

## **Chapter 5. Implementation**

### **Overview**

Valley Regional Transit (VRT) has adopted the Short-Range Preferred Service Plan, described in Chapter 3, for the ValleyRide fixed-route services in Ada and Canyon counties for implementation in 2005. Some changes may be made to the route structure as a part of the public hearing and comment process prior to implementation. The intent of the plan is to increase ridership by:

- Retaining virtually all existing riders.
- Being useful to existing riders for a wider range of trips.
- Being useful to people who do not currently ride.

The largest growth market is among people who do not currently ride. This market also has the potential to grow long term, especially as costs of driving rise.

To expand ridership, the plan emphasizes simple and direct service. Routes are designed to be easy to understand, and are as straight and direct as possible. The third key element of ridership growth, frequency, is a longer-term issue requiring additional funding, though the proposed system makes it easier to add frequency in the future.

The next challenge is implementation. Putting a new route structure on the street is a concentrated effort that is quite different from making minor service changes. It is important to think through each aspect of the implementation from the perspective of its customers to make the new system as simple, direct, and easy to use as possible.

The goal of the implementation should be to make the ValleyRide services available, transparent, and readily comprehensible to potential customers. Current customers have already gone to the trouble of learning the system and are likely to absorb changes easily. The real test is a first time customer. They should be able to easily and quickly figure out what the system can do for them

and how to use it. Cultivating this perception among current and potential customers will maximize future ridership.

This chapter first recommends a framework for a ridership-oriented approach to implementing the new Valley Regional Transit plan for ValleyRide services. It then suggests how each aspect of the plan can be made as customer-centric as possible. Ada County is the focus of this implementation plan because it is the most complicated implementation process, but the same principles apply for Canyon County. If any aspect of implementation differs for Canyon County, this is noted at the end of each section below.

## **Framework: A Welcoming Transit System**

### **Questions to Ask**

Implementing the ROCIP is an opportunity for Valley Regional Transit to improve its service and make it friendlier for potential customers, as well as existing ones. Still, it is the details of the implementation – the numbering and timing of routes, overhead signs, bus stop signage and locations, maps, bus book, website, and so on – that will largely determine how customers perceive the changes and the new service plan.

When thinking through how to design and implement each of these details, each should be considered through the lens of the potential customer who is not familiar with the system. At each step, it may be useful to ask the following questions as a litmus test for simplicity:

- Does this decision serve the goal of being simple, direct, and easy to use?
- Will this decision make the system more comprehensible to someone who has never used ValleyRide before?
- Is this decision consistent with the other choices that have been made about the presentation of the service?

## **The Message: Simple, Direct, Easy**

By design, the proposed system is simple, direct, and easy to use. These features should be the underlying message. At the same time, it is important not to oversell the service. “Fast,” for example, is true of the service to State Street, Hyde Park, and Five Mile (from downtown), but some areas with improved directness will still have only a minute or two of speed improvement, not enough for many to notice. The other common selling point, frequency, cannot be improved with current resources, except that State and Hyde Park (and inner Warm Springs) are upgrade to 30-minute service all day.

The Nampa–Caldwell improvements will be faster and more frequent for trips between the two cities. Trips along the Boulevard will be possible every half-hour instead of every hour, and the delay and transfer at Karcher Mall will be eliminated. For the east side of Nampa, trips to Caldwell or destinations on the Boulevard will be dramatically faster and more direct. These improvements should be marketed as part of the Canyon County changes.

A transit system can express its simplicity and usefulness via a coherent set of well-executed maps, overhead signs, stops, and so on, so that every time a customer encounters some part of the system, the message that it is simple, direct, and easy to use is reinforced. The transit system itself delivers the message. The best marketing a transit system can have is to be simple, direct, and easy to use, and to make these features apparent.

## **About this Chapter**

The remainder of this chapter discusses crucial elements of a successful customer-centric implementation of the new ValleyRide service plan. Each major element of the implementation will be introduced with a brief discussion of why it’s important, guiding principles, and key implementation considerations. Major elements to successful implementation include:

- Customer information: route naming, overhead signage, maps
- Fixed stops: stop spacing, placement, management, amenities
- Transit center

- Driver training
- Decision making process

## **Customer Information**

Clearly and simply presenting complex information about a transit system is crucial for making it useful for current customers and easy to understand for potential customers. This is a challenge for any transit system. Valley Regional Transit now has the opportunity to tie all these different improvements together with clear and simple explanations of what the system can do and how to use it.

### **Route Naming, Numbering, and Overhead Signs**

Before the new service plan is adopted, each route needs to be named and numbered according to a sensible scheme. The naming of a route can start to communicate the right type and amount of information to customers so that, at a glance, they can learn as much about the system as possible. Route numbers determine the sequence in which routes are presented, in a schedule brochure or on a website. A logical sequence to this presentation helps customers to more quickly find the services that they need.

To make the route numbering scheme as meaningful as possible for riders, the proposed route numbering in Boise starts along the river south of downtown and counts up as the routes move clockwise around a map. Where possible, this is consistent with the existing route numbering so as to minimize disruption for existing riders. In keeping with the current route numbering scheme, 20s are reserved for numbering cross-town routes.

