦ Downtown Business Association could potentially help coordinate an incentive program.	♦ Lack of high-quality transit lines currently. ♦ Uncertain of employer/employee numbers.

Bicycle Infrastructure and Access Network

Successful programs to reduce auto trips through increased bicycling generally include four components:

(1) Safe access through the public right-of-way.

This includes bike lanes, sharrows and other networks of public right-of-way access that ensure a reasonable means of using bikes in a manner that connects users to local and regional origins and destinations. The Willamette Falls Legacy Project will need to evaluate how bikes are linked to adjacent areas and how bikes can access the site from external locations.

Opportunities	Challenges
♦ Create a shared street design	♦ Auto speeds along McLoughlin/OR99E.
♦ Multi-use path implementation.	♦ Limited width of right-of-way and crowded sidewalks.
♦ Mixed use urban form. Recent Multi-modal mixed use designation (MMA).	♦ Intersection safety (28 crashes in past 5 years at Main & McLoughlin/OR99E intersection).
♦ Reintroduction of Water	♦ Few safe bike/pedestrian crossings across McLoughlin.
♦ Planned riverwalk Bike/Ped bridge over McLoughlin /OR99E to Promenade	

(2) Safe and secure bike parking at the destination

Bicyclists should feel that they can access their destinations as conveniently as someone arriving by car. On-site bike parking should be tailored for both commuter and visitor bike trips, and may include ground or wall racks, lockers, or bike hubs, conveniently located and adequate to demand. Existing bike parking requirements may need to be reevaluated.

(3) On-site bike/pedestrian amenities

Amenities may include shower and locker facilities for commuters as well as bike repair stations.

(4) Information and incentives

Bike trips can be encouraged and supported through incentive programs as well as outreach and communications that inform users on how to access the site—e.g., trip planning, maps, website, etc.

Opportunities	Challenges
♦ TDM welcome packets to employees	♦ Bike/pedestrian-friendly infrastructure to encourage non-auto travel
♦ Wayfinding & information kiosks	

(5) Bike Sharing

A bike share system, or public bicycle system, is a public transit service where bicycles are made available for shared use to individuals for very short trips for a price. Bike Share systems allow people to use a bike from point A to point B. Bike Share systems are a great complement to transit and are popular with both local residents and tourists alike.

Carsharing

Carsharing programs provide access to a fleet of centrally owned and maintained vehicles located near homes, workplaces, or transit hubs. Members typically reserve shared vehicles for a specific timeframe and pay for use through some combination of hourly, overhead, and mileage-based rates

Carsharing offers compelling TDM and parking management benefits. By distributing the fixed costs of car ownership across the marginal cost of every trip made, carsharing reduces the total number of trips made by participants. By offering an alternative to individual ownership, carsharing contributes to lower ownership rates. By increasing the number of users per vehicle and encouraging more frequent use throughout the day, carsharing reduces parking demand while preserving the convenience and flexibility of automobile use.

In the Portland metropolitan area, services such as ZipCar, Car2Go, ReachNow, Turo, and Getaround are options to explore. For the Willamette Falls Legacy Project, carsharing programs could be offered through individual businesses, the property owner, or a Transportation Management Association (see Item 6 below). Some municipalities and developers own and operate their own carsharing service for residents through Turo or Getaround, which provide software, insurance, and customer support services.

The Willamette Legacy Falls Project development team could work with carsharing companies to provide services by reserving parking spaces in prime locations for carsharing vehicles. There are opportunities for collaborating with these companies on discounted introductory memberships for residents and businesses.

Opportunities	Challenges
♦ Partnerships with carsharing companies. ♦ Developer or business could potentially own and operate local carshare program.	♦ Car2Go's boundaries do not extend to Oregon City. ♦ Need density for the system to work.

Walkability and Wayfinding

Better pedestrian environments, including good signage and wayfinding, are essential to encouraging walking. The Willamette Falls Legacy Project will need to enhance pedestrian connections to transit, the historic downtown, and the water.

Opportunities	Challenges
♦ Unique branding opportunity on signage to create on-site circulation, as well as directing people to and from destinations.	♦ Competing transportation options-friendly infrastructure (e.g., signage, messaging, etc.).

Transportation Management Association (TMA)

A Transportation Management Association, as outlined in the *Transportation Demand Management Encyclopedia* (Victoria Transport Policy Institute, 2010), is a nonprofit, member-controlled organization that provides transportation services in a particular area, such as a commercial district, mall, campus, industrial park, or transportation corridor. A TMA's particular focus is on more efficient use of transportation and parking resources to improve access and support economic development. It is generally a public-private partnership, consisting primarily of area businesses with local government support. For the most part, TMAs form as 501(c)4 or (c)6 organizations under Federal nonprofit statutes.

TMAs in the Portland metropolitan area include Go Lloyd, Explore Washington Park, South Waterfront TMA, and the Central Eastside Transportation and Parking Management Association, all in Portland, and the Westside Transportation Alliance in Washington County.

A TMA framework can create economies of scale, leverage, and equity, and enable smaller entities to provide trip-reduction services comparable to those offered by large entities. TMAs build partnerships and community within defined boundaries, which allows them to be proactive rather than reactive to transportation concerns. TMA services can include:

- Access management
- Advocacy
- Education and outreach
- Flextime support for employees
- Emergency Ride Home programs
- Incentive and reward programs
- Individualized trip-planning services
- Marketing and promotion
- Parking management
- Pedestrian and bicycle planning
- Rideshare matching and vanpool coordination
- Shared parking coordination
- Shuttle services
- Telework support
- Transit fare products and incentives
- Transit improvements
- Transportation access guides

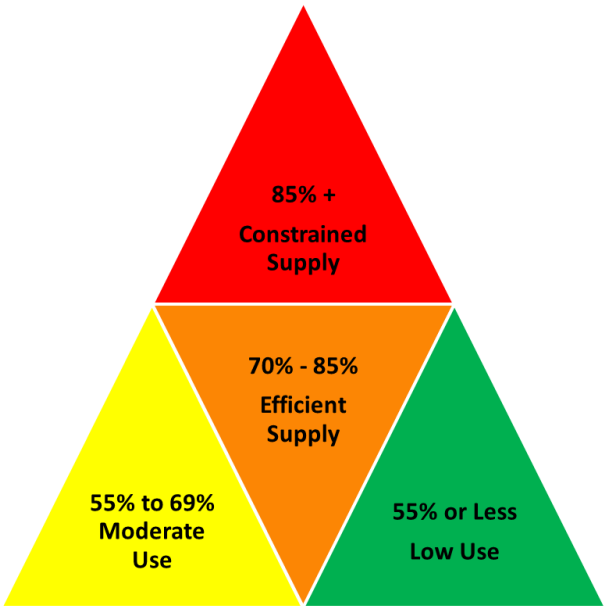
The Willamette Falls Legacy Project could be greatly facilitated by a TMA, particularly if such an organization included a partnership with the downtown, possibly through the Downtown Oregon City Association.

Opportunities	Challenges
♦ TMA could be supported through a shared LID/BID mechanism to grow with the community's needs.	♦ Creating ongoing public and private partnerships to leverage for TDM success.

Parking Management Strategies

Parking Management encourages more efficient use of parking facilities, reduces parking demand, and shifts travel to non-SOV modes. Smart management of parking helps ensure access to businesses and attractions and supports neighborhood vitality.

The availability of free or inexpensive parking is cited as a key factor in choosing to drive a personal auto rather than travel by another mode. In addition, free or inexpensive parking is often abused by long-term parkers who occupy valuable spaces at the expense of short-term parkers.



Parking demand that exceeds supply leads to the common phenomenon of circling—cars going around and around the area searching for parking, leading to congestion and delay. Several recent studies show that circling accounts for between 30% and 45% of all traffic in dense urban districts.

Parking Management strategies include:

- Shared Parking/Park Once
- Parking Ratios (Minimums and Maximums)
- Parking Districts
- Timed Parking
- Priced Parking
- Monitoring of Parking Occupancy and Turnover
- Parking Enforcement
- Unbundling Parking
- Residential Parking Permits
- Bicycle Parking
- Electronic Parking Guidance Systems
- Parking Lot/Garage Design and Placement

Shared Parking/Park Once

Shared Parking/ Park Once seeks to shift parking into shared public facilities rather than a proliferation of dedicated accessory lots, reducing the volume of parking and vehicle trips as well as the number of curb cuts on sidewalks. It allows people to park their car once and move throughout an area on transit or on foot.

