ESTACADA
ACTIVE TRANSPORTATION PLAN
APPENDIX
Facility Type Selection Index
Facility Selection

Bicycle Facilities

Selecting the best bikeway facility type for a given roadway can be challenging, due to the range of factors that influence bicycle users’ comfort and safety. There is a significant impact on cycling comfort when the speed differential between bicyclists and motor vehicle traffic is high and motor vehicle traffic volumes are high.

As a starting point to identify a preferred facility, the chart below can be used to determine the recommended type of bikeway to be provided in particular roadway speed and volume situations. To use this chart, identify the appropriate daily traffic volume and travel speed on or the existing or proposed roadway, and locate the facility types indicated by those key variables.

Other factors beyond speed and volume which affect facility selection include traffic mix of automobiles and heavy vehicles, the presence of on-street parking, intersection density, surrounding land use, and roadway sight distance. These factors are not included in the facility selection chart below, but should always be considered in the facility selection and design process.

| FACILITY TYPE         | STREET CLASS     | 0  | 2  | 4  | 6  | 8  | 10 | 15+ | 20+ | 25+ | 30+ |
|-----------------------|------------------|----|----|----|----|----|----|-----|-----|-----|-----|-----|
| BICYCLE BOULEVARD     | LOCAL            |    |    |    |    |    |    |     |     |     |     |     |
| BIKE ROUTE            | LOCAL            |    |    |    |    |    |    |     |     |     |     |     |
| BIKE LANE             | COLLECTOR ARTERIAL |    |    |    |    |    |    |     |     |     |     |     |
| BUFFERED BICYCLE LANE | COLLECTOR ARTERIAL |    |    |    |    |    |    |     |     |     |     |     |
| SEPARATED BICYCLE LANE| COLLECTOR ARTERIAL |    |    |    |    |    |    |     |     |     |     |     |
| SHARED USE PATH       | COLLECTOR ARTERIAL |    |    |    |    |    |    |     |     |     |     |     |

**AVERAGE ANNUAL DAILY TRAFFIC (1,000 veh/day or 100 veh/peak hr)**

**POSTED TRAVEL SPEED (mph)**
Bicyclist User Type

The current AASHTO Guide to the Development of Bicycle Facilities encourages designers to identify their rider type based on the trip purpose (Recreational vs Transportation) and on the level of comfort and skill of the rider (Causal vs Experienced). A user-type framework for understanding a potential rider’s willingness to bike is illustrated in the figure below. Developed by planners in Portland, OR* and supported by research**, this classification identifies four distinct types of bicyclists.

### Four Types of Transportation Bicyclists

**Strong and Fearless.** Bicyclists who will typically ride anywhere regardless of roadway conditions or weather. These bicyclists can ride faster than other user types, prefer direct routes and will typically choose roadway connections -- even if shared with vehicles -- over separate bicycle facilities such as shared-use paths.

**Enthused and Confident.** Bicyclists who are fairly comfortable riding on all types of bikeways but usually choose low traffic streets or shared-use paths when available. These bicyclists may deviate from a more direct route in favor of a preferred facility type. This group includes all kinds of bicyclists such as commuters, recreationalists, racers and utilitarian bicyclists.

**Interested but Concerned.** The bulk of the cycling population, these bicyclists who typically only ride a bicycle on low traffic streets or shared-use paths under favorable weather conditions. These bicyclists perceive significant barriers to their increased use of cycling, specifically traffic and other safety issues. These people may become “Enthused & Confident” with encouragement, education and experience.

**No Way, No How.** Persons in this category are not bicyclists, and perceive severe safety issues with riding in traffic. Some people in this group may eventually become more regular cyclists with time and education. A significant portion of these people will not ride a bicycle under any circumstances.

Pedestrian Crossing Location and Facility Selection

The specific type of treatment at a crossing may range from a simple marked crosswalk to full traffic signals or grade separated crossings. Crosswalk lines should not be used indiscriminately, and appropriate selection of crossing treatments should be evaluated in an engineering study done before a marked crosswalk is installed. The engineering study should consider the number of lanes, the presence or lack of a median, the distance from adjacent signalized intersections, the pedestrian volumes and delays, the average daily traffic (ADT), the posted or statutory speed limit or 85th-percentile speed, the geometry of the location, the possible consolidation of multiple crossing points, the availability of street lighting, and other appropriate factors.

Typical Application

- Sidewalks should be provided on both sides of urban commercial streets, and should be required in areas of moderate residential density. (1-4 dwelling units per acre).
- In rural areas, no curb and gutter is necessary to establish a sidewalk. Instead, the sidewalk should feature a wide furnishing zone, which may be configured as an open ditch for stormwater catchment and infiltration. Ditches can be retrofitted into bioswales or raingardens for filtration and water purification.

Materials and Maintenance

Sidewalks are typically constructed out of concrete and are separated from the roadway by a curb or gutter and sometimes a landscaped boulevard. Less expensive walkways constructed of asphalt, crushed stone, or other stabilized surfaces may be appropriate. Ensure accessibility and properly maintain all surfaces regularly. Surfaces must be firm, stable, and slip resistant. Colored, patterned, or stamped concrete can add distinctive visual appeal.

Design Features

- It is important to provide adequate width along a sidewalk corridor. A pedestrian through zone width of six ft enables two pedestrians (including wheelchair users) to walk side-by-side, or to pass each other comfortably.
- In areas of high demand, sidewalks should contain adequate width to accommodate the high volumes and different walking speeds of pedestrians.
- Appropriate placement of street trees in the furnishing zone (minimum width 4 ft) helps buffer pedestrians from the travel lane and increases facility comfort.

Crash Reduction

Sidewalks reduce walking along the roadway and reduce other pedestrian crashes. Roadways without sidewalks are more than twice as likely to have pedestrian crashes as roadways with sidewalks on both sides of the street.¹

Further Considerations

- At a minimum, the Americans with Disabilities Act requires a 3 ft clear width in the pedestrian zone plus 5 ft passing areas every 200 ft.
- The clear width may be reduced to a minimum of 32 inches for short, constrained segments of up to 24 inches long, provided that constrained segments are separated by regular clear width segments that are a minimum of 48 inches long and 36 inches wide.
- Providing a 6 ft clear width across the full corridor for all new sidewalks (and 12 ft or greater in downtown and pedestrian-priority areas) meets requirements for passing and maneuverability.
- Existing deficient-width sidewalks are to be retrofitted to meet citywide standard.

Separated Bike Lanes

Separated bike lanes provide protection through physical barriers and can include flexible delineators, curbs, on-street parking or other barriers. Separated bike lanes can be at the same elevation as adjacent travel lanes or can be raised.

**Typical Application**

- Streets with high motor vehicle volumes and/or speeds and high bicycle volumes.
- Streets for which conflicts at intersections can be effectively mitigated using parking lane setbacks, bicycle markings through the intersection, and other signalized intersection treatments.
- Appropriate for most riders on most streets, although caution should be used when approaching intersections or other conflict areas.

**Design Features**

A. Pavement markings, symbols and/or arrow markings must be placed at the beginning of the separated bike lane and at intervals along the facility (MUTCD 9C.04).

B. 7 ft width preferred (5 ft minimum).

C. 3 ft minimum buffer width adjacent to parking. 18 inch minimum adjacent to travel lanes (NACTO, 2012). Channelizing devices should be placed in the buffer area.

- If buffer area is 4 ft or wider, white chevron or diagonal markings should be used.
Separated Bike Lanes

Further Considerations

- Separated bike lane buffers and barriers are covered in the MUTCD as preferential lane markings (section 3D.01) and channelizing devices (section 3H.01). Curbs may be used as a channeling device.
- A retrofit separated bike lane has a relatively low implementation cost compared to road reconstruction by making use of existing pavement and drainage and by using parking lane as a barrier.
- Gutters, drainage outlets and utility covers should be designed and configured as not to impact bicycle travel.
- Special consideration should be given at transit stops to manage bicycle & pedestrian interactions.
- Separated bike lanes can be configured into two-way facilities that allow bicycle movement in both directions on one side of the road. Two-way separated bicycle lanes share some of the same design characteristics as one-way separated bicycle lanes, but may require additional considerations at driveway and side-street crossings.

Crash Reduction

A before and after study in Montreal of physically separated bicycle lanes shows that this type of facility can result in a crash reduction of 74 percent for collisions between bicyclists and vehicles. (CMF ID: 4097) In this study, there was a parking buffer between the bike facility and vehicle travel lanes. Other studies have found a range in crash reductions, from 8 percent (CMF ID: 4094) to 94 percent (CMF ID: 4101).

Materials and Maintenance

Separated bike lanes require routine maintenance, including debris removal. Routine sweeping to remove debris, such as leaves and other obstructions, can be done with smaller street sweepers. Public works staff and contractors should be trained on maintenance and other considerations, such as trash collection.
Bike Boulevard

Bicycle Boulevards are low-volume, low-speed streets modified to enhance bicycle safety and comfort by using design treatments such as signage, pavement markings, speed and/or volume reduction features, and crossing improvements. These treatments encourage through movements of bicyclists while discouraging similar through-trips by non-local motorized traffic.

Local bikeways create high quality, low-stress facilities for bicyclists without physical separation because the roadway design itself creates a calm traffic environment where people biking and people driving can comfortably share the road.

Design Features

A) No centerline should be used on the roadway to promote full use of roadway by bicyclists.
B) Bicycle Boulevard markings or shared lane markings (CAMUTCD 9C-9) should be placed frequently along the route to identify the bicycle boulevard.
C) Wayfinding signs should be used to identify bikeway network connections and direct users to nearby destinations.
D) Minimal use of stop signs along the route allow for fast bicycle travel.
E) Speed management methods avoid creating narrow pinch points for bicyclists.

- Volume management methods should always allow through access for bicyclists.
- At offset intersections, treatments should reduce exposure to fast vehicles and may concentrate bicycle crossings at one location to permit the use of robust crossing treatments.
Bike Boulevard

Berkeley CA - Bicycle boulevards use speed and volume management techniques to create comfortable conditions for bicycling in mixed traffic. Alternating parking creates a chicane to slow traffic speeds.

Typical Application

- Parallel with and in close proximity to major thoroughfares (1/4 mile or less).
- Follow a desire line for bicycle travel that is ideally long and relatively continuous (2-5 miles). The bikeway should have less than 10% out of direction travel compared to shortest path of primary corridor.
- Reduce traffic volumes down to 2,000 cars per day (1,500 cars per day preferred maximum).
- Use traffic calming to maintain an 85th percentile speed below 20 mph (25 mph maximum).
- Selection of major street crossing treatments based on cross street volumes, lane configurations, presence of medians and traffic control devices.

Further Considerations

Stop signs should not be oriented to the bicycle boulevard route. This improves bicycle travel time but may attract motor vehicle traffic. Monitor conditions over time to determine if additional volume control measures may be needed.

Bicycle boulevards should be a complementary element of a bicycle network, and not serve as a replacement for separated facilities on high demand corridors.

Crash Reduction

A comprehensive study conducted in Berkeley, California found that collision rates on bicycle boulevards are two to eight times lower than those on parallel, adjacent arterial routes. The results from the study were highly statistically significant and provides strong evidence that riding bike boulevards is safer for cyclists than riding on arterials.  

Materials and Maintenance

Maintenance needs for bicycle wayfinding signs are similar to other signs, and will need periodic replacement due to wear. Placing sharrows between vehicle tire tracks will increase the life of the markings and minimize the long-term cost of the treatment.

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Shared Use Path

Shared use paths outside of road right-of-way can provide a desirable facility, particularly for recreation, and users of all skill levels preferring separation from traffic. Bicycle paths should generally provide directional travel opportunities not provided by existing roadways.

**Typical Application**

- In abandoned rail corridors (commonly referred to as Rails-to-Trails or Rail-Trails.
- In active rail corridors, trails can be built adjacent to active railroads (referred to as Rails-with-Trails.
- In utility corridors, such as powerline and sewer corridors.
- In waterway corridors, such as along canals, drainage ditches, rives and beaches.
- Along roadways.

**Design Features**

**Width**

- 8 ft is the minimum allowed for a two-way bicycle path and is only recommended for low traffic situations.
- 10 ft is recommended in most situations and will be adequate for moderate to heavy use.
- 12 ft is recommended for heavy use situations with high concentrations of multiple users. A separate track (5’ minimum) can be provided for pedestrian use.

**Lateral Clearance**

- A 2 ft or greater shoulder on both sides of the path should be provided. An additional 1 ft of lateral clearance (total of 3’) is required by the MUTCD for the installation of signage or other furnishings.
- If bollards are used at intersections and access points, they should be colored brightly and/or supplemented with reflective materials to be visible at night.
A shared use path is for both pedestrian and bicycle two-way travel.

**Overhead Clearance**
- Clearance to overhead obstructions should be 8 ft minimum, with 10 ft recommended.

**Striping**
- When striping is required, use a 4 inch dashed yellow centerline stripe with 4 inch solid white edge lines.
- Solid centerlines can be provided on tight or blind corners, and on the approaches to roadway crossings.

**Further Considerations**

The provision of a shared use path adjacent to a road is not a substitute for the provision of on-road accommodation such as paved shoulders or bike lanes, but may be considered in some locations in addition to on-road bicycle facilities.

To reduce potential conflicts in some situations, it may be better to place one-way sidepaths on both sides of the street.

**Crash Reduction**

Shared use paths reduce injury rates for cyclists, pedestrians, and other nonmotorized modes by 60 percent compared with on street facilities.¹

**Materials and Maintenance**

Asphalt is the most common surface for bicycle paths. The use of concrete for paths has proven to be more durable over the long term. Saw cut concrete joints rather than troweled improve the experience of path users.

Shared Roadway

Marked Shared Roadways use sharrows and road signs to create shared space for people biking and driving on quiet neighborhood streets. Sharrows are a shared lane marking painted in a general travel lane that is used to encourage bicycle travel, highlight proper bike positioning within the lane, and alert drivers.

**Typical Application**

- In constrained conditions, sharrows are placed in the middle of the lane. On a wide outside lane, the sharrows can be used to promote bicycle travel to the right of motor vehicles.
- In all conditions, sharrows should be placed outside of the door zone of parked cars.

**Design Features**

- May be used on streets with a speed limit of 35 mph or under. Lower than 30 mph speed limit preferred.
- In constrained conditions, preferred placement is in the center of the travel lane to minimize wear and promote single file travel.
- Minimum placement of a sharrow centerline is 11 feet from edge of curb where on-street parking is present, 4 feet from edge of curb with no parking. If parking lane is wider than 7.5 feet, the sharrow should be moved further out accordingly.

**Materials and Maintenance**

Placing sharrows between vehicle tire tracks will increase the life of the markings and minimize the long-term cost of the treatment.
Bike Lane

Bike lanes designate an exclusive space for bicyclists through the use of pavement markings and signs. The bike lane is located directly adjacent to motor vehicle travel lanes and is used in the same direction as motor vehicle traffic. Bike lanes are typically on the right side of the street, between the adjacent travel lane and curb, road edge or parking lane.

**Typical Application**
- Bike lanes may be used on any street with adequate space, but are most effective on streets with moderate traffic volumes ≥ 6,000 ADT (≥ 3,000 preferred).
- Bike lanes are most appropriate on streets with moderate speeds ≥ 25 mph.
- Appropriate for skilled adult riders on most streets.
- May be appropriate for children when configured as 6+ ft wide lanes on lower-speed, lower-volume streets with one lane in each direction.

**Design Features**

- Mark inside line with 6” stripe. Mark 4” parking lane line or “Ts”.¹
- Include a bicycle lane marking (MUTCD Figure 9C-3) at the beginning of blocks and at regular intervals along the route (MUTCD 9C.04).
- 6 ft width preferred adjacent to on-street parking (5 ft min.).
- 5–6 ft preferred adjacent to curb and gutter (4 ft min.) or 4 ft more than the gutter pan width.

¹ Studies have shown that marking the parking lane encourages people to park closer to the curb. FHWA. Bicycle Countermeasure Selection System. 2006.
### Bike Lane

Bike lane word, symbol, and/or arrow markings (MUTCD Figure 9C-3) shall be placed outside of the motor vehicle tread path in order to minimize wear from the motor vehicle path (NACTO 2012).

Bicycle lanes provide an exclusive space, but may be subject to unwanted encroachment by motor vehicles.

### Further Considerations

- On high speed streets (≥ 40 mph) the minimum bike lane should be 6 ft.
- On streets where bicyclists passing each other is to be expected, where high volumes of bicyclists are present, or where added comfort is desired, consider providing extra wide bike lanes up to 7 ft wide, or configure as a buffered bicycle lane.
- It may be desirable to reduce the width of general purpose travel lanes in order to add or widen bicycle lanes.
- On multi-lane and/or high speed streets, the most appropriate bicycle facility to provide for user comfort may be buffered bicycle lanes or physically separated bicycle lanes.

### Manhole Covers and Grates

- Manhole surfaces should be manufactured with a shallow surface texture in the form of a tight, nonlinear pattern.
- If manholes or other utility access boxes are to be located in bike lanes within 50 ft of intersections or within 20 ft of driveways or other bicycle access points, special manufactured permanent nonstick surfaces will be required to ensure a controlled travel surface for cyclists breaking or turning.
- Manholes, drainage grates, or other obstacles should be set flush with the paved roadway. Roadway surface inconsistencies pose a threat to safe riding conditions for bicyclists. Construction of manholes, access panels or other drainage elements will be constructed with no variation in the surface. The maximum allowable tolerance in vertical roadway surface will be 1/4 of an inch.

### Crash Reduction

Before and after studies of bicycle lane installations show a wide range of crash reduction factors. Some studies show a crash reduction of 35 percent (CMF ID: 1719) for vehicle/bicycle collisions after bike lane installation.

### Materials and Maintenance

Paint can wear more quickly in high traffic areas or in winter climates. Bicycle lanes should be cleared of debris through routine operations.
**ENHANCED CROSSING TREATMENTS**

**Marked Crosswalks**

A marked crosswalk signals to motorists that they must stop for pedestrians and encourages pedestrians to cross at designated locations. Installing crosswalks alone will not necessarily make crossings safer especially on multi-lane roadways. At mid-block locations, crosswalks can be marked where there is a demand for crossing and there are no nearby marked crosswalks.

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**Typical Application**

All crosswalks should be marked at signalized intersections. At unsignalized intersections, crosswalks may be marked under the following conditions:

- At a complex intersection, to orient pedestrians in finding their way across.
- At an offset intersection, to show pedestrians the shortest route across traffic with the least exposure to vehicular traffic and traffic conflicts.
- At an intersection with visibility constraints, to position pedestrians where they can best be seen by oncoming traffic.
- At an intersection within a school zone on a walking route.

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**Design Features**

The crosswalk should be located to align as closely as possible with the through pedestrian zone of the sidewalk corridor.

- The landing at the top of a ramp shall be at least 4 feet long and at least the same width as the ramp itself.
- The ramp shall slope no more than 8.33%, with a maximum cross slope of 2.0%.
- If the ramp runs directly into a crosswalk, the landing at the bottom will be in the roadway.
- If the ramp lands on a dropped landing within the sidewalk or corner area where someone in a wheelchair may have to change direction, the landing must be a minimum of 5'-0" long and at least as wide as the ramp itself.
Marked crosswalks are used to raise driver awareness of pedestrian and pathway crossings and help direct users to preferred crossing locations.

**Further Considerations**

Continental crosswalk markings should be used at crossings with high pedestrian use or where vulnerable pedestrians are expected, including: school crossings, across arterial streets for pedestrian-only signals, at mid-block crosswalks, and at intersections where there is expected high pedestrian use and the crossing is not controlled by signals or stop signs. High-visibility crosswalks are not appropriate for all locations. See intersection signalization for a discussion of enhancing pedestrian crossings.

Some cities prohibit omitting or removing a marked crosswalk at intersections in order to require a three-stage pedestrian crossing. Intersections with three-stage crossings lead to arduous and increased crossing distances, pedestrian frustration, encourages jaywalking, and exhibits modal bias favoring motor vehicle level-of-service over other modes.

**Crash Reduction**

At an unsignalized four-leg intersection with no marked crosswalks and stop control for the minor street, installing markings to facilitate crossing of a major street reduced crash likelihood by 65% (CMF ID: 3019). The number of travel lanes for the major street ranged from two to eight.

**Materials and Maintenance**

Because the effectiveness of marked crossings depends entirely on their visibility, maintaining marked crossings should be a high priority. Thermoplastic markings offer increased durability than conventional paint.
Pedestrian Hybrid Beacon

A hybrid beacon, previously known as a High-intensity Activated Crosswalk (HAWK), consists of a signal-head with two red lenses over a single yellow lens on the major street, and pedestrian and/or bicycle signal heads for the minor street. There are no signal indications for motor vehicles on the minor street approaches. The signal is only activated when a pedestrian and/or bicyclist is present, resulting in minimal delay for motor vehicle traffic.

Typical Application

- Hybrid beacons are used to improve non-motorized crossings of major streets in locations where side-street volumes do not support installation of a conventional traffic signal (or where there are concerns that a conventional signal will encourage additional motor vehicle traffic on the minor street).
- May also be used at mid-block crossing locations.
- May be used at shared use path and trail crossing.

Design Features

May be installed without meeting traffic signal control warrants if roadway speed and volumes are excessive for comfortable user crossing.

- If installed within a signal system, signal engineers should evaluate the need for the hybrid signal to be coordinated with other signals.
- Parking and other sight obstructions should be prohibited for at least 100 feet in advance of and at least 20 feet beyond the marked crosswalk to provide adequate sight distance.

Crash Reduction

A 2010 FHWA before-and-after study found that pedestrian hybrid beacons led to a 29% reduction in total crashes, a 69% reduction in pedestrian crashes, and a 15% reduction in severe crashes.


Materials and Maintenance

Hybrid beacons are subject to the same maintenance needs and requirements as standard traffic signals. Signing and striping need to be maintained to help users understand any unfamiliar traffic control.
Raised Crosswalks

A raised crosswalk or intersection can eliminate grade changes from the pedestrian path and give pedestrians greater prominence as they cross the street. Raised crosswalks should be used only in very limited cases where a special emphasis on pedestrians is desired; review on case-by-case basis.

Typical Application

- Like a speed hump, raised crosswalks have a traffic slowing effect which may be unsuitable on emergency response routes.
- Raised crosswalks can also be used as a traffic calming treatment.

Design Features

- The raised crosswalk area should be at the same grade as the adjacent sidewalk, with no grade change from sidewalk level.
- Use detectable warnings at the curb edges to alert vision-impaired pedestrians that they are entering the roadway.
- Approaches to the raised crosswalk may be designed to be similar to speed humps.

Crash Reduction

Raised pedestrian crosswalks serve as traffic calming measures by extending the sidewalk across the road and bringing motor vehicles to the pedestrian level. Raised crosswalks reduce motor vehicle speeds and increase vehicular yield rate by 45%. C

Materials and Maintenance

Because the effectiveness of marked crossings depends entirely on their visibility, maintaining marked crossings should be a high priority.
Minimizing Curb Radii

The size of a curb’s radius can have a significant impact on pedestrian comfort and safety. A smaller curb radius provides more pedestrian area at the corner, allows more flexibility in the placement of curb ramps, results in a shorter crossing distance and requires vehicles to slow more on the intersection approach. During the design phase, the chosen radius should be the smallest possible for the circumstances.

Typical Application

- Several factors govern the choice of curb radius in any given location. These include the desired pedestrian area of the corner, traffic turning movements, street classifications, design vehicle turning radius, intersection geometry, and whether there is parking or a bike lane (or both) between the travel lane and the curb.

Design Features

- The radius may be as small as 3 ft where there are no turning movements, or 5 ft where there are turning movements, adequate street width, and a larger effective turning radius created by parking or bike lanes.

Crash Reduction

Minimizing the size of a corner radius is critical to creating compact intersections with safe turning speeds. Smaller corner radii require motor vehicles to reduce speeds when turning.

Materials and Maintenance

Improperly designed curb radii at corners may be subject to damage by large trucks.
Accessible Curb Ramps

Curb ramps are the design elements that allow all users to make the transition from the street to the sidewalk. There are a number of factors to be considered in the design and placement of curb ramps at corners. Properly designed curb ramps ensure that the sidewalk is accessible from the roadway. A sidewalk without a curb ramp can be useless to someone in a wheelchair, forcing them back to a driveway and out into the street for access.

Design Features

- The landing at the top of a ramp shall be at least 4 ft long and at least the same width as the ramp itself.
- The ramp shall slope no more than 1:12, with a maximum cross slope of 2.0 percent.
- If the ramp runs directly into a crosswalk, the landing at the bottom will be in the roadway.
- If the ramp lands on a dropped landing within the sidewalk or corner area where someone in a wheelchair may have to change direction, the landing must be a minimum of 5 ft long and at least as wide as the ramp, although a width of 5 ft is preferred.

Typical Application

- Curb ramps are used to assist people with mobility devices to cross the street at intersections. They also accommodate individuals with strollers, bicycles, carts and strollers.
- ADA requires all new and rebuilt curb ramps to provide accessibility for people with disabilities, including blind pedestrians.
Curb Extensions

Curb extensions minimize pedestrian exposure during crossing by shortening crossing distance and giving pedestrians a better chance to see and be seen before committing to crossing.

**Typical Application**
- Within parking lanes appropriate for any crosswalk where it is desirable to shorten the crossing distance and there is a parking lane adjacent to the curb.
- May be possible within non-travel areas on roadways with excess space.
- Particularly helpful at midblock crossing locations.
- Curb extensions should not impede bicycle travel in the absence of a bike lane.

**Design Features**
- For purposes of efficient street sweeping, the minimum radius for the reverse curves of the transition is 10 ft and the two radii should be balanced to be nearly equal.
- When a bike lane is present, the curb extensions should terminate one ft short of the parking lane to maximize bicyclist safety.
- Reduces pedestrian crossing distance by 6-8 ft.

**Crash Reduction**
There are no Crash Modification Factors (CMFs) available for this treatment.

**Materials and Maintenance**
Planted curb extensions may be designed as a bioswale, a vegetated system for stormwater management.
Active Warning Beacons

Active warning beacons are user actuated illuminated devices designed to increase motor vehicle yielding compliance at crossings of multi lane or high volume roadways. Types of active warning beacons include conventional circular yellow flashing beacons, in-roadway warning lights, or Rectangular Rapid Flash Beacons (RRFB).

**Typical Application**

- Warning beacons shall not be used at crosswalks controlled by YIELD signs, STOP signs, or traffic signals.
- Warning beacons shall initiate operation based on pedestrian or bicyclist actuation and shall cease operation at a predetermined time after actuation or, with passive detection, after the pedestrian or bicyclist clears the crosswalk.

**Design Features**

- Types of active warning beacons include conventional circular yellow flashing beacons, in-roadway warning lights, or Rectangular Rapid Flash Beacons (RRFB).
- Rectangular rapid flash beacons have the most increased compliance of all the warning beacon enhancement options.
- Installations of RRFBs on median islands improves driver yielding behavior.

**Crash Reduction**

A study of the effectiveness of going from a no-beacon arrangement to a two-beacon RRFB installation increased yielding from 18 percent to 81 percent. A four-beacon arrangement raised compliance to 88 percent. Additional studies over long term installations show little to no decrease in yielding behavior over time.

**Materials and Maintenance**

Depending on power supply, maintenance can be minimal. If solar power is used, RRFBs should run for years without issue.
Bike and Pedestrian Bridge

Bike and pedestrian bridges are most often used to provide trail access over natural features such as streams and rivers, where a culvert or boardwalk is not an option. The type and size of bridges can vary widely depending on the trail type and specific site requirements.

Typical Application

Some bridges often used for multi-use trails include suspension bridges, prefabricated span bridges and simple log bridges. When determining a bridge design for multi-use trails, it is important to consider emergency and maintenance vehicle access.

Design Features

- The clear width of the bridge should allow for 2 feet of clearance on each end of the pathway.
- Bridge deck height should match that of the path surface to provide a smooth transition.
- Bicycle and shared use paths should include a 54” guard rail where hazardous conditions exist.
- A minimum vertical clearance of 10 ft is desirable for motor vehicle access.
- Maximum opening between railing posts is 6”.
- A trail bridge should support 6.25 tons if motor vehicle access is permitted. (AASHTO 2002)
Sidewalk Infill

Due to historic development patterns, sidewalks may be missing for limited segments along an otherwise continuous corridor, or may be provided on only one side of the street where demand exists for access on both sides. Sidewalk infill strategies should identify and prioritize these gaps in order to provide complete, accessible facilities.

Typical Application

- Missing segments in an otherwise complete corridor
- Missing on one side of a corridor
- Where sidewalks are completely absent from the roadway
- The AASHTO Pedestrian Guide states “Wherever there is developed frontage along a road or street, there will be people walking for exercise, visiting neighbors, accessing bus stops, or walking for pure enjoyment. Sidewalk or pathways are needed to safely accommodate these activities.” (2004, p.25)

Design Features

- Sidewalk width will vary depending on the available public right-of-way between the curb line and private property line.
- Generally, sidewalk infill projects do not change the configuration of the roadway travel area.
- When filling gaps in a corridor, sidewalk segments should provide adequate width and landscaped buffer. A buffer zone of 4-6 feet is desirable to separate pedestrians from the street.
- Infill sidewalks may need to transition at the ends of the segments to connect to existing sidewalk alignment and design.
- New and reconstructed sidewalks must meet accessibility guidelines. This includes the design of curb ramps and driveway curb cuts.
Estacada Core Active Transportation Route Cost Estimate
Estacada ATP Cost Estimate

Project Name: Route 1a: Timber Park to Downtown Route

Project Description: Separated bike lanes on the highway portion. Bike lanes along the Wade St. Shared roadway along SW 3rd Ave.