In Canyon County, 40s denote intercounty routes, and 50s denote local service in Nampa and Caldwell. In the 50s, which form a single composite route, northbound runs will have even numbers and southbound runs will be odd, but the entire package should be presented on one schedule as a composite service.

Good route names are simple, usually just the name of the main arterial used. As a good route name is reinforced on bus overhead signs, maps, signs, and other media, the person who has never used the bus gradually begins to learn where certain routes go and, in so doing, become potential customers because they start to understand how the system works and how it might be useful for them.

Valley Regional Transit should develop and fix a route naming convention for its new service plan as soon as possible because it is the basis of many other materials that need to be produced for riders. Our proposed naming is as follows. The route name is shown in capitals. Following this are the two possible destination signs. These indicate the endpoints of the route, and therefore also convey a sense of the direction that the bus is going.

Good route naming is most obviously beneficial when it is employed on bus overhead signs. When done well, overhead signs alert customers as to what bus is approaching, where the bus is going, and more or less how it's getting there (the main routing). When the route name describes the routing, it helps customers to associate the bus with its route and thereby requires them to remember less in order to use the system. When all routes are named according to their major routing, it makes learning the whole system (rather than one or two commonly used routes) a much easier task for regular customers, lowering one barrier for increased use by potential customers.

The primary constraint on route naming conventions is usually bus overhead signs – these displays are often limited in the number and types of characters they can display. The following table recommends a naming convention for the new ValleyRide service plan. About 30 percent of bus overhead signs have extremely limited capabilities in terms of the amount and type of characters that can be displayed. The proposed naming convention has been designed for the 70 percent of bus overhead signs that can display the full route name. According to the ValleyRide Maintenance Department, the signs with limited capabilities will start to be phased out in summer 2005.

**Figure 5-1 Recommended Route Naming Convention for Boise Area Service**

<b>ROUTE First Page</b>	<b>TO (INBOUND) Second Page Inbound</b>	<b>To (OUTBOUND) Second Page Outbound</b>
1 PARKCENTER	to Downtown	to Airport
2 BROADWAY	to Downtown	to Timberline HS
3 VISTA	to Downtown	to Airport
4 ROOSEVELT	to Downtown	to Targee & Vista
5 EMERALD	to Downtown	to TS Mall
6 ORCHARD	to Downtown	to Curtis & Franklin
7 FAIRVIEW	to Downtown	to TS Mall
8 CHINDEN - 5 MILE	to Downtown	to TS Mall
9 STATE	to Downtown	to Glenwood
10 COLLISTER - COLE	to Downtown	to TS Mall
14 HYDE PARK	to Downtown	to Parkhill
16 VETS HOSP	to Downtown	N/A
17 WARM SPRINGS	to Downtown	to Old Pen Rd
29 OVERLAND	to BSU	to TS Mall

In Nampa and Caldwell, the street or highway used does not distinguish each route, as it does in Boise: All local routes use the Boulevard, and all intercounty routes use I-84. For this reason, Canyon County route names will emphasize destinations; the destination city is shown in capitals, followed by the branch name (for locals) or the intermediate city (e.g. “via Meridian”) for intercounty service.

For Nampa and Caldwell service, we recommend that vehicles be equipped with overhead signs that can accommodate a second page of information, as indicated. This is easily done on electric signs. On vinyl signs, the main or “first page” name would appear in all caps, and the second page in mixed case, for appropriate emphasis.

**Figure 5-2 Recommended Route Naming Convention for Nampa/Caldwell**

<b>ROUTE</b> <i>First Page</i>	<b>DESTINATION</b> <i>Second Page</i>
51 NAMPA S 12 <sup>th</sup>	to Greenhurst
52 CALDWELL West	to W Valley Med
53 NAMPA Garrity	to Mercy North
54 CALDWELL East	to Kearney

### **Bus Stop Signs**

Fixed bus stops allow a transit agency to provide riders with information about the system (e.g., what bus stops there, where it’s going, how often it comes by, schedule, etc.). This is particularly helpful for attracting new riders to the system by making it more comprehensible to the uninitiated.

As an ideal, all fixed stops, even if they are pole stops, should have the information needed so that a customer can learn, from only that sign, how to use that particular route, if not the entire system. Because ValleyRide does not plan to install shelters at every stop, we recommend that signs at pole stops offer the appropriate type and amount of information.

Any good bus stop sign needs to be:

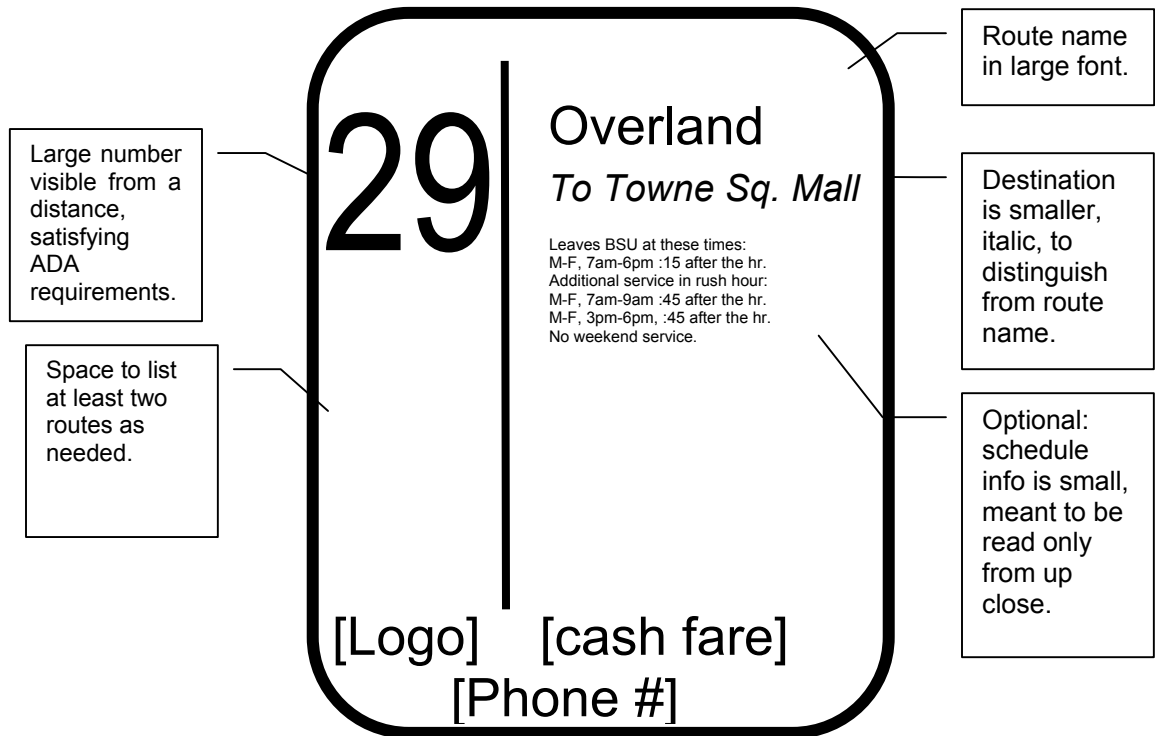
1. **Rigorously simple and clear** (not cluttered with unrelated information, including promotional material).
2. **Consistent with ADA requirements.** Industry practice is to put route numbers in very large typefaces, in the range of 1–2 inches high and route names in a very large typeface, at least 1/2 inch high and preferably larger. Relatively tall and thin typefaces are often preferred to maximize the number of characters that can be shown.
3. **Updatable without replacing the sign.** For example, the Long–Range Plan, if implemented, should not require replacing signs that are less than five years old. Any procurement of signs must include a cost–effective way to procure decals for revisions, including a means to protect such decals

from weather and vandalism. An initial procurement may require a contractor to print the route information on each sign, but ValleyRide must retain the ability to print decals, or provide an exact layout for a printer's use. Decals used in updating a sign must match the sign's look exactly, including font and background.

So what goes on a sign? In declining order of priority, and also declining order of prominence if present, the list is:

1. Route number.
2. Route name.
3. Destination (distinguished from route name, less prominent, identical to that used on overhead signs).
4. ValleyRide phone number they can call (although a good sign, like a good brochure, will reduce the need for these calls).
5. Span information (when it operates, e.g., 7am – 7pm).
6. Schedule (“Service at 0:32 past the hour.”). Combined with the span information, this is all you need to know to determine whether a bus is coming. Some systems have tried to provide schedule information that is specific to each stop, but this detail becomes too hard to update accurately. We recommend providing the time that the bus leaves the beginning of the route, along with that location (e.g. “Departs Downtown at :45 past the hour.”) This information is sufficient to give some sense of when the bus might be expected at this stop, and it is far less complex to produce and update, since there are only two standard schedule decals for each route, one for each direction.
7. Fare. (A sticker on the back of the sign, or even the sign pole, is often sufficient for this purpose.) Only the cash fares need to be displayed here. This completes the information needed to permit spontaneous use.

We recommend making every effort to provide all of the above information in an uncluttered way. Good signage means faster transit service, because it reduces the time drivers spend answering questions as passengers board the bus.



## System Map

Clear and simple maps are a powerful way to make a transit system feel simple, transparent, and easy to use for potential customers. For a transit system the size of ValleyRide, a good system map can obviate the need for route maps, and can even make bus books unnecessary. The initial resources spent developing a good system map can be a very wise investment that, if it becomes unnecessary to update and print route maps and bus books, can save transit agency money over time.

From a customer's perspective, a single fold out map that explains a system (with schedules and other information on the reverse side) is usually less intimidating and easier to carry than a bus book.

In general, a good transit system map has certain characteristics:

**Effective use of color** – color can effectively be used in several ways, but it must be as meaningful as possible. For relatively simple systems, routes can be color coded, but as the number of routes increases on a map, the more likely that color-coding will be counter-productive. At that point, switch to color-coding by frequency, so that the maps assist in marketing the most frequent services.

**Appropriate scale** – the map must be at a scale that's legible for most people.

**Practical size** – either as a fold out map or as part of a bus book, system maps should not be too big.

**Utility** -- The same map should be useful in several media, e.g. in the bus book, posted in shelters, and on the website.

Besides potentially making bus books unnecessary, a good system map is also a boon for a transit agency website and other tools for customer service. The hard work that is required to make a system map clear and simple will help at every turn when creating other customer materials.