This strategy can be accomplished by brokering shared-parking agreements among private lot owners[1] or through construction of public facilities in areas of dense, mixed land uses. Overall, shared parking creates

[1] Shared parking agreements are typically established in conjunction with new development. However, they can also be established when an existing development is redeveloped or changes use. Shared-parking agreements can be formal and documented in the deed, lease, or contract as required by city code, or informal.

an efficient parking system, allows for denser development, and reduces the amount of land required for parking.

Opportunities	Challenges
♦ A shared facility could allow for efficient, centralized parking that is less burdensome than individual on-site parking and lowers development costs.	♦ Determining applicable funding mechanism and shared-use agreements.

Parking Ratios (Minimums and Maximums)

Parking ratios are used to determine the minimum number of stalls needed to support new development and the maximum number of stalls allowed. Parking minimums ensure that developers provide enough parking to satisfy demand, while parking maximums ensure that developers do not overbuild parking. Oregon City currently has parking minimums and maximums as described in Title 17 of the municipal code (17.52.020).

As the Willamette Falls Legacy Project evolves, the City and project partners should evaluate current parking requirements to ensure that the supply of parking meets the project's needs.

Parking Districts

Parking districts can include permit programs, meters, and other programs to manage parking demand, and may place restrictions on who can park, when they can park, and for how long.

The most common types of parking districts are residential and commercial districts where parking is managed through permits and/or pricing. Priced parking and parking permits are described below. Parking benefit districts dedicate net revenue from the sale of permits or from meters to improvements such as pedestrian/bicycle amenities, information systems, or new parking supply. Parking benefit districts can also be a source of ongoing support for TDM programs (see TDM Strategies section).

Parking benefit districts are in place in Portland's Lloyd, Central Eastside, and Northwest Parking Plan districts. Revenue is shared with stakeholders, generally through a TMA format, and invested directly in transportation programs and infrastructure. Examples of investments made by Parking Benefit Districts are:

- New and improved crosswalks
- Transit information screens – with 'real time' arrival information
- Clean and Safe program, i.e. street cleaners
- Improved wayfinding and signage for all travel modes
- Discounted transit passes and bike share memberships for residents and employees
- Purchase bicycle infrastructure – racks, bike cages, work/maintenance stations, compressed air station, etc.

Timed Parking

Timed parking limits the amount of time a vehicle can remain in a parking space. It requires signage and enforcement to ensure that regulations are followed. Limits of 15 minutes to one hour should be used only in areas where land uses require high levels of turnover; otherwise, these shorter limits do not provide sufficient time for visitors and patrons of local businesses. Longer time limits between two and eight hours should be used in areas that require longer stays for visitors and employees.

Priced Parking

Priced parking charges motorists fees for using parking facilities. Priced parking programs can be used to manage parking demand, recover the cost of construction, and generate revenue for TDM programs and TMAs. Priced parking is already in place in the Oregon City downtown.

Priced parking is often difficult to implement, and may require a political process to transition an area from free to paid parking. However, when high demand, low turnover, and generally poor parking conditions exist, it is often the most effective way to change travel behavior, manage the available parking supply, and support alternative travel modes. The fact that pricing is already in place in the downtown supports employing a similar strategy for the Willamette Falls Legacy Project. This would create a seamless transition between areas and support TDM programs and measures to increase use of alternative modes.

Monitoring of Parking Occupancy and Turnover

Monitoring the performance of the parking system will ensure that it continues to meet the needs of its users. Monitoring programs typically involve the collection of parking data on a routine basis. Using locally derived data provides the most accurate information on parking use and need.

Monitoring programs need not be elaborate, but they should be consistent, routine, and structured to answer relevant questions about occupancy, turnover, duration of stay, patterns of use, and enforcement. A methodology for collecting and analyzing parking data is provided in *Parking Made Easy: A Guide to Managing Parking in Your Community*.

The City has already collected parking data on its downtown as part of this project. Information from that study will inform ideas, strategies, and programs for the Willamette Falls Legacy Project.

Parking Enforcement

Parking enforcement often carries a negative connotation, but when performed properly it can manage demand, improve turnover, deter habitual offenders, and improve the efficiency of the entire parking system. Proper enforcement should be focused on education and promoting behavioral change, rather than generating additional revenue.

Enforcement systems already in place in the downtown can be expanded as appropriate to the Willamette Falls Legacy Project site.

Unbundling Parking

Unbundling parking separates the cost of a parking space from the cost of a building lease or purchase agreement, often for residential or commercial uses. It monetizes the parking space, allowing tenants to pay only for the parking they need.

Requiring new developments at the Willamette Falls Legacy Project site to unbundle parking would likely necessitate changes to the municipal code. Such a requirement could also be negotiated as a part of a larger master plan or development agreement for the site.

Unbundling parking is an equitable way of distributing parking resources. It promotes alternative mode choices by equalizing the cost of parking and other modes, and reduces parking demand and vehicle miles traveled.

Residential Parking Permits

Residential parking permit programs work to distribute parking resources across a variety of users, primarily residents and commercial visitors and employees. Such programs allow permit holders to park on-street in residential areas and limit the stays of non-permit holders (e.g., employees and visitors) during enforcement hours. They are particularly effective in areas where commercial development creates parking overflow in residential neighborhoods. This could become an issue with the Willamette Legacy Falls Project, as growth in the number of employees and visitors may impact adjacent residential areas.

Bicycle Parking

Bicycle parking facilities provide safe and secure places for people to park their bikes. Bicycle parking is critical to promoting bicycling as a viable transportation option.

Bicycle parking is already required for new development in Oregon City's municipal code (17.52.040). These requirements may need to be reevaluated given the Willamette Falls Legacy Project's vision for attracting a high number of visitors and supporting increasing use of non-auto modes. Biking will be a key component of this vision.

Electronic Parking Guidance Systems

Electronic Parking Guidance Systems direct motorists from main access roads to parking facilities with available spaces. Information for a specific facility or for a defined area is displayed on signs, and may also be presented via phone, internet, or in-vehicle navigation systems. These systems are sometimes called Dynamic Parking Guidance Systems, as the numbers change every few minutes. This strategy reduces traffic, which leads to a reduction in emissions, fuel consumption and wasted time. It promotes better use of parking capacity and can direct parking traffic onto dedicated roads.

Such systems, provided at the front end of development, can effectively distribute traffic within the Willamette Falls Legacy Project site, but also offer the opportunity to link the site to parking resources in the larger downtown. For more information on these types of systems, see the SF*park* Technical Manual. http://sfpark.org/resources/docs_techmanual/

Parking Lot/Garage Design and Placement

Design standards for parking facilities can help to ensure that off-street parking will accommodate access and circulation while meeting the needs of the development. Placement standards can help to ensure that facilities do not impact existing or future development, or the sharing of parking between developments. Both standards can also help to ensure that parking facilities meet the aesthetic vision of the community.

Oregon City's current code focuses on design, placement, and landscaping of surface lots (17.52.060) and some architectural requirements in (17.62.050) it does not provide a lot of direction for the development of successful garages. Guidance on exterior design, access points, integration with other modes, shared parking, and ground-floor active uses is lacking. All elements of the City's code for parking facility design and location should be reevaluated to ensure that off-street parking facilities will be designed appropriately, will accommodate vehicle access and circulation, and are placed to optimize land-use efficiency.

