BUS STOP DESIGN & PLANNING GUIDE

Prepared by the Operations and Planning Departments

2011
PURPOSE OF GUIDE

The design of passenger waiting areas plays a significant role in a person’s decision of whether and how often to use transit. Comfort, security, access, facility attractiveness and several other factors should be considered when establishing bus stops.

RVTD has varying levels of authority to install and construct bus stops throughout the Rogue Valley. The district’s goal is to provide a comfortable and accessible waiting area at each stop however limitations exist that prevent this goal from being reached.

The purpose of this guide is to provide:

- policies for the type of stop amenities that should be provided
- an existing conditions report as of 2010 of all bus stops
- design guidelines for various types of bus stops
- an inter-agency framework for how bus stops are improved
- a reference on the varying levels of authority RVTD has in each city
- a budget and timeline for making bus stop improvements
POLICIES

The following are excerpts from the 2007 Ten-Year Long Range Plan:

Support Equitable Access to Transportation

- When locating bus stops place nearest to safe pedestrian crossing or facility if the infrastructure exists.

Ensure the Efficient Use of Transit Investments

- All new facilities that are built will consider installation of energy and water conservation technologies.

Improve Public Outreach/ Marketing

- Install transit schedule and route information in all bus shelters.

Enhance RVTD’s Financial Stability

- Establish a long-term capital replacement program to allow for the planned replacement of buses, paratransit vehicles and other capital assets on a scheduled basis.

Reduce Water and Other Pollution

- Install solar powered technologies for stops, facilities and buildings when price difference does not exceed more than 25% conventional equipment.

Bus Stop Hierarchy Designations

<table>
<thead>
<tr>
<th>Class</th>
<th>Boardings/ day</th>
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<tr>
<td>Class A</td>
<td>&gt; 60</td>
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<tr>
<td>Class B</td>
<td>31-60</td>
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<td>11-30</td>
</tr>
<tr>
<td>Class D</td>
<td>0-10</td>
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Class A

These are the most frequently used bus stops in the system based on the number of boardings, transfers, bus frequency and routes served. These stops should have the highest level of amenities including a large and comfortable waiting area with multiple shelters if serving more than one route at a time and consideration for bus pull out areas. Additional amenities should include systemwide route and schedule information, a bicycle rack, an attractive trash receptacle, and consideration for restroom and food/drink nearby.

Class B

These are the stops with high boardings per day that should have at a minimum a shelter, map and route information, a trash receptacle and a bicycle rack. These stops may also need a bus pull out area if there are long dwelling times.

Class C

These stops have moderate boardings per day and should be equipped with a Simme seat or a bench. Additional amenities could include map and route information, a trash receptacle and a bicycle rack depending on the location. Nearby awnings or trees should be considered to allow for nearby shelter during harsh weather.

*Consideration should be given in areas with higher than average elderly and disabled populations for the installation of a shelter.*

Class D

These are the stops with the lowest use and should have at least a sign posted with consideration for nearby shelter during harsh weather.

All stops should have:

- Adequate lighting at the stop or nearby
- ADA accessibility and consider pedestrian safety
- A bus stop sign with stop number designation
**PASSENGER AMENITIES & FEATURES**

The list below captures the amenities and features that are used to evaluate passenger waiting areas.

**LOCATION:**

- Stop Number
- Routes Served
- Inbound/Outbound
- Corner location of stop in reference to nearest intersection (NE, SE, etc)
- On Street
- At Street
- LAT/LON
- Municipality (Medford, Ashland, etc.)
- Status (active/inactive)
- Nearest Landmark

**AMENITIES:**

- Number of Shelters
- Vendor of shelter
- Condition
- Type of Shelter
- Width, Depth
- Wheelchair Access
- Lighting (none, working, present but not working)
- Graffiti
- Seating Capacity
- Number of Benches
- Vendor of Bench
- Condition
- Type of Bench (semi-seat, etc)
- Seating Capacity
- Graffiti

**ADA:**

- Sidewalk (none, width 5ft+, < than 5ft width)
- Loading pad
- Obstructions
- Curb Cut
- Nearby Pedestrian Crossing
- Terrain (Flat, minor slope, major slope)
- Surface (Concrete, dirt, etc)
- ADA (Accessible, Functional, not accessible)

**MISC.**

- Bike Parking
- Bike Lane
- Time point
- Stop Sign
- Sign (new, old, unclear)
- Sign post type
- Posted speed
- Trees
- Bus Bay
- FLAGGED for attention
EXISTING CONDITIONS OF STOP FACILITIES

Staff evaluated bus stop conditions in 2010 using the passenger amenities and features list on the previous page. This information is combined with passenger activity data that was collected in 2008 to provide the following report.