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<td>Temporary Protection &amp; Traffic Control (3% of Construction Sub-Total)</td>
<td>LS</td>
<td>$2,438</td>
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<tr>
<td>Removal of Structures and Obstructions (4% of Construction Sub-Total)</td>
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<td>$3,251</td>
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<tr>
<td><strong>Roadway Elements</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Road - new/reconstruct (incl. curb, sidewalk, drainage)</td>
<td>SF</td>
<td>$15</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Road - new/reconstruct with median (incl. curb, sidewalk, drainage)</td>
<td>SF</td>
<td>$22</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Road - resurface</td>
<td>SF</td>
<td>$4</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Curb and Gutter</td>
<td>LF</td>
<td>$21</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Sidewalk</td>
<td>SF</td>
<td>$10</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Curb Extension or Modification</td>
<td>EA</td>
<td>$13,000</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Shared-Use Paths</td>
<td>SF</td>
<td>$9</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Minor Widening, no curbs</td>
<td>SF</td>
<td>$10</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Modify Driveway</td>
<td>LF</td>
<td>$250</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Retaining Wall (by length)</td>
<td>SF</td>
<td>$250</td>
<td>$0</td>
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</tr>
<tr>
<td><strong>Utility and Drainage</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Utility Relocation</td>
<td>LF</td>
<td>$55</td>
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</tr>
<tr>
<td>Utility Burial</td>
<td>LF</td>
<td>$150</td>
<td>$0</td>
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<td>Drainage System Installed</td>
<td>LF</td>
<td>$115</td>
<td>$0</td>
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<tr>
<td><strong>Right-of-Way Development</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landscaping only - medians and bulbouts</td>
<td>LF</td>
<td>16,000</td>
<td>$4</td>
<td>$64,000</td>
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<tr>
<td><strong>Traffic Elements</strong></td>
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</tr>
<tr>
<td>Traffic Signal (Installation)</td>
<td>EA</td>
<td>$250,000</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Traffic signals (less than 4-lanes)</td>
<td>EA</td>
<td>$150,000</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Traffic Signal (Modification per pole)</td>
<td>EA</td>
<td>$50,000</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Roundabout - Unconstrained/Small</td>
<td>EA</td>
<td>$1,000,000</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Roundabout - Constrained/Large</td>
<td>EA</td>
<td>$2,225,000</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Signing/Striping</td>
<td>LF</td>
<td>8,275</td>
<td>$2</td>
<td>$16,550</td>
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<tr>
<td>Street Lighting - per side</td>
<td>LF</td>
<td>$120</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Install/Upgrade Warning Device at Railroad Crossing</td>
<td>EA</td>
<td>$200,000</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td><strong>Other Construction Items</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delineators</td>
<td>EA</td>
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<tr>
<td>Shared Lane Markings</td>
<td>EA</td>
<td>4</td>
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<td>$720</td>
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<td>ADA Curb Ramps</td>
<td>EA</td>
<td>12</td>
<td>$810</td>
<td>$9,720</td>
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<td><strong>Construction Cost Subtotal</strong></td>
<td></td>
<td></td>
<td></td>
<td>$90,990</td>
</tr>
<tr>
<td>Construction &amp; Environmental Contingency (40% of Construction Cost Subtotal)</td>
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<td>$36,396</td>
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<tr>
<td>Engineering Design and Construction Management (50% of Construction Cost Subtotal)</td>
<td>LS</td>
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<td>$0</td>
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<tr>
<td><strong>Land Acquisition Costs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimate square-feet of high-value ROW taking</td>
<td>SF</td>
<td>$30</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Estimate square-feet of developed ROW taking</td>
<td>SF</td>
<td>$20</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Estimate square-feet of undeveloped ROW taking</td>
<td>SF</td>
<td>$15</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td><strong>Land Acquisition Cost Subtotal</strong></td>
<td></td>
<td></td>
<td></td>
<td>$0</td>
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<tr>
<td>2015 cost estimate</td>
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<td></td>
<td></td>
<td>$90,990</td>
</tr>
<tr>
<td><strong>Total Project Cost (2017):</strong></td>
<td></td>
<td></td>
<td></td>
<td>$97,469</td>
</tr>
</tbody>
</table>

Notes: ROW and sidewalks are not needed for the Wade St. portion. ROW and sidewalks are not needed for SW 3rd Ave. Striping is only needed for Wade St. and 3rd Ave. ADA compliant ramps are needed for all ramps. The highway will be restriped to include the buffer for the bike lanes.
## Estacada ATP Cost Estimate

**Project Name:** Route 1b. Lakeshore Dr. Route

**Project Description:** Upgrades to Lakeshore trail. Shared roadways along Lakeshore Dr and Beech Rd.

### Roadway Elements

<table>
<thead>
<tr>
<th>Construction Items and Descriptions</th>
<th>Unit</th>
<th>Qty</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobilization (15% of Construction Sub-Total)</td>
<td>LS</td>
<td>1</td>
<td>$59,343</td>
<td>$59,343</td>
</tr>
<tr>
<td>Erosion Control (1.5% of Construction Sub-Total)</td>
<td>LS</td>
<td>1</td>
<td>$5,934</td>
<td>$5,934</td>
</tr>
<tr>
<td>Clearing &amp; Grubbing (2.5% of Construction Sub-Total)</td>
<td>LS</td>
<td>1</td>
<td>$9,891</td>
<td>$9,891</td>
</tr>
<tr>
<td>Temporary Protection &amp; Traffic Control (3% of Construction Sub-Total)</td>
<td>LS</td>
<td>1</td>
<td>$11,869</td>
<td>$11,869</td>
</tr>
<tr>
<td>Removal of Structures and Obstructions (4% of Construction Sub-Total)</td>
<td>LS</td>
<td>1</td>
<td>$15,825</td>
<td>$15,825</td>
</tr>
</tbody>
</table>

### Utility and Drainage

<table>
<thead>
<tr>
<th>Construction Items and Descriptions</th>
<th>Unit</th>
<th>Qty</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road - new/reconstruct (incl. curb, sidewalk, drainage)</td>
<td>SF</td>
<td></td>
<td>$15</td>
<td>$0</td>
</tr>
<tr>
<td>Road - new/reconstruct with median (incl. curb, sidewalk, drainage)</td>
<td>SF</td>
<td></td>
<td>$22</td>
<td>$0</td>
</tr>
<tr>
<td>Road - resurface</td>
<td>SF</td>
<td></td>
<td>$4</td>
<td>$0</td>
</tr>
<tr>
<td>Curb and Gutter</td>
<td>LF</td>
<td></td>
<td>$21</td>
<td>$0</td>
</tr>
<tr>
<td>Sidewalk</td>
<td>SF</td>
<td></td>
<td>$10</td>
<td>$0</td>
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<tr>
<td>Curb Extension or Modification</td>
<td>EA</td>
<td></td>
<td>$13,000</td>
<td>$0</td>
</tr>
<tr>
<td>Shared-Use Paths</td>
<td>SF</td>
<td>40,800</td>
<td>$9</td>
<td>$367,200</td>
</tr>
<tr>
<td>Minor Widening, no curbs</td>
<td>SF</td>
<td></td>
<td>$10</td>
<td>$0</td>
</tr>
<tr>
<td>Modify Driveway</td>
<td>EA</td>
<td></td>
<td>$2,000</td>
<td>$0</td>
</tr>
<tr>
<td>Retaining Wall (by length)</td>
<td>LF</td>
<td></td>
<td>$250</td>
<td>$0</td>
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<tr>
<td>Bridge (new or replace)</td>
<td>SF</td>
<td></td>
<td>$250</td>
<td>$0</td>
</tr>
</tbody>
</table>

### Right-of-Way Development

<table>
<thead>
<tr>
<th>Construction Items and Descriptions</th>
<th>Unit</th>
<th>Qty</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landscaping only - medians and bulbouts</td>
<td>LF</td>
<td></td>
<td>$4</td>
<td>$0</td>
</tr>
</tbody>
</table>

### Traffic Elements

<table>
<thead>
<tr>
<th>Construction Items and Descriptions</th>
<th>Unit</th>
<th>Qty</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic Signal (Installation)</td>
<td>EA</td>
<td></td>
<td>$250,000</td>
<td>$0</td>
</tr>
<tr>
<td>Traffic signals (less than 4-lanes)</td>
<td>EA</td>
<td></td>
<td>$150,000</td>
<td>$0</td>
</tr>
<tr>
<td>Traffic Signal (Modification per pole)</td>
<td>EA</td>
<td></td>
<td>$50,000</td>
<td>$0</td>
</tr>
<tr>
<td>Roundabout - Unconstrained/Small</td>
<td>EA</td>
<td></td>
<td>$1,000,000</td>
<td>$0</td>
</tr>
<tr>
<td>Roundabout - Constrained/Large</td>
<td>EA</td>
<td></td>
<td>$2,225,000</td>
<td>$0</td>
</tr>
<tr>
<td>Signing/Striping</td>
<td>LF</td>
<td>1,925</td>
<td>$2</td>
<td>$3,850</td>
</tr>
<tr>
<td>Street Lighting - per side</td>
<td>LF</td>
<td></td>
<td>$120</td>
<td>$0</td>
</tr>
<tr>
<td>Install/Upgrade Warning Device at Railroad Crossing</td>
<td>EA</td>
<td></td>
<td>$200,000</td>
<td>$0</td>
</tr>
</tbody>
</table>

### Other Construction Items

<table>
<thead>
<tr>
<th>Construction Items and Descriptions</th>
<th>Unit</th>
<th>Qty</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared Lane Markings</td>
<td>EA</td>
<td>78</td>
<td>$180</td>
<td>$14,040</td>
</tr>
<tr>
<td>ADA Curb Ramps</td>
<td>EA</td>
<td>13</td>
<td>$810</td>
<td>$10,530</td>
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### Construction Cost Subtotal

<table>
<thead>
<tr>
<th>Construction Items and Descriptions</th>
<th>Unit</th>
<th>Qty</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constraction &amp; Environmental Contingency (40% of Construction Cost Subtotal)</td>
<td>LS</td>
<td>1</td>
<td>$199,392</td>
<td>$199,392</td>
</tr>
<tr>
<td>Engineering Design and Construction Management (50% of Construction Cost Subtotal)</td>
<td>LS</td>
<td>1</td>
<td>$249,241</td>
<td>$249,241</td>
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### Land Acquisition Costs

<table>
<thead>
<tr>
<th>Construction Items and Descriptions</th>
<th>Unit</th>
<th>Qty</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimate square-feet of high-value ROW taking</td>
<td>SF</td>
<td></td>
<td>$30</td>
<td>$0</td>
</tr>
<tr>
<td>Estimate square-feet of developed ROW taking</td>
<td>SF</td>
<td></td>
<td>$20</td>
<td>$0</td>
</tr>
<tr>
<td>Estimate square-feet of undeveloped ROW taking</td>
<td>SF</td>
<td></td>
<td>$15</td>
<td>$0</td>
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### Land Acquisition Cost Subtotal

<table>
<thead>
<tr>
<th>Construction Items and Descriptions</th>
<th>Unit</th>
<th>Qty</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
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<tbody>
<tr>
<td>Total Project Cost (2017):</td>
<td></td>
<td></td>
<td></td>
<td>$1,014,557</td>
</tr>
</tbody>
</table>

**Notes:** Striping for parking on one side of Lakeshore Dr. and one side of Beech Rd. Sharrows spaced 100 feet apart along both Lakeshore Dr. and Beech Rd. No ROW will need to be acquired. All sidewalks will need to be updated to be ADA compliant. Shoulder on one side of trail included in shared-use path width.
## Estacada ATP Cost Estimate

### Project Name: Route 2. SE 4th Avenue/SE Regan Hill Road

**Project Description:** Bike lanes along the Regan Hill portion. East of Shafford Ave., there will be bike lanes uphill and a shared roadway downhill. West of Shafford Ave., there will be a shared roadway.

<table>
<thead>
<tr>
<th>Construction Items and Descriptions</th>
<th>Unit</th>
<th>Qty</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobilization (15% of Construction Sub-Total)</td>
<td>LS</td>
<td>1</td>
<td>$211,824</td>
<td>$211,824</td>
</tr>
<tr>
<td>Erosion Control (1.5% of Construction Sub-Total)</td>
<td>LS</td>
<td>1</td>
<td>$21,182</td>
<td>$21,182</td>
</tr>
<tr>
<td>Clearing &amp; Grubbing (2.5% of Construction Sub-Total)</td>
<td>LS</td>
<td>1</td>
<td>$35,304</td>
<td>$35,304</td>
</tr>
<tr>
<td>Temporary Protection &amp; Traffic Control (3% of Construction Sub-Total)</td>
<td>LS</td>
<td>1</td>
<td>$42,365</td>
<td>$42,365</td>
</tr>
<tr>
<td>Removal of Structures and Obstructions (4% of Construction Sub-Total)</td>
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<td>1</td>
<td>$56,486</td>
<td>$56,486</td>
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<tr>
<td>Road - new/reconstruct (incl. curb, sidewalk, drainage)</td>
<td>SF</td>
<td>72,000</td>
<td>$15</td>
<td>$1,080,000</td>
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<tr>
<td>Road - new/reconstruct with median (incl. curb, sidewalk, drainage)</td>
<td>SF</td>
<td>$22</td>
<td>$0</td>
<td></td>
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<tr>
<td>Road - resurface</td>
<td>SF</td>
<td>$4</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Curb and Gutter</td>
<td>LF</td>
<td>$21</td>
<td>$0</td>
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<tr>
<td>Sidewalk</td>
<td>SF</td>
<td>22,500</td>
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<td>$225,000</td>
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<td>$0</td>
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</tr>
<tr>
<td>Shared-Use Paths</td>
<td>SF</td>
<td>$9</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Minor Widening, no curbs</td>
<td>SF</td>
<td>$10</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Modify Driveway</td>
<td>EA</td>
<td>$2,000</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Retaining Wall (by length)</td>
<td>LF</td>
<td>$250</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Bridge (new or replace)</td>
<td>SF</td>
<td>$250</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td><strong>Construction Cost Subtotal</strong></td>
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<td>$1,796,522</td>
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### Site Preparation

<table>
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<th>Utility and Drainage</th>
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</thead>
<tbody>
<tr>
<td>Utility Relocation</td>
</tr>
<tr>
<td>Utility Burial</td>
</tr>
<tr>
<td>Drainage System Installed</td>
</tr>
</tbody>
</table>

### Right-of-Way Development

<table>
<thead>
<tr>
<th>Right-of-Way Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landscaping only - medians and bulbouts</td>
</tr>
</tbody>
</table>

### Traffic Elements

<table>
<thead>
<tr>
<th>Traffic Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic Signal (Installation)</td>
</tr>
<tr>
<td>Traffic signals (less than 4-lanes)</td>
</tr>
<tr>
<td>Traffic Signal (Modification per pole)</td>
</tr>
<tr>
<td>Roundabout - Unconstrained/Small</td>
</tr>
<tr>
<td>Roundabout - Constrained/Large</td>
</tr>
<tr>
<td>Signing/striping</td>
</tr>
<tr>
<td>Street Lighting - per side</td>
</tr>
<tr>
<td>Install/Upgrade Warning Device at Railroad Crossing</td>
</tr>
</tbody>
</table>

### Other Construction Items

<table>
<thead>
<tr>
<th>Other Construction Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared Lane Markings</td>
</tr>
<tr>
<td>Street Trees</td>
</tr>
<tr>
<td>Delineators</td>
</tr>
</tbody>
</table>

### Construction Cost Subtotal

- $1,796,522

### Land Acquisition Costs

<table>
<thead>
<tr>
<th>Land Acquisition Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimate square-feet of high-value ROW taking</td>
</tr>
<tr>
<td>Estimate square-feet of developed ROW taking</td>
</tr>
<tr>
<td>Estimate square-feet of undeveloped ROW taking</td>
</tr>
</tbody>
</table>

### Land Acquisition Cost Subtotal

- $0

### 2015 Cost Estimate

- $3,413,391

### Total Project Cost (2017):

- $3,656,455

Notes: Regan Hill Road will need to be reconstructed with new sidewalks. Shared road markings spaced 100 feet apart on the 4th Ave. portion (only on one side east of Shafford Rd.). Striping will be redone for parking and bike lanes. Street trees will be put in west of Shafford Rd.
# Estacada ATP Cost Estimate

**Project Name:** Route 3. NE Pierce St./NE Cemetery Rd.

**Project Description:** On Cemetery Rd. bike lanes north of Cascadia Ridge Dr. and bike lanes uphill and shared roadway downhill south of Cascadia Ridge Dr. Separated bike lanes on the 6th Ave. portion. Shared roadway along the Pierce St./Shafford Ave. portion.

<table>
<thead>
<tr>
<th>Construction Items and Descriptions</th>
<th>Unit</th>
<th>Qty</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobilization (15% of Construction Sub-Total)</td>
<td>LS</td>
<td>1</td>
<td>$402,076</td>
<td>$402,076</td>
</tr>
<tr>
<td>Erosion Control (1.5% of Construction Sub-Total)</td>
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<td>$40,208</td>
<td>$40,208</td>
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<tr>
<td>Clearing &amp; Grubbing (2.5% of Construction Sub-Total)</td>
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<td>$67,013</td>
<td>$67,013</td>
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<tr>
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<tr>
<td>Road - resurface</td>
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<td>Curb and Gutter</td>
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<tr>
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<td>Drainage System Installed</td>
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<tr>
<td>Roundabout - Constrained/Large</td>
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<tr>
<td>Estimate square-feet of developed ROW taking</td>
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<tr>
<td>Estimate square-feet of undeveloped ROW taking</td>
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<tr>
<td><strong>Land Acquisition Cost Subtotal</strong></td>
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<td><strong>Total Project Cost (2017):</strong></td>
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</table>

Notes: On Cemetery Rd. sidewalks are needed on one side of the road. Striping for bike lanes and parking. Sharrows spaced 100 feet apart. Bike/Ped bridge extension off each side of the existing bridge along 6th Ave. ROW for bridge NOT included.
## Estacada ATP Cost Estimate

### Project Name: Route 4. Milo McIver Route

**Project Description:** Update and widened shared-use path and add a pedestrian bridge.

<table>
<thead>
<tr>
<th>Construction Items and Descriptions</th>
<th>Unit</th>
<th>Qty</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Site Preparation</strong></td>
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<tr>
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<td>$580,998</td>
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<td><strong>Roadway Elements</strong></td>
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<td></td>
</tr>
<tr>
<td>Road - new/reconstruct (incl. curb, sidewalk, drainage)</td>
<td>SF</td>
<td></td>
<td>$15</td>
<td>$0</td>
</tr>
<tr>
<td>Road - new/reconstruct with median (incl. curb, sidewalk, drainage)</td>
<td>SF</td>
<td></td>
<td>$22</td>
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<tr>
<td>Road - resurface</td>
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<td>$0</td>
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<tr>
<td>Curb and Gutter</td>
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<td>$0</td>
</tr>
<tr>
<td>Sidewalk</td>
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<td>$0</td>
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<td>Curb Extension or Modification</td>
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<td>$0</td>
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<tr>
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<tr>
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<td>Utility Relocation</td>
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<td>$0</td>
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<tr>
<td>Utility Burial</td>
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<td>$0</td>
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<tr>
<td>Drainage System Installed</td>
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<tr>
<td><strong>Right-of-Way Development</strong></td>
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<tr>
<td>Landscaping only - medians and bulbouts</td>
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<td>$0</td>
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<tr>
<td><strong>Traffic Elements</strong></td>
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<td>Traffic Signal (Installation)</td>
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<td>Traffic signals (less than 4-lanes)</td>
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<tr>
<td>Traffic Signal (Modification per pole)</td>
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<td>$0</td>
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<tr>
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<td>$0</td>
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<tr>
<td>Roundabout - Constrained/Large</td>
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<td>Signing/Striping</td>
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<td>$0</td>
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<td><strong>Other Construction Items</strong></td>
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<tr>
<td>Other</td>
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<tr>
<td>Estimate square-feet of high-value ROW taking</td>
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<td>Estimate square-feet of developed ROW taking</td>
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<tr>
<td>Estimate square-feet of undeveloped ROW taking</td>
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</table>

Notes: Shared-use path cross section includes 2 foot buffers on each side. Lighting costs are also included since it does not currently exist.
### Estacada ATP Cost Estimate

**Project Name:** Route 5: North City Route

**Project Description:** Separated bike lanes along the River Mill Rd., Eagle Creek Rd., and 6th Ave. portions. Shared roadway along the 2nd Ave. and uptown Broadway portion. Sharrows will be added to the downtown Broadway portion.

<table>
<thead>
<tr>
<th>Construction Items and Descriptions</th>
<th>Unit</th>
<th>Qty</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
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<tr>
<td><strong>Site Preparation</strong></td>
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<td>Utility Burial</td>
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<td>Traffic Signal (Modification per pole)</td>
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<td>Install/Upgrade Warning Device at Railroad Crossing</td>
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<td>$0</td>
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<tr>
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<td>Striped Crosswalk</td>
<td>LF</td>
<td></td>
<td>$8.51</td>
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<tr>
<td>Median Refuge Island</td>
<td>EA</td>
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<tr>
<td>ADA Crossing Ramps</td>
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<td><strong>Construction Cost Subtotal</strong></td>
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<td></td>
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<td>LS</td>
<td>1</td>
<td>$2,550,369</td>
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<td>Engineering Design and Construction Management (50% of Construction Cost Subtotal)</td>
<td>LS</td>
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<td><strong>Land Acquisition Costs</strong></td>
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<td></td>
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</tr>
<tr>
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<td>SF</td>
<td>28,400</td>
<td>$15</td>
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<tr>
<td>Estimate square-feet of developed ROW taking</td>
<td>SF</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Project Cost (2017):** $13,433,233

Notes: ROW will need to be acquired for the River Mill Rd. portion. Eagle Creek Rd. will need to be redone to incorporate the new cross-section. Sidewalks on one side of 6th Ave. (from Eagle Creek to Broadway) will be needed. Sidewalks are needed one one side of 2nd Ave. Uptown Broadway does not need sidewalks just planters. Downtown Broadway just needs sharrow markings.
## Estacada ATP Cost Estimate

**Project Name:** Route 6. Highway 211-224 Route

**Project Description:** Separated Bike Lanes from SW Oak Rd. to Hwy 211. Conventional bike lanes North of SW Oak Rd. and South of Hwy 211.

### Construction Items and Descriptions

<table>
<thead>
<tr>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobilization (15% of Construction Sub-Total)</td>
<td>LS</td>
<td>1</td>
<td>$321,000</td>
<td>$321,000</td>
</tr>
<tr>
<td>Erosion Control (1.5% of Construction Sub-Total)</td>
<td>LS</td>
<td>1</td>
<td>$32,100</td>
<td>$32,100</td>
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<tr>
<td>Clearing &amp; Grubbing (2.5% of Construction Sub-Total)</td>
<td>LS</td>
<td>1</td>
<td>$53,500</td>
<td>$53,500</td>
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<tr>
<td>Temporary Protection &amp; Traffic Control (3% of Sub-Total)</td>
<td>LS</td>
<td>1</td>
<td>$64,200</td>
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### Roadway Elements

<table>
<thead>
<tr>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road - new/reconstruct (incl. curb, sidewalk, drainage)</td>
<td>SF</td>
<td></td>
<td>$15</td>
<td>0</td>
</tr>
<tr>
<td>Road - new/reconstruct with median (incl. curb, sidewalk, drainage)</td>
<td>SF</td>
<td></td>
<td>$22</td>
<td>0</td>
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<tr>
<td>Road - resurface</td>
<td>SF</td>
<td>513,000</td>
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<td>$2,052,000</td>
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<tr>
<td>Curb and Gutter</td>
<td>LF</td>
<td></td>
<td>$21</td>
<td>0</td>
</tr>
<tr>
<td>Sidewalk</td>
<td>SF</td>
<td></td>
<td>$10</td>
<td>0</td>
</tr>
<tr>
<td>Curb Extension or Modification</td>
<td>EA</td>
<td></td>
<td>$13,000</td>
<td>0</td>
</tr>
<tr>
<td>Shared-Use Paths</td>
<td>SF</td>
<td></td>
<td>$9</td>
<td>0</td>
</tr>
<tr>
<td>Minor Widening, no curbs</td>
<td>SF</td>
<td></td>
<td>$10</td>
<td>0</td>
</tr>
<tr>
<td>Modify Driveway</td>
<td>LF</td>
<td></td>
<td>$250</td>
<td>0</td>
</tr>
<tr>
<td>Retaining Wall (by length)</td>
<td>SF</td>
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<td>$250</td>
<td>0</td>
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<tr>
<td>Bridge (new or replace)</td>
<td>SF</td>
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### Utility and Drainage

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<th>Unit</th>
<th>Qty</th>
<th>Unit Cost</th>
<th>Total Cost</th>
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</thead>
<tbody>
<tr>
<td>Utility Relocation</td>
<td>LF</td>
<td></td>
<td>$55</td>
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<td>Utility Burial</td>
<td>LF</td>
<td></td>
<td>$150</td>
<td>0</td>
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<td>Drainage System Installed</td>
<td>LF</td>
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### Right-of-Way Development

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### Traffic Elements

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<td>Traffic signals (less than 4-lanes)</td>
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<tr>
<td>Traffic Signal (Modification per pole)</td>
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<td></td>
<td>$50,000</td>
<td>0</td>
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<tr>
<td>Roundabout - Unconstrained/Small</td>
<td>EA</td>
<td></td>
<td>$1,000,000</td>
<td>0</td>
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<tr>
<td>Roundabout - Constrained/Large</td>
<td>EA</td>
<td></td>
<td>$2,225,000</td>
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<tr>
<td>Signing/Striping</td>
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<tr>
<td>Install/Upgrade Warning Device at Railroad Crossing</td>
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### Other Construction Items

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</thead>
<tbody>
<tr>
<td>Flexible delineators</td>
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<td>Pedestrian Hawk Signal</td>
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### Construction Cost Subtotal

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### Land Acquisition Costs

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</thead>
<tbody>
<tr>
<td>Estimate square-feet of high-value ROW taking</td>
<td>SF</td>
<td></td>
<td>$20</td>
<td>0</td>
</tr>
<tr>
<td>Estimate square-feet of developed ROW taking</td>
<td>SF</td>
<td></td>
<td>$15</td>
<td>0</td>
</tr>
</tbody>
</table>

### Total Project Cost (2017)

**$5,487,975**

**Notes:** This does not include the portion of the highway covered in Route 1a. The highway will need to be resurfaced north of Timber Park to facilitate the proposed cross-section. Frontage along the highway (e.g. sidewalks, planter strips, etc) are the responsibility of the developer as urbanization occurs.
## Estacada ATP Cost Estimate

### Project Name: Route 7a. NW Wade Street Route

**Project Description:** Bike Boulevard and a shared-use path to connect the north and south portions of NW Wade St. and NW 1st Avenue.

### Construction Items and Descriptions

<table>
<thead>
<tr>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Site Preparation</strong></td>
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<tr>
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<td>$13,978</td>
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<tr>
<td><strong>Roadway Elements</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Road - new/reconstruct (incl. curb, sidewalk, drainage)</td>
<td>SF</td>
<td></td>
<td>$15</td>
<td>$0</td>
</tr>
<tr>
<td>Road - new/reconstruct with median (incl. curb, sidewalk, drainage)</td>
<td>SF</td>
<td></td>
<td>$22</td>
<td>$0</td>
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<tr>
<td>Road - resurface</td>
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<td></td>
<td>$4</td>
<td>$0</td>
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<tr>
<td>Curb and Gutter</td>
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<td>24,000</td>
<td>$21</td>
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<td>Sidewalk</td>
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<td>$240,000</td>
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<td>Curb Extension or Modification</td>
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<td>$0</td>
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<tr>
<td>Shared-Use Paths</td>
<td>SF</td>
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<tr>
<td>Minor Widening, no curbs</td>
<td>SF</td>
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<td>$10</td>
<td>$0</td>
</tr>
<tr>
<td>Modify Driveway</td>
<td>EA</td>
<td></td>
<td>$2,000</td>
<td>$0</td>
</tr>
<tr>
<td>Retaining Wall (by length)</td>
<td>LF</td>
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<td>$250</td>
<td>$0</td>
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<tr>
<td>Bridge (new or replace)</td>
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<td>$0</td>
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<tr>
<td><strong>Utility and Drainage</strong></td>
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<td></td>
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<tr>
<td>Utility Relocation</td>
<td>LF</td>
<td></td>
<td>$55</td>
<td>$0</td>
</tr>
<tr>
<td>Utility Burial</td>
<td>LF</td>
<td></td>
<td>$150</td>
<td>$0</td>
</tr>
<tr>
<td>Drainage System Installed</td>
<td>LF</td>
<td></td>
<td>$115</td>
<td>$0</td>
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<tr>
<td><strong>Right-of-Way Development</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landscaping only - medians and bulbouts</td>
<td>LF</td>
<td>24,000</td>
<td>$4</td>
<td>$96,000</td>
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<tr>
<td><strong>Traffic Elements</strong></td>
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<tr>
<td>Traffic Signal (Installation)</td>
<td>EA</td>
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<td>$250,000</td>
<td>$0</td>
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<tr>
<td>Traffic signals (less than 4-lanes)</td>
<td>EA</td>
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<td>$150,000</td>
<td>$0</td>
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<tr>
<td>Traffic Signal (Modification per pole)</td>
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<td>$50,000</td>
<td>$0</td>
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<tr>
<td>Roundabout - Unconstrained/Small</td>
<td>EA</td>
<td></td>
<td>$1,000,000</td>
<td>$0</td>
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<tr>
<td>Roundabout - Constrained/Large</td>
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<td>$2,225,000</td>
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<tr>
<td>Signing/Striping</td>
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<td>Street Lighting - per side</td>
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<tr>
<td>Install/Upgrade Warning Device at Railroad Crossing</td>
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<td></td>
<td>$200,000</td>
<td>$0</td>
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<tr>
<td><strong>Other Construction Items</strong></td>
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<tr>
<td>Shared Lane Markings</td>
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<tr>
<td>Other</td>
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### Construction Cost Subtotal: $440,294

### Construction & Environmental Contingency (40% of Construction Cost Subtotal)

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<th>Unit Cost</th>
<th>Total Cost</th>
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</thead>
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### Engineering Design and Construction Management (50% of Construction Cost Subtotal)

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<th>Qty</th>
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### Land Acquisition Costs

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<th>Unit</th>
<th>Qty</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimate square-feet of high-value ROW taking</td>
<td>SF</td>
<td></td>
<td>$30</td>
<td>$0</td>
</tr>
<tr>
<td>Estimate square-feet of developed ROW taking</td>
<td>SF</td>
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<td>$20</td>
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<tr>
<td>Estimate square-feet of undeveloped ROW taking</td>
<td>SF</td>
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<td>$15</td>
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</tbody>
</table>

### Land Acquisition Cost Subtotal: $0

### Total Project Cost (2017): $896,130

**Notes:** NW Wade St. and NW 1st Avenue needs sidewalks and planter strips.
### Construction Items and Descriptions

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Qty</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
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<td>Removal of Structures and Obstructions (4% of Construction Sub-Total)</td>
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<td>$15</td>
<td>$0</td>
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<tr>
<td>Road - new/reconstruct with median (incl. curb, sidewalk, drainage)</td>
<td>SF</td>
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<tr>
<td>Bridge (new or replace)</td>
<td>SF</td>
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<td><strong>Utility and Drainage</strong></td>
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<td>Utility Burial</td>
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<td>$0</td>
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<tr>
<td>Drainage System Installed</td>
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<td>$115</td>
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<tr>
<td><strong>Right-of-Way Development</strong></td>
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<td></td>
</tr>
<tr>
<td>Landscaping only - medians and bulbouts</td>
<td>LF</td>
<td></td>
<td>$4</td>
<td>$0</td>
</tr>
<tr>
<td><strong>Traffic Elements</strong></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Traffic Signal (Installation)</td>
<td>EA</td>
<td></td>
<td>$250,000</td>
<td>$0</td>
</tr>
<tr>
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Notes: Complete reconstruction will be required. Assumed minor widening for the physical barrier between the bike lane and parking lane. Restriping will also be needed.
## Estacada ATP Cost Estimate

### Project Name: Crossing Enhancements

**Project Description:** Crossing enhancements include, striped crosswalks, hybrid pedestrian beacons, signal enhancements, and minimizing curb radii.

### Construction Items and Descriptions

<table>
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**Total Project Cost (2017):** $1,900,727

**Notes:** Two Pedestrian Hybrid Beacons along Hwy 211-224, marked crosswalks at Eagle Creek Rd./10th Ave. and NE 6th Ave./NE Main St., curb extensions at NW 6th Ave./Eagle Creek Rd. and NE 6th Ave./NE Main St, leading pedestrian interval at Hwy 211-224/Broadway St., and lighting enhancements at Hwy 211-224/SE River Mill Rd.
Estacada Project Prioritization
## Project Prioritization Criteria

<table>
<thead>
<tr>
<th>Opportunity Route</th>
<th>Description</th>
<th>Facility Connects to Major Local Destinations</th>
<th>Addressess Challenging Street Crossings</th>
<th>Supports Neighborhood Connections to Schools</th>
<th>Filling Network Gaps</th>
<th>Exposure to High Vehicular Traffic Speeds and Volumes</th>
<th>Serves a Wide Range of Users</th>
<th>ROW Available and Natural Resources Impacts</th>
<th>Community Acceptance</th>
<th>Feasibility (overall cost and impacts)</th>
<th>Improves Regional Connections and Tourism Opportunities</th>
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<th>Rank</th>
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Bicycle Wayfinding Signing Plan
BICYCLE WAYFINDING SIGNAGE PLAN

A bicycle wayfinding system consists of comprehensive signing to guide bicyclists to their destinations along preferred bicycle routes. Signs are typically placed at decision points along bicycle routes – typically at the intersection of two or more bikeways and at other key locations leading to and along bicycle routes. Further required design guidance can be found in the MUTCD Section 9B.01 – Application and Placement of Signs and Section 9B.20 – Bicycle Guide Signs. Additional design guidance can be found through the Oregon Department of Transportation. It should be noted that Clackamas County also has an Active Transportation Plan (ATP) with recommendations for bicycle wayfinding signage. Furthermore, the Clackamas County ATP includes a plan for a bicycle route with a wayfinding signage plan along Highway 211-224 through Estacada. Further coordination will need to be made with the County where the bicycle wayfinding signage plans overlap. Proposed signage along the state highways must be consistent with the MUTCD and other applicable ODOT standards and permitted through ODOT’s District 2B office.