V. APPROACH

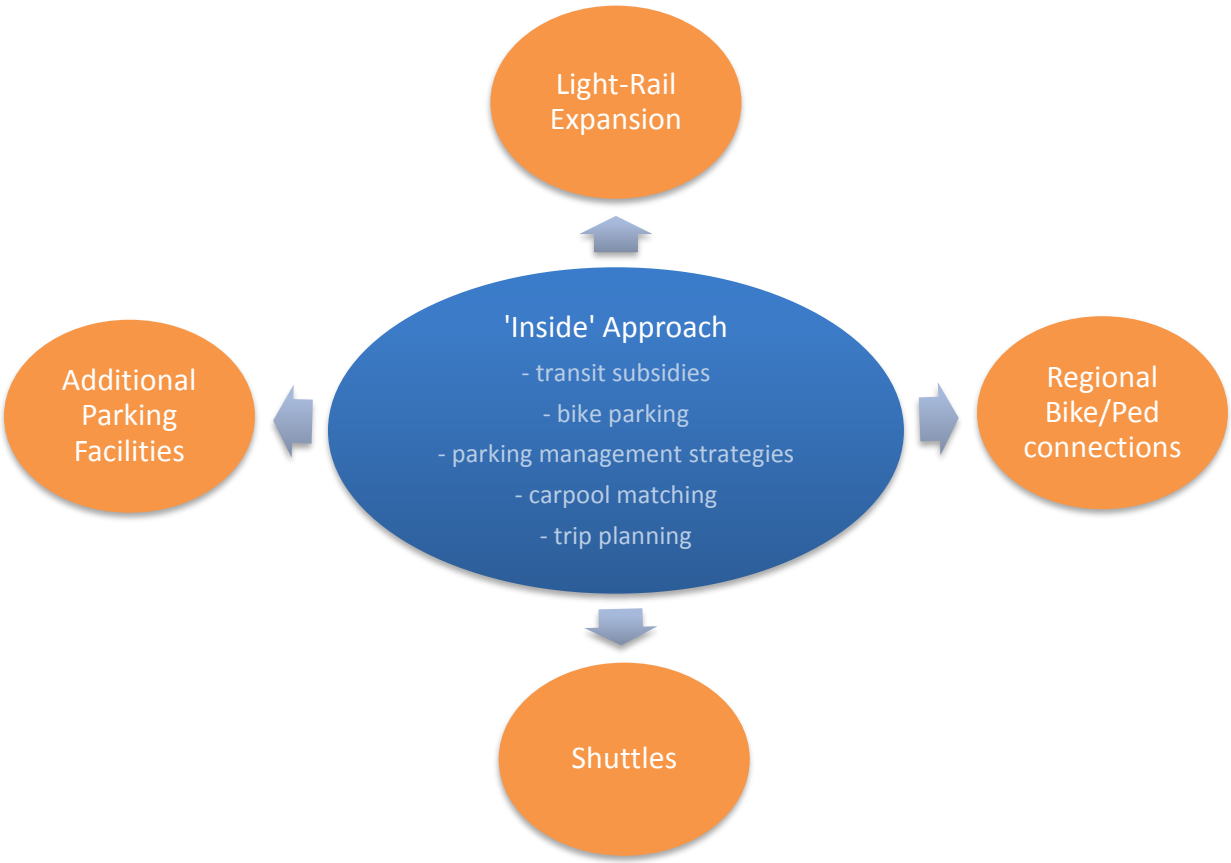
An "Inside/Outside" methodology was used to prioritize TDM and parking management strategies and create a timeline to inform decision-making and implementation.

The Inside/Outside methodology aims to maximize existing infrastructure through easy-to-implement programs, services, and projects, building on what municipalities already have "inside" their City. Stakeholders also mentioned the desire to implement strategies based upon development plans. Without a more concrete timeline and land use plan, a rigid TDM plan is difficult to determine. A key aspect of this plan is its emphasis on flexibility based on many factors including by not limited to:

- Land use development (residential vs. commercial needs)
- Local/Regional capital improvement projects (99E improvements, local street improvements)
- Downtown parking operational/management changes (time stays, permit zones, rates, etc.)
- Local transit changes (bus lines)

After "inside" strategies are implemented, "outside" TDM and parking management strategies should be explored. These are often costlier, longer-term projects requiring outside funding sources and partnerships. Examples include major capital improvements such as transit expansion and regional bicycle/pedestrian connections, and links to remote infrastructure like shuttles or additional parking facilities.

The following diagram below graphically illustrates the "Inside/Outside" approach.



VI. RECOMMENDATION STRATEGIES

Guided by the Inside/Outside approach and industry best practices, stakeholders prioritized TDM and parking strategies into near, mid and long-term solutions. Likely strategies were categorized into theme areas (i.e. Pedestrian, Information & Options, Parking, Bicycle, Transit). Additional strategies were added by stakeholders. The implementation of strategies is not meant to be completed step-by-step in order, rather the strategies work to complement each other and can be implemented based on need and/or opportunities. However, the near-term strategies must be completed before the mid and long-term strategies can be effectively implemented, again reinforcing the 'inside/outside' approach.

Strategy Summary Table

	Strategy	Category	Timeline	Page
	Near-Term Strategies			
1	Centralize Coordination and Implementation of the TDM Plan	Coordination	Near-Term	20

	Strategy	Category	Timeline	Page
2	Develop Ongoing Monitoring Data Collection Plan	Coordination	Near-Term	21
3	Provide Interim Onsite Parking (Pay to Park)	Parking	Near-Term	21
4	Develop Needs Inventory of Walking and Bicycling Infrastructure	Walking & Bicycling	Near-Term	22
5	Walking & Bicycling Infrastructure Action Plan	Walking & Bicycling	Near-Term	22
6	Wayfinding Action Plan	Info & options	Near-Term	23
7	Coordination with Tourism Groups	Coordination	Near-Term	23
8	Coordination with Downtown Oregon City Association (DOCA)	Coordination	Near-Term	24
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Near-Term Strategies

The following near-term strategies (immediate – 4 years after riverwalk opening) focus on creating a baseline for ongoing monitoring, management and implementation of TDM strategies. The projects/programs aim to target 'low-hanging fruit', in other words, transportation options solutions that focus on simple changes that can be implemented in the near future.

Near Term Strategies		
1. Centralize Coordination and Implementation of the TDM Plan		
Rationale	Most strategies require ongoing monitoring, especially measurement of onsite parking usage, parking pricing, walking and bicycling access improvements, off-site parking and shuttle programs, residential parking permits, and hours of parking enforcement.	
Priority	#1	
Effectiveness	****	
Relative Cost	$	
Triggers	Plan approval/adoption.	

Near Term Strategies

Implementation steps:

- Within six months of plan adoption, designate a single staff person (interim TDM manager) responsible for plan implementation.
- Establish a representative TDM access plan implementation.
- Establish a staff working group that will look at a public's ability to plan for and support completion of near, medium and long term projects.
- Advisory committee to be charged with assisting in the coordination and implementation of the TDM plan.
- Initiate routine meeting schedule, provide consultant support as needed.

2. Develop Ongoing Monitoring Data Collection Plan		
Rationale	Ensure stakeholder coordination and forward movement of TDM plan.	
Priority	#1	
Effectiveness	****	
Relative Cost	$$	
Triggers	Plan approval/adoption.	

Implementation steps:

- Review existing monitoring methods and determine what is missing (approach, level of detail).
- Include as an annual or biannual budget item.
- Identify stakeholders who can provide paid or volunteer support for data collection tasks.
- Identify staff to own and manage project.
- Determine appropriate schedule.
- Hire consultants as needed.

3. Provide Interim Onsite Parking (Pay to Park)		
Rationale	Provide limited onsite parking opportunities for riverwalk visitors to promote transportation options but still accommodate vehicle trips.	
Priority	#1	
Effectiveness	***	
Relative Cost	$$$	
Triggers	Opening day of riverwalk.	

Near Term Strategies

Implementation steps:

- Evaluate code provisions to allow for interim conditional use of commercial parking (non-accessory) at the site.
- Identify location of interim parking (parcel or existing building) on site.
- Initiate necessary improvements (e.g., paving, striping, lighting, signage, pay stations)
- Initiate operations.

4. Develop an existing condition report and Needs Inventory of Walking and Bicycling Infrastructure		
Rationale	Need to improve access for people walking and biking. First need an inventory to identify top projects.	
Priority	#1	
Effectiveness	****	
Relative Cost	$$	
Triggers	Plan approval/adoption	

Implementation steps:

- Review existing city inventories to date for downtown area.
- Hire consultants and solicit volunteer help as needed.
- Develop report on existing conditions, identifying sidewalk, bike lanes, connectivity, ADA, signage, lighting and other barriers to a walkable and bikable connected environment through site and between site and other downtown destinations. Review and provide a priority list for implementation.

5. Walking & Bicycling Infrastructure Action Plan		
Rationale	Improve safe access and multimodal connections. Beneficial to existing Downtown.	
Priority	#1	
Effectiveness	****	
Relative Cost	$$	
Triggers	Plan approval/adoption	

Near Term Strategies

Implementation steps:

- Finalize an action plan for addressing barriers and recommended improvements in the existing conditions report, including estimated costs and potential funding sources/processes.
- Ensure plan is regional in scope and takes advantage of nearby trails such as the Trolley Trail.
- Present Action Plan to City Council for review and approval.
- Work with affected City divisions and TDM Manager to coordinate and prioritize projects with internal planning and funding.