### **Bus Book: Replace with Fold-Out Brochure**

The schedule book now published for Boise area services consists of many schedules printed on newsprint, with a system map that is hard to read and not to scale. The newsprint is an understandable means of conveying extensive information, including individual maps of each route.

We recommend replacing the existing bus book with a much more compact brochure. The format would consist of a single double-sided, oversized sheet of color glossy paper, folded into a compact size, and would accommodate the whole Boise area system including routes in the Canyon County area. One side contains the cover material and a large and detailed system map. The other

shows the schedules of individual routes. The following features are especially important:

- No individual route maps are needed. The system map presents all the routes at a right-and-left level of detail. If detail is needed to show routings in a specific area, this detail is provided in insets within the system map. The high-quality system map also encourages customers to perceive the service as a system, not just as a collection of individual routes.
- Maps show each route in a different color. This color is repeated in the heading of each schedule on the reverse side, for easy identification.
- Small surface area means a lower overall printing cost. The entire brochure is not much larger than the colored cover-and-foldout page of the current book. However, it is printed to higher quality and therefore shows more information. No newsprint pages are required.
- Legible schedules. Font sizes and formats make for a more legible schedule table than in the current book.

In short, we believe that Valley Regional Transit can launch the new ValleyRide service with a smaller schedule brochure at a lower cost. This should be a key tool in launching the new service.

## **Fixed Stops**

The ValleyRide Boise/Garden City system is going to transition from a flag stop system, where at any point on a route a rider may flag down the bus to board, to a fixed stop system where the bus only stops at predetermined locations. Currently, the absence of fixed stops and the shelters and informational signs that can accompany them are a major obstacle to using the current ValleyRide services, especially for new customers who are unsure of bus routes or schedules. In terms of creating a system that is transparent, simple, and easy to use, a well executed shift to a fixed stop system represents an enormous opportunity for Valley Regional Transit to improve the accessibility and transparency of the ValleyRide system to its customers, prevent problems as

the system evolves, and to make lasting improvements to its speed and reliability.

How do fixed stops improve the customer's experience? Most importantly, fixed stops can provide customers with useful and clear information about what the system can do for them and how they can use it. Fixed stops themselves are informational for new customers who are unsure about how to catch a bus because they clearly mark where buses stop, eliminating the uncertainty of a flag stop system. Whether marked by a shelter or a simple pole marker, fixed stops also allow for the placement of amenities and information that improve a customer's waiting experience, a big part of the customer's overall experience.

Other customer benefits of shifting to fixed stops are either more subtle or are realized in the long term. Fixed stops can make using the bus system feel safer because people tend to congregate at stops while waiting for the bus, which feels (and actually is) safer. In the long term, fixed stops can improve how land use is integrated with transit service because they send clear signals to developers and city planners about where transit stops and its permanence. These signals help decisions about local land use to start taking transit into consideration, which in the long term will reinforce the usefulness of Valley Regional Transit's services.

Operationally, fixed stops improve bus performance and customer satisfaction because they make bus service faster and more reliable. By stopping only at certain locations, bus service can be faster because buses are likely to stop less frequently. More importantly, fixed stops can reduce bus travel time variability because the number of places a bus might stop on a route is given a ceiling. By reducing travel time variability, bus schedule adherence and therefore customer perception of reliability is improved, which is especially important in a system where customers rely on timed transfers.

Moreover, bus drivers benefit because fixed stops make driving the buses an easier task. Rather than having to be prepared to stop at any location along a route, drivers know they need only stop the bus at certain predetermined

locations. This consistency makes it easier to drive, reduces driver stress and fatigue, and should reduce the probability of getting into an accident.

Though all aspects of this implementation plan are critical, getting the fixed stops right is the most important to make the ValleyRide system a coherent whole that potential customers can easily understand. Successfully implementing fixed stops is so important because, perhaps more than anything else, it will profoundly change how customers interact with the system, provides the most potential to improve that interaction, will have a large effect on how well the system will perform in terms of speed and reliability, and, once established, fixed stop spacing and location can be very difficult to change systemically in the future.

Moving to a fixed stop system must be well executed to reap its potential benefits. There are several key elements to moving to a fixed stop system: stop spacing, placement, management, and amenities. In general, the new fixed stops should be clearly marked, consistently spaced according to a sensible stop spacing policy, placed appropriately, be managed well, and have appropriate amenities and information. Each aspect of a fixed stop needs to be consistent with an overall policy that is firm enough to be respected but flexible enough to allow for local, site-specific considerations and deviations. What follows is a review of each aspect of successful shift to fixed stops, starting with the highest-level consideration—stop spacing—and drilling down to the more particular, site-specific decisions.

## **Stop Spacing Policy**

Stop spacing is the first major issue to resolve when establishing fixed stops. Generally, a stop spacing policy articulates the distance between stops in a system and strikes a balance between the different considerations that go into stop spacing decisions, such as the balance between the distance people must walk to get to a stop and the speed and reliability of transit once on the bus. Stop spacing must be established before stop placement can be determined.