Sign Types

There are three types of bicycle wayfinding signs:

- Confirmation Signs
- Turn Signs
- Decision Signs

Confirmation Signs

Confirmation signs⁷ are used to indicate to bicyclists that they are on a designated bikeway and make motorists aware of the bicycle route. The information included on these signs consist of destinations and the corresponding distance/time. Signs are typically placed every ¼ to ½ mile on off-street facilities and every 2 to 3 blocks along bicycle facilities. Furthermore, signs should be placed soon after turns to confirm destination(s).

Turn Signs

Turn signs⁸ are used to indicate where a bikeway turns from one street onto another street. The information included on these signs consist of destinations and arrows. Signs are typically placed on the near-side of intersections where bike routes turn (e.g., where the street ceases to be a bicycle route or does not go through). Figure 2 shows an example of a turn sign.

---

⁶ Clackamas County Active Transportation Plan, June 1, 2015.
⁷ NACTO
⁸ NACTO
Decision Signs

Decision signs\(^9\) are used to mark the junction of two or more bikeways and inform bicyclists of the designated bike route to access key destinations. The information included on these signs consist of destinations with arrows, distances, and travel times (optional). Signs are typically placed on the near-side of intersections in advance of a junction with another bicycle route and along a route to indicate a nearby destination. Figure 3 shows an example of a decision sign.

![Figure 3: Example of a Decision Sign](image)

Source: MUTCD

Sign Locations

Bicycle wayfinding signs are typically placed along all streets and/or bicycle facility types that are part of the bicycle network, and along corridors with circuitous bikeway facility routes to guide bicyclists to their intended destination.

Types of Destinations

Bicycle wayfinding signs are placed to direct users to a number of different types of destinations including: on-street bikeways, commercial centers, and local/regional parks and trails. The bicycle destinations within Estacada include:

- Wade Creek Park
- Timber Park
- Milo McIver State Park
- City Hall/Downtown Estacada
- Lakeshore Trail/Cazadero Trail

Figures 4 and 5 show the proposed bicycle wayfinding signage plan for Estacada. A breakdown of each suggested sign can be seen below. It should be noted that the sign locations are approximate and have not been field verified. Proposed signage along the state highways must be consistent with MUTCD and other applicable ODOT standards and permitted through ODOT’s District 2B office.
Figure 4. Bicycle Wayfinding Signage Plan

![Map diagram showing bicycle signage plan with various routes and signs marked in different colors and styles.]

<table>
<thead>
<tr>
<th>Bicycle Sign Type</th>
<th>Code</th>
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<tr>
<td>Turn Sign</td>
<td>T</td>
</tr>
<tr>
<td>Confirmation Sign</td>
<td>C</td>
</tr>
<tr>
<td>Core Active Transportation Routes</td>
<td></td>
</tr>
</tbody>
</table>

- **SAM Stop**
- **Tri-Met Bus Stops**
- **Existing Shared Use Path**
- **Outside Urban Growth Boundary**
- **City Limit**
- **Downtown**
- **Park**
- **School**

Legend:
- Red: Decision Sign
- Orange: Turn Sign
- Yellow: Confirmation Sign
- Green: Core Active Transportation Routes
Figure 5. Bicycle Wayfinding Signage Plan (Downtown Estacada)
BICYCLE WAYFINDING SIGNAGE PLAN BREAKDOWN

**Sign Number: 1**
Sign Type: Turn
Location: Intersection of NE Cemetery Rd./NE 6th Ave., westbound

<p>| | |</p>
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<tr>
<td>↓</td>
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<tr>
<td>↓</td>
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**Sign Number: 2**
Sign Type: Confirmation
Location: Along NE 6th Ave. between NE Pierce St. and NE Cemetery Rd., westbound

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<tr>
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<tr>
<td>←</td>
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**Sign Number: 3**
Sign Type: Decision
Location: Intersection of NE Pierce St./NE 6th Ave., westbound

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>↑</td>
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<td>City Hall/Downtown 1.5 Mi.</td>
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**Sign Number: 4**
Sign Type: Decision
Location: Intersection of N Broadway St./NW 6th Ave., westbound

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<td>↑</td>
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</tr>
<tr>
<td>←</td>
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**Sign Number: 5**
Sign Type: Decision
Location: Intersection of NW Wade St./NW 6th Ave., westbound

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**Sign Number: 6**
Sign Type: Confirmation
Location: Along SE Eagle Creek Rd. between SE River Mill Rd. and NW 6th Ave., northbound

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<tr>
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<td>Milo McIver State Park 0.7 Mi.</td>
</tr>
<tr>
<td>←</td>
<td>City Hall/Downtown 1.5 Mi.</td>
</tr>
</tbody>
</table>

**Sign Number: 7**
Sign Type: Turn
Location: Intersection of SE River Mill Rd./SE Eagle Creek Rd., northbound

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>←</td>
<td>Timber Park 0.9 Mi.</td>
</tr>
<tr>
<td>←</td>
<td>Lakeshore/Cazadero Trail 0.5 Mi.</td>
</tr>
<tr>
<td>←</td>
<td>Milo McIver State Park 0.7 Mi.</td>
</tr>
</tbody>
</table>

**Sign Number: 8**
Sign Type: Decision
Location: Intersection of Hwy 211-224/SE River Mill Rd., westbound

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>↑</td>
<td>Timber Park 0.6 Mi.</td>
</tr>
<tr>
<td>↑</td>
<td>Lakeshore/Cazadero Trail 0.2 Mi.</td>
</tr>
<tr>
<td>↑</td>
<td>Milo McIver State Park 0.7 Mi.</td>
</tr>
<tr>
<td>←</td>
<td>City Hall/Downtown 1.5 Mi.</td>
</tr>
</tbody>
</table>

**Sign Number: 9**
Sign Type: Turn
Location: Intersection of SE River Mill Rd./SE Eagle Creek Rd., eastbound

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>↑</td>
<td>Wade Creek Park 0.7 Mi.</td>
</tr>
<tr>
<td>↑</td>
<td>City Hall/Downtown 1.6 Mi.</td>
</tr>
</tbody>
</table>
Sign Number: 10  
Sign Type: Confirmation  
Location: Along SE Eagle Creek Rd. between SE River Mill Rd. and NW 6th Ave., southbound

![Diagram of Wade Creek Park and City Hall/Downtown]

Wade Creek Park  
City Hall/Downtown

Sign Number: 11  
Sign Type: Turn  
Location: Intersection of NW Wade St./NW 6th Ave., westbound

![Diagram of Wade Creek Park and City Hall/Downtown]

← Wade Creek Park 0.8 Mi.  
← City Hall/Downtown 0.5 Mi.

Sign Number: 12  
Sign Type: Decision  
Location: Intersection of N Broadway St./NW 6th Ave., eastbound

![Diagram of Wade Creek Park and City Hall/Downtown]

↑ Wade Creek Park 0.6 Mi.  
← City Hall/Downtown 0.3 Mi.

Sign Number: 13  
Sign Type: Decision  
Location: Intersection of NE Pierce St./NE 6th Ave., eastbound

![Diagram of NE Cemetery Road]

↑ City Hall/Downtown 0.7 Mi.  
← NE Cemetery Road 0.2 Mi.

Sign Number: 14  
Sign Type: Turn  
Location: Intersection of NE Cemetery Rd./NE 6th Ave., eastbound

![Diagram of Wade Creek Park and City Hall/Downtown]

← NE Cemetery Road

↑ Wade Creek Park 0.1 Mi.

← NE Cemetery Road 0.4 Mi.

Sign Number: 15  
Sign Type: Decision  
Location: Intersection of NW Wade St./NW 6th Ave., northbound

![Diagram of Wade Creek Park and City Hall/Downtown]

← Wade Creek Park 0.4 Mi.

↑ City Hall/Downtown 0.1 Mi.

← NW Regan Hill Road 0.9 Mi.

Sign Number: 16  
Sign Type: Decision  
Location: Intersection of N Broadway St./NE 2nd Ave., southbound

![Diagram of SE Regan Hill Road and City Hall/Downtown]

↑ City Hall/Downtown 0.4 Mi.

← SE Regan Hill Road 0.9 Mi.

Sign Number: 17  
Sign Type: Decision  
Location: Intersection of N Broadway St./SW 3rd Ave., southbound

![Diagram of Milo McIver State Park and City Hall/Downtown]

↑ City Hall/Downtown 0.2 Mi.

↑ Milo McIver State Park 1.0 Mi.

↑ Hwy 211-224 0.2 Mi.

Sign Number: 18  
Sign Type: Decision  
Location: Intersection of Broadway St./SE 4th Ave., southbound

![Diagram of Milo McIver State Park and City Hall/Downtown]

↑ Milo McIver State Park 1.2 Mi.

← City Hall/Downtown 0.1 Mi.
<table>
<thead>
<tr>
<th>Sign Number: 37</th>
<th>Sign Type: Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location: Intersection of Hwy 211-224/ SW Wade St., southbound</td>
<td></td>
</tr>
<tr>
<td>Cascading Scenic River Bikeway 0.4 Mi.</td>
<td></td>
</tr>
<tr>
<td>City Hall/Downtown 0.2 Mi.</td>
<td></td>
</tr>
<tr>
<td>Wade Creek Park 1.0 Mi.</td>
<td></td>
</tr>
<tr>
<td>Hwy 211-224</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sign Number: 38</th>
<th>Sign Type: Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location: Intersection of SE Shafford Ave./SE 4th Ave., westbound</td>
<td></td>
</tr>
<tr>
<td>Cascading Scenic River Bikeway</td>
<td></td>
</tr>
<tr>
<td>City Hall/Downtown 0.2 Mi.</td>
<td></td>
</tr>
<tr>
<td>Wade Creek Park 1.0 Mi.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sign Number: 39</th>
<th>Sign Type: Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location: Intersection of Hwy 211-224/ SE River Mill Rd., southbound</td>
<td></td>
</tr>
<tr>
<td>Cascading Scenic River Bikeway</td>
<td></td>
</tr>
<tr>
<td>City Hall/Downtown 1.5 Mi.</td>
<td></td>
</tr>
<tr>
<td>Cascading Rivers Scenic Bikeway 1.7 Mi.</td>
<td></td>
</tr>
<tr>
<td>Milo McIver State Park 0.7 Mi.</td>
<td></td>
</tr>
<tr>
<td>Timber Park 0.6 Mi.</td>
<td></td>
</tr>
<tr>
<td>Lakeshore/Cazadero Trail 0.2 Mi.</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Sign Number: 40</th>
<th>Sign Type: Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location: Intersection of Hwy 211-224/ SW Oak Rd., southbound</td>
<td></td>
</tr>
<tr>
<td>Cascading Scenic River Bikeway 0.8 Mi.</td>
<td></td>
</tr>
<tr>
<td>Lakeshore/Cazadero Trail 0.1 Mi.</td>
<td></td>
</tr>
<tr>
<td>Milo McIver State Park 0.5 Mi.</td>
<td></td>
</tr>
<tr>
<td>Timber Park 0.7 Mi.</td>
<td></td>
</tr>
<tr>
<td>City Hall/Downtown 0.6 Mi.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sign Number: 41</th>
<th>Sign Type: Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location: Intersection of Hwy 211-224/ SW Wade St., eastbound</td>
<td></td>
</tr>
<tr>
<td>Cascading Scenic River Bikeway 0.4 Mi.</td>
<td></td>
</tr>
<tr>
<td>Cascading River Scenic Bikeway 0.3 Mi.</td>
<td></td>
</tr>
<tr>
<td>City Hall/Downtown 0.3 Mi.</td>
<td></td>
</tr>
<tr>
<td>Lakeview Park 0.9 Mi.</td>
<td></td>
</tr>
<tr>
<td>Lakeshore/Cazadero Trail 0.1 Mi.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sign Number: 42</th>
<th>Sign Type: Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location: Intersection of Hwy 211-224/ Broadway St., eastbound</td>
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</tr>
<tr>
<td>Cascading Scenic River Bikeway 0.3 Mi.</td>
<td></td>
</tr>
<tr>
<td>City Hall/Downtown 0.1 Mi.</td>
<td></td>
</tr>
<tr>
<td>Lakeshore/Cazadero Trail 0.1 Mi.</td>
<td></td>
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<table>
<thead>
<tr>
<th>Sign Number: 43</th>
<th>Sign Type: Confirmation</th>
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</thead>
<tbody>
<tr>
<td>Location: Along Hwy 224 east of Hwy 211 Junction</td>
<td></td>
</tr>
<tr>
<td>Cascading River Scenic Bikeway</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Sign Number: 44</th>
<th>Sign Type: Confirmation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location: Along Hwy 224 east of Hwy 211 Junction</td>
<td></td>
</tr>
<tr>
<td>City Hall/Downtown Milo McIver State Park</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sign Number: 45</th>
<th>Sign Type: Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location: Intersection of Hwy 211-224/ Broadway St., westbound</td>
<td></td>
</tr>
<tr>
<td>City Hall/Downtown 0.1 Mi.</td>
<td></td>
</tr>
<tr>
<td>Milo McIver State Park 1.1 Mi.</td>
<td></td>
</tr>
<tr>
<td>Lakeshore/Cazadero Trail 0.1 Mi.</td>
<td></td>
</tr>
<tr>
<td>Timber Park 1.3 Mi.</td>
<td></td>
</tr>
</tbody>
</table>
Sign Number: 46  
Sign Type: Decision  
Location: Intersection of Hwy 211-224/ SW Wade St., westbound

$, 0.9 Mi. \rightarrow$

Sign Number: 47  
Sign Type: Decision  
Location: Intersection of Hwy 211-224/ SW Oak Rd., northbound

$, 0.5 Mi.  
$, 0.7 Mi.  
$, 0.1 Mi. \rightarrow$

Sign Number: 48  
Sign Type: Decision  
Location: Intersection of Hwy 211-224/ SE River Mill Rd., northbound

$, 0.6 Mi.  
$, 0.7 Mi.  
$, 0.2 Mi.  
$, 1.0 Mi. \rightarrow$

Sign Number: 49  
Sign Type: Confirmation  
Location: Along Hwy 211-224 north of SE River Mill Rd., northbound

$,Hwy 211-224$

Sign Number: 50  
Sign Type: Confirmation  
Location: Along Lakeshore/Cazadero Trail North of Timber Park, southbound

$, Timber Park 0.6 Mi.  
$, Milo McIver State Park 0.5 Mi.  
$, Timber Park 0.7 Mi.  
$, Lakeshore/Cazadero Trail 0.1 Mi. \rightarrow$

Sign Number: 51  
Sign Type: Decision  
Location: Intersection of Milo McIver Pedestrian Bridge/Lakeshore/ Cazadero Trail, southbound

$, Cascading River Scenic Bikeway 1.2 Mi.  
$, City Hall/Downtown 1.1 Mi.  
$, Milo McIver State Park \rightarrow$

Sign Number: 52  
Sign Type: Confirmation  
Location: Along Lakeshore/Cazadero Trail south of Milo McIver State Park, southbound

$, $$$City Hall/Downtown\rightarrow$ Cascading River Scenic Bikeway$

Sign Number: 53  
Sign Type: Decision  
Location: Intersection of Lakeshore/ Cazadero Trail/SW Lakeshore Dr., southbound

$, Cascading River Scenic Bikeway 0.8 Mi.  
$, City Hall/Downtown 0.7 Mi.  
$, Hwy 211-224 0.1 Mi. \rightarrow$

Sign Number: 54  
Sign Type: Turn  
Location: Intersection of SW Lakeshore Dr./SW Beech Rd., eastbound

$, City Hall/Downtown 0.2 Mi.  
$, Cascading River Scenic Bikeway 0.4 Mi. \rightarrow$
Sign Number: 64
Sign Type: Confirmation
Location: Along Lakeshore/Cazadero Trail North of Timber Park, northbound

Hwy 211-224
Timber Park 0.2 Mi.
Lakeshore/Cazadero Trail →
City Hall/Downtown 1.1 Mi. →

Sign Number: 65
Sign Type: Decision
Location: Intersection of Milo McIver Pedestrian Bridge/Lakeshore/Cazadero Trail, eastbound

Milo McIver State Park
City Hall/Downtown

Sign Number: 67
Sign Type: Decision
Location: Intersection of NE Main St./NW 6th Ave., westbound

Wade Creek Park 0.2 Mi.
City Hall/Downtown 0.6 Mi. →

Sign Number: 68
Sign Type: Decision
Location: Intersection of NE Main St./NE 2nd Ave., southbound

City Hall/Downtown 0.1 Mi.
SE Regan Hill Rd. 0.8 Mi.
Wade Creek Park 0.6 Mi. →

Sign Number: 69
Sign Type: Decision
Location: Intersection of NE Main St./NW 6th Ave., eastbound

City Hall/Downtown 0.5 Mi.
Wade Creek Park 0.5 Mi. →

Sign Number: 70
Sign Type: Decision
Location: Intersection of NE Main St./NW 6th Ave., northbound

Wade Creek Park 0.2 Mi.
NE Cemetery Road 0.3 Mi. →

Sign Number: 71
Sign Type: Decision
Location: Intersection of NE Main St./NW 6th Ave., eastbound

NE Cemetery Road 0.3 Mi.
City Hall/Downtown 0.6 Mi. →

Sign Number: 72
Sign Type: Decision
Location: Intersection of NE Main St./NE 2nd Ave., eastbound

SE Regan Hill Rd. 0.8 Mi.
NE Cemetery Road 0.5 Mi.
Sign Number: **73**  
Sign Type: **Decision**  
Location: **Intersection of NW 1st Ave./N Broadway St., northbound**  

<table>
<thead>
<tr>
<th>Arrow</th>
<th>Location</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>↑</td>
<td>NE Cemetery Road</td>
<td>0.7 Mi.</td>
</tr>
<tr>
<td>←</td>
<td>Wade Creek Park</td>
<td>0.6 Mi.</td>
</tr>
</tbody>
</table>

Sign Number: **74**  
Sign Type: **Decision**  
Location: **Intersection of NW 1st Ave./N Broadway St., southbound**  

<table>
<thead>
<tr>
<th>Arrow</th>
<th>Location</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>↑</td>
<td>City Hall/Downtown</td>
<td>0.3 Mi.</td>
</tr>
<tr>
<td>←</td>
<td>Wade Creek Park</td>
<td>0.6 Mi.</td>
</tr>
</tbody>
</table>

Sign Number: **75**  
Sign Type: **Decision**  
Location: **Intersection of NW 1st Ave./N Broadway St., eastbound**  

<table>
<thead>
<tr>
<th>Arrow</th>
<th>Location</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>←</td>
<td>Wade Creek Park</td>
<td>0.6 Mi.</td>
</tr>
<tr>
<td>→</td>
<td>City Hall/Downtown</td>
<td>0.3 Mi.</td>
</tr>
</tbody>
</table>

Sign Number: **76**  
Sign Type: **Turn**  
Location: **Intersection of NW 1st Ave./NW Wade St., westbound**  

<table>
<thead>
<tr>
<th>Arrow</th>
<th>Location</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>→</td>
<td>Wade Creek Park</td>
<td>0.5 Mi.</td>
</tr>
</tbody>
</table>

Sign Number: **77**  
Sign Type: **Turn**  
Location: **Intersection of NW 1st Ave./NW Wade St., southbound**  

<table>
<thead>
<tr>
<th>Arrow</th>
<th>Location</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>←</td>
<td>City Hall/Downtown</td>
<td>0.4 Mi.</td>
</tr>
</tbody>
</table>
Decorative Signing Examples

The following bicycle wayfinding signage examples are meant to provide Estacada with a reference point in developing their own unique signs to represent their city. However, it is recommended that the City consider following the signage guidelines set forth in the Clackamas County ATP to provide consistency for regional bicycle riders. It should be noted that all bicycle wayfinding signs must be the requirements set forth by the MUTCD. The signage examples below have been provided from the following communities (Figures 6–9).

Figure 6: City of Milwaukie

Figure 7: City of Gresham

Figure 8: City of Berkeley

Figure 9: City of Oakland
Safe Routes to School Documentation
**Action Plan for**  
**Estacada Middle School**

**Principal:** Ben Hargrave  
**Grades:** 6-8  
**Enrollment:** 250  
**Address:** 500 NE Main Street  
**First bell:** 8:05 a.m.  
**Last bell:** 3:20 p.m.

This Action Plan summarizes existing conditions, observations, and recommended improvements and programs for Estacada Middle School. Safe Routes to School (SRTS) walk audits were conducted on May 1, 2017 and May 9, 2017. A summary map on Page 10 illustrates the audit location, area characteristics and locations of infrastructure recommendations.

This Action Plan supports the county-wide SRTS efforts of Clackamas County. For more information on the program, visit: [www.clackamas.us/engineering/srts.html](http://www.clackamas.us/engineering/srts.html).

**What is Safe Routes to School (SRTS)?**

SRTS is a comprehensive program to make school communities safer by combining engineering tools and enforcement with education about safety and activities to enable and encourage students to walk and bicycle to school. SRTS programs typically involve partnerships among municipalities, school districts, community members, parent volunteers, and law enforcement.

Although most students in the United States walked or biked to school before the 1980s, the number of students walking or bicycling to school since has sharply declined in both urban and rural areas.

The benefits of implementing a SRTS plan are far-reaching and include improving safety, encouraging physical activity, and reducing traffic congestion and motor vehicle emissions near schools. Implementing SRTS programs and projects benefit adjacent neighborhoods as well as students and their families.

Clackamas County’s SRTS Program Handbook outlines activities and local resources that school and community members can use to encourage walking and biking and promote traffic safety in school areas. See [www.clackamas.us/engineering/srts.html](http://www.clackamas.us/engineering/srts.html) for more information.
Why Safe Routes to School for Clackamas County?

Within the span of one generation, the percentage of children walking or bicycling to school has dropped to 13%.

48% 13%
1969 2009

Roads near schools are congested, decreasing safety and air quality.

Fewer students walking & biking to school
More parents driving children to school
Rising concerns about safety of walking & biking
Increased traffic at and around school

This movement away from active transportation is a self-perpetuating cycle.

SRTS education & encouragement programs can result in a 25% increase in walking and biking over 5 years.

A comprehensive SRTS program addresses reductions in walking and biking through a multi-pronged approach that uses education, encouragement, engineering and enforcement efforts to develop attitudes, behaviors, and physical infrastructure that improve the walking and biking environment.

SRTS programs provide many benefits for communities!

Healthy Living

Less Traffic

Better Educational Achievement

Increased Social Interactions

Cleaner Air and Water

Cost-Effective
**How Do Students Get to School Now?**

As part of the Clackamas SRTS program, Estacada Middle School families participated in parent surveys in spring 2017.

**Parent Surveys**

Parents are asked how their children travel to and from school via a paper or online survey. Parent surveys also ask questions about the barriers to walking or biking to/from school, health information, and/or perception of crime and other social behaviors.

The Clackamas SRTS program collected 4 parent surveys in April 2017, all from families with children in the 6th grade. All respondents live between a half-mile and a mile from the school. All 4 respondents report driving to school in the family vehicle, while 2 respondents report walking home from school.

While the survey represents a very small sample size, the parents identified the following barriers to walking or biking: speed of traffic, safety of intersections and crossings, crossing guards, and the amount of traffic along the route. These findings indicate that there is potential for promoting walking and biking by addressing traffic safety barriers.

Resources and best practice programs for conducting parent surveys include:

- The Oregon SRTS website provides [evaluation resources](#).
- The [National Center for SRTS](#) has forms, data collection guidelines, and data center.
Walk Audit Summary

Walk Audit Date: May 1 and May 9, 2017  Meeting Time: May 1 at 7:15a.m. and May 9 at 3:10p.m.
Day of Week: Monday and Tuesday  Weather: 71 degrees, clear skies
Attendees:
- Nicole Perry, The Street Trust
- Scott Hoelscher, Clackamas County
- Lori Mastrantonio, Clackamas County
- Christian Snuffin, Clackamas County
- Mallorie McDowell, Clackamas County

Existing Conditions

School Layout

The main school entrance is at NE Main Street where NE 5th Avenue ends. Students generally load along Main Street, and a sidewalk connects to a paved walkway to the building’s front entrance. An additional entrance is located on NE 6th Avenue, across from the high school. Surrounding streets have intermittent sidewalks, signs that are not up to current standards, and inadequate crosswalks. Traffic travels at moderate and low speeds in this neighborhood.

SITE CIRCULATION

Vehicles: Student drop-offs and pick-ups occur mostly on NE Main Street and on NE 6th Avenue. In the afternoons, cars park on NE 6th Avenue and wait until dismissal for pick-ups.

School Buses: Buses are lined up on NE Main Street and NE 6th Avenue and travel from the Middle School to the High School driveway to pick-up students. Arrivals enter through High School driveway.

Pedestrians: There is a crossing attendant in front of the school at NE 5th Avenue and NE Main Street. Pedestrian traffic surrounding the school is a mix of elementary, middle, and high school students and some were observed walking with an adult.

Bicyclists: There are no bike lanes surrounding the school. Outdated bike parking racks are located in front of the school.
Walk Audit Observations and Infrastructure
Recommendations

Key locations are described below, including issues identified during audit observations and discussions. Project numbering refers to the Improvements Map on page 10. The party responsible for implementing each recommendation is in parentheses (i.e., City of Estacada or Estacada School District).

1. School Parking Lot and Grounds

The school has two main entrances. Students arrive on foot, by bike, and by scooter. There are sidewalks on three sides, and one side of the school borders the elementary school. The bike parking is an older style, which does not support a bicycle with two points of contact.

RECOMMENDATIONS
a. Upgrade bike parking along west side of the school with modern bike racks (District).

2. NE 6th Avenue

High traffic flow occurs on NE 6th Avenue, where pick-ups and drop-offs occur for middle school and high school students. Several crosswalk and intersection upgrades are needed along NE 6th Avenue to increase safety and comfort for pedestrians. This is a high-traffic area where buses, cars, and people cross in all directions during the most congested periods.

RECOMMENDATIONS
a. Upgrade crosswalk on the south side of NE 6th Avenue at NE Main Street with continental crosswalk markings and signs; install ADA curb ramps on the southwest, southeast, and northeast corners of the intersection. Consider north-south crossing treatment on 6th. (City)
b. Replace diagonal crosswalk west of the high school driveway with perpendicular crosswalk and continental markings, signs, and ADA curb ramps. (City)
c. Upgrade crosswalk at NE 6th Avenue and NE Pierce Street with continental markings, signs, and ADA curb ramps. (City)
d. Upgrade crosswalk at NE 6th Avenue and N Broadway with continental markings, signs, and ADA curb ramps. (City)
e. Finish sidewalks on the south side of NE 6th Avenue from Wade Creek to NE Cemetery Road. (City)

3. NE Main Street

The front of the school faces NE Main Street where a crossing guard is present in the morning and afternoon. The crosswalk on the corner at NE 6th Avenue is heavily used by elementary, middle, and high school students, partly due to the coffee shop on the corner being a popular
destination. Several buses serving Estacada Middle and High Schools queue up on NE Main Street in the afternoons. Cars stop and park on Main in between loading and no stopping zones. Curb extensions and signs can create more organized pick-up and drop-off areas.

RECOMMENDATIONS
a. Upgrade school zone signage to current ODOT standards (City).
b. Stop signs at NE 6th Avenue and NE Main Street should have “All-Way” placard mounted below each stop sign (City).
c. Upgrade crosswalk at NE Main Street and NE 5th Avenue with continental markings, signs, and ADA curb ramps (City).
d. Upgrade street lighting between NE 6th Avenue and NE 2nd Avenue. (City)

4. NE 5th Street
This is another area for pick-ups and drop-offs near the front of the school, where sidewalks are inconsistent. Residents park along the street and gravel surfaces.

RECOMMENDATIONS
a. Install sidewalks on north side of NE 5th Avenue between NE Main Street and north-south alleyway between Main and N Broadway (City).

5. NE Pierce Street
There is heavy pedestrian activity and drop-offs on NE Pierce Street. The absence of sidewalks and poor crosswalk visibility present safety issues.

RECOMMENDATIONS
a. Upgrade school zone signage to current ODOT standards (City).

6. NW Wade Street
Traffic from Wade leads into 5th to the front of the school. The street is characterized by a few homes, a large fenced lot, cars parked on the street, gravel, and limited sidewalks.

RECOMMENDATIONS
a. Install crosswalk at the intersection of NW Wade Street and NW 6th Avenue (City).
Cost Estimates

Table 1 summarizes recommendations for Estacada Middle School, provides order-of-magnitude cost estimates, and places the projects in priority tiers. Figure 1 on the following page shows the locations of the recommendations. Figure 2 on page 11 shows the Suggested Route Map, which can be shared with parents at the start of the school year along with the walking and biking tips.

Table 1. Estacada School Recommended Improvements

<table>
<thead>
<tr>
<th>RECOMMENDATIONS</th>
<th>LEAD AGENCY</th>
<th>PLANNING – LEVEL COST</th>
<th>PRIORITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 1. School Parking Lot and Grounds</td>
<td></td>
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<tr>
<td>a. Upgrade bike parking along west side of the school with modern bike racks.</td>
<td>School District</td>
<td>$</td>
<td>High</td>
</tr>
<tr>
<td>2. NE 6th Avenue</td>
<td></td>
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</tr>
<tr>
<td>a. Upgrade crosswalk on the south side of NE 6th Avenue at NE Main Street with continental crosswalk markings and signs; install ADA curb ramps on the southwest, southeast, and northeast corners of the intersection. Consider north-south crossing treatment on 6th. Add RRFB or school zone flashers.</td>
<td>City</td>
<td>$$</td>
<td>Medium</td>
</tr>
<tr>
<td>b. Replace diagonal crosswalk west of the high school driveway with perpendicular crosswalk and continental markings, signs, and ADA curb ramps.</td>
<td>City</td>
<td>$$</td>
<td>Low</td>
</tr>
<tr>
<td>c. Upgrade crosswalk at NE 6th Avenue and NE Pierce Street with continental markings, signs, and ADA curb ramps.</td>
<td>City</td>
<td>$$</td>
<td>Medium</td>
</tr>
<tr>
<td>d. Upgrade crosswalk at NE 6th Avenue and N Broadway with continental markings, signs, and ADA curb ramps.</td>
<td>City</td>
<td>$$</td>
<td>Medium</td>
</tr>
<tr>
<td>e. Finish sidewalks on the south side of NE 6th Avenue from Wade Creek to NE Cemetery Road.</td>
<td>City</td>
<td>$$</td>
<td>Medium</td>
</tr>
<tr>
<td>3. NE Main Street</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>a. Upgrade school zone signage to current ODOT standards.</td>
<td>City</td>
<td>$$</td>
<td>Medium</td>
</tr>
<tr>
<td>b. Stop signs at NE 6th Avenue and NE Main Street should have “All-Way” placards mounted below each stop sign. Add RRFB or school zone flashers.</td>
<td>City</td>
<td>$</td>
<td>Low</td>
</tr>
</tbody>
</table>
c. Upgrade crosswalk at NE Main Street and NE 5th Avenue with continental markings, signs, and ADA curb ramps.  
   
d. Upgrade street lighting between NE 6th Avenue and NE 2nd Avenue.  