6. Wayfinding Action Plan		
Rationale	Improve wayfinding for people walking and bicycling, especially connections to elevator.	
Priority	#1	
Effectiveness	**	
Relative Cost	$	
Triggers	Opening day of Riverwalk	

Implementation steps:

- Using the walking and biking needs inventory plan, develop a plan to improve wayfinding system.
- Coordinate and partner with stakeholders currently investing in wayfinding downtown (DOCA, Tourism, Public Works, ODOT etc.).
- Develop a list of downtown destinations to be used in wayfinding signage that can be located at the elevator and repeated at strategic locations throughout the downtown.
- Identify funding sources

7. Coordination with Tourism Groups		
Rationale	As the site develops, ensure visitor access is well coordinated and efficient.	
Priority	#2	
Effectiveness	**	
Relative Cost	$$	
Triggers	When on-site parking is over 85% occupancy and there is overflow on nearby streets, OR when additional development on-site generates a significant number of new trips.	

Near Term Strategies

Implementation steps:

- Engage with Tourism Plan project now and continue to integrate plan goal and strategies.
- Engage with Mt. Hood Territory organization and local tourist destinations.
- Identify shared needs and goals; identify opportunities for collaboration and coordination especially around large events.
- Continue wayfinding and online resources website coordination.
- Consider formal tourism position on the TDM Access Plan Implementation Committee to act as a liaison between the City's TDM effort and the tourist groups.

8. Coordinate with Downtown Oregon City Association (DOCA)		
Rationale	Creating useful and up-to-date information by coordinating with the Downtown Association is necessary and will benefit both destinations.	
Priority	#2	
Effectiveness	***	
Relative Cost	$	
Triggers	Opening day of Riverwalk	

Implementation steps:

- Set up a plan with DOCA and relevant stakeholders to identify common goals and opportunities for collaboration.
- Hold regular meetings with DOCA and stakeholders for information sharing and to monitor programs and initiatives.
- Consider DOCA position on the TDM Access Plan Implementation Committee to act as a liaison between the City's TDM effort and the Main Street association.

9. Shared Use Parking Agreements with Private Owners of Off-Street Supply		
Rationale	Facilitate shared-use parking agreements for existing off-street private parking lots	
Priority	#1	
Effectiveness	***	
Relative Cost	$	
Triggers	Begin process now, implement when off-street parking occupancy is regularly above 85%.	

Near Term Strategies

Implementation steps:

- Evaluate and possibly amend code provisions to ensure that shared-use non-accessory parking is or becomes an allowed use downtown.
- Use data from the 2016 parking study to identify facilities that could serve as shared-use "opportunity sites." Criteria could include proximity to downtown, a meaningful supply of empty stalls, pedestrian/bike connectivity, walk distance/time, safety and security issues, etc.
- Based on the above, develop a short list of opportunity sites and identify owners.
- Establish a target goal (number) of downtown employees to transition into opportunity sites.
- Through DOCA, begin outreach to owners of private lots.
- Negotiate shared-use agreements through DOCA or an appropriate private entity.
- Obtain agreements from downtown businesses to participate in employee assignment program.
- Incorporate program information, including identified shared-use lots, on the resources website.

10. Enhance/Expand Existing Residential Parking Program (RPP)		
Rationale	Expand the residential permit program to manage on-street parking in residential neighborhoods.	
Priority	#2	
Effectiveness	***	
Relative Cost	$$	
Triggers	When on street parking occupancy in upper neighborhoods is above 85% and/or the neighborhood requests such a program.	

Implementation steps:

- Begin conversation on current protocols and processes related to existing RPP. Provide a revised outreach packet for neighborhood education.
- Reaffirm and/or revise current protocols to limit RPPs to block faces zoned Residential.
- Consider implementing a monthly or annual fee for residential permits to provide support for administration of RPP program and stronger localized enforcement.
- Implement revised program.

11. Price Parking to Demand-Tiered Rate Systems for On and Off-Street Public Supply		
Rationale	Ensure that on- and off-street parking stalls are priced to efficiently distribute demand and encourage use of transportation options.	
Priority	#1	
Effectiveness	****	
Relative Cost	$	

Near Term Strategies	
Triggers	When parking occupancy on street is above 85%

Implementation steps:

- Evaluate distribution of parking demand in downtown per 2016 parking study.
- Conduct demand analysis of Bluff parking.
- Re-calibrate on-street parking to demand using the 85% occupancy standard.
- Consider pricing on commercial streets on Bluff, coordinated with residential permit parking re-evaluation.
- Review pricing of existing City off-street permit program to ensure market pricing of off-street permits.
- Provide outreach to visitors and business owners on benefits of demand pricing.

12. Extend Bus Service from Downtown Transit Center to the Site		
Rationale	Extend bus service closer to the site. The current stop is too far for most people to conveniently walk.	
Priority	#2	
Effectiveness	***	
Relative Cost	$$	
Triggers	Opening day of Riverwalk	

Implementation steps:

- Begin discussions with TriMet.
- Identify location for bus stop and route access to bus stop
- Implement necessary infrastructure (striping, shelter, signage).
- Work with TriMet to launch service change.

13. Create Resource Website		
Rationale	Create online information resource website outlining transportation options, routes, links, etc.	
Priority	#1	
Effectiveness	***	
Relative Cost	$$	
Triggers	Opening day of Riverwalk	

Near Term Strategies
Implementation steps: ▪ Convene a group of stakeholders to identify target audiences and key information. ▪ Develop a list of transportation resources for employers, employees, and visitors. ▪ Identify and procure funds for website development and maintenance. ▪ Link to social media to keep it fresh. ▪ Promote launch of website and find influential stakeholders and community leaders to drive traffic to the site. ▪ Regularly monitor and evaluate the site's information and usability.

Mid-Term Strategies

Mid-term strategies (4 – 10 years after riverwalk opening) present a mix of infrastructure improvements and program management solutions for both TDM and parking. These strategies require a bit more time, coordination and, in some cases, funding; therefore, developing them may take more time and resources.

Mid Term Strategies		
14. Improve Pedestrian Infrastructure		
Rationale	Increase the number of visitors accessing the site on foot, improve safety and comfort for people walking	
Priority	#2	
Effectiveness	***	
Relative Cost	$$	
Triggers	Approval of the Walking & Biking Action Plan	
Implementation steps: ▪ Using the Walking & Biking Action Plan, prioritize projects that improve pedestrian access: additional wayfinding signage, improved crossings, pedestrian scale lighting, etc. ▪ Review TSP for previously identified pedestrian infrastructure projects. ▪ Pursue funding.		
15. Improve Bicycle Infrastructure		
Rationale	Increase the number of bike lanes, paths, bike parking, etc.	
Priority	#2	
Effectiveness	***	
Relative Cost	$$	

Mid Term Strategies	
Triggers	Approval of the Walking & Biking Action Plan
Implementation steps: ▪ Using the inventory and needs plan, prioritize projects that improve bicycle access: add bike parking, repaint sharrows, improve wayfinding and crossings, etc. ▪ Review TSP for previously identified bicycle infrastructure projects. ▪ Identify funding.	
16. Identify Potential Remote Parking Sites to Support Future Shuttle Opportunities	
Reason(s)/ Rationale	Ensure successful multi-modal routes and efficient parking
Priority	#2
Effectiveness	**
Relative Cost	$
Triggers	On-site and downtown parking exceeds 85% with new tiered pricing implemented
Implementation steps: ▪ Use the TDM implementation Committee to work with DOCA, area property owners, developers, etc. to: ▪ Identify opportunity sites (e.g., West Linn, Oregon Trail Interpretative Center, Clackamette Park, Amtrak station, etc.) ▪ Assess actual parking use at sites to determine whether surpluses are available. ▪ Evaluate code provisions to allow for commercial parking (non-accessory) at opportunity sites. ▪ Engage property owners in agreements for use.	
17. Customer Validation Program	
Reason(s)/ Rationale	Encourage longer-term parking off-street as site/downtown develop
Priority	#1
Effectiveness	**
Relative Cost	$$
Triggers	When off-street parking remains under-used but on-street occupancies are above 85%

Mid Term Strategies

Implementation steps:

- Convene businesses to determine validation program parameters.
- Conduct research on best practices of validation programs.
- Through DOCA on behalf of the Implementation Committee, draft agreements on how much and how businesses will refund the city's parking fees.
- Draft marketing materials and conduct focus groups on best messaging techniques.
- Plan a program roll out media event.
- Regularly monitor program effectiveness with DOCA, businesses, etc.