A sound stop spacing policy is not a rule to be rigidly applied but a firm guideline for making decisions about stop spacing. A good policy helps to

depoliticize the establishment of stops; as much as possible, determining stop spacing and locations should be a matter of sound analysis and planning rather than political considerations. When stops are proposed, some particular stops are likely to be opposed. In places, Valley Regional Transit may be perceived as attempting to provide better service (i.e., more or fewer stops) to a particular area. A sound and well-articulated stop spacing policy justifies stop placement, makes stop choices defensible, and helps to ensure that the distribution of stops in the system is equitable and fair.

When defining the spacing standards, walking distance to stops is the primary reason to minimize distance between stops – current customers often want their walk to the stops they frequently use to be as short as possible. However, the desire for easy access must be balanced against customers' desire for fast and reliable bus service once on the bus, which requires longer stop spacing.

To illustrate, consider two extremes. If a bus stopped only once every mile, bus service would be fast and predictable, but ridership and access would suffer because walking distance would increase and the number of customers (present and potential users of the system) who live or work within a ¼ mile of a bus stop decreases. If buses stop 10 times every mile, it would be a very short walk to a stop but transit performance would suffer. Bus stop spacing is a compromise between these two needs.

If walking distance is the primary reason to minimize stop spacing, there are many more reasons to maximize distance between stops:

- **Transit speed and reliability** -- Much of the delay and uncertainty in transit operations is related to the approach and departure from bus stops, including the opening and closing of doors. The delay and reliability impacts are the same whether the bus is serving one customer or 50. To the extent that the same customers can be grouped at fewer stops, service is faster for everyone.
- **Stop amenities** -- With a fixed budget, the number of amenities that can be provided and maintained at each stop goes down as the number of stops increase. More stops spread limited resources even thinner.

- **Customer safety** – Fewer stops can also increase the safety of those waiting for buses by increasing the number of people that are likely to be waiting at any given stop.
- **Reduce conflicts between buses and other vehicles** – Fewer bus stops in a system can reduce the incidence of accidents because for every hour of operation, buses will stop and merge with traffic less often than they would if there were more stops, reducing the chance of accidents.

What stop spacing standards have other transit agencies adopted? The following table summarizes stop spacing standards for some comparable (and not so comparable) transit providers. There is some variation from city to city, and this reflects different population densities, land use patterns, block lengths, and boardings. Keep in mind that these spacings are appropriate for relatively level ground (< 3% grade); steeper streets or approaches may necessitate tighter stop spacing.

**Figure 5-3 Peer Provider Stop Spacing**

<b>Transit Agency</b>	<b>High Density Areas (spacing in ft.)</b>	<b>Low Density Areas (spacing in ft.)</b>
Lane Transit District (Eugene, OR)	800	800
Spokane Transit (Spokane, WA)	720	720
Trans Link (Vancouver, BC)	820	820
Regional Transit District (Sacramento, CA)	varies	1,056
Tri Met (Portland, OR)	780	1,000+
SF Muni (San Francisco, CA)	800 - 1,200	N/A
RTD (Denver, CO)	600	1,250
METRO (Houston, TX)	800	1,000+

Because most of Boise is relatively low density, Nelson Nygaard recommends Valley Regional Transit have no more than five bus stops per mile for the ValleyRide system (stops every 1040 feet). In certain areas with higher density and ridership such as BSU and downtown, closer spacing (as low as 800 feet) may be justified.

When determining stop spacing, it is useful to begin by the few places that must have a bus stop. These anchor points are often transit centers, major destinations, high use intersections, points with unusually large and focused customer catchments, unique pedestrian access routes, etc. Once these anchor points are identified, a stop spacing policy makes it fairly easy to fill in the remaining stops.

## **Stop Placement**

Once the spacing of the stops has been determined and their approximate location is set, then the placement of stops can begin, determining where exactly a stop should be placed at a particular intersection. Good stop placement is crucial. It affects how easy the system is to use, stop accessibility, customer safety, legal concerns, and transit operations.

Just as with creating a sound stop spacing policy, ValleyRide should create a sound stop placement policy. Adding new fixed stops can be controversial and may generate opposition; some people simply do not want a bus stop near their business or home. Valley Regional Transit must establish its minimal interest in placing stops and clearly articulate this interest so that, when working with communities to place stops, everyone knows where VRT can and cannot compromise.

From a customer-oriented point of view, the first consideration for placing bus stops is how well a particular placement will serve the customer. Can people walk there? Is it near obvious pedestrian access routes (typically near an intersection or where a person can otherwise cross the street)? Is it a pleasant place to wait (i.e., is there a sidewalk and curb rather than dirt and gravel)? Is it an obvious place for a bus stop to be? Is it where will most customers want a stop to be? Is it where it will serve the largest number of customers (i.e., does it maximize the number of customers within a ¼ mile)? Can the stop's analog (i.e., the stop serving the other direction) be located nearby in the other direction? Finally, is the stop safely placed in terms of how the customers will access it and where they wait for the bus?

A recent legal precedent in California about stop placement and transit agency liability means that when making stop placement decisions Valley Regional Transit will need to consider potential legal risks. In April 2003, the California Supreme Court held a transit agency liable for \$1.6 million in damages for having placed a bus stop in a hazardous location. The Court ruled that given the peak period traffic volumes and the condition of the roadway shoulder (no sidewalk, which limited access to the stop), the transit agency should have recognized a dangerous condition and moved the bus stop closer to a traffic signal located about a block away.