<table>
<thead>
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<th>City</th>
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<tbody>
<tr>
<td>c.</td>
<td>Upgrade crosswalk at NE Main Street and NE 5th Avenue with continental markings, signs, and ADA curb ramps.</td>
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<td>d.</td>
<td>Upgrade street lighting between NE 6th Avenue and NE 2nd Avenue.</td>
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4. NE 5th Street

a. Install sidewalks on north side of NE 5th Avenue between NE Main Street and north-south alleyway between Main and N Broadway.  

<table>
<thead>
<tr>
<th></th>
<th>City</th>
<th>$$$</th>
<th>Medium</th>
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</thead>
<tbody>
<tr>
<td>a.</td>
<td>Install sidewalks on north side of NE 5th Avenue between NE Main Street and north-south alleyway between Main and N Broadway.</td>
<td>City</td>
<td>$$$</td>
</tr>
</tbody>
</table>

5. NE Pierce Street

a. Upgrade school zone signage to current ODOT standards.  

<table>
<thead>
<tr>
<th></th>
<th>City</th>
<th>$</th>
<th>High</th>
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<tbody>
<tr>
<td>a.</td>
<td>Upgrade school zone signage to current ODOT standards.</td>
<td>City</td>
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</tbody>
</table>

6. NW Wade Street

a. Install crosswalk at the intersection of NW Wade Street and NW 6th Avenue.  

<table>
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<tr>
<th></th>
<th>City</th>
<th>$</th>
<th>Medium</th>
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</thead>
<tbody>
<tr>
<td>a.</td>
<td>Install crosswalk at the intersection of NW Wade Street and NW 6th Avenue.</td>
<td>City</td>
<td>$</td>
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</tbody>
</table>
This page is intentionally left blank.
Figure 1. Estacada Middle School Improvements Map
Figure 2. Estacada Middle School Suggested Route Map
Be Safe Walking, Biking, & Driving in School Areas

Safety Tips for Walking

USE THE CROSSWALK
Always cross at corners or at a marked crosswalk. This is where drivers expect to see you.

LOOK BEFORE YOU CROSS
Look left, right, and left again before crossing a street or driveway. Look over your shoulder for turning cars, especially at intersections.

MAKE EYE CONTACT
Don’t assume that drivers see you. Make eye contact with drivers before stepping off of the sidewalk.

BE VISIBLE
Wear reflective or bright-colored clothing when it’s dark and walk with one or more buddies.

FOLLOW THE RULES
Follow directions from crossing guards and pay attention to traffic signs and signals.

Safety Tips for Driving

RESPECT THE ZONE
Slow down in school zones. The safe speed may be less than 25 MPH. Set a good example by following instructions from crossing guards.

BRAKE FOR PEOPLE WALKING
Stop for people in crosswalks and at unmarked intersections. Look and stop for children who may be crossing mid-block, too.

BE AWARE AND ALERT
Set aside distractions like texting, phone calls, or eating while driving, and keep an eye out for the unexpected.

GO WITH THE FLOW
Follow your school’s drop-off and pick-up procedures. Pull to the curb rather than letting children out in the street. Avoid unsafe maneuvers, such as mid-block U-turns or stopping in a crosswalk.

RESPECT THE NEIGHBORHOOD
Park in legal spaces and don’t double park or block driveways.

Safety Tips for Biking

BE PREDICTABLE
Obey all stop signs, traffic signals, and guidance from crossing guards. Never ride against traffic.

BE ALERT
Watch out for drivers turning left or right, or coming out of driveways. Avoid car doors opening in front of you and yield to pedestrians.

WEAR YOUR HELMET
Make sure that it fits properly: snug and level on your head, just above your eyebrows.

MAKE EYE CONTACT
Make sure drivers see you, especially at intersections and driveways.

12 Clackamas County Safe Routes to School
Programmatic Recommendations

Programmatic activities and events complement infrastructure improvements by empowering students and their families to try walking and bicycling, and by making it safer for them to do so. The activities below are recommended for Estacada Middle School to improve and promote safe walking and bicycling to and from school and in the community. They can be implemented by school administrators, teachers, parents or even school clubs.

Education Programs

BICYCLE AND PEDESTRIAN SAFETY EDUCATION

Pedestrian and bicycle safety education teaches students basic traffic laws and safety rules. Getting middle school students excited about Safe Routes to School activities and events can build momentum for walking and bicycling, since older students can have more independence to get to school on their own or together. The National Center for SRTS provides Tips for Engaging Middle School Students, which will help SRTS practitioners recognize and build off of the typical attributes of middle school students.

Resources and best practice programs for middle school students include:

♦ Oregon SRTS provides classes and train-the-trainer programs. Oregon-based service providers are listed at: www.oregonsaferoutes.org/bike-ed-service-providers
♦ The National Highway Traffic Safety Administration offers a child pedestrian safety curriculum and the Cycling Skills Clinic Guide to help organizations plan bike safety skills events.
♦ The Oregon Bicycle Transportation Alliance developed SRTS Curriculum, which includes a flexible in-class and on-bike curriculum and pedestrian safety lesson plans.
♦ The Girls in Gear curriculum is a girls-specific, bicycling program designed to empower adolescent girls. GIG is designed to create self-reliance and build confidence. It is also the first program to creatively integrate STEM— Science, Technology, Engineering and Mathematics— activities, physical exercise and nutrition education by way of the bicycle.
♦ SRTS Michigan: Make Trax lessons and activities complement community Safe Routes to School planning efforts. Make Trax provides lessons on learn about data collection, mapping software, and presentation skills.
PARENT EDUCATION AND OUTREACH

Parents are the primary decision-makers about how their children get to school. Informing parents about their options for walking and bicycling, as well as communicating the benefits of active transportation, can encourage more families to walk and bike. This can occur through school e-news or announcements, and other informational resources. Suggested route maps can show parents the best walking or biking route to the school, overcoming concerns about barriers.

Resources and best practice programs:

♦ Oregon SRTS provides materials, handouts, and theme ideas for Monthly Walk and Bike events as well as Back to School messages.
♦ The National Center for SRTS has several tip sheets for parents on safe walking and bicycling behaviors.

Encouragement Programs

WALK + BIKE TO SCHOOL CHALLENGE

The Oregon Walk + Bike to School Challenge celebrates students walking and bicycling to school. International Walk to School Day is held the first Wednesday in October and Bike to School Day takes place the second week in May. Parents can set up a table on the event day to provide refreshments and small rewards for families who participate, as well as maps, lights, and safety information to encourage more students and families to join in the fun.

Even families who live too far from school to walk and bike can participate by driving to a designated central location and walking together from there. Coffee and breakfast can be provided, and students can dress up or hold posters to make a fun, parent-supervised parade to school.

Resources and best practices:

♦ Schools in Oregon can order incentives to support and promote Walk + Bike Challenge Day and Month.
♦ Walk Bike to School suggests event ideas and planning resources for encouraging active transportation at schools.
♦ The National Center for SRTS maintains a national database of walk and bike to school day events as well as event ideas and planning resources.
STUDENT CLUBS AND YOUTH LEADERSHIP PROGRAMS

Clubs and leadership programs allow older students to form groups to support the causes they care about most. Older elementary school student clubs can host Walk + Bike Challenge events, organize a competition, or work with their peers to promote walking and bicycling. Student clubs can offer excellent ideas, and provide exceptional energy and drive to get things done.

Resources and best practice programs:

- Marin County SRTS's Teens Go Green program partners with teens interested in the environment to bring reduced CO2 and healthy lifestyles to their schools.
- Create a cycling league or club. Leagues can introduce student riders to the sport of mountain biking or road racing, with a focus on skills, fun, fitness, and responsibility.

Enforcement Programs

AAA SCHOOL SAFETY PATROL

Older elementary school student volunteers can sign-up to become a certified AAA School Safety Patroller. With support and leadership from school faculty and parents, student patrollers help fellow students develop a better understanding of pedestrian and vehicular traffic hazards.

Resources and best practice programs:

- AAA has School Safety Patrol membership information and descriptions of student, teacher, and parent roles.

Evaluation Programs

STUDENT HAND TALLIES

Hand tallies are a standard way of tracking the different ways (modes) students used to get to school for SRTS programs. Students are asked how they got to and from school over a 2-3 day period. Students raise their hand when the mode they took is called out, and the teacher or a volunteer records the findings.
Tracking the change in mode over time can indicate how successful the SRTS program is at addressing concerns and promoting walking and bicycling. Resources and best practice programs for conducting hand tallies include:

- The Oregon SRTS website provides [evaluation resources](#).
- The [National Center for SRTS](#) has forms, data collection guidelines, data center, and automatically-generated reports.
School Action Plan for
River Mill Elementary School

Principal: Jennifer Behrman
Enrollment: 340
First bell: 8:00 a.m.
Last bell: 2:20 p.m. (12:30 p.m. on Wednesdays)

Grades: K-5
Address: 850 N Broadway Street
Estacada, OR 97022

This report summarizes existing conditions, observations, and recommended improvements and programs for River Mill Elementary School resulting from the Safe Routes to School (SRTS) walk audit conducted on October 12, 2017. A summary map on Page 11 illustrates the audit location, area characteristics, and locations of infrastructure recommendations.

This audit supports the county-wide SRTS efforts of Clackamas County. For more information on the program, visit: www.clackamas.us/engineering/srts.html.

What is Safe Routes to School (SRTS)?

SRTS is a comprehensive program to make school communities safer by combining engineering tools and enforcement with education about safety and activities to enable and encourage students to walk and bicycle to school. SRTS programs typically involve partnerships among municipalities, school districts, community members, parent volunteers, and law enforcement.

Although most students in the United States walked or biked to school before the 1980s, the number of students walking or bicycling to school since has sharply declined in both urban and suburban areas.

The benefits of implementing a SRTS plan are far-reaching and include improving safety, encouraging physical activity, and reducing traffic congestion and motor vehicle emissions near schools. Implementing SRTS programs and projects benefit adjacent neighborhoods as well as students and their families.

Clackamas County SRTS has a Program Handbook that outlines activities and local resources that school and community members can use to encourage walking and biking and promote traffic safety in school areas.

See www.clackamas.us/engineering/srts.html for more information.
Why Safe Routes to School for Clackamas County?

Within the span of one generation, the percentage of children walking or bicycling to school has dropped to 13%.

Roads near schools are congested, decreasing safety and air quality.

1969 - 48%
2009 - 13%

Fewer students walking & biking to school
More parents driving children to school
Rising concerns about safety of walking & biking
Increased traffic at and around school

This movement away from active transportation is a self-perpetuating cycle.

SRTS education & encouragement programs can result in a 25% increase in walking and biking over 5 years.

A comprehensive SRTS program addresses reductions in walking and biking through a multi-pronged approach that uses education, encouragement, engineering and enforcement efforts to develop attitudes, behaviors, and physical infrastructure that improve the walking and biking environment.

SRTS programs provide many benefits for communities!

Healthy Living
Less Traffic
Better Educational Achievement
Increased Social Interactions
Cleaner Air and Water
Cost-Effective
How Do Students Get to School Now?

As part of the Clackamas SRTS program, River Mill Elementary students and families participated in student hand tallies and parent surveys in fall 2017.

Student Hand Tallies

Hand tallies are a standard way of tracking the different ways (modes) students used to get to school. Students are asked how they traveled to and from school over a 2-3 day period. Students raise their hand when the mode they took is called out, and the teacher or a volunteer records the findings. Ten classrooms’ hand tallies are included in this Action Plan.

Figure 1 shows the results of the fall 2017 hand tallies. Most students ride the bus: approximately 46 percent of students take the bus to school and 62 percent take it home. A family vehicle is the next most common mode. Less than 2 percent of students report walking to or from school and no students reported biking.

Figure 1. November 2017 Student Hand Tally Results, Morning and Afternoon

Tracking the change in mode over time can indicate how successful the SRTS program is at addressing concerns and promoting walking and bicycling. Resources and best practice programs for conducting hand tallies include:

- The Oregon SRTS website provides evaluation resources.
- The National Center for SRTS has forms, data collection guidelines, data center, and automatically-generated reports.
Parent Surveys

Parent surveys ask families about the barriers to walking or biking to/from school, health information, how children travel to and from school, and perception of crime and other social behaviors.

The Clackamas SRTS program collected 13 parent surveys in November 2017, primarily from families with children in Kindergarten and second grade. The results are shown as numbers of respondents instead of percentages because of the low response rate. The majority of respondents live over two miles from River Mill Elementary (7 families). Two respondents live under a quarter-mile, one lives within a quarter- to a half-mile, two live within a half-mile to a one mile, and one lives within one to two miles. All students who live over two miles from school take the bus or are driven in a family vehicle. No respondents indicated that they walk or bike to school.

Figure 2 shows the main barriers for parents of students who did not walk or bike. All respondents who live over two miles away reported time and distance as barriers to walking and biking to school. Families who live closer to school cited lack of sidewalks and amount of traffic along the route. These findings indicate that there is potential for promoting walking and biking among families who live closer to school, by addressing traffic safety barriers.

Figure 2. Barriers to Allowing a Child to Walk or Bike to/from School

Resources and best practice programs for conducting parent surveys include:

- The Oregon SRTS website provides evaluation resources.
- The National Center for SRTS has forms, data collection guidelines, and data center.
Walk Audit Summary

Walk Audit: October 12, 2017  
Meeting Time: 7:20-9am  
Date:  
Day of Week: Thursday  
Weather: Rainy and Stormy

Attendees:
- Scott Hoelscher, Clackamas County  
- Carl Olson, Clackamas County  
- Mallorie McDowell, Clackamas County  
- Sadie Main, City of Estacada  
- Melanie Wagner, City of Estacada  
- Nicole Perry, The Street Trust  
- Hannah Day-Kapel, Alta Planning + Design  
- Katie Selin, Alta Planning + Design

Existing Conditions

School Layout
River Mill Elementary School is located on N Broadway St, one block north of 6th St and east of NW Wade St. Sports fields and a playground to the north of the school serve the surrounding, growing residential neighborhood.

Most students enter and are dismissed through the main door on the west side of the main school building. A few students go straight to the auxiliary school building on the east side of the property by wrapping around the building to the south.

SITE CIRCULATION

Vehicles: Student drop-off occurs in the parking lot to the west of the school. Vehicles line up in the second lane away from the school (leaving one clear for special needs buses to drop off right in front of the main door). As vehicles arrive at the front of the line, their student may exit the vehicle, cross the other lane, and head into the building. After the student departs, the vehicle continues to the parking lot exit to the west.

For student pick-up, families are required to come inside to sign their student out of the cafeteria.

School Buses: Buses load and unload students in the parking lot to the west of River Mill in front of the main entrance and along 8th St, south of the building. Both of these areas are also open to vehicles.

Pedestrians: There is a new, wide sidewalk along N Broadway St, south of the school. From the east, students can cut through the Estacada High School parking lot from surrounding neighborhoods. However, there are no crossings and limited sidewalks connecting the school to the neighborhoods north and west of the school.
Bicyclists: There are no dedicated bike facilities connecting to the school. On the southeast corner of the school, there is sheltered bike parking for approximately 8 bikes. The bike parking is an older, less effective design.

Walk Audit Observations and Infrastructure Recommendations

Key locations are described below, including issues identified during audit observations and discussions. Project numbering refers to the Improvements Map on page 11. The party responsible for implementing each recommendation is in parentheses (i.e., City of Estacada or Estacada School District).

1. School Parking Lot and Grounds

Student drop-off and pick-up operate fairly smoothly, but could be improved. For morning drop-off, families waited until they got to the front of the line to let their student head inside. However, some vehicles circled around counter clockwise, through the exit, to drop their student off in the center of the parking lot. On the north side of the parking lot, the sidewalk ends before it connects to the sidewalk on N Broadway St. Students walking from that side of the school must walk in the road, as buses and cars exit the parking lot. A subdivision, currently under construction, will increase foot traffic from this side in the next several years.

RECOMMENDATIONS

a. Build approximately 242 feet of sidewalk along the north side of the parking lot to the east side of N Broadway St, either by moving the existing fence and constructing sidewalk, curb and gutter, or pedestrian space could be designated with bollards and paint. (Estacada School District)
b. Replace bike parking with modern racks. (Estacada School District)
c. Move bus loading (except the special education bus) to 8th St and use both lanes in front of the school to load students. (Estacada School District)
d. Build approx. 268 feet of sidewalk on the east side of N Broadway St north along the school’s property to connect with the Campanella Estates development. (Estacada School District/City of Estacada)
e. Add a stop sign at the southbound secondary parking lot exit onto N Broadway St. (Estacada School District)

2. N Broadway Street

N Broadway St is a calm neighborhood street posted as a school zone. The main traffic flow occurs on N Broadway St, approaching the school from the south. A smaller number of vehicles access River Mill along N Broadway St from the north. The N Broadway St segment from NE 6th Ave to 8th Ave has a wide, new sidewalk on the east side of the street, but no sidewalk on the west side of the street. The segment to the north has a sidewalk on the west side of the street after the corner by Carleton St, but no sidewalk on the east side.

The intersection at N Broadway St and 8th Ave provides a safe crossing for students to access the school. It is an all way stop, a crosswalk, ADA compliant curb ramps, and a stop bar for vehicles on N Broadway.
There is no pedestrian crossing to the school at N Broadway St and NW 10th Ave.

N. Broadway St has no specific bike facilities. Bikes can ride in the road or on the sidewalk, where it exists. Only one student biking was observed during the walk audit.

**RECOMMENDATIONS**

a. Install a crosswalk and ADA-compliant curb ramps across N Broadway St connecting to the south corner of NW 10th Ave. (City of Estacada)

b. Add Neighborhood Greenway signs and pavement markings on N Broadway St from NE 6th Ave to NW 10th Ave and into the new subdivision. (City of Estacada)

### 3. 8th Avenue

Adjacent to school grounds on the south side of the school, 8th Ave is a one way (to the west), private street owned by the Estacada School District. It connects River Mill Elementary to the High School. It has a sidewalk on the north and pull-in parking on the south side. Buses drop students off on the north side of the street. River Mill has a gate that is only open in the morning to let buses through. During the walk audit, vehicles were observed cutting through on the road going both directions. Students who live east of the school access the school this way, after using one of the paths to the High School from surrounding neighborhoods.

**RECOMMENDATION**

a. Sign 8th Ave as a one-way street westbound. (Estacada School District)

### 4. NW 10th Avenue

NW 10th Ave connects River Mill Elementary with Eagle Creek Rd/NW Wade St, a main road that heads north into the countryside and connects more homes to town. Across Eagle Creek road is the Public Library and Wade Creek Park, two important destinations for students and families. The stop sign for NW 10th Ave west bound is too short to be properly visible to drivers. Bushes and trees obscure the sidewalk and school zone signs along both sides of NW 10th Ave.

**RECOMMENDATIONS**

a. Construct approximately 118 feet of sidewalks on the south side of NW 10th Ave to fill the gap east of Eagle Creek Rd. (City of Estacada)

b. Install a crosswalk with ADA-compliant curb ramps and pedestrian-activated flashing beacons (RRFB) from the south corner of NW 10th Ave across Eagle Creek Rd. (City of Estacada)

c. Install new stop sign pole at correct height at Eagle Creek Rd. (City of Estacada)

d. Trim bushes and trees obscuring signs and blocking sidewalk along the north and south sides of NW 10th Ave between SW Wade St and N Broadway St. (City of Estacada)

### 5. NE 6th Avenue

NE 6th Ave is the closest and busiest collector street near River Mill Elementary. Students who live in one of the many neighborhoods south of the school have to walk along and cross NE 6th Ave. There are two main
crossings. The closest to the school is the 4-way intersection at NE 6th Ave and N Broadway St. This crossing includes faded crosswalks on the south and east legs of the intersection. N Broadway St has stop signs, but NE 6th Ave does not. At the three-way intersection at NE 6th Ave and NE Main St there are stop signs on all legs, but no crosswalk across NE 6th Ave on either corner. The curb radius on the west side of NE Main St is large and has an irregular curb cut that is sometimes used as an entrance to the parking lot on the corner.

The sidewalks on NE 6th Ave are incomplete between N Broadway St and NW Wade St.

RECOMMENDATIONS

a. Add a stop sign and flashing beacon at the east leg of NE 6th Ave and N Broadway St and a stop sign at the west leg. (City of Estacada)
b. Stripe a crosswalk at the west leg of NE 6th Ave at NE Main St, reduce the curb radius and clarify access issues on the southwestern corner of NE 6th Ave and NE Main St. (City of Estacada)
c. Complete sidewalks along NE 6th Ave between N Broadway St and NW Wade St. (City of Estacada)
d. Add protected bike facilities from NW Wade St to NE Cemetery Rd. (City of Estacada)
Cost Estimates

Table 1 summarizes recommendations for River Mill Elementary School, provides order-of-magnitude cost estimates, and places the projects in priority tiers.

**Table 1. River Mill Elementary School Recommended Improvements**

<table>
<thead>
<tr>
<th>RECOMMENDATIONS</th>
<th>LEAD AGENCY</th>
<th>PLANNING – LEVEL COST</th>
<th>PRIORITY</th>
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<tbody>
<tr>
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<td>Estacada School District</td>
<td>$$</td>
<td>High</td>
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<tr>
<td>b. Replace bike parking with modern racks.</td>
<td>Estacada School District</td>
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<td>c. Move bus loading (except the special education bus) to 8th St and use both lanes in front of the school to load students.</td>
<td>River Mill Elementary</td>
<td>$</td>
<td>Medium</td>
</tr>
<tr>
<td>d. Build approx. 268 feet of sidewalk on the east side of N Broadway St north along the school’s property to connect with the Campanella Estates development.</td>
<td>Estacada School District/ City of Estacada</td>
<td>$$$</td>
<td>Low</td>
</tr>
<tr>
<td>e. Add a stop sign at the southbound secondary parking lot exit onto N Broadway St.</td>
<td>Estacada School District</td>
<td>$</td>
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<tr>
<td><strong>2. N Broadway Street</strong></td>
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<tr>
<td>a. Install a crosswalk and ADA-compliant curb ramps across N Broadway St connecting to the south corner of NW 10th Ave.</td>
<td>City of Estacada</td>
<td>$$</td>
<td>High</td>
</tr>
<tr>
<td>b. Add Neighborhood Greenway signs and pavement markings on N Broadway St from NE 6th Ave to NW 10th Ave and into the new subdivision.</td>
<td>City of Estacada</td>
<td>$$</td>
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<tr>
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<td>Estacada School District</td>
<td>$</td>
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<td><strong>4. NW 10th Avenue</strong></td>
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<tr>
<td>a. Construct approx. 118 feet of sidewalks on the south side of NW 10th Ave to fill the gap east of Eagle Creek Rd.</td>
<td>City of Estacada</td>
<td>$$</td>
<td>High</td>
</tr>
<tr>
<td>b. Install a crosswalk with ADA-compliant curb ramps and pedestrian-activated Flashing Beacons (RRFB) from the south corner of NW 10th Ave across Eagle Creek Rd.</td>
<td>City of Estacada</td>
<td>$$</td>
<td>High</td>
</tr>
<tr>
<td>c. Install new stop sign pole at correct height at Eagle Creek Rd.</td>
<td>City of Estacada</td>
<td>$</td>
<td>Medium</td>
</tr>
<tr>
<td>d. Trim bushes and trees obscuring signs and blocking sidewalk along the north and south sides</td>
<td>City of Estacada</td>
<td>$</td>
<td>Medium</td>
</tr>
</tbody>
</table>
### 5. NE 6th Avenue

<table>
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<tr>
<th>RECOMMENDATIONS</th>
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</thead>
<tbody>
<tr>
<td>of NW 10th Ave between SW Wade St and N Broadway St.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>a. Add a stop sign and flashing beacon at the east leg of NE 6th Ave and N Broadway St and a stop sign at the west leg.</td>
<td>City of Estacada</td>
<td>$$</td>
<td>Medium</td>
</tr>
<tr>
<td>b. Stripe a crosswalk at the west leg of NE 6th Ave at NE Main St, reduce the curb radius and clarify access issues on the southwestern corner of NE 6th Ave and NE Main St.</td>
<td>City of Estacada</td>
<td>$$$</td>
<td>Medium</td>
</tr>
<tr>
<td>c. Complete sidewalks along the south side of NE 6th Ave between N Broadway St and NW Wade St.</td>
<td>City of Estacada</td>
<td>$$$</td>
<td>Medium</td>
</tr>
<tr>
<td>d. Add protected bike facilities from NW Wade St to NE Cemetery Rd.</td>
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<td>$$$</td>
<td>Medium</td>
</tr>
</tbody>
</table>
Figure 3. River Mill Elementary School Improvements Map
Figure 2: River Mill Elementary Suggested Route Map
Programmatic Recommendations

Programmatic activities and events complement infrastructure improvements by empowering students and their families to try walking and bicycling, and by making it safer for them to do so.

River Mill Elementary School currently promotes transportation safety by sending information to parents about student drop-off and pick-up patterns, as well as reminders about driving safely. Additionally, the school promotes walking and bicycling through participation in the annual Walk + Bike to School Day.

The activities below are recommended for River Mill Elementary School to improve and promote safe walking and bicycling to and from school and in the community. They can be implemented by school administrators, teachers, parents, or even school clubs.

Education Programs

BICYCLE AND PEDESTRIAN SAFETY EDUCATION

Pedestrian and bicycle safety education teaches students basic traffic laws and safety rules.

Resources and best practice programs for elementary school students include:

- The Street Trust’s SRTS Curriculum includes a flexible in-class and on-bike curriculum and pedestrian safety lesson plans.
- Oregon SRTS provides classes and train-the-trainer programs. Oregon-based service providers are listed at: www.oregonsaferoutes.org/bike-ed-service-providers
- The National Highway Traffic Safety Administration offers a child pedestrian safety curriculum and Cycling Skills Clinic Guide to help organizations plan bike safety skills events.
- The Girls in Gear curriculum is a girls-specific bicycling program designed to empower adolescent girls by creating self-reliance and building confidence. It is also the first program to creatively integrate STEM — Science, Technology, Engineering and Mathematics — activities, physical exercise and nutrition education by way of the bicycle.

PARENT EDUCATION AND OUTREACH

Parents are the primary decision-makers about how their children get to school. Informing parents about their options for walking and bicycling, as well as communicating the benefits of active transportation,
can encourage more families to walk and bike. This can occur through school e-news or announcements, and other informational resources. Suggested route maps can show parents the best walking or biking route to the school, overcoming concerns about barriers.

Resources and best practice programs:

- Oregon SRTS provides materials, handouts, and theme ideas for Monthly Walk and Bike events as well as Back to School messages.
- The National Center for SRTS has several tip sheets for parents on safe walking and bicycling behaviors.

**Encouragement Programs**

**WALK + BIKE TO SCHOOL CHALLENGE**

The Oregon Walk + Bike to School Challenge celebrates students walking and bicycling to school. International Walk to School Day is held the first Wednesday in October and Bike to School Day takes place the second week in May. Parents can set up a table on the event day to provide refreshments and small rewards for families who participate, as well as maps, lights, and safety information to encourage more students and families to join in the fun.

Even families who live too far from school to walk and bike can participate by driving to a designated central location and walking together from there. Coffee and breakfast can be provided, and students can dress up or hold posters to make a fun, parent-supervised parade to school.

Resources and best practices:

- Schools in Oregon can order incentives to support and promote Walk + Bike Challenge Day and Month.
- Walk Bike to School suggests event ideas and planning resources for encouraging active transportation at schools.
- The National Center for SRTS maintains a national database of walk and bike to school day events as well as event ideas and planning resources.

**STUDENT CLUBS AND YOUTH LEADERSHIP PROGRAMS**

Clubs and leadership programs allow older students to form groups to support the causes they care about most. Older elementary school student clubs can host Walk + Bike Challenge events, organize a competition, or work with their peers to promote walking and bicycling. Student clubs can offer excellent ideas, and provide exceptional energy and drive to get things done.

Resources and best practice programs:
Marin County SRTS’s Teens Go Green program partners with teens interested in the environment to bring reduced CO2 and healthy lifestyles to their schools.

- Create a cycling league or club. Leagues can introduce student riders to the sport of mountain biking or road racing, with a focus on skills, fun, fitness, and responsibility.

**Enforcement Programs**

**AAA SCHOOL SAFETY PATROL**

Older elementary school student volunteers can sign-up to become a certified AAA School Safety Patroller. With support and leadership from school faculty and parents, student patrollers help fellow students develop a better understanding of pedestrian and vehicular traffic hazards.

Resources and best practice programs:

- AAA has School Safety Patrol membership information and descriptions of student, teacher, and parent roles.
Action Plan for Clackamas River Elementary School

Principal: Amy Hudson
Grades: K-6
Enrollment: 585
Address: 301 NE 2nd Avenue

First bell: 7:55 a.m.
Last bell: 2:15 p.m.

This Action Plan summarizes existing conditions, observations, and recommended improvements and programs for Clackamas River Elementary School. Safe Routes to School (SRTS) walk audits were conducted on May 1 and May 9, 2017. A summary map on Page 11 illustrates the audit location, area characteristics, and locations of infrastructure recommendations.

This Action Plan supports the county-wide SRTS efforts of Clackamas County. For more information on the program, visit: www.clackamas.us/engineering/srts.html

What is Safe Routes to School (SRTS)?

SRTS is a comprehensive program to make school communities safer by combining engineering tools and enforcement with education about safety and activities to enable and encourage students to walk and bicycle to school. SRTS programs typically involve partnerships among municipalities, school districts, community members, parent volunteers, and law enforcement.

Although most students in the United States walked or biked to school before the 1980s, the number of students walking or bicycling to school since has sharply declined in both urban and rural areas.

The benefits of implementing a SRTS plan are far-reaching and include improving safety, encouraging physical activity, and reducing traffic congestion and motor vehicle emissions near schools. Implementing SRTS programs and projects benefit adjacent neighborhoods as well as students and their families.

Clackamas County SRTS’s Program Handbook outlines activities and local resources that school and community members can use to encourage walking and biking and promote traffic safety in school areas. See www.clackamas.us/engineering/srts.html for more information.
Why Safe Routes to School for Clackamas County?

Within the span of one generation, the percentage of children walking or bicycling to school has dropped to 13%.

Roads near schools are congested, decreasing safety and air quality.

1969 48% 2009 13%

- Fewer students walking & biking to school
- More parents driving children to school
- Rising concerns about safety of walking & biking
- Increased traffic at and around school

This movement away from active transportation is a self-perpetuating cycle.

SRTS education & encouragement programs can result in a 25% increase in walking and biking over 5 years.

A comprehensive SRTS program addresses reductions in walking and biking through a multi-pronged approach that uses education, encouragement, engineering and enforcement efforts to develop attitudes, behaviors, and physical infrastructure that improve the walking and biking environment.

SRTS programs provide many benefits for communities!

- Healthy Living
- Less Traffic
- Better Educational Achievement
- Increased Social Interactions
- Cleaner Air and Water
- Cost-Effective
How Do Students Get to School Now?

As part of the Clackamas SRTS program, Clackamas River Elementary families participated in student hand tallies and parent surveys in spring 2017.

Student Hand Tallies

Hand tallies are a standard way of tracking the different ways (modes) students used to get to school. Students are asked how they travelled to and from school over a 2-3 day period. Students raise their hand when the mode they took is called out, and the teacher or a volunteer records the findings.

Figure 1 shows the results of the spring 2017 hand tallies. Most students are driven in the family vehicle to Clackamas River Elementary (62 percent) and take the school bus home (48 percent). A small number of students also walk, carpool, or bus to and from school.

![Bar Chart](chart.png)

Figure 1. May 2017 Student Hand Tally Results, Morning and Afternoon Mode Split

Tracking the change in mode over time can indicate how successful the SRTS program is at addressing concerns and promoting walking and bicycling. Resources and best practice programs for conducting hand tallies include:

- The Oregon SRTS website provides [evaluation resources](https://www.srtp.oregon.gov/).  
- The [National Center for SRTS](https://www.srtp.org/) has forms, data collection guidelines, data center, and automatically-generated reports.
Parent Surveys

Parent surveys also ask questions about the barriers to walking or biking to/from school, how children travel to and from school, health information, and/or perception of crime and other social behaviors.