18. Calm Traffic on 99E		
Rationale	Vehicular traffic is felt to be unsafe for pedestrians	
Priority	#1	
Effectiveness	**	
Relative Cost	$$	
Triggers	When development of projects in adopted Willamette Falls Framework Plan is triggered by onsite redevelopment, or when funding is acquired for TSP street-calming projects downtown	

Implementation steps:

- Implementation of planned safety projects: A. Tunnel illumination & Intelligent transportation signage improvements in spring 2019 at 99E, B. Railroad realignment at 99E, C. Right in and right out at 99E and Water Ave.
- Coordinate with Oregon City Public Works and ODOT on proposed and planned Transportation System Plan (TSP) projects in the downtown that support pedestrian comfort and safety.

19. Explore Formation of a Transportation Management Association		
Rationale	Incentive programs encourage people to use transportation options.	
Priority	#1	
Effectiveness	****	
Relative Cost	$$	
Triggers	Significant development on-site and in downtown and/or continued parking constraints.	

Mid Term Strategies

Implementation steps:

- Have TDM Implementation Committee work with DOCA, property owners, and the City to identify concerns and goals for a possible TMA.
- Conduct Business Improvement District feasibility study to be a primary funding source for the TMA.
- Research other TMAs.
- Identify project champions and empower them to lead the charge.

20. Shuttles		
Rationale	Encourage a "park once" philosophy.	
Priority	#1	
Effectiveness	***	
Relative Cost	$$$	
Triggers	When on-site parking is over 85% occupancy and there is overflow to nearby streets, OR when additional development on-site generates a significant number of new trips.	

Implementation steps:

- Research other shuttle programs (e.g., Explore Washington Park, BUZZ Bus in Palm Springs, Columbia River Gorge Express).
- Reach out to partners such as tourist locations (End of Oregon Trail Museum, DOCA, etc.) to gauge interest and explore possible funding opportunities.
- Identify possible routes and stop locations.
- Identify funding.
- Develop RFP for operators.
- Launch shuttle service with big media event.
- Monitor shuttle performance regularly.

21. Private Development Onsite Use of TDM Tools		
Rationale	Provide incentives for employees and visitors to use alternate modes onsite and ensure full use of parking spaces	
Priority	#2 & 3	
Effectiveness	***	
Relative Cost	$$$	
Triggers	Approval of private development on the Willamette Falls Legacy Project site will require a TDM plan.	

Mid Term Strategies

Implementation steps:

- Private development will provide proportional support to the TDM plan. Tools could include:
  - New employee welcome procedures explaining transportation options
  - Installing bike parking and changing rooms on-site
  - Discounted/subsidized or pre-tax transit passes for employees
  - Bike/walk bucks using the federal biking transit tax benefit program
  - Annual travel surveys of employees
  - Workplace challenges to raise awareness about options and "gamify" commuting.

22. Explore Carsharing Agreements		
Rationale	Add more transportation options to support multi-modal access	
Priority	#2	
Effectiveness	***	
Relative Cost	$$	
Triggers	When on-site parking is over 85% occupancy and there is overflow to nearby streets, OR when additional development on-site generates a significant number of new trips.	

Implementation steps:

- City to begin dialog with regional carsharing companies to understand potential marketplace barriers (for private development sites and for public on/off-street locations)
- City/DOCA to facilitate conversations with private developers to incorporate dedicated carsharing stalls into their properties – could be strategy to reduce minimum parking requirements
- City to negotiate agreement with carsharing operators to deploy vehicles in public parking supply (with supportive parking utilization and market demand data)

23. Improve Information Technology	
Rationale	Improve information technology infrastructure
Priority	#2
Effectiveness	***
Relative Cost	$$$
Triggers	Increased private development onsite. List can be developed in conjunction with shared use parking agreements and tiered parking pricing options.

Mid Term Strategies

Implementation steps:
▪ With TDM Manager, develop a list of technology applications that enhance the user experience and improve information delivery.
▪ Technology improvements could include:
  ○ Pay by phone payment service
  ○ License plate reading technology for enforcement
  ○ Off-street sensors and real-time availability information via web and mobile apps.
  ○ Evaluate list of technology applications for feasibility including cost, maximizing user coverage, return on investment, and ease of adoption.
  ○ Prioritize list based on factors above.

Long-Term Strategies

Long-term strategies (10 – 20 years after riverwalk opening) require the greatest amount of coordination, organization, and often, funding. Below are a number of strategies that may be applicable in the future as the Willamette Fall Legacy Project is developed and as Oregon City continues to thrive.

Long Term Strategies		
24. Build Parking Garage		
Rationale	As the site becomes a popular destination, vehicle parking will become a concern	
Priority	#1	
Effectiveness	***	
Relative Cost	$$$$	
Triggers	When new development on the site generates a significant number of additional trips.	
Implementation steps: ▪ Identify potential locations future public/private parking garage in downtown and or mill site. ▪ Conduct market and feasibility study. ▪ Determine base parking rate to cover construction and operating cost. ▪ Identify possible locations. ▪ Develop pro forma for construction. ▪ Identify possible public and private funding sources. ▪ Develop RFP for operator and construction company. ▪ Monitor parking garage performance regularly and adjust rates.		

Long Term Strategies		
25. Extend High Capacity Transit (HCT) to Oregon City		
Rationale	Extend MAX Orange Line or Bus Rapid Transit to Oregon City	
Priority	#2	
Effectiveness	***	
Relative Cost	$$$$$	
Triggers	When significant dense development generates enough trips to and from the Downtown area.	
Implementation steps: ▪ Oregon City continues role in regional planning for line extension. ▪ Collaborates with stakeholders, when needed to show support.		
26. Water Taxis		
Reason(s)/ Rationale	Create transit connections across and along the Willamette River	
Priority	#2	
Effectiveness	**	
Relative Cost	$$$	
Triggers	Driven by outside investment in this mode (tourism or transportation based).	
Implementation steps: ▪ Build proposed boat dock onsite or provide shuttle service from Jon Storm dock and or other docks along both sides of the lower Willamette.		
27. Bikeshare Program		
Rationale	Create a bikeshare program to facilitate multi-modal transportation option	
Priority	#2	
Effectiveness	**	
Relative Cost	$$	
Triggers	When additional dense mixed-use development on-site generates a significant number of new trips.	

Long Term Strategies

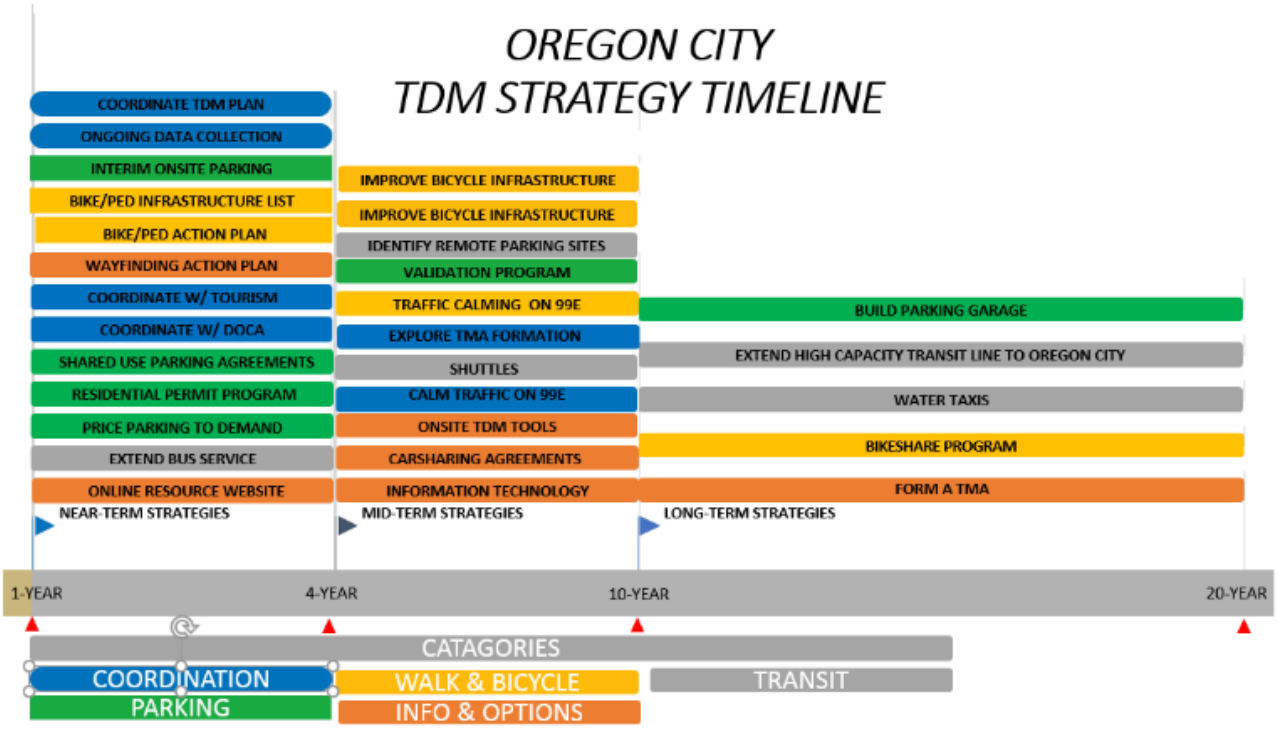
Implementation steps:

- Conduct feasibility study.
- Identify key partners (City, DOCA, tourist groups, etc.)
- Procure funding for planning (federal or regional grants, Bikeshare Foundation, etc.)
- Develop RFQ for bikeshare operator.
- Identify possible operators and negotiate contract.
- Work with operator to determine best funding mechanism and price structure.
- Work with operator to determine station locations.
- Procure necessary permits and/or agreement for station locations.
- Roll out marketing campaign and media event.
- Monitor program regularly.

28. Form a Transportation Management Association (TMA)		
Rationale	Have a central organizing group responsible for implementing and monitoring transportation demand programs and access.	
Priority	#2	
Effectiveness	*****	
Relative Cost	$$$	
Triggers	When there is development on-site and continued strain on parking and transportation access.	

Implementation steps:

- Use key findings from earlier feasibility study to develop strategy and work plan for a TMA, with timelines and milestones identified.
- Establish a Business Improvement District (BID) to fund TMA.
- Develop language to codify the BID.
- Recruit board members to oversee the TMA.
- Develop organizational framework, bylaws, goals, etc.



VII. TDM Strategies in Action

The following examples provide an overview summary of a Transportation Demand Management program put into practice, specifically shuttles, which the community expressed high support for through the public outreach process.

Transportation Management Associations (TMAs)

While Transportation Demand Management programs can be effective implemented through employers or business associations alone, often the impact is greater when multiple entities work cooperatively. Transportation Management Organizations or Associations or TMO/TMAs are typically nonprofit organizations charged with coordinating a neighborhood, district, or regions Transportation Demand Management programs. Since they are independent entities pooling resources and convening stake holders they can take advantage of government grant funds and are able to do more creative marketing and outreach activities reaching a wide range of individuals.

There are a few creative funding mechanisms for TMAs, from membership dues, parking revenue, district assessments/taxes, and grants.

- **District assessment/tax -** an assessment or additional tax can be levied through a business improvement district to help fund a TMA's program. These are often the largest source of revenue for organizations.

- **Parking revenue -** Parking revenue can be used to help pay for TDM programs as well infrastructure in a neighborhood or district. This requires coordination, collection and oversight from the City.
- **Membership Dues or Direct employer contributions -** Direct dues are often a common way to start or fund a small organization.
- **Local government contributions -** for start-up funding or for special projects, local or regional governments often provide grants. These are often given out on a short term basis.

For more on forming a TMA visit the Association for Commuter Transportation's website and look for their TMA Handbook- http://actweb.org/wp-content/uploads/2016/11/tma_handbook_final.pdf

Organization	Location	Community Served	Funding Sources	Impact
North Shore TMA *"We want to grow. We need new businesses coming here, but how do we manage all that traffic and flow? The TMA evolved from those kinds of discussions."* Mayor Kimberley Driscoll City of Salem, Mass.	Salem, Beverly, Danvers, Lynn, and Peabody, MA Suburbs/small towns Founded in 2008	10,000 employees + 10,000 students	• Membership dues • State grants	Compliance assistance with Massachusetts Rideshare Regulation Roundtables for property managers, developers, and facility managers Telework support
Go Lloyd *"You guys are the best! Seriously, I wouldn't have bike commuted if it wasn't for your help."* PacifiCorp Employee	Lloyd Neighborhood, Portland, OR Neighborhood in mid-size city Founded in 1994	25,000 employees 3,000 residents 18 million + visitors each year	• Parking Meter Revenue • Business Improvement District Funds • Transit Pass Sale Commissions	Since 1997, Go Lloyd has reduced employee drive alone trips by more than 25% 4.5 million lbs. reduction in greenhouse gas emissions annually 1,200 few vehicles driving to work daily

Organization	Location	Community Served	Funding Sources	Impact
Boulder Junction TOD TDM Access District	Large (160 acres) Transit Oriented Development Site in Boulder, CO Small City	*Currently operational:* 400 residential units 2 restaurants 1 hotel *In development/ construction:* 800+ units 400,000+ sq ft of commercial space	• Parking Meter Revenue • Development fees known as "TDM Access District" • City grant funds	Their goal is 45% SOV rate. They are at 58% now, but just opened this year.

Shuttles

Shuttles can be very effective at moving people to destinations, especially popular sites such as Multnomah Falls in the Columbia River Gorge. They can, however, be expensive to operate and require both sufficient ridership demand and sustainable funding to be effective. The table below offers a few examples of shuttle programs in small cities and regional tourist destinations.

Shuttle Name -- Location	Operating Schedule	Funding Sources	Direct Operating Expenses
Columbia Gorge Express—Portland to Gorge, Oregon *Destination-based* 	Pilot started in 2016 Seasonally (May-September) Friday, Saturday, Sunday only Hourly, 9am-7pm	A combination of: • Local and regional economic development funds (e.g. Travel Portland) • Federal Highway Administration funds • Friends of the Columbia Gorge and more • Passenger fare: $5 per person round-trip	• $225,000 per season

Shuttle Name -- Location	Operating Schedule	Funding Sources	Direct Operating Expenses
BUZZ Trolley–Palm Springs, California *Loop/Circulator* 	Started in 2014 Year round Thursday-Sunday Every 15 minutes from 11am-1am	• City sale & use tax passed for downtown revitalization purposes, 1% (Measure J) • Business sponsorship coming soon • Free rides to anyone	• $847,000 per year
Explore Washington Park Shuttle—Portland, OR *Loop/Circulator* 	Started in 2015 Seasonally April- October Weekends only 9am-7pm May-September Daily 9am-7pm Every 15 minutes	• On-site parking fees fund the TMA, Explore Washington Park. which operates and pays for the shuttle	• $330,000 per year
CCC Xpress Shuttle—Clackamas County Community College, OR *Destination-based* 	September-June Monday-Friday Every 15 minutes during peak, then every 30 minutes 6:45am-6:45pm		• $60 per Shuttle hour for 2 shuttles running daily, plus a 3rd shuttle during peak hours • $180,000 per school year
Mt. Hood Express – operated by Clackamas County between Sandy and Government Camp	7 days per week 5:15am-6:15pm 6 runs per day, one additional run Dec 1 – March 31	Public/Private partnership – Timberline Lodge, Mt. Hood Ski Bowl, and Resort at the Mountain are major contributors	• $558,298 per year

Shuttle Name -- Location	Operating Schedule	Funding Sources	Direct Operating Expenses
Mt. Hood EXPRESS MHX 26		Passenger fare: $2 one-way, $5 round-trip	

Parking Permit Programs

Area parking permit programs seek to manage on-street parking spaces and encourage visitor turn over so local residents can access spaces more easily. Permit programs are intended for residential/business use within a defined boundary. Area permit programs are requested by neighborhood stakeholders to address an access issue. Programs are administered by the City with permit fees coving the cost of administration and some base level of enforcement. Typically visitors can only stay 30 minutes to 2 hours in an on-street space unless they display a permit for that zone. While the primary role of the parking permit program is to manage demand, some cities have used parking permit revenue (with an added surcharge) to fund local street improvement projects and encouragement programs. Examples of encouragement activities include discounted or free transit passes and bike share memberships to local residents and employees, improved wayfinding signage, new and improved crosswalks and bus shelters, etc.

