

12 - Regional Intermodal Systems (Freight and Passenger)

Intermodal Freight Movement

Intermodal freight movements involve the transfer of cargo between two or more modes of transportation. This form of transportation can serve to reduce shipping costs and increase a shipper's mobility options, while using the existing transportation infrastructure in the most efficient manner possible. Intermodal freight movements increasingly involve the transfer of container encapsulated cargo or trailer encapsulated cargo between two or more modes of transportation. Container freight movements can include truck, rail, ship, or barge. A cargo container freight movement utilizing rail during a portion of its trip is referred to as a container on flatcar (COFC) movement. Trailer cargo employing an intermodal exchange between truck and rail modes are referred to as a trailer on flatcar (TOFC) movement.

The movement of bulk and break-bulk cargoes, such as petroleum and finished wood products, are also frequently intermodal, with goods being transferred between modes for shipment both into and out of the SKATS area. Intermodal bulk and break-bulk freight movements can use a combination of pipeline, truck, ship, barge, rail, or air modes to complete. Additionally, most air freight shipments and many parcel shipments are handled intermodally, relying on an air-to-truck or truck-to-rail, interface.

Advantages associated with the intermodal shipment of freight can include: increased modal options for shippers, the potential for reduced costs, and a potential increase in the size of the market the shipper can reach cost effectively. The overall goal of the Intermodal Freight Movement System chapter of the Regional Transportation Systems Plan (RTSP) is to ensure the safe, economical, and efficient transfer of freight between modes in the region.

This plan element:

- Identifies the key facilities and locations within the SKATS area where freight is either directly transferred from one mode (such as truck, rail, pipeline, aircraft, or barge) to another or loaded for intermodal transfer somewhere else (but within 50 miles);
- Defines the scope of intermodal freight operations within the SKATS area and indicates the impact of intermodal activities on SKATS area commerce.
- Establishes regional policies related to the safe, economical, and efficient transfer of goods between modes; and

- Identifies improvements to the regional intermodal freight movement system necessary over the next 20 years to achieve the established goals.

Intermodal freight is increasingly seen as a panacea by many shippers for their freight movement needs while transportation providers also realize numerous benefits from intermodal freight movement. The efficiency with which a shipment can be transported across the continent when trans-shipped between truck and rail modes has increased dramatically. Even more dramatic results are achieved when this technology is applied to intercontinental shipments, an especially important consideration given the potential Pacific Rim trading opportunities SKATS area firms enjoy.

However, as railroads attempt to centralize operations, including the on- and off-loading of rail cars, and "making-up" of trains, some SKATS area rail shippers are experiencing a decline in the frequency of direct rail service. A number of shippers are finding it more expeditious to containerize their former rail cargo and truck it 50 miles to the nearest intermodal rail yards (located in Portland) for trans-shipment. Air freight carriers already operate in a similar manner, as they trans-ship from truck to truck in Salem and transfer the cargo again from truck to airplane in Portland, some 50 miles away. Air freight carriers, however, typically transport cargo with a considerably higher unit value than goods transported by rail shippers. As such, the overall shipment costs for an air freight shipment make up a smaller portion of the product's as-delivered per unit cost. Conversely, products typically shipped by rail are frequently sensitive to increases in per unit shipping costs, with increases in these costs potentially placing the goods producer at a competitive disadvantage.

The Regional Intermodal Freight System

The SKATS area has several facilities that generate intermodal freight movements, ranging in size from those of statewide significance to those that are primarily of local importance (**Map 12-1**). SKATS area freight movements (including intramodal freight movements) that generate intermodal freight movements originating or terminating within 50 miles of SKATS area are addressed by this plan element.

The SKATS area's largest intermodal facility is a private operation specializing in lumber reloading. As such, it is also referred to as a "break-bulk" reload facility. The firm operates three facilities in Salem, one on Industrial Way NE, another on Cherry Avenue, and the third located on Front Street. These facilities reload approximately 200,000 tons of wood products annually, valued at approximately \$55 million (1995 figure). The Cherry Avenue facility is served directly by the BNSF, but the firm ships its cars out of the area over both the BNSF and UP rail systems. Access to these lumber reload facilities can be problematic for large commercial vehicles, as inadequate turning radii and at-grade railroad crossings leading to these facilities reduce safety margins and operating efficiencies.