The Clackamas SRTS program collected 25 parent surveys in March 2017, primarily from families with children in 3rd and 5th grades. Most respondents live more than two miles from the school (9 respondents). Of the respondents, the majority drive alone in the family vehicle for both morning and afternoon commutes (16 and 10 respondents respectively), with a small number taking the school bus, walking, carpooling, or biking.

Figure 2 shows the main barriers for the parents of students who did not walk or bike. Most of the barriers are related to transportation issues: speed of traffic (7 respondents), amount of traffic along the route (6 respondents), the safety of intersections and crossings (5 respondents). These findings indicate that there is potential for promoting walking and biking by addressing traffic safety barriers.

![Figure 2. December 2016 Parent Survey Responses for Issues Reported to Affect the Decision Not to Allow A Child to Walk/Bike to/from School (for parents of children who did not walk/bike to/from school)](image)

Resources and best practice programs for conducting parent surveys include:

- The Oregon SRTS website provides [evaluation resources](#).
- The [National Center for SRTS](#) has forms, data collection guidelines, and data center.
Walk Audit Summary

Walk Audit Date: May 1 and May 9, 2017  Meeting Time: May 1 at 7:30 a.m. and May 9 at 2:30 p.m.
Day of Week: Monday and Tuesday  Weather: 46 degrees, mostly to partly cloudy
Attendees:
  • Nicole Perry, The Street Trust
  • Lori Mastrantonio, Clackamas County
  • Sadie Main, City of Estacada
  • Scott Hoelscher, Clackamas County
  • Christian Snuffin, Clackamas County
  • Mallorie McDowell, Clackamas County

Existing Conditions

School Layout

The school is located in an older neighborhood with intermittent sidewalks. The main student entrance to the school is along NE 2nd Avenue. A paved walkway at the center of the parking lot provides access to the school building. Students can also enter and are dismissed by grade level through the exits on the west side of the school building at NE Main Street.

Estacada Middle School is located directly north of Clackamas River and both schools share sports fields.

SITE CIRCULATION

Vehicles: Student drop-offs and pick-ups occur via loop driveway in the parking lot at NE 2nd Avenue and along NE Main Street and cause congestion around the first bell at 7:55 a.m. and dismissal at 2:30 p.m. but are generally efficient.

School Buses: Buses load and unload students in a separate lane in the parking lot.

Pedestrians: There are pedestrians coming from NE Pierce Street, NE 2nd Avenue, and NE Main Street. There is a crossing attendant on NE Main Street who arrives around 7:30 a.m. Pedestrian traffic is a mix of elementary, middle, and high school students and some were observed walking with an adult.

Bicyclists: There are no bike lanes surrounding the school. Bike parking is provided at the school’s front entrance.
Walk Audit Observations and Infrastructure Recommendations

Key locations are described below, including issues identified during audit observations and discussions. Project numbering refers to the Improvements Map on page 11. The organization responsible for implementing each recommendation is in parentheses (i.e., City of Estacada or Estacada School District).

1. School Parking Lot and Grounds

The circulation on school grounds currently operates well, with separate bus drop-off and boarding zones and a crossing guard on NE Main Street at NE 2nd Avenue.

RECOMMENDATIONS

a. Repaint existing crosswalks at the east and west ends of the loop driveway at NE 2nd Avenue (District).
b. Repaint school grounds crosswalks at the driveway crossings on NE Pierce Street and near the driveway entrance at the east corner of the parking lot (District).
c. Replace “School Bus Only” signs located along interior driveway south of school building - one sign faded; one sign turned wrong direction (District).
d. Upgrade bike parking racks (District).

2. NE 2nd Avenue

The main traffic flow occurs on NE 2nd Avenue, where drivers turn into the school parking lot. This is a high-traffic area for cars and pedestrians, which could benefit from several improvements to increase comfort level for people walking near the school.

Several families were observed crossing mid-block, which could be remedied by formalizing a crosswalk at NE Currin Street. However, the south side of NE 2nd Avenue lacks sidewalks, ADA-compliant curb ramps, and appropriate signage. These elements are important for people with bicycles, strollers, and mobility assistive devices.

RECOMMENDATIONS

a. Construct sidewalk on south side of NE 2nd Avenue from alley between NE Pierce Street and NE Currin Street to NE Main Street (City).
b. Formalize an intersection at NE Currin Street: construct curb ramps and curb extensions, and install appropriate signage (City).
c. Install crosswalk at the intersection of NE Currin Street and NE 2nd Avenue (City).
3. NE Main Street
Several grade levels are dismissed on the side of the school located at NE Main Street. Pedestrian and vehicle traffic is heaviest here in the afternoon. Cars are regularly parked on both sides of the street here outside of drop-off and pick-up times. TriMet bus 30 stops at NE Main and NW 3rd Avenue. Signs for the school zone are outdated and could be confusing for people driving in this area.

RECOMMENDATIONS
a. Upgrade school zone signage to current ODOT standards (City).

4. NE Pierce Street
There is heavy pedestrian activity and drop-offs on NE Pierce Street. The absence of sidewalks and poorly visible crosswalk present safety issues for students walking in this area.

RECOMMENDATIONS
a. Construct sidewalks on the east side of NE Pierce Street from the residence at 457 NE 2nd Avenue to NE 6th Avenue (City).
b. Establish “no parking” zones (City).

5. NE Currin Street
As mentioned earlier, there is a natural crossing at the intersection at NE Currin Street and NE 2nd Avenue, and upgrades are needed to formalize this intersection. Mid-block crossings are frequently observed here.

RECOMMENDATIONS
a. Construct sidewalk on west side of NE Currin Street between NE 2nd Avenue and E 1st Avenue (City).
b. Construct infill sidewalk on east side of NE Currin Street between NE 2nd Avenue and E 1st Avenue (City).

6. NE Shafford Avenue
Traffic speeds are relatively low here compared to other streets. Sidewalks are absent, and cars park on the gravel along the road.

RECOMMENDATIONS
a. Construct sidewalks from NE 6th Avenue to NE 1st Avenue (City).
7. Cemetery Road

Sidewalks are only present on the west side of NE Cemetery Road. The backyards of homes line the opposite side of the street where there are no sidewalks.

RECOMMENDATIONS

a. Construct a new crosswalk at NE Foothills Drive (City).

Cost Estimates

Table 1 summarizes recommendations for Clackamas River Elementary School, provides order-of-magnitude cost estimates, and places the projects in priority tiers. Error! Reference source not found. on the following page shows the locations of the recommendations. Figure 4 on page 12 shows the Suggested Route Map, which can be shared with parents at the start of the school year along with the walking and biking tips.

<table>
<thead>
<tr>
<th>RECOMMENDATIONS</th>
<th>LEAD AGENCY</th>
<th>PLANNING – LEVEL COST</th>
<th>PRIORITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 1. School Parking Lot and Grounds</td>
<td></td>
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</tr>
<tr>
<td>a. Repaint existing crosswalks at the east and west ends of the loop driveway at NE 2nd Avenue.</td>
<td>District</td>
<td>$</td>
<td>High</td>
</tr>
<tr>
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<td>$</td>
<td>Low</td>
</tr>
<tr>
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<td>District</td>
<td>$</td>
<td>Low</td>
</tr>
<tr>
<td>2. NE 2nd Avenue</td>
<td></td>
<td></td>
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<tr>
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<td>City</td>
<td>$$$</td>
<td>High</td>
</tr>
<tr>
<td>b. Formalize an intersection at NE Currin Street: construct curb ramps and curb extensions, install and appropriate signage.</td>
<td>City</td>
<td>$$</td>
<td>High</td>
</tr>
<tr>
<td>c. Install crosswalk at intersection with NE Currin Street.</td>
<td>City</td>
<td>$</td>
<td>Medium</td>
</tr>
<tr>
<td>3. NE Main Street</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Upgrade school zone signage to current ODOT standards.</td>
<td>City</td>
<td>$</td>
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</tr>
<tr>
<td>4. NE Pierce Street</td>
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</tr>
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| a. Construct sidewalk on west side of NE Currin Street between NE 2nd Avenue and E 1st Avenue. | City        | $$$                   | Low      |
| b. Construct infill sidewalk on east side of NE Currin Street between NE 2nd Avenue and E 1st Avenue. | District    | $                     | High     |

6. NE Shafford Avenue

| a. Construct sidewalks from NE 6th Avenue to NE 1st Avenue. | City        | $$$                   | High     |

7. Cemetery Road

| a. Construct a new crosswalk at NE Foothills Drive. | City        | $                     | Medium   |
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Figure 3. Clackamas River Elementary School Improvements Map
HOW TO USE THIS MAP: This suggested route to school map is intended to encourage adults and students to consider walking or bicycling to school. Adults are responsible for choosing the most appropriate option based on their knowledge of the different routes.

Figure 4. Clackamas River Suggested Route Map
Be Safe Walking, Biking, & Driving in School Areas

Safety Tips for Walking

USE THE CROSSWALK
Always cross at corners or at a marked crosswalk. This is where drivers expect to see you.

LOOK BEFORE YOU CROSS
Look left, right, and left again before crossing a street or driveway. Look over your shoulder for turning cars, especially at intersections.

MAKE EYE CONTACT
Don't assume that drivers see you. Make eye contact with drivers before stepping off of the sidewalk.

BE VISIBLE
Wear reflective or bright-colored clothing when it’s dark and walk with one or more buddies.

FOLLOW THE RULES
Follow directions from crossing guards and pay attention to traffic signs and signals.

Safety Tips for Driving

RESPECT THE ZONE
Slow down in school zones. The safe speed may be less than 25 MPH. Set a good example by following instructions from crossing guards.

BRAKE FOR PEOPLE WALKING
Stop for people in crosswalks and at unmarked intersections. Look and stop for children who may be crossing mid-block, too.

BE AWARE AND ALERT
Set aside distractions like texting, phone calls, or eating while driving, and keep an eye out for the unexpected.

GO WITH THE FLOW
Follow your school's drop-off and pick-up procedures. Pull to the curb rather than letting children out in the street. Avoid unsafe maneuvers, such as mid-block U-turns or stopping in a crosswalk.

RESPECT THE NEIGHBORHOOD
Park in legal spaces and don't double park or block driveways.

Safety Tips for Biking

BE PREDICTABLE
Obey all stop signs, traffic signals, and guidance from crossing guards. Never ride against traffic.

BE ALERT
Watch out for drivers turning left or right, or coming out of driveways. Avoid car doors opening in front of you and yield to pedestrians.

WEAR YOUR HELMET
Make sure that it fits properly: snug and level on your head, just above your eyebrows.

MAKE EYE CONTACT
Make sure drivers see you, especially at intersections and driveways.
**Programmatic Recommendations**

Programmatic activities and events complement infrastructure improvements by empowering students and their families to try walking and bicycling, and by making it safer for them to do so. The activities below are recommended for Clackamas River Elementary School to improve and promote safe walking and bicycling to and from school and in the community. They can be implemented by school administrators, teachers, parents or even school clubs.

**Education Programs**

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Parents are the primary decision-makers about how their children get to school. Informing parents about their options for walking and bicycling, as well as communicating the benefits of active transportation, can encourage more families to walk and bike. This can occur through school e-news or announcements, and other informational resources. Suggested route maps can show parents the best walking or biking route to the school, overcoming concerns about barriers.

Resources and best practice programs:
♦ Oregon SRTS provides materials, handouts, and theme ideas for Monthly Walk and Bike events as well as Back to School messages.
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Older elementary school student volunteers can sign-up to become a certified AAA School Safety Patroller. With support and leadership from school faculty and parents, student patrollers help fellow students develop a better understanding of pedestrian and vehicular traffic hazards.

Resources and best practice programs:

- AAA has School Safety Patrol membership information and descriptions of student, teacher, and parent roles.
Open House Meeting #1 Summary
Estacada Active Transportation Plan
Open House Meeting #1 Summary

Meeting Date: November 28, 2017
Meeting Time: 5:30 p.m. to 7:30 p.m.
Meeting Location: Estacada City Hall, 475 SE Main St., Estacada, OR 97023

The project team held an open house to provide a public introduction to the Active Transportation Plan (ATP) project and solicit public input on the findings describing existing conditions, suggested opportunity routes, and their proposed facility types in Estacada.

Attendance
The event was promoted through the City website and City newsletter (a copy of the information flyer is attached). There were members of the public in attendance during the entirety of the event, which included significant interaction between event attendees and the project team. The sign in sheet included 56 members of the public and three members of the Public Advisory Committee (PAC). Several written surveys (21) were filled out and returned during the event, and 75 people submitted feedback through a similar online survey following the event.

Informational Posters
The major findings regarding the identified opportunity routes and their proposed facility types were summarized into 12 informational posters. Images of these posters are attached at the end of this summary. Members of the public were encouraged to read through these at their own pace, and project team members engaged the public to answer questions and foster additional discussion. The posters included:

1. Welcome and Introduction to ATP Process
2. Community Values for the ATP
3. Existing Conditions
4. Opportunity Routes
5. Opportunity Route 1a/b: SW Lakeshore Drive Route and Milo McIver to Downtown Route
6. Opportunity Route 2: SE 4th Avenue/SE Regan Hill Route
7. Opportunity Route 3: NE Pierce Street/NE Cemetery Road Route
8. Opportunity Route 4: Milo McIver State Park Route
9. Opportunity Route 5: North City Route
10. Opportunity Route 6: Downtown/Central City Loop
11. Opportunity Route 7: Highway 211-224 Route
12. Opportunity Route 8a/b: NW Wade Street and NE Main Street Routes
Public Feedback
During the event, in addition to the comment forms, the public was encouraged to write comments directly onto the posters. Members of the project team also recorded comments that came up during the introduction of the project and during conversations that occurred surrounding the posters.

Major themes expressed in the public feedback are summarized below. See attachment for a complete listing of comments received.

Community Values for ATP: using stickers, the public selected the key criteria for active transportation projects that were most important to them.

- The top-ranking criteria included, addressing challenging street crossings, and filling network gaps (with an emphasis around the schools).
- The remaining criteria received minimal support with very few stickers.

Opportunity Route 1a/b: SW Lakeshore Drive Route and Milo McIver to Downtown Route

- Supportive of upgrades to the recreational path (Lakeshore Drive Route).
- Do not remove parking on SW 2nd Avenue (Milo McIver to Downtown Route).

Opportunity Route 2: SE 4th Avenue/SE Regan Hill Route

- There is a need to complete the sidewalks along this route.
- Biking improvements are not recommended due to steep grade and lack of bicyclists.

Opportunity Route 3: NE Pierce Street/NE Cemetery Road Route

- The public was supportive of the pedestrian facility upgrades and the safer environment this route will create for children walking/biking to school.
• Concerns with the steep grade on Cemetery Road.

**Opportunity Route 4: Milo McIver State Park Route**

• This route was highly supported by the community.

**Opportunity Route 5: North City Route**

• This route was highly supported by the community.
• There was an identified need to complete the sidewalks and enhance the crossings along this route.

**Opportunity Route 6: Downtown/Central City Loop**

• The community was not supportive of this route. However, they did identify the need to complete the sidewalks and provide ADA accessibility.

**Opportunity Route 7: Highway 211-224 Route**

• The proposal to reduce the number of lanes on Highway 211-224 was not well supported.
• Highway crossings need to be enhanced.

**Opportunity Route 8a/b: NW Wade Street and NE Main Street Routes**

• There is a need to complete/repair the sidewalks along this route.
• Support for this route was mixed.

**Other Comments:**

• There is a need to complete/repair the sidewalks (ADA compliant) throughout the city.
• Highway crossings and other identified crossings need to be enhanced.
• The road diet is not supported.
Join us: Nov. 28, 2017

Estacada Active Transportation Plan Open House

OR Respond Online to Survey

What is Active Transportation?
When people transport themselves under their own power, such as walking or biking, we call it Active Transportation. The City of Estacada is now developing an Active Transportation Plan (ATP) to supplement the City’s overall Transportation System Plan.

1 mile of walking each way = 2/3 of the daily recommended 60 minutes of physical activity

Get involved and tell us what you think

Key topics to be discussed:

- Proposed key walking and biking routes that connect places of interest and provide recreational opportunities
- Proposed facility types by route to key destinations to make using those routes a great experience.
- Your ideas to improve conditions for walking, biking, and access to public transit.

"We need to plan for safe, walking and biking options for future generations while also working to build cycling tourism for our local economy."

Denise Carey, City Manager

When: Please join us at the
Open House #1
November 28, 2017
5:30 PM – 7:30 PM

Where: Estacada City Hall
475 SE Main Street
Estacada, OR 97023

Respond Online: You can view all open house materials and provide comments online from November 29 through Dec. 12 at cityofestacada.org.

City Hall is ADA accessible. Please let us know in advance if you need any special accommodations to attend the meeting (see contact info below).

Los documentos del proyecto pueden ser traducidos al espanol bajo peticion.

Your input will help guide the project team through the next phase - to develop a set of recommended projects and programs to improve transportation options and support active, healthy living in Estacada.

Open House #2 will follow in spring 2018 so the community can discuss and improve on these recommendations.

For more information or to request special accommodations, contact: Melanie Wagner,
City of Estacada 503-630-8270 x203,
wagner@cityofestacada.org
Welcome!
Estacada Active Transportation Plan Open House

November 28, 2017

What is Active Transportation?

When people transport themselves under their own power, such as walking or biking, we call it Active Transportation. The City of Estacada is now developing an Active Transportation Plan (ATP) to supplement the City’s overall Transportation System Plan. The ATP will include the identification of key walking and biking routes that support safe routes to schools, routes to the downtown and riverside area, connections to public transit, and integration with regional recreational opportunities. The adoption of the ATP will help the City secure federal and state funding to turn the plan into reality.

Purpose of today’s Open House

Having completed the evaluation of Estacada’s active transportation system performance and needs, the project team would like to share our findings with you and get your input. Please take some time to view the open house materials posted around the room and fill out a survey to share your thoughts. Project staff are available to answer any questions and discuss your ideas. Key topics to be discussed:

• Proposed key walking and biking routes that connect places of interest and provide recreational opportunities.

• Proposed facility types, by route, to key destinations to make using those routes a great experience.

• Your ideas to improve conditions for walking, biking, and access to public transit.

Where we are in the process

The project team is just completing the “Understand” phase of the ATP (see project schedule). This included the development of opportunities to strengthen the City’s active transportation system with the Technical and Public Advisory Committees, an evaluation of the current active transportation system, and an assessment of potential facility improvement types.

Following this Open House, we’ll begin the development of recommended solutions for addressing Estacada’s active transportation needs. The draft recommendations will be shared at a second Open House in the Spring of 2018.

How to stay involved

• Respond Online: View all open house materials and provide comments online from November 29 – December 12 at www.cityofestacada.org

• Fill out survey at the Open House

• Visit www.cityofestacada.org to provide comments anytime and review project documents

• Contact the City Project Manager, Melanie Wagner for more information – (503) 630-8270 x203; wagner@cityofestacada.org

¿Necesita traducción al español?

Para solicitar información del proyecto en español, utilice el formulario para contactar al equipo en www.cityofestacada.org o póngase en contacto con Melanie Wagner en la ciudad de Estacada – (503) 630-8270 x203; wagner@cityofestacada.org
Community Values for Active Transportation

The project team developed the following criteria to improve the active transportation system and guide solution recommendations for the Estacada Active Transportation Plan. The project criteria have been discussed with the Technical and Public Advisory Committees and will be used to select and prioritize projects in the final Plan.

Using the stickers you received upon arrival, please select the key criteria for active transportation projects that are most important to you.

<table>
<thead>
<tr>
<th>Key Criteria for Active Transportation Projects</th>
<th>Place Sticker Next to Most Important Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility connects to major local destinations (parks, transit stops, activity centers)</td>
<td></td>
</tr>
<tr>
<td>Addresses challenging street crossings</td>
<td></td>
</tr>
<tr>
<td>Supports neighborhood connections to schools</td>
<td></td>
</tr>
<tr>
<td>Filling network gaps (e.g., incomplete sidewalks)</td>
<td></td>
</tr>
<tr>
<td>Lessens exposure to high vehicular traffic speeds and volumes</td>
<td></td>
</tr>
<tr>
<td>Serves a wide range of users (e.g., ages, abilities)</td>
<td></td>
</tr>
<tr>
<td>Additional property is not required or is available and avoids impacting natural resources</td>
<td></td>
</tr>
<tr>
<td>Feasibility (ability to construct and reasonable cost considering benefits provided)</td>
<td></td>
</tr>
<tr>
<td>Improves regional connections and tourism opportunities</td>
<td></td>
</tr>
</tbody>
</table>
Existing Conditions

With its acres of forest and miles of river, Estacada is a well-known destination for great active transportation and other outdoor recreation opportunities. However, to continue the promotion of active transportation several areas for improvement have been identified. Key deficiencies are called out in the map below. Please use the survey to let us know your highest priority locations for improvement.
Opportunity Routes

Based on the existing conditions, ten opportunity routes were identified to represent the primary active transportation corridors within the city of Estacada. Improvements along these routes will help to connect the city and aid Estacada’s endeavor to become a healthy and active community. The opportunity routes are shown below. Please use the survey to identify the opportunity routes that are most important to you.
1a/b. SW Lakeshore Drive Route and Milo McIver to Downtown Route

Benefits

- Provides the residents of Estacada with a safe walking and bicycling route:
  - connecting from the downtown,
  - across Highway 211-224,
  - and to the recreational opportunities located along the riverfront (i.e. Timber Park and Lakeshore Trail).

Facility Types: Below are recommendations for enhanced walking and biking facilities for the above opportunity routes. Refer to the Facility Types Section of your packet for more details.

A. Separated Bike Lanes
- Two-way or one-way physically separated bike lanes (parking along SW 2nd Avenue will need to be removed)
- Separation from traffic is recommended due to the high motor vehicle volumes

C. Shared Use Path
- Provides bicyclists and pedestrians a safe and efficient path separate from motor vehicle traffic
- Improving and expanding the existing and proposed trail

D. Shared Roadway
- A shared roadway with designated shared lanes or sharrow markings and signage
- Sharrows are used to indicate shared lane environments for bicycles and motor vehicles with minimal impact

F. Enhanced Crossing
- Help pedestrians and bicyclists cross the five-lane highway safely
- Pedestrian Hybrid Beacon (PHB) to be considered

H. Sidewalk Infill
- Missing sidewalk segments along both routes will be addressed to complete the corridor (discussion will occur in later work)

Please use the survey to give us feedback on Route 1 a/b.
2. SE 4th Avenue/SE Regan Hill Route

Benefits

- Connects residential areas in eastern Estacada to the schools and the downtown.
- Two facility types were considered due to the steep hill along SE 4th Avenue.

Facility Types: Below are recommendations for enhanced walking and biking facilities for the above opportunity route. Refer to the Facility Types Section of your packet for more details.

D Shared Roadway
- A shared roadway along the westbound (downhill) lane with designated shared lanes or sharrow markings and signage
- Sharrows are used to indicate shared lane environments for bicycles and motor vehicles with minimal impact

E Bike Lane
- Designates exclusive space for bicyclists (options: bike lanes on one side, or bike lanes on both sides of the route)
- Separates bicyclists from motor vehicle traffic through the use of pavement markings and signs

H Sidewalk Infill
- Missing sidewalk segments along the entire route will be addressed to complete the corridor (discussion will occur in later work)

Please use the survey to give us feedback on Route 2.
3. NE Pierce Street/NE Cemetery Road Route

Benefits

- Connects residential areas to the north/northeast to the schools and the downtown.
- Two options considered: separated bike lanes versus conventional bike lanes, and a bike boulevard versus a shared roadway.
- Widening considerations will need to be made for the street bridge along NE 8th Avenue between NE Pierce Street and NE Cemetery Road.

Facility Types: Below are recommendations for enhanced walking and biking facilities for the above opportunity route. Refer to the Facility Types Section of your packet for more details.

A. Separated Bike Lanes
   - Two-way physically separated bike lane
   - Separation from traffic is recommended due to the high motor vehicle volumes, especially near the schools

B. Bicycle Boulevard
   - Street modifications to enhance bicycle safety and comfort
   - Design treatments include: signage, pavement markings, volume/speed reduction features, and crossing improvements

C. Shared Roadway
   - A shared roadway with designated shared lanes or sharrow markings and signage
   - Sharrow indicate shared lane environments for bicyclists

D. Bike Lane
   - Designates an exclusive space for bicyclists and separates them from motor vehicle traffic
   - Separated using pavement markings and signage

H. Sidewalk Infill
   - Missing sidewalk segments along the entire route will be addressed to complete the corridor (discussion will occur in later work)

Please use the survey to give us feedback on Route 3.
4. Milo McIver State Park Route

Benefits

- Creates a comfortable and convenient connection between the recreational site and the city with a new bike and pedestrian bridge over the Clackamas River.
- When paired with the Milo McIver to Downtown Route (Route 1a), a walking trip between the State Park and the downtown commercial district could be made significantly faster and with increased safety.

Facility Types: Below are recommendations for enhanced walking and biking facilities for the above opportunity route. Refer to the Facility Types Section of your packet for more details.

**C** Shared Use Path

- Provides bicyclists and pedestrians a safe and efficient path separate from motor vehicle traffic
- Improving and expanding the existing and proposed trail

**G** Bike and Pedestrian Bridge

- Provides direct access across the Clackamas River from Estacada to Milo McIver State Park

Please use the survey to give us feedback on Route 4.
5. North City Route

Benefits

- Connects the downtown network to all the other opportunity routes.
- Provides a walkable and bike-able loop route for exercise and recreation.
- Crossing enhancements will improve access and safety to the schools (SE 9th Avenue) and the industrial zone (SE River Mill Road).

Facility Types: Below are recommendations for enhanced walking and biking facilities for the above opportunity route. Refer to the Facility Types Section of your packet for more details.

A. Separated Bike Lanes
   - Two-way physically separated bike lane
   - Separation from traffic is recommended due to high motor vehicle volumes, especially near schools

F. Enhanced Crossing
   - Helps pedestrians/bicyclists cross the five-lane highway (Hwy 211-224) and high-volume roadway (near the schools) safely
   - Pedestrian Hybrid Beacon and marked crosswalk considered

H. Sidewalk Infill
   - Missing sidewalk segments along the entire route will be addressed to complete the corridor (discussion will occur in later work)

Please use the survey to give us feedback on Route 5.
6. Downtown/Central City Loop

Benefits

- Connects the downtown central core with the schools, and is a part of a network of opportunity routes linking many of Estacada’s murals.
- The route creates a loop of approximately one mile in length for exercise and recreational use.

Facility Types: Below are recommendations for enhanced walking and biking facilities for the above opportunity route. Refer to the Facility Types Section of your packet for more details.

**Bicycle Boulevard**
- Street modifications to enhance bicycle safety and comfort by encouraging the through movements of bicyclists
- Design treatments include: signage, pavement markings, volume/speed reduction features, and crossing improvements

**Shared Roadway**
- A shared roadway with designated shared lanes or sharrow markings and signage
- Sharrow are used to indicate shared lane environments for bicycles and motor vehicles with minimal impact

**Bike Lane**
- Designates an exclusive space for bicyclists and separates them from motor vehicle traffic
- Separated using pavement markings and signage

**Sidewalk Infill**
- Missing sidewalk segments along the entire route will be addressed to complete the corridor (discussion will occur in later work)

Please use the survey to give us feedback on Route 6.
7. Highway 211-224 Route

Benefits
- Hwy 211-224 carries the highest traffic volumes/speeds of any corridor and separates the downtown from the riverfront.
- Enhanced safety through crossing enhancements, sidewalk completion/improvements, and physical separation from motor vehicle traffic for bicyclists.
- Less speeding and improved crossings through the application of a "lane reduction" (removal of one travel lane in each direction extending from SW 2nd Ave to Hwy 211).

How much Traffic can the Proposed Lane Reduction along Hwy 211-224 Handle?
- Typically a highway with one lane in each direction can support an Average Daily Traffic (ADT) volume greater than 20,000 vehicles.
- Currently in Estacada, the ADT along Hwy 211-224 is 10,000 vehicles.
- The projected 2025 ADT in Estacada is approximately 15,000 vehicles.
- For Comparison: 1) Hwy 224 in Eagle Creek serves an ADT of 11,000 vehicles; 2) US 97 in La Pine was recently reduced from five lanes to three lanes and serves an ADT of 9,000 vehicles.

Facility Types: Below are recommendations for enhanced walking and biking facilities for the above opportunity route. Refer to the Facility Types Section of your packet for more details.

A. Separated Bike Lanes
  - Two one-way physically separated bike lanes
  - Separation from traffic is recommended due to high motor vehicle volumes and high vehicle speeds

F. Enhanced Crossing
  - Helps pedestrians/bicyclists cross the five-lane highway
  - Recommended crossing improvements would vary by location (three locations)

H. Sidewalk Infill
  - Missing sidewalk segments along the entire route will be addressed to complete the corridor (discussion will occur in later work)

Please use the survey to give us feedback on Route 7.
8a/b. NW Wade Street and NE Main Street Routes

Benefits

- Connects the northern portion of the city to the southern portion of the city while considering the steep hill between NW 1st Avenue and SW 2nd Avenue.
- Creates a complete pedestrian and bicycle network throughout the central portion of the city.

Facility Types: Below are recommendations for enhanced walking and biking facilities for the above opportunity routes. Refer to the Facility Types Section of your packet for more details.

B Bicycle Boulevard
- Street modifications to enhance bicycle safety and comfort by encouraging the through movements of bicyclists
- Design treatments include: signage, pavement markings, volume/speed reduction features, and crossing improvements

C Shared Use Path
- A path that would switchback on the hill and would connect to the Veterans Memorial on SW 2nd Avenue
- Provides bicyclists and pedestrians with a safe and efficient path separate from motor vehicle traffic

E Bike Lane
- Designates an exclusive space for bicyclists and separates them from motor vehicle traffic
- Separated using pavement markings and signage

H Sidewalk Infill
- Missing sidewalk segments along both routes will be addressed to complete the corridor (discussion will occur in later work)

Please use the survey to give us feedback on Route 8a/b.
Attachment: Summary of Public Feedback Received

Flip Board
Flip board comments include those written by attendees or staff during the event. Comments in brackets were added by staff for clarification.

- Consider how the River Mill Site will fit with the current plan.
- Pedestrian crossings are needed along the highway (Hwy 224-211).
  - Consider a signal at the bridge
  - Consider a signal at 2nd Avenue
  - Consider a flashing pedestrian crossing at Elm Road
  - Consider a pedestrian crossing at Currin Street
- Speed bumps are needed on Lakeshore Drive.
- Consideration for ADA ramps throughout the City, particularly around church on Broadway Street.
- Opportunity Route 4: Milo McIver State Park Route was widely accepted.
- The intersection of Shafford Avenue and SE 4th Avenue was identified as a concern and it was recommended that the [NW] corner be shaved or a mirror be added. [Intersection realignment should be considered.]

Information Poster Written Comments
These comments were written on the information boards, mainly on the maps.

- Community Values for ATP:
  - The top-ranking criteria included, addressing challenging street crossings, and filling network gaps (with an emphasis around the schools).
  - The remaining criteria received minimal support with very few stickers.
  - An additional criteria was added (ranked third in the sticker activity) to repair sidewalks around the schools.
  - No road diet.
- Existing Conditions
  - Three locations were confirmed as areas of concerns. Traffic signals were the suggested mitigation for intersections.
    - Hwy 224-211 near the North Urban Growth Boundary
    - Hwy 224-211 and River Mill Road
    - Hwy 224-211 and 2nd Avenue
  - The Highway 211-224 junction was also identified as a problem area.
Survey/Written Feedback (96 responses)

- Do you live in Estacada?
  - Yes: 78%
  - No: 22%

- Are you an employer or employee of a business within Estacada?
  - Yes: 34%
  - No: 66%

- How often do you use the following means to travel to or from work?

