

# POTENTIAL STRATEGIES

The study evaluated the following strategies to address the previously identified needs within the constraints placed on SMART. This document identifies the criteria used to evaluate the strategies and provide the evaluation of strategies for both the out-of-town medical service and Route 2X.

## EVALUATION CRITERIA

The following criteria were used when evaluating the effectiveness of each strategy.

- **Maintains Existing Connections.** Assesses the strategy's ability to maintain regional connections currently available with existing out-of-town medical service or Route 2X.
- **Increases Connection Options.** Assesses the number of destinations potentially available to Wilsonville residents by transit, reachable via direct service or reasonable connections.
- **Improves Travel Times.** Assesses the strategy's ability to reduce transit travel times relative to the current system. It includes directness of routing, number of transfers required, and frequency of service.
- **Increases Customer Convenience.** Assesses the number of transfers required to travel outside of Wilsonville along with likely wait times for these transfers.
- **Increases Cost-effectiveness of Medical Service or Route 2X.** Assesses the potential for the service to carry more riders per unit cost of service.
- **Customer Cost.** Assesses the monetary cost to complete a regional trip in terms of total fare required (SMART and TriMet where applicable).
- **Cost to SMART.** Assesses the monetary cost to SMART as an incremental cost/savings relative to the current out-of-town medical and Route 2X services.
- **Avoids Duplication with Existing Services.** Assess the degree to which the strategy duplicates services in common transit markets.
- **Service to Downtown Portland.** Assess the strategy's ability to connect Wilsonville to Downtown Portland.
- **Service to Major Medical Institutions.** Assess the strategy's ability to connect Wilsonville to major medical facilities in the region.
- **Operational Feasibility.** Assesses the strategy's impacts on transit operations including layover locations, passenger capacity, and complexity of passenger eligibility and trip screening procedures.
- **Potential to attract new customers.** Assesses strategy's ability to attract new passengers not currently using SMART, especially among potential choice riders.

## OUT-OF-TOWN MEDICAL SERVICE

The following strategies were evaluated for the out-of-town medical service.

### Proposed Alternatives

#### Serve Primary Destinations with Medical Shuttle

This strategy addresses the limited productivity the out-of-town medical service by serving popular destination with scheduled service. These services can provide more efficient service (carrying more riders at the same time) when serving a limited set of popular and nearby destinations. The new service would make scheduled stops at a couple of locations in Wilsonville and at popular medical facilities that make up the majority of current medical service destinations. SMART local buses, or in-city dial-a-ride for qualifying passengers, will be available to provide connections to the in-town stops. Additionally, time will be built into the schedule allowing for a limited number of deviations to medical facilities not on the schedule or to home locations in Wilsonville.

### Other Alternatives

#### Shift Out-of-Town Medical Dial-A-Ride trips to fixed route

Transit trips made via demand-response, or dial-a-ride services are inherently more expensive than those completed on fixed-route services. Fixed route's ability to carry more riders per hour or mile of service leads to conditions where dial-a-ride trips cost five times as much. Therefore the first potential solution strategy strives to encourage out-of-town medical trip riders to use fixed route whenever they can. This strategy encompasses a number of well-accepted tactics used in the transit industry including:

- Conditional Eligibility and Trip Screening – to determine which trips remain appropriate for dial-a-ride service based on trip characteristics and passenger capabilities
- Fare Free or Reduced Fare Programs – to encourage the use of fixed-route service as a less expensive option
- Travel Training and Promotion – to increase customer knowledge of, and comfort with using fixed-route service as an option when appropriate

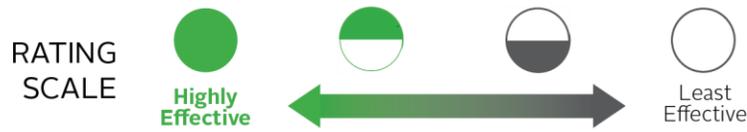
#### Integrate Out of Town Medical Dial-A-Ride and fixed-route trips

This strategy physically integrates demand response service with fixed-route service when dial-a-ride service is needed at the rider's origin and/or destination. This may occur when the passengers cannot navigate to a fixed-route bus stop due to a disability or barriers in the path of travel to the stop, or the distance to a bus stop is great; but the customer can otherwise travel on a fixed-route bus. This approach can greatly reduce costs and free up vehicles if the long-distance component of a long trip can be shifted to fixed route. Implementation would require SMART to establish trip screening to identify what trips can be partially shifted to fixed route and enhanced eligibility procedures to identify which passengers can transfer to a bus.

## **Evaluation of Out-of-Town Medical Service Strategies**

Figure 1 shows how these strategies rate based on the evaluation criteria presented above. The table illustrates that the proposed alternative (medical shuttle service) maintains service to the major medical institutions closest to Wilsonville where the majority of existing out-of-town medical trips are taken. It increases the cost-effectiveness of the service, which is expected to allow it to serve more riders and currently unmet demand for the service.

**SMART Transit Integration Project  
Evaluation of Strategies**



**Figure 1 Effectiveness of Out-of-Town Service Strategies in Meeting Criteria**

Criteria/Objectives	Proposed Alternative	Other Alternatives	
	Serve Primary Destinations with Medical Shuttle	Shift Out-of-Town Medical Dial-A-Ride trips to fixed route	Integrate Out of Town Medical Dial-A-Ride and fixed-route trips
Maintains Existing Connections		N/A	N/A
Increases Connection Options	N/A	N/A	N/A
Improves Travel Times		N/A	
Increases Customer Convenience			
Increases cost-effectiveness of Medical Service			
Customer Cost		N/A	N/A
Cost to SMART			
Avoids duplication with existing services	N/A	N/A	N/A
Service to Downtown Portland	N/A	N/A	N/A
Service to Major Medical Institutions		N/A	
Operational Feasibility		N/A	
Potential to attract new customers			

## ROUTE 2X SERVICE

The following strategies were evaluated for Route 2X. Figure 2 summarizes their evaluation against the above criteria.