Two unused "circus ramps" exist in the SKATS area, one located on a spur track adjacent to the Salem Fairgrounds and another located at the southern end of UP's Salem rail yard. Both have been used to load trailers onto flatcars in the past, but are now in disrepair. While neither is advantageously located from a commercial access standpoint, they do retain value due to their

rail accessibility. No facilities for the reloading of intermodal freight containers currently exist within the Salem-Keizer area.

Other area intermodal freight operations primarily offering priority parcel delivery services include Amtrak (via the Salem Railroad Station) and the Salem Greyhound Bus Depot. Both of these facilities currently have limited cargo handling capabilities, and they are not optimized for freight transfer activities. Amtrak, however, does have the ability to handle palletized cargo with unit weights of up to 2,000 pounds, but must be notified in advance if a cargo of this weight is to be shipped.

Amtrak offers very competitive freight rates, and offers several scheduled trips per day between Eugene and Seattle to potential freight customers. In 1996, the Salem Railroad Station was dispatching well over 2,000 pounds of cargo per month.

The Salem Greyhound Bus Terminal processes over 400 pounds of cargo a day (1996 figure). While no dollar value is available for this cargo, it is often freight that is shipped "next bus out," allowing for same day delivery from other west coast cities.

Air freight operations are intermodal by their very nature. Among the approximately thirteen air freight and package express providers serving the SKATS area, only a handful maintain local facilities within the region. The balance of these firms provide local services from bases in Portland. Currently, only a limited amount of air freight is shipped directly to and from Salem's McNary Field via UPS through their contractor Sports Air and occasionally FedEx. FedEx is the only SKATS area air freight provider that maintains an intermodal facility with direct airside access to McNary Field. Although the exact quantities vary from day to day, an average of over 200 pounds of cargo are transferred daily. While the market for air freight services in Salem and Keizer is expanding, the existing method of intermodal transfer from truck to plane will likely remain adequate for the foreseeable future.

Several SKATS area goods producing firms that relied heavily on direct rail service in the past have begun to load their finished products into containers for trans-shipment to rail or marine transport in the Portland area. Much of this tonnage was shipped from the Salem area via refrigerated or standard boxcar, but the increased convenience, reliability, and flexibility offered by containers is gradually shifting traffic away from using direct rail service. No modern intermodal facilities that would allow for safe and efficient transfer of containers or trailers onto flatcars currently exist in the SKATS area. The Class 1 railroads serving the SKATS area believe that existing intermodal facilities in Eugene and Portland will continue to provide sufficient intermodal trailer and container capacity for SKATS area shippers for the foreseeable future.

Area shippers, however, have raised concerns that current updates to intermodal reload facilities in the Portland area, at both the UP's Brooklyn and Albina Yards, may not be sufficient for serving the long-term Willamette Valley intermodal transfer demands. This potential problem is exacerbated by the absence of any intermodal container or trailer reload facilities in the mid-Willamette Valley between Eugene and Portland.

Goals, Objectives, and Policies

Goal 1: An integrated regional system of intermodal transportation options for SKATS area shippers.

Objective: Ensure adequate intermodal opportunities to SKATS area shippers as part of the of the regional transportation system.

Policy 1: Support continued improvements to provide efficient access to intermodal facilities servicing SKATS area shippers.

Policy 2: Encourage efforts to maximize intermodal goods movement routing options within the region.

Goal 2: Maximize SKATS area intermodal efficiency.

Objective: Provide enhanced intermodal efficiency within the region.

Policy: Support appropriate development of needed intermodal freight transfer facilities in the SKATS area.

Recommended Improvements

The intermodal concept has garnered considerable interest from area shippers, though research to assess market demand and private sector interest in the development, use, and operation of any new public/private regional intermodal facility located within the Salem-Keizer area is necessary to determine the appropriate levels of improvements needed in the areawide intermodal system. Although opportunities for increased intermodal freight activities clearly exist within the SKATS area, potential users would have to be identified, and their specific needs assessed, before any additional actions are considered. The two primary intermodal freight transfer improvements that the SKATS area could potentially consider include improved truck-to-air connections and the creation of an additional truck-to-rail intermodal transfer facility capable of loading intermodal containers and trailers onto flatcars. The concept of an intermodal container and/or trailer reload facility in the SKATS area is not endorsed at this time by the Class 1 railroad serving the area, but they would, as common carriers, be required to provide service to such a facility's rail spur.

Intermodal links between various modes of transportation serving our communities should continue to receive consideration in both short and long term planning efforts. Continued development of an efficient and accessible intermodal system is crucial to the SKATS region's future economic vitality.