<table>
<thead>
<tr>
<th></th>
<th>Daily</th>
<th>1-3x per Week</th>
<th>1-3x per Month</th>
<th>Rarely/Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive</td>
<td>87%</td>
<td>7%</td>
<td>2%</td>
<td>4%</td>
</tr>
<tr>
<td>Walk</td>
<td>5%</td>
<td>8%</td>
<td>11%</td>
<td>76%</td>
</tr>
<tr>
<td>Bike</td>
<td>0%</td>
<td>0%</td>
<td>7%</td>
<td>93%</td>
</tr>
<tr>
<td>Transit</td>
<td>0%</td>
<td>1.5%</td>
<td>4.5%</td>
<td>94%</td>
</tr>
</tbody>
</table>

- How often do you use the following means to travel to or from shopping, entertainment, or recreational destinations?

<table>
<thead>
<tr>
<th></th>
<th>Daily</th>
<th>1-3x per Week</th>
<th>1-3x per Month</th>
<th>Rarely/Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive</td>
<td>71%</td>
<td>27%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>Walk</td>
<td>3%</td>
<td>13%</td>
<td>16%</td>
<td>68%</td>
</tr>
<tr>
<td>Bike</td>
<td>0%</td>
<td>2%</td>
<td>4%</td>
<td>94%</td>
</tr>
<tr>
<td>Transit</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

- How often do you use the following means to travel to or from school?

<table>
<thead>
<tr>
<th></th>
<th>Daily</th>
<th>1-3x per Week</th>
<th>1-3x per Month</th>
<th>Rarely/Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive</td>
<td>36%</td>
<td>4%</td>
<td>0%</td>
<td>60%</td>
</tr>
<tr>
<td>Walk</td>
<td>3%</td>
<td>3%</td>
<td>1%</td>
<td>93%</td>
</tr>
<tr>
<td>Bike</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
<td>99%</td>
</tr>
<tr>
<td>Transit</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

- Existing Conditions: Using the Existing Conditions map, please tell us your three highest priority locations for walking and biking improvement. What makes each location challenging for biking or walking? The most popular responses are listed below. (Percentages are based on the 79 participants who responded to this question).
  - Schools, Library, and Parks – access and sidewalk improvements are needed (24%)
  - Highway 211-224 – high vehicular speeds and difficult crossings (23%)
  - City in general – sidewalk facilities need to be improved (10%)
  - 6th Street – crossing challenges, lack of bicycle and pedestrian facilities (8%)

Estacada Active Transportation Plan
Open House Meeting #1 Summary
Page 18 of 34
• Opportunity Routes: Using the Opportunities Route map, please tell us the three routes you think are the most important for improving biking and walking in Estacada. (Percentages are based on the 63 participants who responded to this question).
  o SW Lakeshore Drive Route (19%)
  o North City Route (19%)
  o Milo McIver State Park Route (14%)

• How strongly do you support the suggested facility types for each route?

<table>
<thead>
<tr>
<th>Route 1a/b</th>
<th>Strongly Support</th>
<th>Support</th>
<th>Neutral</th>
<th>Do Not Support</th>
<th>Strongly Do Not Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route 2</td>
<td>19%</td>
<td>9%</td>
<td>9%</td>
<td>13%</td>
<td>50%</td>
</tr>
<tr>
<td>Route 3</td>
<td>8%</td>
<td>16%</td>
<td>20%</td>
<td>14%</td>
<td>42%</td>
</tr>
<tr>
<td>Route 4</td>
<td>9%</td>
<td>19%</td>
<td>24%</td>
<td>11%</td>
<td>37%</td>
</tr>
<tr>
<td>Route 5</td>
<td>24%</td>
<td>14%</td>
<td>18%</td>
<td>9%</td>
<td>35%</td>
</tr>
<tr>
<td>Route 6</td>
<td>13%</td>
<td>14%</td>
<td>26%</td>
<td>7%</td>
<td>40%</td>
</tr>
<tr>
<td>Route 7</td>
<td>4%</td>
<td>12%</td>
<td>26%</td>
<td>17%</td>
<td>41%</td>
</tr>
<tr>
<td>Route 8a/b</td>
<td>7%</td>
<td>5%</td>
<td>5%</td>
<td>14%</td>
<td>69%</td>
</tr>
<tr>
<td>Route 9a/b</td>
<td>11%</td>
<td>18%</td>
<td>23%</td>
<td>14%</td>
<td>34%</td>
</tr>
</tbody>
</table>
Survey Open Responses:

Review this project’s Existing Conditions map. What are your three highest priority locations for walking and biking improvement? What makes each location challenging for biking or walking?

<table>
<thead>
<tr>
<th>Location 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>no ped bike facilities on bridge - 6th street</td>
</tr>
<tr>
<td>none</td>
</tr>
<tr>
<td>enhanced crossings across highway</td>
</tr>
<tr>
<td>Finish the Springwater Trail</td>
</tr>
<tr>
<td>downtown city loop - not for bikes</td>
</tr>
<tr>
<td>Old EC Hwy - no shoulder in many places</td>
</tr>
<tr>
<td>walking around Clackamas River Elementary sidewalks damaged by the library</td>
</tr>
<tr>
<td>None the crosswalks work great!</td>
</tr>
<tr>
<td>Leave it Alone!</td>
</tr>
<tr>
<td>leave highway alone</td>
</tr>
<tr>
<td>difficult crossings</td>
</tr>
<tr>
<td>By the river.</td>
</tr>
<tr>
<td>rivermill road -very narrow roadway and so many new houses will increase vehicular traffic in coming years</td>
</tr>
<tr>
<td>Schools and Parks</td>
</tr>
<tr>
<td>HWY 224 CROSSING - SPEED OF VEHICLES WITH LIMITED SAFE CROSSWALKS</td>
</tr>
<tr>
<td>None, I don’t walk/bike</td>
</tr>
<tr>
<td>Estacada isn’t a biking community</td>
</tr>
<tr>
<td>1, do not remove parking on 2nd St</td>
</tr>
<tr>
<td>1 - please do not remove parking on 2nd ave</td>
</tr>
<tr>
<td>What map? I can’t find it on your website.</td>
</tr>
<tr>
<td>I do not walk or ride a bike in the town of Estacada</td>
</tr>
<tr>
<td>No priority for walking or biking</td>
</tr>
<tr>
<td>Better access for schools</td>
</tr>
<tr>
<td>Every location is impractical for walking/biking paths. All streets, including hwy 224, are too narrow already.</td>
</tr>
<tr>
<td>Timber park/ Lake Shore Dr.</td>
</tr>
<tr>
<td>1 a/b. Lakeshore route. Pros- already a path there that could be improved, adding bike lanes would help slow traffic in that area. (a known issue), takes advantage of a path already in use and that is connected to the Timber Park and possibly McIver Park. I also like this location because it keeps the bike/ped traffic off the highway. Cons- connecting to downtown, but that could be overcome with a PHB and the use of the existing traffic signal and nothing</td>
</tr>
<tr>
<td>Regan Hill, bike safety</td>
</tr>
<tr>
<td>Crossing Hwy 224 at Elm speeders</td>
</tr>
<tr>
<td>Walking across 224</td>
</tr>
<tr>
<td>No change needed</td>
</tr>
<tr>
<td>It’s fine how it is, do fix something that ain’t broke.</td>
</tr>
<tr>
<td>None</td>
</tr>
<tr>
<td>None, we have beautiful Faraday walking path without traffic.</td>
</tr>
<tr>
<td>Along the river</td>
</tr>
<tr>
<td>Difficult crossing at Elm and Hwy 224 - no lights or crosswalks and traffic speeds through 35mph zone</td>
</tr>
</tbody>
</table>
| Incomplete sidewalks throughout Estacada. It can be difficult to walk or bike safely when the road is narrow and there is no buffer between cars and pedestrians. Not everywhere is well lit making it difficult for drivers to see in
Better crosswalk on Elm and 224
Around the school complex, repairing sidewalks and parking
Infill of missing sidewalks in all of Estacada.
Elm crossing - remove the "landscaping" in the median
4
4th Ave Regan Hill - no area really for ped or bikes
6th street needs 4 lanes and side walks from Broadway to Rivermill road
Elm Street & Wade Street over Hwy 211/224 (walking)
Wade st. Walking
Eliminating Roads to make these "improvements"
Road condition
downtown loop - lack of sidewalks
safe path along 6th avenue

| Location 2 |

- difficult crossings on highway
- sizing down highway is horrible
- main st or broadway needs a bike area
- improve walking/biking AT THE PARKS
- No change
- incomplete sidewalks
- hwy 211/224 speeds people do not obey speed laws maybe traffic cams or police radar would help?
- Safe crossings on the highway
- 6TH AVENUE/WADE STREET - SPEED OF VEHICLES, AREAS WITH NO SIDEWALK/SHOULDER
- None, I don't walk/bike
- We have to drive when we live in this area
- Improve downtown and areas near the school.
- No priority for walking or biking
- Incomplete sidewalks throughout Estacada
- Fairday Lake
- 2 3E 4th - this area needs sidewalks for sure - not so sure about a bike path? But pedestrian improvements are
- Nothing
- Broadway Hill, bike safety
- Crossing Hwy 224 @ 2nd street speeders
- Don't Care about bikes they're disrespectful people
- No change needed
- Linking the town side of Estacada with McIver Park with a pedestrian/bicycle bridge
- Difficult crossing at 2nd and Hwy 224 - no lights or crosswalk and traffic speed is just dropped to 40mph in that
- Difficulty crossing Hwy 224. Rather than narrowing the road, pedestrian crosswalks with lights should be put in
- as well as an additional traffic light coming into town. That will slow traffic, provide a highly visible crossing for
- people and allow it to remain a main thoroughfare with minimal congestion.
- Better crosswalk on end and South Broadway
- Library to town, adding sidewalks
- Direct access to Milo-McIver state park.
- 5
downtown corridor - need more control by union 76 drivers don't pay attention going in or out of gas station
- Broadway & Second Ave (US Bank) (walking)
All areas around all four schools, walking and biking
Eliminate parking spaces
Sidewalks
- schools - lighting and wide streets
- complete sidewalks throughout all neighborhoods

**Location J**
- incomplete sidewalks
- regan hill

**DON'T REDUCE OUR HIGHWAY LANE**
- area around all schools needs improved sidewalks and crosswalks for safety, many deficits there
- Existing path on Lakeshore to Timber Park/McIver
- RIVERMILL RD - NO SHOULDER, VERY NARROW ROAD, VOLUME OF VEHICULAR TRAFFIC
- None, I don't walk/bike
- Bike paths are fine as long as they don't reduce or impede the flow of traffic
  - 8
  - 8
  - 0

**LEAVE 224 ALONE**
- No priority for walking or biking
- Difficult crossing 211/224
- Up the river
- 8 a/b. I like this plan because it keeps ped/bike traffic off of the main streets of Broadway & Main. I really like the idea of connecting the north and south with a shared use switchback path. Also sidewalks are needed on Wade.
- Nothing
- 6th and Eagle Creek Rd, around corner to Library.
- None.
- No change needed

**Difficulties from homes and schools to Library**
- 6th Ave high pedestrian crash corridor - a lot of pedestrian traffic with non-existent/poorly marked/lit crosswalks. The lit crosswalk sign by the stadium is not sufficient. It should be a much brighter crosswalk sign.
- Eagle Creek -high speeds and no barrier for pedestrians/bikes. That is particularly challenging as there are many places where there is nothing but a ditch beside the road.
- Crosswalk improvement on Acacia and Main St.
- Adding crosswalk traffic lights on 224
- Improve crossing on Hwy 224.
  - 8
- Main Street & 6th Ave (Jr. High walking)
- Costs for "improvements" could be spent elsewhere on better ideas
  - milo mciver - needs a bridge
  - crossing at 6th & Wade

Review this project's Opportunity Routes map. What are the three routes you think are the most important for improving biking and walking in Estacada?

**Location 1**
- connection to mcgiver
none

#5 needs to be addressed ASAP with adding the new development. Why are they not required to put in bike paths and a stop light where they are adding 300+ new homes?

Finish the Spring water Trail sidewalks by the school
no changes needed
no biking or walking
Lakeshore Dr.
link between park and downtown for access on foot or bike
Schools and parks
MILO MCCIVER PARK/LAKESHORE/DOWNTOWN
None at the expense of motorized vehicle flow.
Estacada isn’t a biking community like downtown Portland
1, Do not remove parking on 2nd St
1 - please do not remove parking on 2nd ave
Near Schools
#2
None are "most important". This will be a huge waste of taxpayer money
Eagle Creek highway city limits
1 a/b
Bridge from McIver
6th and Wade to the Skate Park
In front of schools
Don’t Care about bikes
None
None
As mentioned above
North City Route - for school areas and library
1a
Around the school complex
4, Access to Milo-McIver state park.
D
4
downtown
6th street to Rivermill road
DC
Across Hwy 224 at downtown
All of the North City Rt. Sidewalks, crossing areas
Marked Crosswalks
Schools
None
B

Location 2:
crossing highway
plan #3
Existing shared path.
cemetery road
Highway crossings
PIERCE/CEMETARY
We have to drive when we live in this area, we’re spread out!
5
5
0
Downtown
#3
Lakeshore drive
2 SE 4th
Cemetery Road/Pierce St.
By the caz: Walking
None
Highway Route - for improved crosswalks but not reducing lanes for auto traffic
1b
5
Wade Creek to town
8a/b. Specifically the sidewalk infill and the switchback access.
C
5
milo mciver
BC
Across Hwy 224 at Industrial site
8A/B All areas regarding walking and driving
Bike & Pedestrian Bridge
downtown loop
E

Location 3
incomplete sidewalks
plan #2
north city route
Existing path on Lakeshore to Timber park and Mciver
HWY 211/224
Bike paths are fine as long as they don’t reduce or impede the flow of traffic
8
8
0
LEAVE 224 ALONE
#5
224
8 a/b
Lakeshore
Several in 224-walking
Lakeshore Rd Route - for scenic route for pedestrians and bicyclists
2
8ab
Lights for Crosswalks on 224
7. But you absolutely can not remove and vehicle lanes instead you need marked crosswalks at each crossing along with the active warning beacons.
8
A
Incomplete side walks
Option 4 Walking and Biking
milo mciver
D
Please share any additional comments on Opportunity Route alignments and facility types below.

1a/b SW Lakeshore Drive Route and Milo McIver to Downtown Route
very scenic walk, seems underutilized
using the F and H ideas
Bike shoulder on hadden rd
We use this area for recreational walking and bike riding already, improvements would be used
Enhanced crossing of highway is 'S' No bike lanes on lakeshore is '1'
Keeps bike and walking traffic off main rd safer
Need business parking on 2nd Street.
No parking on 2nd would hurt our businesses. F and H are okay.
In favor of upgrading existing path for shared use
Removing any parking in downtown is detrimental
There is not a lot of parking now and the town is growing. I rarely see bicycles anyway
We need all the parking we can get in town. The post office and US Bank and the Pharmacy are 3 of the busiest businesses in town. It would destroy the second hand stores parking because all street parking (other businesses as well). If they ever develop the apartment and business between Post Office and US Bank it will get more It will support more crime
I would never walk/ride bikes in this area, leave 224 alone!
Estacada
Waste of money
Not necessary unless more access to river is developed
Least important at this time
Love this idea
Too much foot traffic hard to patrol
Our town is growing stop taking the roads away, it causes more accidents
Red light camera at the stop sign of Lake shore and beech would make it safer for bikes and walkers.
I love the idea of developing a pedestrian and bicycle route along Lakeshore to McIver. This is our hidden gem. I am, however, deeply concerned about the homeless population migrating to other areas causing crime and Making these areas more transit friendly would enable people to have safe means of getting from point a to b. It would also bring more tourists which will promote the local economy.
I do not support Parking Space removal on 2nd St.
Clean up the crime on lakeshore and more people would want to walk there and to the timber park area.
Goes well with option 4, highly desirable
no......there are no bikes allowed on the horse trails for safty reasons
for ALL opp. routes, ADA curb ramp improvements should be included and consider adding/replacing street trees/furnishing zones and/or reimagining on-street parking from parallel to angled, etc.

2 SE 4th Avenue/SE Regan Hill Route
I rarely use it
any improvement appreciated
what fool rides a bike on 4th?
this seems like a steep hill for biking and walking
Fix the blind corner on Regan & Shafford. Connect sidewalk from Shafford up to existing sidewalk on the hill
Finish sidewalks and make a safe place for pedestrians to cross above ginseng
Plans aren’t clear on website. Concerned about the steep road for bicycles.
I need to see the plans more flushed out and what the end product would look like (I am visual) to see if this would work without making it too difficult on traffic patterns.

Clog traffic
No one is going to ride a bike up or down that hill and I would not allow my children! What are you thinking?
Waste of money
I agree this area needs sidewalk improvements
See 1
I feel that sidewalks would be a wonderful idea along this route. I also feel that we need to preserve parking along the road for residents and their guest as well.
At a minimum there needs to be sidewalks all the way up the hill. It is not well lit and cars go up and down that Regain Hill is very steep, does not support bike traffic, get real.
Add sidewalks but not enough bikers I will ride that hill to nowhere ridiculous. Make the side walks acceptable.
how many people do you expect to ride or walk any of these rts

3 NE Pierce Street/NE Cemetery Road Route
would love to see ped/bike access on 6th street bridge
Would be great to address this since the current new developments are being put in sidewalks from cemetery over bridge
don’t remove parking on pierce
this would help kids get to school
Road seems too narrow for most of the suggestions
Don’t have enough info on this one
Same as 2 SE 4th Avenue
Cause accidents
Another hill I would not allow my children to ride bikes up or down.
21471 S. Parkview
Waste of money
Cemetery road only.
makes sense since there are so many homes up there
See 1
Again, sidewalk placement in this area would be smart. With our growth up Cemetery and above Pierce St, it is prudent to provide adequate and safe areas for pedestrian traffic.
Add sidewalks

4 Milo McIver State Park Route
OMG, I love this! It offers great access to recreational opportunities
bike shoulder
effect on water craft?
this seems like a safer route
Love this.
I like the bridge connecting the parks
Concern about adding a bridge over the river for safety reasons.
I think I could agree to this one, I need more information (was sick on the night of the open house).
More accidents
Leave 224 alone!
OR
Waste of money
Financially impractical no matter how it’s funded
This is the only route that would not terribly have a negative impact on automobile travel
No.
Love this idea
Out of all this..the little footbridge across from the Timber park to Mckiver is the only thing that makes a little sense. Seriously, out of the entire schematic that you’ve had put together. That is the only bit that makes a wee Please make a bridge that could double as emergency vehicle access in case of an earthquake. Seismically sound. See 1
I honestly love the idea of a pedestrian/bicycle bridge to Mclver. I am very concerned that the homeless camp and drug activity that accompanies it will migrate to our beautiful park and will contribute to MANY more
Yes
Very good idea.
Most of the Park is closed to bicycles, the only way this makes sense is if it is used solely for walking and/or only bikers on the main entrance rd. If that is the case they would have to widen Entrance rd and add bike lanes
Highly desirable for recreation
no the part of the park for entry is the side for horses, the road is busy with boats and fishermen
This is not only good for community but also as a way to bring in more tourism.

5 North City Route
would be well received
improve river mill and route into city - new homes will increase traffic on this route
what sidewalk infill? not shown on map. parking concern
we need sidewalks maybe a bike lane on one side. but road may need widened
Yes on A.
Needs spotlight at new subdivision, safe areas for crossing busy roads
Is there enough room?
This plan could work with little distribution of parking and traffic flow but I need to see more. The pictures how
More accidents
You’re not doing anything to improve the school access.
Waste of money
No opinion
Makes sense to a point. I’m not sure how River Mill plays in to it and what you are connecting to from River Mill
See 1
I do feel that with the new housing development coming in, we need to be forward thinking in adequate sidewalks for pedestrians from that area to 6th St. Curb extensions at some intersections would be smart, in particular around the schools, while preserving parking for school activities. I also feel that sidewalks need work
Yes
Add sidewalks
Would have the most safety impact for the most people.

6 Downtown/Central City Loop
I'd need more info. I can't really visualize this
strongly do not support
depends on street modification
fix sidewalks for kids and ada
Do not give up parking spots for bike Lanes
Broadway is too narrow now
I am worried about losing parking and making for more traffic congestion. So I need to see more of this plan
Pure stupid
eh whatever
Waste of money
What about uptown businesses, they are part of Estacada.
I agree this area needs sidewalk improvements
See 1
I am going to sound like a broken record, but complete and adequate sidewalks are important. I also feel that well marked crosswalks at busy intersections are equally important.
There is no room for bike lanes downtown. The city has already made Broadway so narrow that trucks cannot fit into the spots without spilling into the lanes of traffic.

/ Highway 211-224 Route
pro's -slows things down / cons - congestion
horrible idea to downsize car lanes, adding enhanced crossings would be great
leave alone
better bicycling
This will back up traffic for miles!
no change in lane number - too much traffic already
DON'T TOUCH THE HIGHWAY. NO BIKES
maybe a bridge over 211/224 to keep them safe and off road and keep four lanes open to lakeshore
Sidewalk infill okay.
Leave it alone
In favor of safe crossings only.
Reducing this section of highway to two lanes will have an adverse impact on traffic flow and will negatively
Narrowing the I-595 is dangerous. There is a fair amount of truck traffic and forcing cars and trucks to merge
together on a narrow road with out adequate room will increase road hazards. This is evident down at the
Don't reduce our lanes from 4 to 2
No, no! I drive this way home and many times someone is on my tail. Its a relief for them to go around in that
stretch of road and not rare end me when I turn into my drive on the highway just outside town. There are many
accidents already on this highway and I fear that may increase with more cars trying to pass log trucks and dump
trucks that they could have passed in the town stretch. Also what about emergency vehicles? Where will they
Numerous concerns: 1 with one lane hwy and blocked bike lanes how would someone pull over in their vehicle
for emergency vehicles. 2. Traffic is starting to get bad now and will get worse with all the new home
developments. This will lead to traffic jams and bottle necking and road rage when someone gets stuck behind
someone slow or is being tail gated by someone in a hurry. 3. Do we want to be a town that is inviting to
tourists, shoppers, people dining out, businesses, new residents, etc or not? If we have too much traffic all of
those people may not bother coming to Estacada. 4. Damascus has one lane highway and tons and tons of
traffic if I did not have a doctor there I would never go there. Estacada could become the same way - a place to
Huge congestion, super stupid
HELL NO LEAVE 224 ALONE
Absolutely Never!
Leave the highways alone All the lanes there are needed for vehicles Not walkers and bikes
Waste of money
NO LANE REDUCTION!
Need to be number 1 to be fixed. Need a stop light at that intersection.
No way
Strongly dislike this proposal. Do not reduce lanes on the highway.
Lane reduction is NOT efficient. This is a working route. Send your tourists and the handful of bicyclists you bus in from out of town onto the old highway, especially since that housing is going up there. No Estacadian is going to want to go that way anymore, so keep all the "wanna be like Portland" contained...might as well be there.

did under separate cover
Why? Do not turn into one lane in either direction!
Stupidest idea I have ever heard of. They just got done working on that road why on earth would you take out Wider and with lights esp. By Caz people die there. My daughter is recovering from her 11/29 acc.
I strongly oppose restricting auto traffic through Estacada on Hwy 224. Our population is on the verge of some pretty decent growth and we need to remember that. I do feel that it is very important to have more, well marked crosswalks (active warning beacons...and bright ones) as well as better, more consistent enforcement of our speed limit through town. In addition, I think that brighter street lights and sidewalks along 224 towards 4th
Making this a 2-lane highway will increase congestion. This is a main thoroughfare and the city is experiencing considerable growth. It would be far more reasonable to create a bike path further in, eliminating the concerns
NO, I DO NOT SUPPORT THIS ROUTE. NO ROAD DIET.
Add crosswalk lights for crossing in 2 additional areas of town
Again, MUST NOT eliminate any traffic lanes, instead add active beacons and fully marked crosswalks.
There is already a bike lane for the numbers of bikes here.
Please don’t use car lanes for bike paths
NO ROAD DIET
Probably the most expensive, and least supported option.
Leave it alone!!!!!!!!!!!!
None you have lost touch with your community

B NW Wade Street and NE Main Street Routes

Good idea
makes the most sense regarding walking, bikes within the current city roads
better sidewalks
You can’t ride without signage? Build the walkway to Veterans Memorial. Ask scouts for Eagle Prover this would be better than broadway st
Route around town
Not sure why there needs to be so many north to south routes
Didnt get this one. Do we want bicycles barrowing down these hills
Again I am worried about parking and traffic congestion. I would like to see more detailed plans of how this
Your even dumber then I thought
whatever. This town is not walk/bike-able. No matter improvements you put people are not going to walk or
Waste of money
Need to be on top of list with sidewalks, speed control bumps like in Sandy, and cross walk in front of park and
Love this idea
See 1
Main St definitely needs attention for pedestrians though sidewalks and well marked crosswalks in busy
OK
Repair sidewalks
Finish sidewalks, I have never even seen a bycyclist here.
Please use this space to let us know any other comments or questions you have on any of the materials for the Estacada Active Transportation Plan.

Open-Ended Response

maybe a pedestrian bridge or two to cross the highway. Thanks to all who worked on this!
I'm okay with adding a couple stop lights with cross walks but no highway diet will happen without a battle! No Portlandia bike lanes here and no Springwater trail extension!
bridge to 2nd street as well possibly a stop light added would be a great improvement. Bottle necking the highway would be a gross misuse of funds especially since the recent upgrades to that stretch of highway as well as future growth to the area that would most likely have to be reversed if the downsizing of lanes actually took place. The proposed F and H Ideas are great for the highway but moving from 2 lanes in each direction down to resolve sidewalk issue in city center no highway reduction not enough ped or bike traffic on 224
air pump at bicycling center in estacada better shoulders on springwater rd
This is not France. People do not bike every day, it rains 8 months of the year. Why all the constant catering to bicycling when the owners contribute nothing to the costs of their infrastructure? Start requiring license plates and tags for bicycles and use the money to pay for the projects. If you want to slow down traffic entering I turn off at Rivermill and come into town on Old Highway. It is now unsafe for walkers and new homes will make it worse. I would like to see that option first. Also, walking from high school to cemetery rd over bridge at 6th is dangerous - so improvements there are important Safe for walkers ok with me - not enough bicycles yet for I don't feel Estacada is a bicycle town. There is no connection between Estacada and anywhere else to safely bring bicycles here. It isn't safe for pedestrians and bicyclists to be on the same path. We need to fix our sidewalk infrastructure first and improve ADA access in town first. I am in favor of improving pedestrian access I like many of the suggestions to improve use for pedestrians and bicyclists. I do not support lessening lanes on 224. I do support a separated bike lane on one side of the road. Allow bikes to go both ways in that lane. I support a bike lane on the old Eagle Creek Hwy. It should take over Weitz Lane. The only through traffic should be home owners of the lane. The bike lane should go to the Old EC Hwy here and go to town. I ride my bike for No Bikes Leave the highway alone, crossing is acceptable
Portland went to great lengths to accommodate bikers, especially downtown. They still have many bike-car accidents. All they really managed to do was really mess up auto traffic. It is a popular fad to support biking as an alternative means of transport, but out here it is incredibly unrealistic. Far more people drive to work than bike will need to extend the 4 lanes all the way to Clackamas. Stop light by the RiverMill with all the new 300 plus homes
A compromise would be those flashing crosswalks that light up when a pedestrian or bicyclist presses a button and the sign flashes for traffic to stop. This will save the city a considerable amount of money and not interfere with vehicular traffic. Reducing lanes will create a bottleneck increasing the risk of motor vehicle accidents. Pedestrians and bicyclists don't pay the gas tax. Many of my coworkers support leaving things the way they are. Don't reduce the Highway!! It was just finished! Waste of Money City couldn't even make parking spaces long enough on Broadway for pickups! What makes you think that you can do this right this is country/no city
At this point in time I feel any bicycle improvements are not necessary at this time. sidewalks definitely should I am a concerned citizen who would like to be more involved with the planning direction and future of this Install RRFB's at difficult crossings - they work
1. Second St. is the worst. It takes away street parking for small businesses that have been in Estacada for years.
2. if second is used it ends on Broadway at the bottom of a dangerous intersection where even now a light is necessary due to high traffic. 3. Since bikes have the same rules on the road as cars why do we need special lane
community. You really need to diversify your input to better represent what this community wants. Again I want to point out that a single lane restriction may be accomplished though the grant money available but the problems it will create with access onto the highway will take 3-4 times the amount available (if not more) to solve. There are numerous ways to facilitate bike and pedestrian traffic around town without creating a traffic monster on the highway. Estacada is not downtown Portland and even though we do have increased bike traffic in the summer, the majority of transportation in this community is private autos, not bicycles or public transportation. It has been this way for decades and will remain that way for decades to come regardless of what a minority group wants. It would seem that your task is to create a plan that works best for the majority of people in the community not a small group with a narrow focus. If your decision must be made by a specific date I walk and would like to see our sidewalks improved but I also drive and shop locally and would find that my favorite small businesses that I support and would find that having parking would make it a challenge. There’s not enough bike activity to support spending City money on this proposed plan.

I support Estacada being bike/walk friendly, however, I don’t support it harming local businesses. There needs to be a way that won’t hurt local small businesses, after all they are one big draw to tourists we have year round. Not a necessary use of funds. Public transportation or repaving roads and sidewalks would be more beneficial for sidewalk fill in and fix where needed. Seems like an area that could use help would be NW Wade Street and 6th. Leave it alone anything we can do to improve livability of our city residents is important. Obviously we don’t have the money to do it all but the new developments will bring additional money to the table. those residents deserve consideration. the majority are moving in from out of area and are hopefully intent to settle. estacada is a very Estacada is paying for Urban Growth through our taxes, how is shutting down a four lane highway down to two helping. This is doing the reverse. By squeezing the traffic together is creating a bottleneck for the flow of traffic. How much do you hate construction work on roadways when narrow the road down? I bet you cringe! Also, try making a left hand turn toward Molalla from any of the streets (that don’t have a stop light) at 7 or 8 a.m. on a weekday. Just with the two lanes in both direction now makes it tough to cross over in a car and imagine trying to do that with only one lane and a constant flow of traffic. Put the money to better use like fixing Stafford Street where the road is narrow, there’s no sidewalks; kids walking, to and from school, in the road. And this is a main road that people use a lot to getting there kids to school. A accident is just waiting to happen one of these Wow. Estacada has way too many missing sidewalks! I’m not sure there is enough bicycle traffic to justify most of these facility types or that narrow roads can accommodate them. Most on bikes around here seem to be kids so I want their safety traveling to and from school and parks to be priority. Recreation/tourism second. Not in favor of highway bottle neck or sharing the roads with kids or adults anywhere or giving up parking anywhere in I APPRECIATE ALL OF THE EFFORT PUT INTO THIS. AS A CITY RESIDENT WHO LOVES WALKING MORE THAN DRIVING IT IS IMPORTANT TO ME THAT WE DETERMINE GOOD WAYS TO IMPROVE SAFETY FOR OUR PEDESTRIANS AND CYCLISTS, WHILE KEEPING IN MIND THE RESIDENTS OF THE GREATER AREA WHO USE OUR ROADS AS WELL. IT IS UNLIKELY THAT THOSE WHO LIVE 2+ MILES OUT OF CITY CENTER CAN CONSIDER THE IDEA OF WALKING TO THE GROCERY STORE, BUT TO ME THAT IS SOMETHING I WANT TO BE ABLE TO CONTINUE DOING. BIKEING FROM ESTACADA TO DOWNTOWN PDX IS A BUCKET LIST DREAM FOR ME, AS I HAVE RIDDEN THE The only thing I care about, is NOT reducing traffic flow on 224. Town will become a traffic nightmare. While I do not live in downtown Estacada, I do travel quite often through the area, and shop there also. If your improvements make traveling through the area more difficult, I will shift my shopping to other areas. In regards to improvements for bicyclist, I have to often witnessed their lack of regard for safety, pedestrians, and other vehicles on the roads. I also resent my hwy tax dollars supporting these projects, bicyclist need to step and pay for these improvements also. I do believe that better lighting, and flashing crosswalk signs (the type where you push a button and the sign lights up and flashes)would improve pedestrian safety for hwy crossings. I realize that making Estacada more attractive to bicyclist might bring in more tourist dollars, but don’t forget the people
That’s all well and good that you’re trying to support being “active”. However, most of us don’t live in the downtown area and MUST drive. Don’t be like Portland and try to force us to not use our vehicles. They are necessary. The bus can’t take us all to our destinations, especially in a timely manner, either. A simple 30 minute car commute turns into a nearly 2 hour ordeal from Estacada City Hall to Gresham City Hall using Tri-Met. The We are a small town and not a big city. There is one or more cars at every home. How many homes have bicycles? Why should we inconvenience our lives for the few bicycles that pass through our town for they are at the expense of having a user friendly town to vehicles (as most people use that mode of transportation). I believe their are solutions that can accommodate everybody (although probably not make everyone happy) and the plan needs to be revisited. I would like to see more detailed examples of how the end project would actually look like. I would like to thank everyone who has worked on the project so far. I know a lot of hard work goes into this and it is impossible to please everyone. Also, I know nobody is trying to make life difficult for people.