Stop placement can also have significant implications for transit operations because poor stop placement decisions can increase transit travel times and variability. The primary consideration for transit performance when placing stops is whether or not they are near side or far side stops (i.e., before an intersection or after). For example, far side stops at signalized intersections typically reduce delay caused by a traffic signal whereas near side stops at intersections controlled by stop signs are more sensible. Though important, transit performance is never the only consideration; safety, pedestrian access, neighborhood concerns, and property issues can take precedent. The following table summarizes how each type of stop location can address particular issues.

**Figure 5-4 Stop Spacing Considerations**

Issue at intersection	Far side	Near side
Signalized intersection	Usually better for transit performance	Usually worse for transit performance
Intersection controlled by a stop sign	Usually worse for transit performance	Usually better for transit performance
Many right turning vehicles	Addresses issue – reduces the conflicts between buses and right turning cars	Problem – Cars may try to turn right in front of buses or must wait behind bus in right turn lane while bus loads passengers.
Want to minimize parking loss for full pull out stops where there is curbside parking	Addresses issue – farside pullout stops can be shorter because buses use intersection to access stop	Problem – bus zone must be longer because buses need some distance to access curb
Transit priority signals will be installed at that intersection in the future	Good for transit signal priority	Does not work well with transit signal priority

Stop placement can also impact transit performance by determining how transit relates to traffic. Some stop placements make it easier for transit to merge back into traffic after stopping, lowering delays and increasing safety. In general, a stop location should optimize both traffic and transit, but there are times when transit performance should be the primary consideration. The following table summarizes the different ways buses can relate to traffic as they stop to load passengers.

**Figure 5-5 Bus Stop Treatments and Traffic Interactions**

Type of pull out	Definition	Considerations
<b>Full pull out</b>	Bus pulls fully out of traffic lane	Generally, full pullouts are not recommended because they can delay buses as they attempt to merge back into traffic.
<b>Partial pull out</b>	Bus pulls partially out of the traffic lane to stop, just outside envelope of cars in the lane so that cars can still pass a stopped bus but so that the bus can easily work its way back into traffic	Partial pullouts can work well as a compromise between a full pull out and stopping (and blocking) a lane of traffic.
<b>No pull out</b>	Bus stops in the travel lane	Stopping in the travel lane is best from the perspective of transit performance because it minimizes delay, eases boarding, and minimizes lateral motion while on bus, but may unacceptably degrade auto throughput. Bus bulbs (i.e., an extension of the curb line to meet the bus in the travel lane) can be very desirable at select high use locations where there is curbside parking, but can be costly to construct.

Every new bus stop is an issue of interest to neighbors and the surrounding community, with some people (generally current customers) being very supportive while others may be fearful that a bus stop will have a negative impact. While deciding on stop placement, it is best to involve the community, listen to local concerns, help them understand Valley Regional Transit’s rationale for suggesting a certain stop placement, and to be as sensitive to community concerns as possible. ValleyRide may want to create neighborhood level working groups (of neighborhood associations, representatives from city engineering and planning and ValleyRide) to work through exact locations of stops in particular neighborhoods.

**Stop Management**

The majority of small to midsize transit agencies do not manage their stops very well. After fixed stops are implemented, many of these systems don't develop an effective stop management system. As a result, their stop

management strategy often defaults to a reactionary ad hoc approach where stops are improved one at a time in response to complaints or requests from customers. This approach is time consuming, frustrating, and makes it very difficult to systematically improve stops.

When shifting to a fixed stop system, Valley Regional Transit has the opportunity to establish good stop management practices from the start by creating a bus stop inventory and improvement plan. This will help to make sure that, unlike most small to medium size transit agencies, VRT is able to positively answer the following questions:

- Do you know the location, condition, and level of amenities at each of your bus stops?
- Do you have this information available in a format that is user-friendly, easily accessible, and easily shared with other municipal agencies (DPW, Police, Fire, etc)?
- Do you have a plan in place that helps you implement customer-oriented improvements in a logical, system-wide manner?

A bus stop inventory can be created using GIS and Microsoft Access. A database can be created that inventories all attributes of each stop and, using GIS, maps this data so that it is easier to view. Some suggested fields for a stop database:

- GPS coordinates
- Street
- Cross street
- Bus travel direction: north, west, south, east
- Placement: nearside or farside
- Curb: concrete, dirt behind curb, no curb
- Stop position: pullout, in-lane
- Shelter type:
- Information provided

- Amenities: lighting, trash can, bench
- Photo (taken from consistent point of view)

Once established, this inventory can be used to create a prioritized "tiered" customer-oriented bus stop improvement plan. At the time of implementation and in the future, a tiered approach will help Valley Regional Transit avoid the inefficient, and often frustrating, process of dealing with stop improvement issues one stop at a time. It provides a plan for making system-wide changes in a rational manner, beginning with policies regarding the physical condition and location of bus stops. One possible way of prioritizing the stop tiers:

1. Passenger Information, Accessibility and Operational Feasibility
2. Lighting and Security
3. Shelters and Benches
4. Advanced Passenger Systems
5. "Gateway" or Thematic

Another aspect of sound stop management is a stop maintenance plan. All bus stops, but in particular bus shelters, need to be regularly maintained to make sure that they are in good repair and are being used as intended. Stops that are installed and then are neglected eventually deteriorate to a point where they repel potential customers and damage the ValleyRide brand. Before stops are placed, Valley Regional Transit must have a clearly defined bus stop maintenance program.