Freight Roadway Connections to Regionally Significant Intermodal Freight Facilities

Several highway improvements identified in the Regional Highway System chapter would improve access to the two highest volume intermodal facilities in the SKATS area. Detailed descriptions of the individual projects can be found in Chapter 15. Benefits to the Regional Intermodal Freight System facilities and their associated roadway improvements are briefly described below.

McNary Field

McNary Field's intermodal activities occur primarily in the terminal area, which is located at the intersection of 25th Street SE and Madrona Avenue SE. Several of these projects would also improve access to the UP's rail yard, in the event that "Road Railer" service became available to SKATS area shippers. The following projects would enhance access to the airport's terminal and, in most cases, improve safety in the process:

- McGilchrist Street SE from 12th Street to 25th Street
- Madrona Avenue realignment at 25th Street
- Madrona Avenue from 25th Street to Union Pacific Rail Line
- 25th Street, Mission to McGilchrist
- 25th Street, McGilchrist Street to Madrona Avenue

Cherry Avenue Industrial Park

The Cherry Avenue Industrial Park is home to the Cascade Warehouse intermodal lumber reload operation, and is also home to the local "cross-dock" freight transfer facilities of UPS, FedEx Freight, and Roadway Express. The following projects would facilitate access to the Cherry Avenue Industrial Park area, and in so doing, would promote more efficient operations at all of the freight operations previously mentioned:

- Salem Industrial Drive

Intermodal Passenger System

Intermodal passenger facilities and services provide a convenient connection for people between various transportation modes, such as bus, carpool, vanpool, bicycle, walking, single-occupant vehicles (SOV), rail, and air. The improved interconnectivity between modes at these facilities greatly expands the universe of possible modal options and destinations readily available to the traveler. Attractive intermodal passenger facilities also improve traveler

convenience, comfort, and safety, and assist in creating a perception of seamless interconnection between modes.

Salem has a limited number of intermodal transfer facilities, yet they perform a vital function in our overall mobility. These facilities often serve as the primary passenger access points to the statewide and national intercity transportation network by providing intercity bus, train, and airport connections, while typically maintaining links with local transit and taxicab providers.

Intermodal Passenger Facilities Inventory

The SKATS area offers travelers three intercity intermodal transportation facilities. These facilities provide connectivity among airplane, intercity bus, and intercity rail transportation in the region. All are served by the local mass transit system. However, the ease of access to these facilities by modes other than the private automobile, such as walking or bicycling, varies greatly.

McNary Field

McNary Field, host to Salem's Hut Airport Shuttle Bus service, is located in southeast Salem. The airfield is roughly triangular in shape and is bordered by Mission Street to the north, Airway Drive and 25th Street to the west, and Turner Road to the east. The airport is approximately 749 acres in size. Beginning June 7, 2007, commercial passenger air service will resume operation from McNary field, providing service to Salt Lake City via Delta Airlines.

The airport's terminal building is located on the west side of the airport, just east of the 25th Street and Madrona Avenue intersection. The terminal structure, built in 1952, is in generally good condition. The terminal building includes ticket counter space, a baggage claim counter, waiting area, and rest rooms. The primary tenants of this structure at the present time are Hut Limousine and a travel agent's office. The terminal's primary parking lot incorporates 88 paved parking spaces, with a graveled reserve lot providing an additional 60 spaces, for a total of 148 spaces. These spaces are pay-to-park, with a single computerized pay point located at the terminal door. An airport restaurant is approximately 1,000 feet south of the terminal, but access is circuitous, doubling the effective distance that must be traveled to reach the restaurant.

The airport terminal is located approximately four miles southeast of the Capitol Mall. Vehicular access to both Oregon Highway 22 and Interstate 5 is very good. Pedestrian access, in the form of sidewalks, is not adequate. However, due to the remoteness of the site from core residential and employment areas, it is unlikely that many passengers would choose to walk to McNary Field. Bicycle access, at present, is also inadequate, as there are no bike lanes along the portion of 25th Street that serves the terminal. Bicycle lanes are provided on Madrona Avenue between 25th Street and Commercial Street.