Figure 1. Overall breakdown in seating amenities for all stops

Figure 2. This map’s purpose is to show areas in RVTD’s system where there are significant gaps in signage. Red dots signify stops without signs.
Figure 3. RVTD currently has very limited rider information in bus stop facilities. Red dots signify locations where information currently exist.

Accessibility
RVTD collected data on the accessibility of the stops. Using accessibility criteria outlined in the toolkit provided by Easter Seals – Project Action, RVTD was able to make general accessibility determinations of the bus stops. Recorded accessibility data includes:

- Presence, condition, and width of sidewalk
- Presence of curbcuts and obstructions
- Presence, position, and size of loading pad
- Surface of terrain, and slope of landing area
The biggest factor in determining stop accessibility is the presence, condition, and size of a loading pad. The data shows that over 70 RVTD stops do not have sufficient loading pads. In some cases, there are several stops in succession that are without loading pads. Identifying these areas and strategically targeting stops for the installation of loading pads could be beneficial.

Figure 4. Area identified where over 3 stops in succession exist without loading pad.

Safety
In April of 2003, the California Supreme Court ruled that a transit agency could be held liable for placing a bus stop in a hazardous location. In the case of California, the factors that make up the bus stop safety are not limited to the stop facilities and the surrounding area, but also include external factors, such as sidewalks, traffic patterns, and pedestrian amenities. In general, all transit trips begin and end with a walk trip, and for this reason, RVTD collected data on the safety of its bus stops, and some external data. The data includes:

- Bus dwelling area
- Posted Speed
- Stop Hazards
- Lighting Conditions
- Nearest Ped Crossing/Ped Crossing Amenities
- Landscaping Issues
Figure 5. Photograph of stop with safety issues. Passengers, in order to be seen by the bus driver, must stand dangerously close to a high speed traffic area.

Figure 6. Pie Chart showing the ratio of stops that have pedestrian crossings within sight of the bus stop. Pedestrians are much more likely to use pedestrian amenities if the amenities are in sight.

Figure 7. Pedestrian collision map developed for Vancouver BC. Bus stops in areas where collision density is highest could be targeted for safety improvements.
DESIGN GUIDELINES

RVTD preferred shelter design includes an 18’ length by 8’ width pad that is 4” deep. This provides space adequate for one shelter, one trash receptacle and one bicycle rack. Variations are possible depending on the conditions. The shelter pad must have at least 4’ of solid surface in front of the seating area to comply with ADA and an area for the ADA lift landing pad.

Figure 8. Typical shelter size

Figure 8. Typical shelter pad dimensions
Figure 9. Surface and sub surface guide

Figure 10. Shelter anchoring system

Figure 11. La Clinica shelter
RVTD uses a Simme seat for moderately used bus stops. The Simme seat uses a single post and has two seats on either side with a sign attached to the top. The space needed is a 4’ by 2’ concrete pad. To comply with ADA a 4’ clearance is required in front, typically the sidewalk. Often the Simme seat pad is still poured behind the sidewalk.

After installation, the Simme seat stands at just over 10’ tall and is 4 feet wide. See Figures 9 and 10 for surface and sub surface preparation.

RVTD will consider providing a trash receptacle and bicycle rack at Simme seat locations.

The final stop type is a sign post. RVTD uses either a wooden pole or metal pole.
Based on the passenger activity collected in 2008 it was found that only minor improvements to stop facilities are needed. The primary improvements are the installation of Simme seats. The table below shows the number and type of improvements for each stop based on the hierarchy designations.

More accurate information will be collected in 2011 with the Automatic Passenger Counting system, however this needs analysis is still very reliable.

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The table below is based on the hierarchy designations in addition to major populations nearby and other stop characteristics such as a major commercial or school.

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INTERAGENCY FRAMEWORK FOR STOP ENHANCEMENTS

The Operations, Transportation and Planning Departments are responsible for bus stop enhancements. The following describes the role of each department:

**Operations**- Provides the construction and installation of stops, provides the ongoing maintenance of stops and oversees storage of stop materials.

**Transportation**- Advises on stop location to ensure safe vehicle access including traffic issues, vehicle ingress and egress and assisting with stop amenity decision making.

**Planning**- Coordinates with City and County staff, developers and property owners to request stop facilities, prepares easements with property owners, evaluates pedestrian and bicycle connectivity, manages grant funding to purchase stop materials, evaluates stop activity to enhance stops as needed.

A Stop Request Form will be used to provide greater communication between the three departments and ensure there is consistency with how stops are evaluated. An example form is provided in Appendix A.