How stupid are you ?? We should have you locked up like at the funny farm

handful of people will even use the improvements you are suggesting. Most people do not work in Estacada and there is no choice but to drive to work. Destroying commute routes so a handful of people can feel good about riding their bike across the river is not only ill-informed but will have a negative impact on the community. I know there are die-hard walker/bikers out there but removing a lane of 224 in both directions or any direction is I am strongly opposed to making any changes to Hwy 224. It has bike lanes and sidewalks now. It is very much needed in the present and for future growth of the area. Narrowing to one lane in each direction would cause congestion and be unsafe for the motoring public. Please do not narrow or change the existing automobile I totally support the reduction of Hwy 224 through town to two lanes in an effort to improve walker and biker safety but also to slow traffic in an effort to bring people into downtown.

The highway 211 thought is totally out of the question! Taking any on street parking for any reason is non

Leave hwys 224 and 2311 alone

This is not Portland and we don’t want it to be anything like Portland

Reducing Hwy 211/224 to single lanes is about as ridiculous as you can get. Add traffic lights. Add cross walks. Reduce the speed limit. Make narrower lanes. Just DO NOT remove traffic lanes!

This is an accident waiting to happen plan that will cost the taxpayers money that could be put into other more urgent city infrastructure. Estacada should remain a small town atmosphere that is unique and not trying to be As far as bike lanes on 224 & 211 pm intersection instead of going down to 2lane highway the lanes are wide enough to restripe the highway and put bike lanes on each side of the highway.

Leave the highway

something actually useful for the working people of Estacada? Ask ODOT for a two lane Carver Curves! We don’t want 211 reduced in size for non existent bicyclists, especially when they don’t even live here. City Hall should be concerned with the working Estacadian, not the tiny trickle of out of towners and tweakers. Why should those of us who need to get to work, move industry, and actually be productive members of the town continually be penalized for City Hall’s seemingly never ending scramble to turn Estacada into “mini Portland”?

I hope to see all of these changes some day, and wish you well in picking the order.

Bicycler’s are rude and don’t follow the traffic laws, so to put them out here is asking for more accidents since we don’t have adequate officers to patrol this area.

We have enough room for the few people that bike in the community. Like the tweaker you cater too. And there are sidewalks that are hardly used. You bring in all the Portland assholes that wouldn’t be riding those space’s because you send them up river. There are NO safe biking or walking roads to get to Estacada so why are you wasting money on stuff we already don’t use. If you would take people use cross walks they probably wouldn’t get run over. Cars pay license fees and gas taxes for those roads. Make the bikes pay for their riding paths and carry
As we stated under separate cover, Hwy 211/224 should remain 2 lanes each way - one lane for thru traffic and one for traffic that veers off the hwy to do business in Estacada. One lane each way would create traffic backup of RVs, trucks, semi-trucks, log trucks and regular vehicles wanting to go directly through town. People rarely walk or ride bikes into Estacada. This is a rural area with lots of hills. None of these ideas make any sense.

We are growing. Means more cars more people. Don't destroy our area for rude irresponsible cyclists. We moved from slw side and they were horrible and abusive to people. We need to concentrate on the area by the Caz. We've had death, horrific accidents....CONSTANTLY. my daughter was spun 3 times the other night...there needs to be a 3 way light there. We r a growing area of fishermen campers, then semis, loggers, boats, motorbikes all hours. It sounds like a Safeway starting 4am...... only morons narrow a road like this... want lawsuits, there's ur Leave the highway and 2nd ALONE!!!!

Your in the wrong *city* Portland is where you need to go with these foolish ideas.

I feel Estacada is beautiful the way it is. Please don't make it another Portland. We already have Faraday path to ride bikes and walk. We really need to improve 224 by adding lights all the way to Carver, not more pedestrians and bike congestion in Estacada.

In many of my comments, I did not address bicycle traffic. I feel that our first priority should be to support pedestrian and auto movement. Our town is now a bedroom community and transportation by automobile is vital to our residents and community. Everyone that comes here, does so by automobile. I don't feel that taking away parking in our downtown core or for our residents is a smart way to accommodate bicyclists. I also don't feel that taking a way a lane of traffic on Hwy 224 is a wise consideration to accommodate bicyclists. In areas where the road is wide enough to accommodate on street parking without lane restrictions, then I say add a bicycle lane too.

For example, I feel Main St may be wide enough to do this. This is not to say that we shouldn't be mindful of bicycles and try to do our best for those that choose this mode of movement. I do feel that creating a safe, recreational place for bicyclists to enjoy our river view is a smart thought to consider though. Creating an area near the Timber Park where people can walk or bring their bicycles, park their cars, have restroom facilities, and maybe even enjoy a few restaurants while spending a few hours walking and riding bikes with their families along some pretty trails and over to McIver Park would be pretty cool. I believe that this possibly is the vision you likely have as well. I just feel that it is prudent and wise to keep in mind that we are still way too far from urban sprawl and accommodating our auto and pedestrian traffic should be priority #1. Bicycling here is primarily going to be about recreation and not about a mode of transportation...for MOST people, and we do not have the resources to accommodate everyone.

I am excited to see the city is actively pursuing ideas that will promote healthy lifestyles and alternative means of travel. Additional bus services would be a big bonus to the community. At present the use of public transportation is very limited in this rural community. This would both enable commuters with a different option but also provide travel options for those interested in coming out to Estacada for recreation.

I would be in favor of 1ab except that the plan calls for eliminating valued parking spaces on 2nd Ave. I park at the U.S. Post Office everyday. Also, I bank at U.S. Bank several times a week. The other ROUTE that I Do Not Support is Hwy 211/224 land reductions. This is by far the worst ATP plan. It sounds like something SE Portland has done. And I hate it...at the ATP OPEN HOUSE on Nov with the crowd was very riled up about this idea. Please remove this Route Plan from the study.
Open House Meeting Summary #2
The project team held an open house to provide the public an opportunity to review and comment on the recommended active transportation improvement projects developed for the Active Transportation Plan (ATP) project. A key objective was to solicit public feedback on the findings describing the refinement and prioritization of the recommended core active transportation routes in Estacada.

Attendance
The event was promoted through the City website and City newsletter (a copy of the information flyer is attached). There were members of the public in attendance during the entirety of the event, which included significant interaction between event attendees and the project team. The sign in sheet included 15 members of the public and three members of the Public Advisory Committee (PAC). Several written surveys (8) were filled out and returned during the event, and four people submitted feedback through a similar online survey following the event (online survey was provided from May 18th to June 1st).

Informational Posters
The major findings regarding the identified Core Active Transportation (CAT) routes and their proposed cross-sections, the Safe Routes to School (SRTS), and Additional Active Transportation Projects were summarized into 16 informational posters. Images of these posters are attached at the end of this summary. Members of the public were encouraged to read through these at their own pace, and project team members engaged the public to answer questions and foster additional discussion. The posters included:

1. Welcome and Introduction to ATP Process
2. Core Active Transportation Routes
3. Summary of Public Comments from Open House #1
4. Safe Routes to School Projects
5. Project 1a: Timber Park to Downtown Route
6. Project 1b: Lakeshore Drive Route
7. Project 2: SE 4th Avenue/SE Regan Hill Route
8. Project 3: NE Pierce Street/NE Cemetery Road Route
9. Project 4: Milo McIver State Park Route
10. Project 5: North City Route
11. Project 6: Highway 211-224 Route
12. Project 7a: NW Wade Street Route
13. Project 7b: NE Main Street Route
14. Projects 8-10: Crossing Enhancements
Public Feedback
During the event, in addition to the comment forms, the public was encouraged to write comments directly onto the posters. Members of the project team also recorded comments that came up during the introduction of the project and during conversations that occurred surrounding the posters.

Major themes expressed in the public feedback are summarized below. Furthermore, using stickers, the public selected the three projects that were most important to them. See attachment for a complete listing of comments received.

**Safe Routes to School:**

- Many community members strongly supported the Safe Routes to School projects.
- Projects that received the most support include:
  - Finishing the sidewalks on the south side of NE 6th Ave. from Wade Creek to NE Cemetery Rd.
  - Mount “All-Way” placards below the stop signs at the intersection of NE 6th Ave. and NE Main St.
  - Complete sidewalks along NW 10th Ave.
Formalize an intersection at NE Currin St., construct curb ramps and curb extensions, install appropriate signage, and install a crosswalk.

- Install new stop sign pole at correct height at Eagle Creek Rd.
- Upgrade crosswalk at NE Main St. and NE 5th Ave. with continental markings, signs, and ADA curb ramps.

**Project 1a: Timber Park to Downtown Route**

- Received two stickers.
- The majority of community members showed support for this route.

**Project 1b: Lakeshore Drive Route**

- Received six stickers.
- The majority of community members showed support for this route.

**Project 2: SE 4th Avenue/SE Regan Hill Route**

- Received one sticker.
- Most community members were neutral about this route. Approximately half of the respondents strongly supported this route, while approximately half of the respondents strongly did not support this route. Community members argued that there is not enough bike traffic to justify the bike lanes.

**Project 3: NE Pierce Street/NE Cemetery Road Route**

- Received zero stickers.
- The majority of community members showed support for this route.

**Project 4: Milo McIver State Park Route**

- Received ten stickers (the most).
- The majority of community members showed strong support for this route.

**Project 5: North City Route**

- Received three stickers.
- The majority of community members showed support for this route.

**Project 6: Highway 211-224 Route**

- Received two stickers.
- The majority of community members shows strong support for this route.

**Project 7a: NW Wade Street Route**
• Received two stickers.
• The majority of community members responded with neutral support for this route.

Project 7b: NE Main Street Route

• Received three stickers.
• The majority of community members showed support for this route.

Projects 8-10: Crossing Enhancements Located along CAT Route 5 (North City Route)

• Received three stickers.
• The projects that received the most support include:
  o Marked crosswalk and minimizing curbed radii at Main St./NE 6th Ave.
  o Marked crosswalk at NW Wade St./NW 10th Ave.
  o Minimize curb radii at NW Wade St./NW 6th Ave.

Projects 11-14: Crossing Enhancements Located along CAT Route 6 (Highway Route)

• Received three stickers.
• The project that received the most support include:
  o Pedestrian Hybrid Beacon at Hwy 211-224/SW 2nd Ave.
Join us: May 17, 2018

Estacada Active Transportation Plan Open House

City Responds to Community Input

At an open house last November, the community provided their ideas and priorities for key walking & biking routes, and ways to improve conditions for walking, biking, and access to public transit. Join us for an Open House to review the proposed changes based on the community input that was given.

Key Recommendations to Review

- Draft List of bicycle, sidewalk and crossing projects throughout the city
- 4 Lanes on Highway to Remain
- Priority Projects. Do you agree?

Active Living in Rural Communities

“There are unique barriers to active modes of transportation in rural communities... Understanding these barriers is the first step towards finding opportunities to remove them.” — Active Living Research (activelivingresearch.org)

Project website: www.CityofEstacada.org

When: Please join us at the Open House #2
May 17, 2018
5:30 PM – 7:30 PM

Where: Estacada City Hall
475 SE Main Street
Estacada, OR 97023

Online Comment Option: You can view all open house materials and provide comment online from May 18 through June 7 at cityofestacada.org.

City Hall is ADA accessible. Please let us know in advance if you need any special accommodations to attend the meeting (see contact info below).

Los documentos del proyecto pueden ser traducidos al español bajo petición.

Your input has helped guide recommendations for the Plan which will be considered for adoption this summer by the City Council.

Let us know if your priorities were understood and implemented by staff and consultant team.

Do recommended solutions meet current and future walking and biking needs?

For more information or to request special accommodations, contact: Melanie Wagner, City of Estacada 503-630-8270 x203, wagner@cityofestacada.org
Welcome!
Estacada Active Transportation Plan Open House
May 17, 2018

What is Active Transportation?
When people transport themselves under their own power, such as walking or biking, we call it Active Transportation. The City of Estacada is now developing an Active Transportation Plan (ATP) to supplement the City's overall Transportation System Plan. The ATP will include the identification of key walking and biking routes that support safe routes to schools, routes to the downtown and riverside area, connections to public transit, and integration with regional recreational opportunities. The adoption of the ATP will help the City secure federal and state funding to turn the plan into reality.

1 mile of walking = 2/3 of the daily recommended 60 minutes of physical activity

Where we are in the process
The project team is just completing the “Evaluate” phase of the ATP (see project schedule). This included the refinement and prioritization of the recommended solutions for addressing Estacada’s active transportation needs.

Following this Open House, we’ll begin the adoption process for Estacada’s Active Transportation Plan. The adoption process should take place in the Summer of 2018.

How to stay involved
• Respond Online: View all open house materials and provide comments online from May 18 – June 1 at www.cityofestacada.org
• Fill out survey at the Open House
• Visit www.cityofestacada.org to provide comments anytime and review project documents
• Contact the City Project Manager, Melanie Wagner for more information – (503) 630-8270 x203; wagner@cityofestacada.org

Purpose of today’s Open House
Having developed projects based on the evaluation of Estacada’s active transportation system performance and needs, the project team would like to share our findings with you and get your input. Please take some time to view the open house materials posted around the room and fill out a survey to share your thoughts. Project staff are available to answer any questions and discuss your ideas. Key topics to be discussed:
• Proposed list of bicycle, sidewalk, and crossing projects throughout the city.
• Benefits and potential impacts related to improvements on Core Active Transportation Routes.
• Your Opinion on priority projects.

¿Necesita traducción al español?
Para solicitar información del proyecto en español, utilice el formulario para contactar al equipo en www.cityofestacada.org o póngase en contacto con Melanie Wagner en la ciudad de Estacada – (503) 630-8270 x203; wagner@cityofestacada.org
Core Active Transportation (CAT) Routes

Nine Core Active Transportation (CAT) routes were identified to represent the primary active transportation corridors within the city of Estacada. Improvements along these routes will help to connect the city and aid Estacada’s endeavor to become a healthy and active community. The CAT routes are shown below. Please use the survey to identify the CAT routes that are most important to you.
Summary of Public Comments from Open House #1

The project team held Open House #1 on November 28, 2017 to provide a public introduction to the Active Transportation Plan (ATP) project and solicit public input on the findings describing existing conditions, suggested core active transportation routes, and their proposed facility types in Estacada.

Public Feedback
During the event, in addition to the comment forms, the public was encouraged to write comments directly onto the posters. Members of the project team also recorded comments that came up during the introduction of the project and during conversations that occurred surrounding the posters. Major themes expressed in the public feedback are summarized below. See attachment for a complete listing of comments received.

Community Values for ATP: using stickers, the public selected the key criteria for active transportation projects that were most important to them.
• The top-ranking criteria included, addressing challenging street crossings, and filling network gaps (with an emphasis around the schools).
• The remaining criteria received minimal support with very few stickers.

Opportunity Route 1ab: SW Lakeshore Drive Route and Timber Park to Downtown Route
• Supportive of upgrades to the recreational path (Lakeshore Drive Route).
• Do not remove parking on SW 2nd Avenue (Timber Park to Downtown Route).

Opportunity Route 2: SE 4th Avenue/SE Regan Hill Route
• There is a need to complete the sidewalks along this route.
• Biking improvements are not recommended due to steep grade and lack of bicyclists.

Opportunity Route 3: NE Pierce Street/NE Cemetery Road Route
• The public was supportive of the pedestrian facility upgrades and the safer environment this route will create for children walking/biking to school.
• Concerns with the steep grade on Cemetery Road.

Opportunity Route 4: Milo Mciver State Park Route
• This route was highly supported by the community.

Opportunity Route 5: North City Route
• This route was highly supported by the community.
• There was an identified need to complete the sidewalks and enhance the crossings along this route.

Opportunity Route 6: Downtown/Central City Loop
• The community was not supportive of this route. However, they did identify the need to complete the sidewalks and provide ADA accessibility.

Opportunity Route 7: Highway 211-224 Route
• The proposal to reduce the number of lanes on Highway 211-224 was not well supported.
• Highway crossings need to be enhanced.

Opportunity Route 8ab: NW Wade Street and NE Main Street Routes
• There is a need to complete/repair the sidewalks along this route.
• Support for this route was mixed.

Other Comments:
• There is a need to complete/repair the sidewalks (ADA compliant) throughout the city.
• Highway crossings and other identified crossings need to be enhanced.
• The road diet is not supported.
Safe Routes to School (SRTS) Projects

Safe Routes to School (SRTS) is a program intended to enhance the health and safety of school communities by making biking and walking to school more fun and convenient for students. SRTS combines engineering tools, facility design, law enforcement, education, and encouragement.

Clackamas County developed SRTS plans for Clackamas River Elementary School and Estacada Middle School. The SRTS projects are shown below. Please use the survey to identify the SRTS projects that are most important to you.
Project 1a. Timber Park to Downtown Route

BENEFITS INCLUDE

- Adds conventional bike lanes with buffers along the highway, bike lanes along SW Wade St., and a shared roadway along SW 3rd Ave.
- Includes a low-cost improvement on Highway 211-224, with only restricting required.
- Provides a safer walking environment by construction and/or completing sidewalks.
- Creates an opportunity to draw regional cyclists into downtown from the highway.
- Provides safe walking and cycling route connection from the downtown area, across Highway 211-224, to recreational opportunities along the riverfront.

Please use the survey to give feedback on Project 1a.
Project 1b. Lakeshore Drive Route

**BENEFITS INCLUDE**

- Constructs/completes sidewalks
- Creates an opportunity to draw regional cyclists into downtown from the highway.
- Widens Lakeshore Trail to comfortably accommodate more users and make it easier to pass.
- Provides safe walking and cycling route connection from the downtown area, across Highway 211-224, to recreational opportunities along the riverfront.

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**POTENTIAL IMPACTS**

- Parking would be removed on one side of SW Beech Rd.
- Sidewalks would need to be widened on west side of SW Beech Rd. (blockage caused by poles in the middle of the sidewalks).

Please use the survey to give feedback on Project 1b.
Project 2. SE 4th Avenue/SE Regan Hill Route

**Benefits Include**

- Adds conventional bike lanes along SE Regan Hill Rd., conventional bike lanes with a buffer along the south side of SE 4th Ave.
east of SE Shafford Ave., a shared roadway on the north side of SE 4th Ave. east of SE Shafford Ave., and a shared roadway along SE 4th Ave. west of SE Shafford Ave.
- Connects residential area in eastern Estacada to schools and the downtown area.
- Creates a safer, lower-stress environment for people biking to traverse the steep hill along SE 4th Ave.
- Provides a safer walking environment by construction and/or completing sidewalks.

**Potential Impacts**

- Parking will need to be prohibited on the south side of SE 4th Ave.
- Street tree wells along SE 4th Ave. (Broadway St. to Shafford Ave.) may need to be widened.

*Should we include a supplementary route along NE Carole Street? See Project 46 on the Additional Active Transportation Projects Poster for more details.*

*Please use the survey to give feedback on Project 2.*
Project 3. NE Pierce Street/NE Cemetery Road Route

**Benefits Include**

- Adds a conventional bike lane with a buffer along the east side of NE Cemetery Rd. south of NE Cascadia Ridge Dr., a shared roadway on the west side of NE Cemetery Rd. south of NE Cascadia Ridge Dr., separated bike lanes along NE 6th Ave., and a shared roadway along NW Pierce St. through to SE Shafford Ave.
- Connects residential area to the north and northeast to schools and the downtown area.
- Bicycle treatments provide a safer environment for people biking who are climbing/descending the hill along NE Cemetery Rd.
- Widening the 6th Ave. bridge over Wade Creek mitigates a key constraint.
- Provides a safer walking environment by constructing and/or completing sidewalks.

**Potential Impacts**

- Reconstruction may be required for the NE Cemetery Rd. portion south of NE Cascadia Ridge Dr.
- 6th Ave. will need to be widened to incorporate the pedestrian bridge.
- Parking will need to be prohibited along NE 6th Ave.
- Reconstruction will be required for sidewalk and landscape strips along NE Pierce St.
Project 4. Milo McIver State Park Route

**Benefits Include**

- Creates a comfortable and convenient transportation connection between recreational sites such as Milo McIver State Park and Timber Park and the City with a new bike/pedestrian bridge over the Clackamas River.
- Creates both a regional and local connection to Milo McIver State Park.
- Creates a low-stress transportation route for accessing the industrial area surrounding Park Ave.

**Potential Impacts**

- Existing shared-use path would need to be widened.
- Requires the use of Portland General Electric right-of-way.

Please use the survey to give feedback on Project 4.
**Project 5. North City Route**

**BENEFITS INCLUDE**
- Connects to all other CAT routes and complete a walkable, bike-able loop route for exercise and recreation.
- Provides a safer connection between the industrial area and the city.
- Enhances school crossings.
- Enhances access to the Library and Wake Creek City Park.
- Provides a safer and lower stress environment for people bicycling by creating separation from vehicular traffic.
- Creates a safer environment for people walking by constructing and/or completing sidewalks.
- Creates a regional and local connection.

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**POTENTIAL IMPACTS**
- SE River Mill Rd. will need to be widened to include shoulders.
- NW Wade St. will need to be widened to include a center turn lane.
- Sidewalks would need to be widened along NW 6th Ave. and N Broadway St. (SE 4th Ave. to NW 6th Ave.).
- Right-of-way would be needed along SE River Mill Rd.
- Parking will need to be prohibited along 6th Ave.

*Please use the survey to give feedback on Project 5.*
Project 6. Highway 211-224 Route

**Benefits Include**
- Adds conventional bike lanes with a buffer along the highway.
- Creates a safer environment for people walking by constructing and/or completing sidewalks.
- Creates a comfortable and convenient connection between sites such as Milo McIver State Park and Timber Park and the city.
- Improves pedestrian crossings on the highway at four locations (see Projects 11-14).
- Creates both a regional and local connection to Milo McIver State Park.
- Creates a low-stress route for accessing the industrial area surrounding Park Avenue.

**Potential Impacts**
- Highway would need to be widened north of Timber Park to add a center turn lane, bike lanes, and sidewalks. This would likely happen as the area develops.
- Right-of-way may be needed north of SW 2nd Ave.
- Slightly narrower lanes or median would be required along the highway.

Please use the survey to give feedback on Project 6.
Project 7a. NW Wade Street Route

**BENEFITS INCLUDE**

- Provides additional connection for people walking and biking in and around downtown.
- Connects schools to residential areas and the downtown area.
- Creates low-stress environments for people biking by designating bike boulevards.
- Creates a safer environment for people walking by constructing and/or completing sidewalks.

**LEGEND**

- Facility Type Identification
- NW Wade St Route
- Existing Shared Use Path
- Downtown
- Parks
- School
- Outside Urban Growth Boundary
- City Limit

**Route 7a. NW Wade St. (NW 6th Ave. to NW 1st Ave.) and NW 1st Ave. (NW Wade St. to N Broadway St.)**

*Landscape Strip*

**POTENTIAL IMPACTS**

- Will require reconstruction along NW Wade St.

Please use the survey to give feedback on Project 7a.
Project 7b. NE Main Street Route

**Benefits Include**
- Provides additional connection for people walking and biking in and around downtown.
- Connects schools to residential areas and the downtown area.
- Creates low-stress environments for people biking by striping bike lanes.
- Creates a safer environment for people walking by constructing and/or completing sidewalks.

**Potential Impacts**
- Will require significant reconstruction.
- Angled parking will need to be converted to parallel.

Please use the survey to give feedback on Project 7b.
Projects 8-10: Crossing Enhancements

Marked Crosswalks:
- Help people walking and biking cross high-volume and high-speed streets safely.
- Directly connects northern schools to activity generators such as the library and skate park.
- Provides connectivity from the northern schools to the southern schools.

**Project 8: Marked Crosswalk at NW Wade St./NW 10th Ave.:**
- Includes a median refuge.
- Provides connectivity from the northern schools to activity generators (across NW Wade St.).

**Project 9: Minimize Curbed Radii at NW Wade St./NW 6th Ave.:**
- Reducing crossing distance across NW Wade St. on the south side of NW 6th Ave.

**Project 10: Marked Crosswalk and Minimize Curbed Radii at Main St./NE 6th Ave.:**
- Provides connectivity from the northern schools to the southern schools.
- Reduces crossing distance across NE Main St. on the south side of NE 6th Ave.

Minimizing Curb Radii:
- The size of a curb’s radius can have a significant impact on pedestrian comfort and safety.
- A smaller curb radius provides more pedestrian area at the corner, allows more flexibility in the placement of curb ramps, shorter crossing distances, and requires vehicles to slow more on the intersection approach.

Please use the survey to give feedback on Projects 8-10.
Projects 11-14. Crossing Enhancements

**Pedestrian Hybrid Beacon:**
- A Pedestrian Hybrid Beacon is a traffic control device used to help people walking safely cross high-speed or high-volume roadways at mid-block crossings or uncontrolled intersections.

**Leading Pedestrian Interval:**
- A leading pedestrian interval provides people walking a three to seven second head start when entering an intersection ahead of the green signal for motor vehicles traveling in the same direction.
- At the intersection of Hwy 211-224/Broadway St., there is a currently a traffic signal that would benefit from such an enhancement.

**Enhanced Crossing – Illuminations and Addition of Sidewalks**
- Enhancements include illuminating the intersection and adding sidewalks per the cross-section described for Route 6.

**Project 11: Enhanced Crossing at Hwy 211-224/SE River Mill Rd.**
- Provides a safer connection from the city to the Industrial area.
- Provides a safer connection from the downtown area to the riverfront.

**Project 12: Pedestrian Hybrid Beacon at Hwy 211-224/SW 2nd Ave.:**
- Provides a safer connection from the downtown area to the riverfront.

**Project 13: Pedestrian Hybrid Beacon at Hwy 211-224/SW Wade St.:**
- Provides a safer connection from the downtown area to the riverfront.
- At the intersection of Hwy 211-224/Broadway St., there is a currently a traffic signal that would benefit from such an enhancement.

Please use the survey to give feedback on Projects 11-14.
Additional Active Transportation Projects

Additional Active Transportation Projects not covered by the Core Active Transportation Routes are included in the table below. Projects were derived from the current Estacada Transportation System Plan (TSP) and recommendations and input received from the Technical and Public Advisory Committees (TAC and PAC) meetings, stakeholder interviews, and community events. Please use the survey to identify the additional active transportation projects that are most important to you.

<table>
<thead>
<tr>
<th>PROJECT NUMBER</th>
<th>PROJECT LOCATION</th>
<th>FROM</th>
<th>TO</th>
<th>COST*</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>SE River Mill Rd</td>
<td>SE 2nd Avenue</td>
<td>SE Broadway Rd</td>
<td>$1,350,000</td>
</tr>
<tr>
<td>22</td>
<td>SE Maple Rd</td>
<td>SE 1st Ave</td>
<td>SE Broadway Rd</td>
<td>$1,750,000</td>
</tr>
<tr>
<td>23</td>
<td>SW Maple Rd</td>
<td>SW 1st Ave</td>
<td>SW Broadway Rd</td>
<td>$1,750,000</td>
</tr>
<tr>
<td>24</td>
<td>SW Grove Rd</td>
<td>SW 2nd Ave</td>
<td>SW Broadway Rd</td>
<td>$1,750,000</td>
</tr>
</tbody>
</table>

Additional Active Transportation Projects:

- SE River Mill Rd
- SE 2nd Avenue
- SE Broadway Rd
- SE Shafter Rd
- SW Maple Rd
- SW 1st Ave
- SW Broadway Rd
- SW Shafter Rd

Survey Results:

Downtown
Parks
Schools

Estacada Active Transportation Plan
Open House Meeting #2 Summary
Page 21 of 31
Attachment C: Summary of Public Feedback Received

Flip Board
Flip board comments include those written by attendees or staff during the event. Comments in brackets were added by staff for clarification.
- Lower highway speed limits at SE River Mill Rd. traveling southbound into town.
- The extra bike buffer along the highway would make people biking more visible.
- All sidewalk projects should be made the priority.
- Lower the speed limits throughout downtown Estacada.
- Additional enforcement is needed.
- Add speed humps to reduce speeds.
- Lower speed limits from 6th Ave. to the north (25 miles out of town).

Information Poster Written Comments
These comments were written on the information boards, mainly on the maps.

- Safe Routes to School Projects:
  - Consider including the Red Barn Preschool in the SRTS study.
  - Concerns with speeding on Eagle Creek Rd. from 6th Ave. to [City Limits].
- Project 1b: Lakeshore Drive Route
  - Consider adding speed humps along Lakeshore Dr.
  - Do not add sharrows on Beech Rd. or Lakeshore Dr. because they are unsafe.
    - There is no reason to have bikes in the road when there is the [shared-use] path.
- Project 4: Milo McIver State Park Route
  - This route goes well with new Park Master Plan.
  - The City needs to get the bridge, it has been in the discussion process for a long time.
  - This route is a dream and a very good idea.
  - People who work in the industrial area already use the trail to commute to work.
  - The trail expansion was well received.
- Project 5: North City Route
  - Biking to work would be possible for people who work in the industrial area.
- Project 7b. NE Main Street Route
  - Restrict parking during the bus drop-off/pick-up times.
- Projects 8-10: Crossing Enhancements
  - Add a stop sign at the intersection of N Broadway St. and NE 6th Ave.
  - Add a median island at the school crossing along 6th Ave.
• Projects 11-14: Crossing Enhancements
  o Add a crossing at the highway junction (Hwy 211 and Hwy 224).

Survey/Written Feedback (12 responses)
• Do you live in Estacada?
  o Yes: 92%
  o No: 8%
• Are you an employer or employee of a business within Estacada?
  o Yes: 42%
  o No: 58%
• What is your gender?
  o Female: 67%
  o Male: 33%
  o Prefer not to answer: 0%
• What is your age?
  o Under 18 years old: 0%
  o 18 – 24 years old: 8%
  o 25 – 34 years old: 33.5%
  o 35 – 44 years old: 17%
  o 45 – 54 years old: 0%
  o 55 – 64 years old: 33.5%
  o 65 – 74 years old: 8%
  o 75 years or older: 0%
• Each CAT route project includes trade-offs where the city must weigh benefits and potential impacts. Given the trade-offs shown on the posters for each CAT route, how strongly do you support the following?