Transit service to McNary Field is provided via Salem Area Mass Transit District's (SAMTD) "State and Fairview" bus route number 7. Although the bus no longer provides direct access to the terminal, it does stop near the intersection of 25th Street and Madrona Avenue, approximately 600 feet from the terminal building. Direct terminal transit service is considered to be cost prohibitive at this time, but will continue to be evaluated in relation to anticipated

demand in downtown Salem. Additionally, CARTS “Canyon Connector” route stops at the 25th and Madrona intersection, providing service from communities in the Santiam canyon.

Greyhound Station

The Greyhound Bus Station is located on Church Street, between Marion and Center Streets. It occupies approximately one quarter of a city block. The terminal itself features a large waiting area, with a "crush" capacity of over 130 people. Four retail storefronts are located in the portion of the structure facing the street.

The intercity buses serving this facility enter via an alley located midway between Church and Cottage Streets on Marion Street and exit the facility onto Center Street. There is parking space for a maximum of six intercity buses to park on the site behind the terminal. There are also four additional parking spaces behind the terminal for individuals in private vehicles picking up express freight.

There are three dedicated taxi parking spaces located directly in front of the terminal's entrance, two of which are metered. Six additional metered spaces are located directly in front of the terminal building for private vehicles.

Seven SAMTD transit bus routes serve the Greyhound Station area: number 2 “Jan Ree”; number 3 “Capitola”; number 4 “Keizer East”; number 5a “Lancaster Mall”; number 5 “Royal Oaks”; number 17 “Haysville”; and number 25 “West Salem to Downtown”. There is a SAMTD bus stop at the Greyhound Station location, located at the corner of Center and Church St, served by route number 17. The Courthouse Square Transit Center is one and a half blocks south of the Greyhound Station. This station, bounded by Chemeketa Street on the north, Church Street on the east, Court Street on the south and High Street on the west, has 19 of the 26 fixed routes operating through it on a pulse system.

Salem Railroad Station

The Salem Railroad Station offers travelers both intercity train and bus service. The existing Salem passenger rail station site is roughly rectangular in shape, being approximately 1,220 feet in length from north to south, and ranging from approximately 85 feet to 138 feet in width from east to west. This site also has an uninterrupted platform length of more than 1,100 feet, well in excess of the 800-foot minimum required for a facility of this type.

The northern half of the site contains a paved parking lot and half of the depot's passenger platform. The parking lot currently has a capacity of up to 150 cars.

The southern half of the site contains the Salem Railroad Station structure that dates from 1918, an 1880's "freight shed" that is no longer in use, the southern half of the passenger platform, a Union Pacific microwave communications tower, and a small wooded area that slopes down toward the Shelton Ditch. There is no vehicular circulation on the southern portion of the site.

The 1918 station structure is approximately 150 feet by 40 feet in size. The station has a current passenger capacity of approximately 160 people.

This facility is adjacent to State Highway 22, which offers connections to Interstate 5, Oregon Highway 221, Oregon Highway 219, Oregon Highway 213, and Pacific Highway 99E. The station is within a half-mile distance of Willamette University, Tokyo International University, and the Capitol Mall. Most of the sidewalk and bicycle lanes surrounding the existing depot site were installed as part of the Oregon Highway 22 overpass project and connect to existing bicycle facilities on the Pringle Parkway. The 12th Street Pedestrian Promenade, which is described in the Pedestrian chapter of this document, will provide a safe, convenient and attractive walking path from the station to the Capitol Mall and downtown areas.

SAMTD serves the Amtrak Station with route number 7, "State and Fairview." This route stops on Mill Street along the north side of Amtrak's north end parking lot on both the inbound and outbound trips. Route number 15, "Laurel Spring," goes through the area, stopping at the corner of 12th Street and Pringle Parkway as it leaves downtown. This bus stop requires potential passengers traveling from downtown to cross the intersection of 12th and 13th streets, and Oregon Highway 22, to reach the Amtrak terminal. Route number 6, the "12th & Sunnyside," and number 15, the "Laurel Spring," both pass directly in front of the Amtrak station on 13th Street when traveling towards the downtown Transit Center, but due to a very difficult street network and traffic pattern, does not have a designated stop at or near the station. Additionally, the CARTS "Canyon Connector" route travels on 12th Street near the station and will stop at the station as requested by passengers onboard, providing service from communities in the Santiam Canyon.

Amtrak, with the financial backing of ODOT's High Speed Rail Project, is also operating Amtrak Thruway motor coach services north to Portland and south to Eugene from this facility.