### Proposed Alternatives

#### Provide Direct Service to More Attractive Destinations

This strategy provides a “single-seat” ride (not requiring transfers) to Downtown Portland, or the nearby South Waterfront area. This approach is attractive to Wilsonville residents looking to take transit on a regular basis for jobs in Downtown, or for occasional personal trips into Portland. It was highlighted as a recommendation in the 2008 SMART Transit Master Plan.

#### Options

Two potential options for extending 2X service to Portland are being considered. Both options would continue to serve the Tualatin Park & Ride but bypass the Barbur Transit Center. The goal of both options is to better serve commuters between Wilsonville and Portland, as well as provide additional opportunities for accessing out-of-town medical services:

- **Option 1: Direct Route 2X All-Day Service.** This option could serve either downtown Portland or the South Waterfront area with operating hours and frequency similar to current Route 2X service. With an extension to downtown Portland, Route 2X could terminate close to PSU near the Transit Mall (access to TriMet buses, MAX light rail, and Streetcar). Alternatively, the extended route could terminate in the South Waterfront, providing access to the aerial tram (to OHSU), existing Streetcar and future Streetcar Loop (to OMSI and Lloyd Center), future MAX Orange Line light rail, and TriMet buses.
- **Option 2: Route 2X/TriMet Line 96 Integration.** In this option, Route 2X would connect to TriMet Line 96 at the Tualatin Park & Ride. The goal of this option would be to avoid service duplication and save resources that SMART can use to enhance other services.

During AM/PM Peak Hours, Route 2X would terminate at Tualatin Park & Ride when Line 96 operates (about 5:30-9:30 AM and 3-8 PM). Line 96 would serve downtown Portland, with connections to TriMet buses, MAX light rail, and Streetcar.

During the Midday, Route 2X would be extended to downtown Portland (about 9:30 AM – 3 PM). It would follow a similar route to Line 96. This service would be expected to be especially helpful to swing shift workers when Line 96 is not operating.

The total one-way fare to Portland would be \$3 for either option. In Option 1, SMART would receive the fare. In Option 2, the Route 2X fare would be reduced to 50 cents. With a TriMet fare of \$2.50, the total fare would be \$3.00.

## Other Alternatives

### Connect with Regional Transit Network Closer to Wilsonville

This strategy provides connections with the TriMet system close to Wilsonville to minimize travel distance and SMART operating costs. This would entail connections with existing regional service in Wilsonville, Tigard and/or Tualatin.

### Upgrade TriMet Line 96 Service to Provide All-Day Downtown Portland Service

This strategy relies on the TriMet Line 96 service to connect Wilsonville with Downtown Portland. Line 96 requires additional trips each day to provide all-day service and should terminate at SMART Central or at the Town Center to optimize connections.

## Evaluation of Route 2X Strategies

Figure 2 shows how these strategies rate based on the evaluation criteria presented above. The table illustrates that the proposed alternatives (Option 1: Direct Service to Portland or Option 2: Integrated TriMet Line 96 / SMART Route 2X Service to Portland) maintain most existing connections while providing a convenient travel option to Portland that should attract new customers.

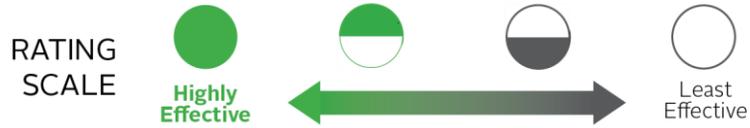
Options 1 and 2 have tradeoffs.

- Option 1 provides direct service without a transfer and would be the most convenient option for passengers, but would be more costly for SMART to provide, and duplicates TriMet service. Customers who need to transfer to a TriMet service in downtown Portland would also need to pay an additional fare.
- Option 2 would require that passengers transfer to Line 96 during peak periods but would be less expensive for SMART to operate and would complement rather than duplicate TriMet service. The fact that Route 2x will provide direct service midday, but will require a transfer at other times may confuse some potential passengers. The TriMet fare paid in Tualatin would cover transfers in downtown Portland if required.

Either option could improve connections to medical institutions in and around downtown Portland for passengers able to use fixed-route transit services (with a connection to TriMet services or the Aerial Tram to OHSU/VA Hospital).

The option to upgrade TriMet Line 96 service to all-day would be cost effective for SMART and avoid service duplication, but create a number of challenging operational issues for the two agencies. Improved connections to the regional network closer to Wilsonville provides benefits to some customers but does not improve connections to Downtown Portland and does not reduce SMART's costs.

**SMART Transit Integration Project  
Evaluation of Strategies**



**Figure 2 Effectiveness Route 2X Service Strategies in Meeting Criteria**

Criteria/Objectives	Proposed Alternatives		Other Alternatives	
	Provide Direct Service to Portland (Proposed Option 1)	Provide Integrated (Line 96/Route 2X) Service to Portland (Proposed Option 2)	Connect with Regional Transit Network Closer to Wilsonville	Upgrade TriMet Line 96 Service to Provide All-Day Downtown Portland Service
Maintains Existing Connections				
Increases Connection Options				
Improves Travel Times				
Increases Customer Convenience				
Increases cost-effectiveness of Route 2X				
Customer Cost				
Cost to SMART				
Avoids duplication with existing services				
Service to Downtown Portland				
Service to Major Medical Institutions			N/A	N/A
Operational Feasibility				
Potential to attract new customers				

**SMART Transit Integration Project  
Evaluation of Strategies**