<table>
<thead>
<tr>
<th>Project 1a: Timber Park to Downtown Route</th>
<th>Strongly Support</th>
<th>Support</th>
<th>Neutral</th>
<th>Do Not Support</th>
<th>Strongly Do Not Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffered bike lanes on Hwy 211-224</td>
<td>18%</td>
<td>18%</td>
<td>46%</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>Bike lanes on SW Wade St.</td>
<td>30%</td>
<td>20%</td>
<td>40%</td>
<td>0%</td>
<td>10%</td>
</tr>
<tr>
<td>Shared roadway on SW 3rd St.</td>
<td>10%</td>
<td>20%</td>
<td>50%</td>
<td>0%</td>
<td>20%</td>
</tr>
</tbody>
</table>
  o Comments on Project 1a trade-offs:
    ▪ No shared roadway on SW 3rd.

<table>
<thead>
<tr>
<th>Project 1b: Lakeshore Drive Route</th>
<th>Strongly Support</th>
<th>Support</th>
<th>Neutral</th>
<th>Do Not Support</th>
<th>Strongly Do Not Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared roadway on SW Lakeshore Dr.</td>
<td>27%</td>
<td>9%</td>
<td>37%</td>
<td>9%</td>
<td>18%</td>
</tr>
<tr>
<td>Lakeshore Trail widening</td>
<td>60%</td>
<td>10%</td>
<td>30%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Estacada Active Transportation Plan
Open House Meeting #2 Summary
Page 23 of 31
### Shared roadway on SE Beech Rd.

<table>
<thead>
<tr>
<th>Project 2: SE 4th Avenue/SE Regan Hill Road Route</th>
<th>Strongly Support</th>
<th>Support</th>
<th>Neutral</th>
<th>Do Not Support</th>
<th>Strongly Do Not Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared roadway on SE 4th Ave. west of Shafford Ave.</td>
<td>30%</td>
<td>10%</td>
<td>20%</td>
<td>10%</td>
<td>30%</td>
</tr>
<tr>
<td>Shared roadway and bike lane on SE 4th Ave. east of Shafford Ave.</td>
<td>30%</td>
<td>20%</td>
<td>10%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Bike lanes on SE Regan Hill Rd. (with redevelopment)</td>
<td>30%</td>
<td>30%</td>
<td>10%</td>
<td>0%</td>
<td>30%</td>
</tr>
</tbody>
</table>

**Comments on Project 1b trade-offs:**

- Shared-path: keep bikes off the road except on Beech.

<table>
<thead>
<tr>
<th>Project 3: Pierce Street/Cemetery Road Route</th>
<th>Strongly Support</th>
<th>Support</th>
<th>Neutral</th>
<th>Do Not Support</th>
<th>Strongly Do Not Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bike lanes on NE Cemetery Rd. north of Cascade Ridge Dr.</td>
<td>40%</td>
<td>30%</td>
<td>0%</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td>Shared roadway and buffered bike lane on NE Cemetery Rd. south of Cascade Ridge Dr.</td>
<td>30%</td>
<td>20%</td>
<td>20%</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td>Separated bike lanes on NE 6th Ave.</td>
<td>20%</td>
<td>30%</td>
<td>20%</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td>Shared roadway on NE Pierce St., SE 3rd Ave., and Shafford Ave.</td>
<td>22%</td>
<td>22%</td>
<td>22%</td>
<td>22%</td>
<td>12%</td>
</tr>
</tbody>
</table>

**Comments on Project 1b trade-offs:**

- Not enough bike traffic to justify. Sidewalks needed in some areas.
- No bike lanes.

<table>
<thead>
<tr>
<th>Project 4: Milo McIver Route</th>
<th>Strongly Support</th>
<th>Support</th>
<th>Neutral</th>
<th>Do Not Support</th>
<th>Strongly Do Not Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lakeshore Trail extension to north</td>
<td>55%</td>
<td>36%</td>
<td>9%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Bicycle-pedestrian bridge over Clackamas River</td>
<td>73%</td>
<td>18%</td>
<td>9%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

**Comments on Project 1b trade-offs:**

- Super excited about a pedestrian/bicycle bridge to McIver
- No bike lanes.

<table>
<thead>
<tr>
<th>Project 5: North City Route</th>
<th>Strongly Support</th>
<th>Support</th>
<th>Neutral</th>
<th>Do Not Support</th>
<th>Strongly Do Not Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separated bike lanes on SE River Mill Rd.</td>
<td>22%</td>
<td>22%</td>
<td>22%</td>
<td>34%</td>
<td>0%</td>
</tr>
<tr>
<td>Project 6: Highway 211-224 Route</td>
<td>Strongly Support</td>
<td>Support</td>
<td>Neutral</td>
<td>Do Not Support</td>
<td>Strongly Do Not Support</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----------------</td>
<td>---------</td>
<td>---------</td>
<td>---------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Buffered bike lanes on Hwy 211-224 north of Timber Park</td>
<td>50%</td>
<td>10%</td>
<td>20%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Buffered bike lanes on Hwy 211-224 south of Timber Park</td>
<td>40%</td>
<td>10%</td>
<td>20%</td>
<td>20%</td>
<td>10%</td>
</tr>
</tbody>
</table>

○ Comments on Project 1b trade-offs:
  - Do it the same as north of Timber Park.
  - No bike lanes.

<table>
<thead>
<tr>
<th>Project 7a: Wade Street Route</th>
<th>Strongly Support</th>
<th>Support</th>
<th>Neutral</th>
<th>Do Not Support</th>
<th>Strongly Do Not Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycle boulevard on NW Wade St.</td>
<td>10%</td>
<td>20%</td>
<td>50%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Bicycle boulevard on NW 1st Ave.</td>
<td>10%</td>
<td>10%</td>
<td>50%</td>
<td>10%</td>
<td>20%</td>
</tr>
</tbody>
</table>

○ Comments on Project 1b trade-offs:
  - Would be okay without shared roadway.
  - Sidewalks needed.
  - No bike lanes.

<table>
<thead>
<tr>
<th>Project 7b: Main Street Route</th>
<th>Strongly Support</th>
<th>Support</th>
<th>Neutral</th>
<th>Do Not Support</th>
<th>Strongly Do Not Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bike lanes on NE Main Street</td>
<td>20%</td>
<td>30%</td>
<td>20%</td>
<td>0%</td>
<td>30%</td>
</tr>
</tbody>
</table>

○ Comments on Project 1b trade-offs:
  - Shared sidewalks – not shared road. No landscaping strips.
  - No bike lanes.

- Using the Crossing Enhancements posters, please tell us the three crossing enhancement projects (Projects 8 through 14) you think are most important to improving walking in Estacada.
  - Project: Marked crosswalk and minimize curb radii at Main St./NE 6th Ave.
  - Project: Minimize Curb Radii at NW Wade St./NW 6th Ave.
  - Project: Pedestrian Hybrid Beacon at Hwy 211-224/SW Wade St.
• Using the Additional Active Transportation Projects poster, please tell us the additional projects (Projects 15 through 24) you think are most important to improving walking and biking in Estacada.
  o Project: Shared-use path along SW Grove Rd.
  o Project: Shared-use path along SW Ivy Rd.
  o Project: Fill-in sidewalk walk gaps along SE Eagle Creek Rd. and N 1st Ave.

• Using the Safe Routes to School Projects poster, please tell us the three Safe Routes to School projects (Projects 25 through 45) you think are most important to improving biking and walking in Estacada.
  o Project: Finish sidewalks on the south side of NE 6th Ave. from Wade Creek to NE Cemetery Rd.
  o Project: Formalize an intersection at NE Currin St., construct curb ramps and curb extensions, install appropriate signage, and construct a crosswalk.
  o Project: Complete sidewalk on the south side of NW 10th Ave. to fill the gap east of Eagle Creek Rd. and install a stop sign pole at correct height at Eagle Creek Rd.

• Considering all four categories (CAT Route, Crossing Enhancement, Additional Projects, and Safe Routes to School), please tell us the three projects that you think are most important overall to improving biking and walking in Estacada.
  o Project: Safe Routes to School
  o Project: Crossing Enhancements
  o Project: Completed sidewalks throughout the city.

• How often do you use the following means to travel to or from work?

<table>
<thead>
<tr>
<th></th>
<th>Daily</th>
<th>1-3x per Week</th>
<th>1-3x per Month</th>
<th>Rarely/Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Walk</td>
<td>0%</td>
<td>14%</td>
<td>0%</td>
<td>86%</td>
</tr>
<tr>
<td>Bike</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Transit</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

• How often do you use the following means to travel to or from shopping, entertainment, or recreational destinations?

<table>
<thead>
<tr>
<th></th>
<th>Daily</th>
<th>1-3x per Week</th>
<th>1-3x per Month</th>
<th>Rarely/Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive</td>
<td>73%</td>
<td>18%</td>
<td>9%</td>
<td>0%</td>
</tr>
<tr>
<td>Walk</td>
<td>25%</td>
<td>12.5%</td>
<td>12.5%</td>
<td>50%</td>
</tr>
<tr>
<td>Bike</td>
<td>0%</td>
<td>0%</td>
<td>12.5%</td>
<td>87.5%</td>
</tr>
<tr>
<td>Transit</td>
<td>0%</td>
<td>0%</td>
<td>12.5%</td>
<td>87.5%</td>
</tr>
</tbody>
</table>
### How often do you use the following means to travel to or from school?

<table>
<thead>
<tr>
<th></th>
<th>Daily</th>
<th>1-3x per Week</th>
<th>1-3x per Month</th>
<th>Rarely/Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive</td>
<td>50%</td>
<td>0%</td>
<td>0%</td>
<td>50%</td>
</tr>
<tr>
<td>Walk</td>
<td>12.5%</td>
<td>12.5%</td>
<td>0%</td>
<td>72%</td>
</tr>
<tr>
<td>Bike</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Transit</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>
### Attachment D: Survey Open Responses

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project 1a: Timber Park to Downtown Route</td>
<td>No shared roadway on SW 3rd.</td>
</tr>
<tr>
<td></td>
<td>ok</td>
</tr>
<tr>
<td>Project 1b: Lakeshore Drive Route</td>
<td>Shared-path - keep bikes off the road except on Beech.</td>
</tr>
<tr>
<td></td>
<td>ok</td>
</tr>
<tr>
<td>Project 2: SE 4th Ave/SE Regan Hill Rd Route</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>Not enough bike traffic to justify. Sidewalk needed in some areas.</td>
</tr>
<tr>
<td></td>
<td>NO BIKE LANES</td>
</tr>
<tr>
<td>Project 3: Pierce Street/Cemetery Road Route</td>
<td>Not enough space for landscaping beds - narrow roads.</td>
</tr>
<tr>
<td></td>
<td>NO BIKE LANES</td>
</tr>
<tr>
<td>Project 4: Milo McIver Route</td>
<td>Super excited about a ped/bicycle bridge to McIver!</td>
</tr>
<tr>
<td></td>
<td>NO BIKE LANES</td>
</tr>
<tr>
<td>Project 5: North City Route</td>
<td>NO BIKE LANES</td>
</tr>
<tr>
<td>Project 6: Highway Route</td>
<td>Do it the same as north of Timber Park</td>
</tr>
<tr>
<td></td>
<td>NO BIKE LANES</td>
</tr>
<tr>
<td>Project 7a: Wade Street Route</td>
<td>Would be okay without shared roadway</td>
</tr>
<tr>
<td></td>
<td>Sidewalks needed</td>
</tr>
<tr>
<td></td>
<td>NO BIKE LANES</td>
</tr>
<tr>
<td>Project 7b: Main Street Route</td>
<td>Shared sidewalks - not shared road. No landscaping strip.</td>
</tr>
<tr>
<td></td>
<td>NO BIKE LANES</td>
</tr>
</tbody>
</table>

Using the Crossing Enhancements posters, please tell us the three crossing enhancement projects (Projects 8 through 14) you think are most important to improving walking in Estacada.

| Location 1 | 8 | 9 | 1 |
|============|---|---|---|
| High school to middle school cross                       | 8 |
| Project 9                                             | 10 |

| Location 2 | 12 | 10 | 5 | 9 |
Using the Additional Active Transportation Projects poster, please tell us the additional projects (projects 15 through 24) you think are most important to improving walking and biking in Estacada.

Location 1

15
19

Speed humps on Eagle Creek Highway
Sidewalks complete on all routes

Location 2

16
17

Highs traffic on River Mill

Location 3

20
24

Using the Safe Routes to School Projects poster, please tell us the three Safe Routes to School projects (projects 25 through 45) you think are most important to improving biking and walking in Estacada.

Location 1

30
32
34
36
38
40
42
44
46
48
50
52
54
56
58
60
62
64
66
68
70
72
74
76
78
80
82
84
86
88
90
92
94
96
98
100
Considering all four categories (CAT Route, Crossing Enhancement, Additional Projects, and Safe Routes to School), please tell us the three projects that you think are most important overall to improving biking and walking in Estacada.

<table>
<thead>
<tr>
<th>Location 1</th>
<th>8-10 - F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>33</td>
</tr>
<tr>
<td>Safe Routes to School</td>
<td></td>
</tr>
<tr>
<td>Safe Routes to School</td>
<td></td>
</tr>
<tr>
<td>Crossing Enhancements</td>
<td></td>
</tr>
<tr>
<td>Safe Routes to School</td>
<td></td>
</tr>
<tr>
<td>Safe Routes to School</td>
<td>9</td>
</tr>
<tr>
<td>Safe Routes to School</td>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location 2</th>
<th>Transportation - 16-20</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Crossing Enhancements</td>
<td></td>
</tr>
<tr>
<td>Crossing Enhancements</td>
<td></td>
</tr>
<tr>
<td>Safe Routes to School</td>
<td>11</td>
</tr>
<tr>
<td>Safe Routes to School</td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location 3</th>
<th>Safe Route 30</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Complete sidewalks</td>
<td></td>
</tr>
<tr>
<td>Additional Projects</td>
<td>44</td>
</tr>
<tr>
<td>Additional Projects</td>
<td>10</td>
</tr>
</tbody>
</table>
Please use this space to tell us anything else you think we should know about walking and biking in Estacada, or other improvements you’d like to see.

Open-Ended Response

Biggest priorities should be filling in/repairing sidewalks near schools and improving crosswalks nearby also. I would like to ask the city to consider placing traffic circles at busy intersections. There are a lot of studies that recommend them for safety without constricting flow.

I am still not convinced that prioritizing bike routes is to the best interest and/or best investment for Estacada. I feel that targeting bike riders is five years too late and cities are saturated with bike lanes and opportunities. Ideally, I would like to see Estacada research and investigate the next wave of marketable improvements to increase tourism and visitation. The current proposals are well designed and deep thought is evident, but again, we are behind the fad of being a bike town. Newberg and Dundee are wine country. Hood River is windsurfing and soon a bike town. Bend is craft beers. Portland is bikes. Many towns on the coast are bikes. Sunriver is bikes. The old Multnomah Falls Highway is bikes, the Springwater trail is bikes... saturated. Let's pick something else for Estacada... how about motorcycles or marijuana tasting. Let's forward think/not do what others are doing.

Sidewalks need to be completed on all routes. A safe crossing at 224/211 south should be considered.

I'm okay with making recreational biking more accessible, but people who live in downtown Estacada do not work in downtown Estacada. The last thing I want to see for our town is turning into NW Portland (no one wants this) or to have our own version of the Springwater Corridor.

I'm so happy to see these plans for Estacada--makes me feel so lucky to live here! I would love to see a connection eventually made to the Springwater corridor.
Public Advisory Committee and Technical Advisory Committee Meeting #1 Summary
MEETING SUMMARY

Estacada Active Transportation Plan
Public Advisory Committee (PAC) and Technical Advisory Committee (TAC)
Meeting #1

Meeting Date: October 24, 2017
Meeting Time: 3:00 PM – 5:00 PM
Meeting Location: Estacada City Hall
Meeting Purpose: The purpose of this meeting was to introduce the Estacada Active Transportation Plan project to the committees, reach consensus on community values to be used for project prioritization, confirm the framework of routes providing the primary connections between major activity centers, and to discuss preferences for facility types along those routes.

Meeting Attendees:
Public Advisory Committee:
Dennis Weber – Citizen
Karen Hovda – Estacada Community Center/Estacada Infrastructure Committee
Michael Minch – Citizen
Phil Lingelbach – Estacada Development Association
Aaron Liersemann – Clackamas County Tourism
Scott France – Clackamas County Public Health
Jamie Nash – Oregon Public Health Institute

Technical Advisory Committee:
Tom Seal – Estacada Public Works Director
Tony Dentel – PGE
Gail Curtis – Oregon Department of Transportation
Andi Howell – Sandy Area Metro
Richard Anderson - Estacada Rural Fire District
Glen Hamburg – Estacada/Clackamas County DTD Planner

Project Team:
Denise Carey – Estacada City Manager
Melanie Wagner – Estacada Assistant to the City Manager
Gail Curtis (also on TAC) – Oregon Department of Transportation
John Bosket – DKS Associates
Rory Renfro – Alta Planning + Design
Meeting Summary

Agenda Overview and Introductions
As part of the introductions, each committee member was asked to describe their primary interest related to active transportation in Estacada.

Dennis – supporting walking opportunities
Karen – supporting walking opportunities and specifically those for senior citizens
Mike – Estacada is small enough that you can reach any destination by walking. Safety for people walking must be a priority, especially for kids and seniors.
Denise – City Council goal is to improve active transportation and make it safer for all
Richard – public safety and protecting the ability to efficiently drive on key emergency response routes
Scott – connecting people to the places they want and need to go, as well as serving the rural areas, are parts of the County Community Health Improvement Plan
Andi – improve access to transit and all modes of travel
Glen – interested in understanding what will be needed to support future growth
Jamie – supporting the Healthy Eating Active Living (HEAL) initiative by using active transportation as a catalyst to fund and implement HEAL strategies
Tony – coordinate with Estacada’s active transportation planning as a manager of PGE lands
Phil – jogging
Gail – support the City’s effort as a representative of ODOT and coordinate the involvement of ODOT’s many technical resources
Aaron – interested in bicycle tourism and coordination with regional efforts

Project Orientation
The main objectives of the Estacada Active Transportation Plan are:

- Improve the pedestrian bicycle elements of Estacada’s Transportation System Plan to go beyond minimum needs
- Create environments where walking and biking are seen as easy and fun for all community members
- Encourage active, healthy lifestyles
- Attract recreational tourism

The project includes 3 phases:

1. The “Understand” phase includes tasks to evaluate current active transportation conditions, discuss issues and interests with stakeholders, and identify opportunities for coordination with regional plans. This phase runs through late Fall 2017 and includes a walking tour with select committee members (occurred on Sept. 20), a joint PAC and TAC meeting (today’s meeting), and an in-person and online Open House (Nov. 28).
2. The “Evaluate” phase includes tasks to develop recommended improvements for the active transportation network, identify priority projects, and assemble a plan to guide implementation. This phase runs from late Fall 2017 to mid Spring 2018 and includes...
another joint PAC and TAC meeting as well as another in-person and online Open House.

3. The “Recommend and Adopt” phase incorporates public comments into a final plan and includes public hearings to adopt the Active Transportation Plan as part of the City’s Transportation System Plan. This phase runs from mid Spring 2018 to mid Summer 2018.

Public participation throughout the project is encouraged. The project team will use the following to engage the public:

- The Public Advisory Committee
- A City Walking Tour
- 2 open houses
- 2 online open houses
- Social media
- City website
- City newsletter
- Flyers in public places
- Local newspaper

The TAC and PAC play a key role in the project by reviewing project documentation and providing input as representatives of their agency/organization or as members of the public.

**Overview of Current Active Transportation Conditions**

A brief presentation was provided summarizing input received during a City Walking Tour with select committee members and observations made by the Project Team. A few key topics of interest included:

- Better active transportation access is needed for the Industrial Park on Hwy 211-224
- Hwy 211-224 is difficult to cross and is a barrier for people walking and biking
- Wade, Zobrist, and Pierce are viewed as walk-bike friendly streets
- There are a few intersections in need of improvements to make walking and biking safer (6th at Main and Wade Streets)
- Need better connections between schools and newer residential developments
- The “School Loop” (6th, Pierce, 2nd, and Main) is a popular recreation route

Other issues raised by committee members include:

- A connection is needed between Wade Street and Cemetery Road (a new collector street will be provided as part of the development being constructed in that area, which will also include a connection to Broadway).
- The Wade Creek bridge on 6th Avenue has no sidewalks and very little shoulder – it is a pinch point for people walking between the neighborhoods on Cemetery Road and the rest of town.
- The older roads in town often lack active transportation facilities.
Discuss Community Values Related to Active Transportation and How That Translates to Project/Route Prioritization

The draft project selection and prioritization criteria were reviewed and discussed. These criteria should reflect community values and will be used to guide the development and prioritization of recommended improvements. Committee input is summarized below.

- Key community values include: safety, all ages and abilities, connectivity, addressing the urban/rural interface, transit access, health, leveraging improvements with other projects, economic development, and tourism.
- Potential impacts to emergency response times from changes to streets must be considered. Key response routes include: Main, Shafford, Coupland, 6th, and Eagle Creek.
- Minimizing exposure to high traffic volumes and speeds is important. Walking along the highway or along Wade north of the library is not pleasant.
- Transit can help bring tourists in, so transit access is important.
- There is interest in growing regional bicycle tourism.
- Safe connections between neighborhoods, schools, parks, shopping, and transit are very important.
- Community acceptance should be important. That criterion is likely to be used in a “Pass/Fail” manner.

Review and Discuss Preferences for Active Transportation Facilities on Opportunity Routes

The draft Opportunity Routes represent primary active transportation corridors where the most significant investments will be made. The proposed routes were discussed with comments summarized below.

1. Lakeshore Drive Route:
   - The existing Lakeshore path is narrow (as narrow as 4’). Need wider path widths to allow for side-by-side travel and to provide access for emergency vehicles. 10’-12’ widths are preferred, plus sufficient overhead clearance.
   - Accessing downtown via 2nd Street may not be the best place because of the 2nd/Broadway intersection.
   - Businesses on 2nd Street may be concerned with on-street parking loss (but most of them have their own off-street parking).
   - Hwy 211-224/2nd Street intersection is an “uncomfortable intersection” with high speeds as vehicles enter downtown. Consider routing people down to crossings at Elm or Broadway.

2. 4th Avenue/Regan Hill Route:
   - On-street parking is underutilized on 4th Avenue.
   - 4th Avenue is becoming more of a commuter route.
   - Potentially a lower priority due to steep grades.

3. Pierce Street/Cemetery Road Route:
   - There is not much parking activity on 6th Avenue, except during athletic events.
   - People often speed on Pierce. Pierce experiences cut-through traffic when Main Street gets congested.
• There may be resistance from the community if traffic calming is proposed on Pierce.
• Shared Lane Markings may be less effective on Pierce (and as an overall measure).

4. Milo McIver State Park Route:
No major comments.

5. North City Route:
• Leverage improvements with future development.

6. Downtown/Central City Loop:
• Funded improvements to be constructed on Shafford in Spring 2018.
• Shafford is an important emergency response route; consider moving the bike boulevard to Pierce.

7. Hwy 211-224 Route:
• Desire for improved bike facilities on the highway between the Hwy 211 split and Faraday Lake (this is mostly outside the study area).
• Seasonal peak traffic often results in back-ups on Hwy 211 where it intersects with Hwy 224. The ability to turn left off Highway 211 is the problem. It is hard to tell what lane oncoming westbound traffic is in. This problem would not be made worse by the proposed lane reduction on the highway.
• Concerns were raised about delay on unsignalized side streets approaching the highway if the lane reduction were implemented.
• The Fire District representative preferred that the highway be left as it is.
• Some members would rather see improvements on an alternative corridor, and leave the highway alone. Others expressed support for re-allocating the roadway space for active transportation.

8. Wade Street/Main Street Routes:
• Traffic volumes may increase as new development occurs in the area.

Discuss Upcoming Community (and on-line) Open House #1
Our first open house is scheduled for Nov 28. Committee members are encouraged to attend and invite others. Open house materials will be available for viewing and commenting on-line for 2 weeks.
Public Advisory Committee and Technical Advisory Committee Meeting #2 Summary
MEETING SUMMARY

Estacada Active Transportation Plan
Public Advisory Committee (PAC) and Technical Advisory Committee (TAC)
Meeting #2

Meeting Date: May 10, 2018
Meeting Time: 3:00 PM – 5:00 PM
Meeting Location: Estacada City Hall
Meeting Purpose: Reviewing the Draft Active Transportation Plan and specifically discussing trade-offs related to the recommended improvements for each Core Active Transportation Route. Committee members were asked to share their thoughts on the recommended improvements and if they thought the project prioritization was right.

Meeting Attendees:

Public Advisory Committee:
Karen Hovda – Estacada Community Center/ Estacada Infrastructure Committee
Michael Minch – Citizen
Phil Lingelbach – Estacada Development Association
Scott France – Clackamas County Public Health
Maggie Kelly – Estacada School District

Technical Advisory Committee:
Tom Seal – Estacada Public Works Director
Gail Curtis – Oregon Department of Transportation
Glen Hamburg – Estacada/Clackamas County DTD Planner

Project Team:
Denise Carey – Estacada City Manager
Melanie Wagner – Estacada Assistant to the City Manager
Gail Curtis (also on TAC) – Oregon Department of Transportation
John Bosket – DKS Associates
Rory Renfro – Alta Planning + Design
Project Status

We are near the end of the second of three phases for this project:

1. Last time we met we were near the end of phase 1, or the “Understand” phase. That phase included tasks to evaluate current active transportation conditions, discuss issues and interests with stakeholders, and identify opportunities for coordination with regional plans. It also included a walking tour with select committee members (occurred on Sept. 20) and an in-person and online Open House (Nov. 28).

2. We are now completing the “Evaluate” phase, which includes tasks to develop recommended improvements for the active transportation network, identify priority projects, and assemble a plan to guide implementation. We will be discussing the draft plan recommendation today and will follow this meeting with our last in-person and online Open House (scheduled for May 17).

3. The “Recommend and Adopt” phase incorporates public comments into a final plan and includes public hearings to adopt the Active Transportation Plan as part of the City’s Transportation System Plan. This phase runs from late Spring 2018 to mid Summer 2018.

Project Objectives and Feedback Received

As a reminder, the main objectives of the Estacada Active Transportation Plan are:

- Improve the pedestrian bicycle elements of Estacada’s Transportation System Plan to go beyond minimum needs
- Create environments where walking and biking are seen as easy and fun for all community members
- Encourage active, healthy lifestyles
- Attract recreational tourism

The TAC and PAC play a key role in the project by reviewing project documentation and providing input as representatives of their agency/organization or as members of the public. At the first PAC and TAC meeting, key interests expressed included:

- Better connections to industrial park
- Highway is difficult to cross
- Better connections between schools and newer neighborhoods
- Improve access to transit
- Support bicycle tourism
- Improve safety at NW 6th Ave. w/ Main and Wade
- Wade Creek bridge on NE 6th Ave is a pinch point
- Older roads lack active transportation facilities
- Consider impacts to emergency response routes
- Connect people to places they want to go
Additional public feedback was obtained from our first Open House. A full summary of public input was provided. The most popular community values were:

- Addressing challenging street crossings
- Filling network (emphasis on school areas)

Other commonly expressed interested included:

- Need to complete/repair sidewalks and make ADA-compliant throughout city
- Highway and other key street crossings need enhancement
- Highway lane reduction is not widely supported

**Overview of Draft Active Transportation Plan**

The first sections of the Draft Plan (Introduction and Objectives) summarize material discussed during the first meeting. The remaining sections (Classifications, Route, Projects, and Design Standards and Guidance) include new material. The focus of PAC/TAC Meeting #2 was mainly on the Routes and Projects sections.

The Classifications section describes the primary role of each Core Active Transportation (CAT) Route (formerly referred to as Opportunity Routes) in the overall network, separating them into Regional, Neighborhood, and Local Facilities.

Committee members were generally supportive of CAT Routes and project recommendations. Comments on the CAT Route recommendations are summarized below. The presentation slides accompanying the discussion are attached.

**Route 1: Lakeshore Drive & Timber Park to Downtown**
- There was general support for projects that enhance the riverfront.
- Most improvements on this route and others seemed focused on bicycle travel. It is difficult to see how pedestrian travel is being improved.
  - Many routes already have partial pedestrian improvements, so it can be harder to see how walking is being improved compared to biking where very little infrastructure is present. However, pedestrian improvements include completion of ADA-compliant sidewalks, landscape strips to create more separation between pedestrians and cars, wider paths, and several street crossing enhancements.

**Route 2: SE 4th Ave/ SE Regan Hill**
- There are a lot of kids traveling in this area.
- Residents north of 4th Ave won’t want to travel out of direction to use facilities on 4th Ave if they are destined to the schools. Should a supplemental route, like on Carole Street, be provided? The hill isn’t as steep on Carole.
  - The project team will consider establishing a supplemental route on Carole Street.

**Route 3: NE Pierce St/ NE Cemetery Rd**
- There will be a need to accommodate lost parking on 6th Ave. Parking on 6th Ave is generally only used during major events at the schools (e.g., football games) so most days this wouldn’t be a problem.

**Route 4: Milo McIver State Park**
• These route recommendations were widely supported by the committee members. A bridge over the river to connect to Milo McIver State Park would be a great asset.

Route 5: North City
• The committees liked the protected bike lanes but recognize that implementation can be challenging in areas where many driveways or other potentially conflicting street uses are present. Buffered bike lanes consist of the same roadway/lane widths, so the typical protected bike lanes can be converted to simpler buffered bike lanes where there would be too many conflicts.
• Committee members like the street trees on Eagle Creek Hwy.
• A landscape strip should be included in the River Mill Rd typical cross-section.
• There is commercial zoning in this area and interest has been expressed in allowing some multi-family residential development.
• There have been some concerns expressed about speeding on NE 2nd Ave, so traffic calming treatments to support a bicycle boulevard might be helpful.

Route 6: Hwy 211-224
• It is preferred that buffered bike lanes be added to the highway by reducing lane widths instead of reconstructing curbs, island, or sidewalks if possible. That would require a design exception from ODOT to allow for 11-foot travel lanes instead of the 12-foot standard. This lane width reduction and creation of buffered bike lanes would improve comfort for bicyclists and could result in lower traffic speeds.
• There was support for the path connections between the highway and the ends of Maple, Ivy, and Grove Road.

Route 7: Wade & Main
• Citizens have requested in the past that the school zone at the top of the hill on Main Street be moved down.
• The school district will be reconstructing sidewalks on Main St. this summer.
• School buses park along the east side of Main St. to load/unload children. There are also a lot of cars stopping to drop off or pick up children here.
• TriMet buses also travel along Main St.
• Parking cannot be removed from Main St.
• Bike lanes on Main St. are supported, but is there a better design to protect people riding bikes from buses and parked cars?
• Pedestrian improvements on Main St. are strongly supported.

Project Prioritization
The project team shared the results of the project prioritization, which was the created by applying criteria developed at our last meeting. The committees agreed with the prioritization shown, but asked that the intersection crossing improvements be moved up to the second highest priority after the North City Route.

It was also noted that ADA improvements in the areas of the schools and downtown are of interest to senior citizens and that continued improvement in those areas be encouraged as well.
Discuss Policy and Code Amendments
Glen Hamburg shared some draft policy and code amendments that the City would like to adopt with the Active Transportation Plan to help implement plan recommendations. There were no comments on the proposed changes. Gail Curtis noted that she would provide some recommendations to simplify the language.

Discuss Upcoming Community (and on-line) Open House #2
Our second open house is scheduled for May 17. We'll be presenting the same information discussed today, with the focus on getting input on recommended improvements.

Committee members are encouraged to attend and invite others. Open house materials will be available for viewing and commenting on-line for two weeks following the event. If committee members would like to volunteer to help present information and solicit feedback, the project team will provide some training following the meeting.
6th Avenue (Main Street to Cemetery Road) Design Alternatives
Street Design Options for NE 6th Avenue between Main Street and Cemetery Road to Retain On-Street Parking

**Option A**

- 59' total width

**Option B**

- 60' total width

(Note: both options fit within the existing 60-foot right-of-way shown on the attached map.)
Project Area