NW Parking Permit District

The NW Portland neighbors recently agreed to price their permits based on parking demand to better manage their on-street parking supply. They agreed to add a surcharge to the permit fee to help fund area improvements. If residents chose not to purchase the a permit at the new price, they could opt out and receive a $100 transit card with a free annual Bikeshare membership or 50% discount on an annual transit pass. This is an example of a city working with neighbors to help resolve an on-going parking program with an innovate approach that directly funds solutions (alternatives to parking).

VIII. RECOMMENDATIONS

The Willamette Falls Legacy Project presents an opportunity to transform the Oregon City waterfront and write an exciting new chapter in the site's long history. Incorporating the valuable input of local stakeholders and guided by industry best practices, TDM and parking strategies provide an important set of tools with which to shape land use and infrastructure development for the betterment of the site and of Oregon City. General recommendations include:

TDM Management Plan Adoption:

- Adopt and actively manage the Oregon City Transportation Demand Management Plan to guide TDM and Parking Management strategies for the Willamette Falls Legacy site, as well as for Oregon City as a whole. Continue to collect data, coordinate with local and regional agencies and governments, and "right-size" parking.

Data Driven Actions

- Use this document's strategies and recommendations not as a step-by-step prescription, but as a guide on how to react when changes occur or opportunities develop. Near-, mid-, and long-term strategies should be viewed as a set of tools to be used when most beneficial for Oregon City, not as a chronological checklist.

Oregon City as a Whole:

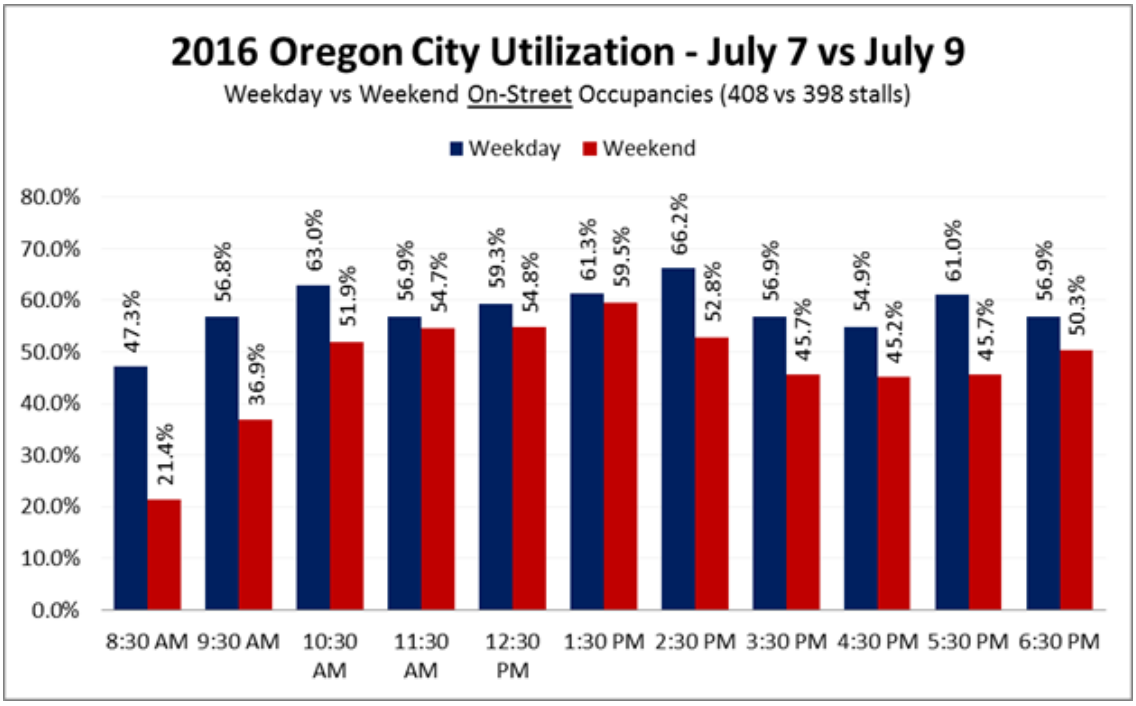
- As the Willamette Falls Legacy Project evolves, TDM and parking solutions should complement and support the success of Oregon City as a whole.

IX. APPENDICES

Appendix I. 2016 Oregon City Parking Study

On-Street Findings:

2016 On-Street Parking Hourly Utilization



Key findings include:

Survey Period	Peak Occupancy (Peak Hour)
Peak Occupancy - Weekday	66.2% (2:00 – 3:00PM)
Peak Occupancy - Weekend	59.5% (1:00 – 2:00PM)

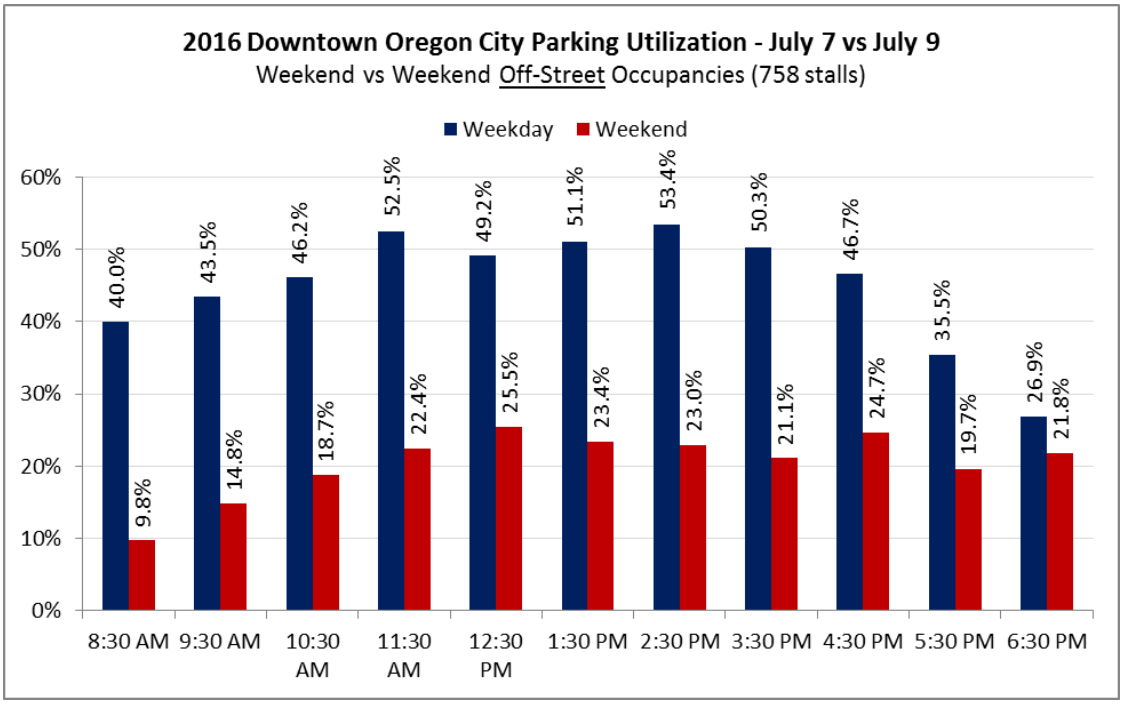
- The weekday peak hour is 2:00 to 3:00 PM, when occupancies reach 66.2%.
- The weekend peak hour is 1:00 to 2:00 PM, when occupancies reach 59.5%.
- Hourly occupancies are higher throughout the day on the weekday compared to the weekend.
- Hourly occupancies are substantially higher in the morning and late afternoon/evening on the weekday.

- Both the weekday and weekend show a small spike in the evenings after 4:00 PM, indicating that the downtown experiences a resurgence of activity at dinner time. The spike occurs earlier on the weekday (between 5:00 and 6:00 PM) than on the weekend (between 6:00 and 7:00 PM).

On-street parking in downtown Oregon City is efficient and occupancy levels are not constrained. Parking metrics indicate a vibrant downtown that is well managed through metering and enforcement. These characteristics will allow for increased parking demand from neighboring developments to be absorbed, and provide a sound baseline for on-street parking management as the downtown grows.