Courthouse Square Transit Center

Courthouse Square is the central hub for the SAMTD transit network, acting as the downtown terminus to allow passengers to transfer among most of the bus routes in the system. Nineteen of SAMTD's 26 bus routes operate through this transit center. In addition, CARTS (Chemeketa Area Regional Transportation System) and SMART (South Metro Area Rapid Transit, based in Wilsonville) make stops at Courthouse Square, providing a connection to communities outside of the Salem-Keizer area.

This facility opened in 2000 as a replacement for the on-street transit center that was located on High Street between Court and State. Courthouse Square is located on the block bounded by Court Street to the south, Church Street to the east, Chemeketa Street to the north and High Street to the west. Providing an attractive and convenient location for transit users, the site currently houses an office building on the southern part of the block, with room on the northern section of the block for another building potentially offering space for retail establishments.

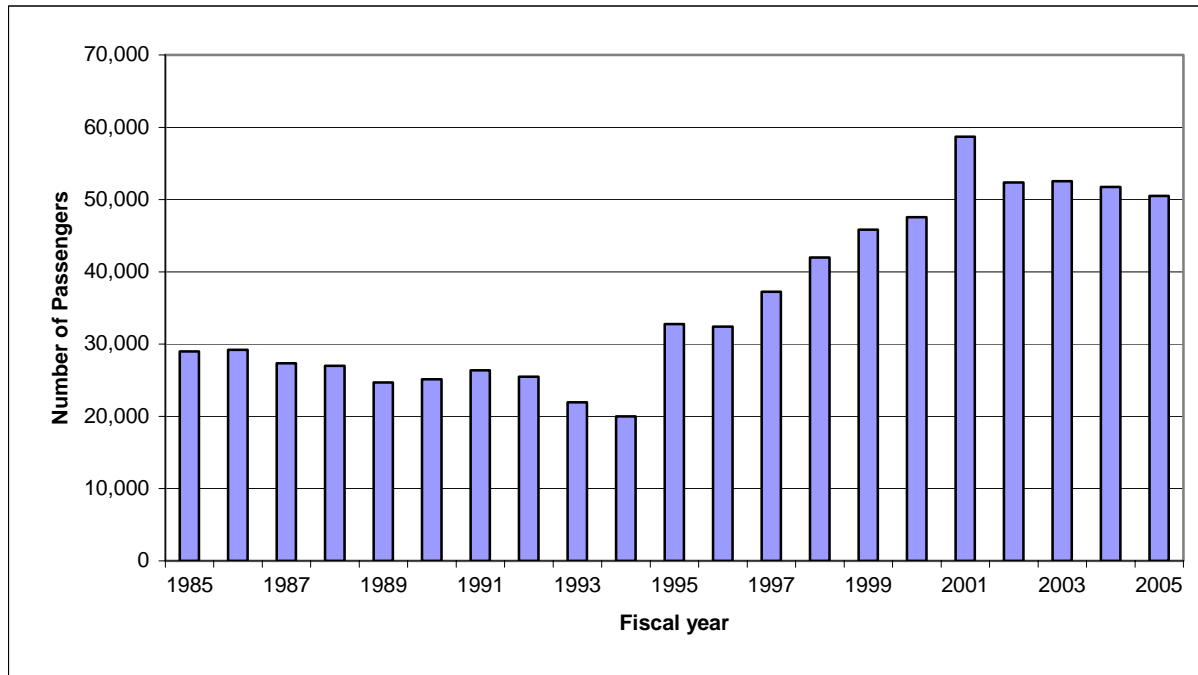
Intermodal Passenger Facility Demand

Current Demand

While many subjective observations can be used in the evaluation of an intermodal facility, the primary quantitative observation usually centers on the number of passengers served by the

facility. While numbers are available for use of the Salem Railroad Station, Greyhound and HUT Shuttle consider their ridership counts proprietary information and thus are not available for publication. **Figure 12-1** shows the growth in use of the Salem Railroad Station, which can be attributable to the increased service provided by the Cascades intercity corridor trains and the Oregon Thruway buses, funded by ODOT.

Figure 12-1
Salem Railroad Station Boardings and Detraining, 1985 to 2005



Future Demand

The ability to develop estimates for future passenger use of two of the Salem-Keizer area intermodal passenger facilities is problematic at this time. Current and future passenger use of McNary Field’s Terminal will likely be limited to HUT Airport Shuttle passengers. The company considers such future passenger estimates proprietary. Additionally, the situation for regularly scheduled passenger flights using the Airport is remote. Future passenger use estimates for the Greyhound Bus Station are dependent upon ridership estimates, which are considered proprietary.