Maintenance can be performed via several types of arrangements. The most obvious is for Valley Regional Transit itself to maintain the shelters itself or to contract the work to private contractor. However, this can be costly and as the number of shelters increases, it can be difficult for the contractor to quickly identify and address shelter issues. For a region Valley Regional Transit's size, a volunteer "adopt a shelter" program may be feasible. Local citizens and businesses will have the most stake in the condition of shelters in their immediate area and are aware of issues as they arise.

## **Stop Amenities**

Waiting for the bus is a large part of the transit customer experience. At fixed stops, ValleyRide has the opportunity to make waiting for the bus as pleasant, safe, and useful as possible via amenities and providing clear and useful information for waiting customers. The desire to maximize amenities must be balanced against the cost to install and then maintain each amenity.

Valley Regional Transit should define its policy for stop amenities and set standards that determine when certain amenities are justified at a particular bus stop. These standards are often articulated in terms of weekday boardings. For example, in order to justify installing a shelter at a stop, Lane Transit (Eugene, OR) requires at least 20 weekday boardings while Tri Met (Portland, OR) requires a stop to have at least 35 boardings. Additional factors can also play an important role in the process, such as proximity to senior housing and if the shelters are funded by other sources. When articulating these standards and criteria, ValleyRide should clearly state that meeting the criteria for a certain amenity does not guarantee placement of that amenity. Because amenities can be costly to install and maintain, and because there may be other priorities for certain amenities, of all guidelines that ValleyRide sets for itself, these should be the most flexible.

What is the minimum level of amenities that VRT wants at every stop? What are the boarding thresholds that begin to recommend other amenities? What amenities are appropriate at the highest use stop? Does the amenity compromise accessibility or block the sidewalk? For a stop with a bus shelter, what is the minimum level of amenities that will be provided? Amenities to consider:

- Signs
- Shelter
- Lighting
- Benches
- Trashcans

- Route schedules
- System maps
- Route maps
- Real time bus arrival information

Stop amenity upgrades (say, for determining whether or not a stop should have a shelter or not) can be prioritized based on how many people use a particular stop, how many people are expected to use that stop in the future, or stops that are targeted for ridership growth. According to the data collected during the ridecheck that Nelson\Nygaard conducted in October 2003, almost all of ValleyRide's routes recorded the highest boarding counts at stops in downtown Boise, Boise State University and at Towne Square Mall (see figure below). The three areas accounted for 85 percent of the bus stops with 20 or more daily boardings in the system.

Boarding activity trends may change with the adoption of the new service plan. Although the major activity centers such as downtown and BSU will continue to generate most of the system's ridership, areas with improved service in the new system may see an increase in ridership. For example, the State Street corridor will see a dramatic increase in bus service under the Preferred Short-Range Service Plan as it improves to 30-minute all day frequencies from 60-minute frequencies. The airport should also see an increase in ridership as the new system provides more direct service from downtown and introduces new bus service from eastern Boise.

**Figure 5-6 Bus Stops with 11+ Daily Boardings**  
*(Nelson|Nygaard ridechecks, October 2003)*

<b>Bus Stop</b>	<b>Total Daily Boardings</b>	<b>Direction</b>
Downtown Station 3	278	N/A
Towne Square TC (Dillard's)	274	N/A
Downtown Station 4	204	N/A
Downtown Station 7	161	N/A
Downtown Station 1	159	N/A
Downtown Station 2	135	N/A
University Dr. & BSU Admin	130	N/A
Downtown Station 6	113	N/A
Downtown Station 5	93	N/A
Lusk St & Royal Blvd	54	N/A
East Stadium	53	N/A
Lusk St & Quads	45	N/A
Lusk St & University Park Apt	44	N/A
Sports Medicine	41	N/A
Campus Ln & West Stadium	40	N/A
Campus Ln & Library	38	N/A
University Dr & Public Affairs	36	N/A
Idaho St. & 15th St.	35	Outbound
Lincoln Ave. & University Dr.	34	Inbound
13th St & Grand Ave	33	Inbound
Campus Ln & Science and Nursing	29	N/A
State St. & 16th St.	26	Inbound
Curtis Rd. & Cassia St.	25	N/A
Latah St & Vaughn St	25	Inbound
Robbins Rd & Senior Center	24	N/A
Goddard St. & Capitol High School	20	N/A
Five Mile Rd & Ustick Rd	18	Inbound
13th St. & River St.	16	Outbound
Broadway Ave. & Linden St./Shopko	16	Inbound
Fairview Ave. & Cole Rd.	16	Inbound
Idaho & 11th St.	16	Outbound
Parkcenter Blvd & Mallard Dr	16	Inbound
State St. & Clover Dr.	16	Inbound
State St. & Collister Dr.	15	Inbound
Allumbaugh St & Barrister Dr	14	Outbound
Broadway Ave. & Boise Ave.	14	Inbound
Fairview Ave. & Liberty St.	12	Inbound
Capitol Blvd. & Idaho St.	11	Outbound
Federal Way & Findley Ave	11	Inbound
Hill Rd. & 17th St.	11	N/A
Overland Rd & Vinnell	11	Inbound
State St. & 17th St.	11	Outbound