Off-Street Findings:

2016 Off-Street Parking Hourly Utilization



Key findings include:

Survey Period	Peak Hour Occupancy (Peak Hour)
Peak Occupancy - Weekday	53.4% (2:00 – 3:00PM)
Peak Occupancy - Weekend	25.5% (12:00 – 1:00PM)

- Weekday peak occupancy is 53.4% and occurs between 2:00 and 3:00 PM.
- Weekend peak occupancy is 25.5% and occurs between noon and 1:00 PM.

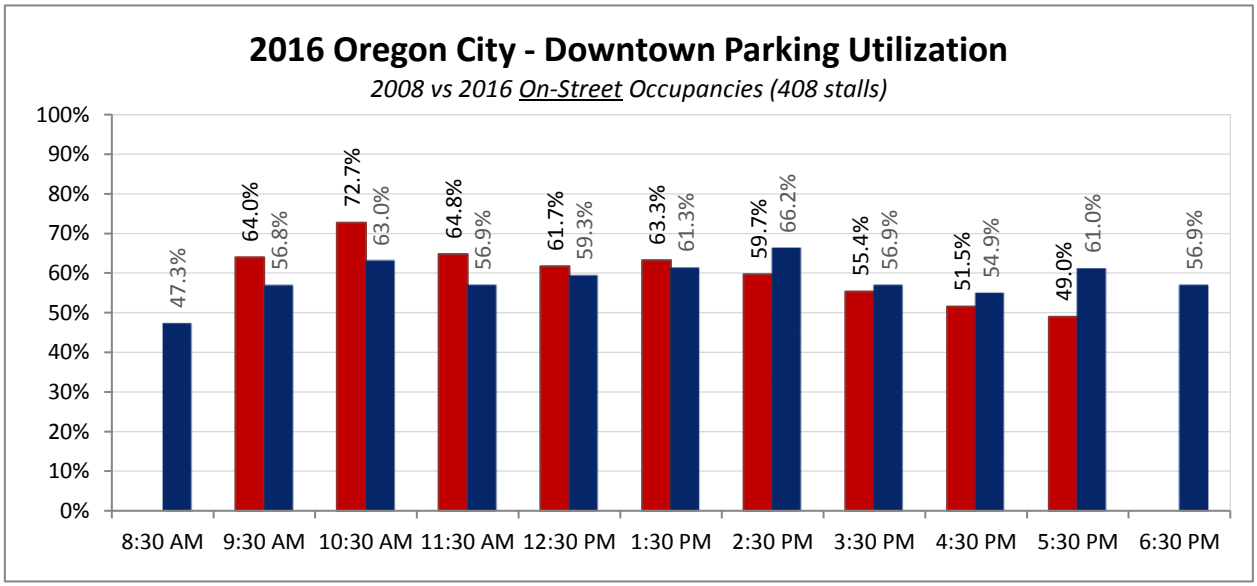
- Hourly occupancy rates are higher throughout the day on the weekday compared to the weekend.
- Hourly occupancy rates are relatively consistent on the weekday and taper off after 4:30 PM.
- Both weekday and weekend occupancy rates are not constrained and show ample room to absorb additional vehicles.
- At the weekday peak hour, 405 vehicles are parked, leaving 353 stalls empty. At the weekend peak hour, 193 vehicles are parked, leaving 565 stalls empty. Both days yield surplus space to which existing or new users could be directed.

The off-street parking supply is not constrained and, through shared-use agreements, can absorb a significant number of additional vehicles throughout the week. These findings are particularly relevant as the Willamette Falls Legacy Project considers short- and long-term off-street parking facilities for the Riverwalk and related developments.

2016 Oregon City On-Street Peak Hour Parking Utilization Comparison

2016 Oregon City On-Street Parking Utilization – Comparative							
Stall Type	**Year**	**Stalls**	**Peak Hour**	**Peak Occupancy**	**Stalls Available**	**Average Length of Stay**	**Violation Rate**
On-Street Peak	***2008***	***392***	***10:00 – 11:00 AM***	***72.7%***	***107***	***2 hr/ 10 min.***	***9.6%***
	2016	***408***	***2:00 – 3:00 PM***	***66.2%***	***138***	***1 hr/ 53 min***	***10.8%***

2016 vs. 2008 Oregon City On-Street Hourly Parking Utilization Comparison



Appendix II. Stakeholder Engagement Summary

There were opportunities throughout the process for community members to provide feedback on this plan, both online and in person. The City held three public meetings that acted as workshops, one open house, and two online surveys. Input from these were incorporated into the plan.

Meeting # 1 (April 26, 2017)

Challenges/Concerns

- Transit
  - No bus or transit access to site
  - No MAX or high capacity transit (HCT) connection
- Highway 99E
  - High traffic speeds make it feel unsafe and unpleasant to walk or bike
- Pedestrian access & comfort
- Bicycle access & comfort
- Connection to Downtown
- Neighborhood parking overflow
- Lack of information or signage
- Constrained site generally

Tools/Ideas

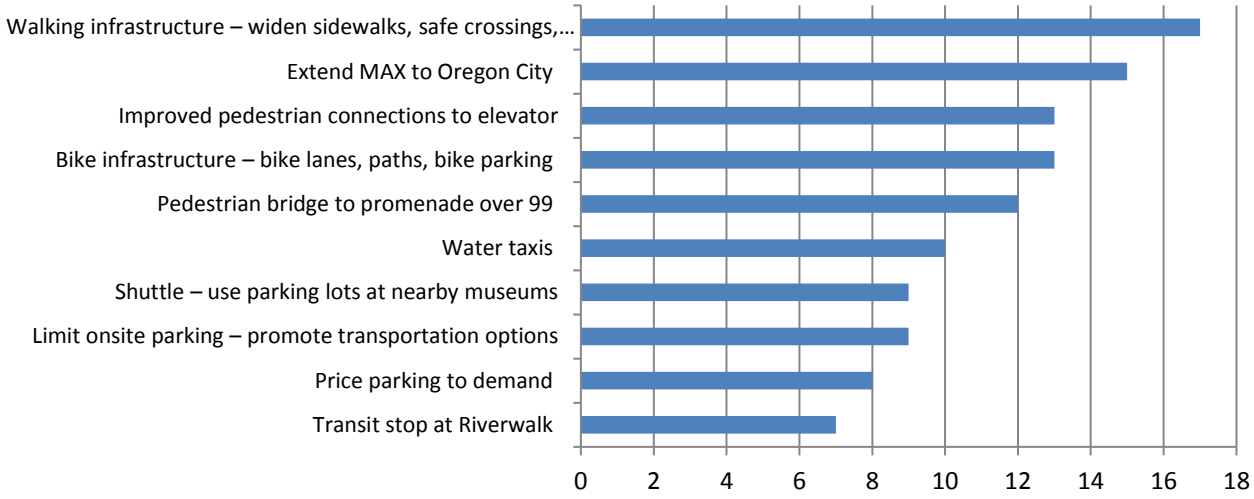
- Improve pedestrian access and comfort
  - Calm traffic on 99E
  - Pedestrian overcrossing from 99e to promenade
- Build/expand bicycle infrastructure
  - Bike lanes, paths, bike parking and wayfinding signage
  - Bikeshare or bike rental programs
- Think outside the box(car)
  - Encourage people to get there without driving, limit onsite parking
- River access
  - Water taxis
- Residential Parking Programs
  - Especially in McLoughlin and Canemah neighborhoods
- Shuttle service
- Coordinate tourist attractions and access
  - Use parking lots at nearby museums for a shuttle
- Traffic calming on Highway 99
- Smart parking pricing
- Charge for parking

- Customer validation program
- Encourage employees to park elsewhere
- Improve parking information and wayfinding signage
- Work with TriMet on expanding service to site

Meeting # 2 (May 24, 2017)

The community was asked to prioritize TDM strategies. There was strong support for most, and many community members were eager to implement them sooner rather than later. The chart below shows the top ten strategies as identified by meeting attendees and online survey respondents. Extending MAX to Oregon City was the most controversial.

Preferred TDM Strategies



Meeting # 3 (July 26, 2017)

At this meeting, the draft plan was presented to the community to ensure that all ideas and concerns had been captured. Community members were generally in agreement with the strategies and timeline. Comments included:

- Work with regional trails such as Trolley Trail to improve bike access.
- Work with Downtown Oregon City Association on advisory committee and ongoing monitoring.
- Important to identify funding for city staff time early on.