Estimates of future passenger levels at the Salem Railroad Station have been developed, based upon several key assumptions. These assumptions include the 2015 service level called for in the Plan of four round trip trains per day operating at 79 mph for the majority of their routes and a "natural" growth in ridership due to SKATS area population growth. Given these factors, passenger volumes through the Salem multimodal rail passenger facility in 2015 were estimated to be approximately 205,600.

Goals, Objectives, and Policies

Goal 1: An integrated regional system of intermodal transportation options for SKATS area passengers.

Objective: Ensure adequate intermodal opportunities to SKATS area travelers as part of the regional transportation system.

Policy 1: Promote efficient and convenient access to intermodal facilities servicing SKATS area passengers.

Policy 2: Maximize connectivity of intermodal travel options within the region.

Goal 2: Maximization of SKATS area intermodal efficiency.

Objective: Provide enhanced intermodal efficiency within the region.

Policy: Encourage development of consolidated intermodal passenger facilities in the SKATS area.

Recommended Improvements

All of the SKATS area's intermodal facilities are over 30 years old, with structural conditions varying greatly. Access to these facilities could also be improved. Convenience and ease of use are paramount to the success of intermodal facilities, and efforts to improve these qualities in our local facilities should also be considered.

McNary Field

McNary Field needs access improvements for modes other than single-occupant vehicles. Current transit access is reasonable given the demand, however, it could be improved to facilitate access to the site. At the very least, an "on demand" SAMTD transit stop on airport grounds nearer the terminal should be reinstated. The proposed addition of bicycle lanes on 25th Street SE between Madrona Avenue and Mission Street would also improve nonvehicular access to this site.

The terminal at McNary Field has sufficient capacity to operate effectively for the foreseeable future, and ongoing scheduled maintenance on the structure should be conducted. However, the costs of these maintenance efforts can be expected to rise over time as the existing structure ages.

Greyhound Station

A privately owned building, the Greyhound Bus Station generally appears to be in good condition structurally. The interior of the facility is well kept, as is the exterior. Other than

continued maintenance of the existing structure, there are no recommended improvements to the station.

Salem Railroad Station

Work on rehabilitating the Salem Railroad Station was completed in 1999 based on the recommendations presented in the 1995 *Salem Passenger Rail Station Study*. Funding was obtained by ODOT from ISTEA sources to complete the work including seismic upgrades, restoring the building of many of its original design features, and improving the circulation of the building and outdoor areas to facilitate an increase in ridership as forecast in *the Pacific Northwest Rail Corridor, Oregon Segment (2000)*. Recommended improvements are to increase the service to the station by SAMTD and CARTS, with the preferred option of locating a bus stop next to the Station itself. Further, coordinating the buses with the scheduled arrival times of the passenger trains will make transit a more attractive option for travel to the Railroad Station.

Courthouse Square Transit Center

This facility opened in 2000 and provides a convenient and attractive location for transferring to, or catching a bus. The southern part of the block includes a five-story building housing the offices of SAMTD in addition to several Marion County departmental offices. Future development of the northern part of the block to provide retail at the pedestrian level is encouraged.

Financial Analysis

A principal goal of any intermodal passenger facility, public or private, has to be that it is as self-supporting an operation as possible. Methods of generating revenues to support individual facilities may vary, but certain revenue streams, such as rent, concessions, and parking revenues, are common to all such facilities.

McNary Field

The terminal at McNary Field is supported by lease revenues from Hut Limousine and a resident travel agent, and limited concessions revenue. Fees collected by occasional terminal users also help support terminal operations. Parking revenues are applied toward general terminal area maintenance. Monies from the City of Salem's General Fund are also used to help pay for terminal maintenance.

The Federal Aviation Administration (FAA) sponsors the Airport Improvement Program (AIP). These funds could also be used for terminal improvements if local match funds can be located. One possibility for raising these local matching funds could be the implementation of a nominal facilities user charge, to be paid by passengers arriving from, or departing on, a journey from the terminal.

Greyhound Station

As a privately held facility, the Greyhound bus station does not receive any public funding for either construction/rehabilitation or maintenance.

Salem Railroad Station

Operational and maintenance funds for staffing the Salem Railroad Station come from ODOT. Long-term funding is not guaranteed, and a funding source will likely be necessary within the time frame of this plan to ensure that the Station is maintained adequately.