## **Transit Centers**

For Valley Regional Transit's ValleyRide services to function as a system, buses must be able to connect with each other. Because the services are relatively infrequent, buses must be scheduled to meet in timed connections, so that passengers do not have long waits for a second bus to complete their trip. This means that it must be safe and practical for a number of buses to gather at one site. Three such sites are planned in the short term:

- Downtown Boise, discussed below
- Towne Square Mall (completed)
- Nampa, discussed below

While there are some remaining issues in establishing these centers (see below), timed connections must also be marketed. Because most trips in the region will require two or more routes, potential customers need to be informed that the routes do work together in timed transfers. Published information should make clear that timed connections exist, rather than leaving passengers to discover them by comparing schedules.

### **Downtown Boise**

Valley Regional Transit's lack of a downtown transit center is an issue both for the efficient function of local bus services and the connectivity of regional and intercity public transportation serving downtown Boise.

The current ValleyRide configuration in downtown Boise (the Main and Idaho couplet) is not ideal, for several reasons:

- It is difficult to transfer between a route that stops on Idaho Street (stations 1 through 4) and one that stops on Main Street (stations 5 through 7). Of the 121 unique possible transfers (e.g., from route 3 to 18), 65 require crossing both of these busy streets.
- Moreover, because these two groups of stations are not in sight of each other, it is difficult for the drivers to know if all buses have arrived and for customers to know if they have missed their bus. Ideally, for the

timed transfer system to work it is best if bus drivers can see one another, visually confirm that all buses have arrived, and see transferring passengers approach so the bus doesn't leave before transferring customers have a chance to board. This generally requires the transfers to happen at one central location.

- Transfers become much more intimidating for passengers when they are required to navigate between locations, especially when they are not in view of each other.
- Many members of the downtown business community object to buses dwelling on Idaho. This sensitivity does not appear to be as great on Main, where fewer small storefronts are adjacent to the layover zones.

The Downtown Mobility Study is examining options for a permanent multimodal downtown transit center in the six-year plan. Short-term relocations, to other on-street locations, have also been proposed, but all have significant obstacles. Any new site must be an improvement on all the items listed above. It must also be within 4-5 blocks of the centroid of downtown, roughly Capital & Main, so that services from all part of the city converging on the transit center are all still serving the downtown directly.

## **Nampa**

In downtown Nampa, a very simple transit center is needed near, or northwest of, the Nampa Civic Center. Karcher Mall is the most northwesterly possible location, and a site off of Caldwell Blvd. northwest of the Civic Center is currently recommended. Minimally, what is needed is a Park-and-Ride area near a transfer area where safe connections can be made among at least three buses.

In the simplest possible arrangement, an off-street lot would provide the terminus and restroom locations for the intercounty routes (40-42) that end in Nampa. Local buses (50s) running along the Boulevard would need to have a common stop with the intercounty buses both as they arrive AND as they depart. This is needed so that an arriving intercounty bus can connect

passengers to local buses in either direction, and likewise, passengers can get from a local bus in either direction to an outbound intercounty bus.

Local buses on the Boulevard should deviate into the transit center if they are running on the far side of the street from it. This means that any facility requires the capacity to turn left onto the Boulevard safely with a small local bus, either via a signal or a point with reasonable gaps in traffic due to a signal not far upstream. A safe point in the median is also needed in the latter case, so that the bus can reach the median and then await a gap in traffic to proceed.

## **Outreach and Future Decisions**

The principles underlying the service plan should serve to simplify the decision making process down the road, both for initial implementation and later evolution. These principles also provide a clear means of responding to many complaints and comments. However, they will work well for these purposes only if they are used consistently.

At any point where Valley Regional Transit expects any community involvement, the agency should know and articulate where it can and cannot compromise – when changes/aspects of the plan are fundamental to its success. The principles of the plan should be understood throughout the agency, from the Board to the bus drivers. For policy staff and Board members, the principles must also be defensible in any one-on-one conversation as it relates to a particular issue. Compromising the principles may be expedient in a particular circumstance, but each compromise creates a precedent for more compromise, and any decision in this direction must be made in the full awareness of how it may weaken the long-term clarity of the agency’s goals.



## Table of Contents

	PAGE
<b>Chapter 5. Implementation .....</b>	<b>5-1</b>
Overview.....	5-1
Framework: A Welcoming Transit System.....	5-2
About this Chapter .....	5-3
Customer Information.....	5-4
Fixed Stops.....	5-11
Transit Centers .....	5-25
Outreach and Future Decisions .....	5-27

## Table of Figures

	PAGE
Figure 5-1 Recommended Route Naming Convention for Boise Area Service .	5-6
Figure 5-2 Recommended Route Naming Convention for Nampa/Caldwell....	5-7
Figure 5-3 Peer Provider Stop Spacing.....	5-15
Figure 5-4 Stop Spacing Considerations.....	5-18
Figure 5-5 Bus Stop Treatments and Traffic Interactions .....	5-19
Figure 5-6 Bus Stops with 11+ Daily Boardings.....	5-24