

## 3 What is an Intermodal Facility?

There are multiple ideas about what constitutes an “Intermodal Transportation Facility”. Across all, there is an overarching objective to create a “state of the art” transportation center, but that goal is complicated by physical space limitations, financial constraints, roadway capacity constraints, joint development issues and questions about which specific operators need to be accommodated and with what infrastructure. This section provides background on urban passenger terminals, with the intention of informing project participants and providing context for decision-making about what the SITF should become.

### 3.1 Intermodal Facility

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An intermodal facility can be defined as a place where interface occurs between transportation systems. In a passenger terminal, people enter the facility by one mode of access (e.g. on foot, riding a bicycle, by car, by bus or train, etc.) and leave by another. The term “multimodal terminal” is generally applied to a terminal that serves multiple transit operators and/or modes, such as combined bus and rail stations. The term “intermodal” implies not only multiple transit modes but also a high degree of connectivity and interchange between modes.

The American Public Transit Association does not differentiate between “Intermodal” and “Multimodal”:

*Intermodal (multimodal) are those issues or activities, which involve or affect more than one mode of transportation, including transportation connections, choices, cooperation and coordination of various modes.*

The Center for Transportation Excellence offers the following definition for “Intermodal Passenger Terminal”:

*An existing railroad passenger terminal which has been or may be modified as necessary to accommodate several modes of transportation, including intercity rail service and some or all of the following: intercity bus, commuter rail, intra-city rail transit and bus transportation, airport limousine service, airline ticket offices, rent-a-car facilities, taxicabs, private parking and other transportation services.*

In previous and current planning efforts in Sacramento, the terms “multi-modal” and “intermodal” have been used interchangeably. Both terms can accurately describe the existing station facility, despite the fact that the number of “intermodal” transfers is actually low. Passengers transfer between heavy rail and bus services, and utilize other “access” modes (walk, bicycle, private automobile, etc.) to connect to and from the facility.

However, it is important to note that a passenger terminal does not necessarily need to have a large volume of transfers between transit modes to be considered successful. Indeed, many of the most acclaimed downtown transit terminals do not have large volumes of transfers. As described in the following section, facilitating transfer between transit modes is only one of several benefits provided by a multi-modal terminal.

## 3.2 Benefits of Intermodal Facilities

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Successful intermodal, or multi-modal, passenger facilities can provide numerous benefits in their communities:

### 3.2.1 Supporting and Enhancing Transit Usage

An intermodal transportation facility can improve the passenger experience in a number of ways. It can provide convenient access to multiple transit services and create opportunities for synergistic passenger amenities and an attractive environment. Generally, improving the passenger experience will help encourage ridership on the transit services operating in the terminal.

### 3.2.2 Facilitating Transfer Between Transit Modes

A well-designed terminal facility will facilitate transfers and create a more “seamless” transit network. Transfers are optimized by minimizing distances between boarding and alighting points, providing clearly marked routes for transfers and information. Although it is difficult to predict exactly how much intermodal transfers will increase by collocating transit functions, evidence suggests that transfers and ridership will increase if the system is easy to use.

### 3.2.3 Clarifying the Regional Transit Network

The regional transit network is comprised of numerous operators and modes. The resulting network can be confusing and inconvenient for existing and potential passengers. A successful intermodal facility helps to make the overall transit network more understandable by providing a clearly identifiable point of access to multiple transit operators. This centralization of transit services can, in turn, increase ridership by creating a single, identifiable (and often iconic) point of transit access.

### 3.2.4 Increasing Transportation Options

An intermodal facility consolidates multiple operators and routes into one location. This creates more possible combinations of trip segments, and therefore increases the number of travel options for passengers.

### 3.2.5 Taking Advantage of Efficiencies

Consolidating transit services typically allows for economy in infrastructure. This includes shared access routes, boarding and alighting areas, lobby amenities and/or automobile parking. The consolidation of facilities also provides a higher degree of flexibility to accommodate unusual events and unforeseen future changes in service or demand patterns.

### 3.2.6 Creating a Destination and Gateway

A multi-modal transportation facility, particularly one offering regional and intercity services, can become a major gateway to the local area. It makes a first impression of the community to arriving passengers. Historically, major transportation centers have been signature civic buildings and public spaces that celebrate arrival, the city, and mobility.

### 3.2.7 Supporting Economic and Urban Development

Intermodal facilities can help support economic and development objectives by providing a concentration of transportation capacity, creating opportunities for joint development, and in some cases serving as a catalyst for redevelopment. A transit hub also creates the opportunity to create transit-oriented development. This issue is particularly important for Sacramento, given the potential for redevelopment of the Railyards site and the proximity of the SITF to the central business district.

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### 3.3 Challenges of Intermodal Facilities

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Despite the numerous benefits of intermodal facilities, they also regularly face several challenges:

#### 3.3.1 Institutional Issues

Terminals that serve multiple operators face inherent institutional challenges. In some cases different operators may offer competing services. Generally there is competition for space or other resources within the terminal. There may also be concerns by some operators about the mixing of passengers, related to security, ease of use and the quality of the passenger experience.

#### 3.3.2 Physical Engineering Challenges

Providing the physical infrastructure necessary to serve multiple modes, vehicle types and operational requirements can present a significant engineering challenge. This is particularly true with the SITF, given the need to accommodate freight rail, different configurations of heavy passenger rail, intercity bus and local bus services within a fixed area. Access modes and parking must also be accommodated.

#### 3.3.3 Traffic Impacts

Increased activity associated with an improved intermodal transportation facility may result in additional traffic on the adjacent roadway network. Depending on the access arrangements, parking provision and demand characteristics of the facility, the local network may need to accommodate additional transit and/or private vehicle access. For the SITF, future roadway capacity constraints have been identified for circulation across the heavy railroad tracks and along the I Street corridor. The future operation of light rail vehicles on surface streets in the vicinity further complicates traffic operation.

#### 3.3.4 Cost

Cost is always a serious challenge for any major infrastructure project and a principal concern when developing the program. The creation of a funding strategy is complicated by multiple operators, although this may also create additional funding opportunities.

### 3.4 Types of Intermodal/Multi-Modal Facilities

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Intermodal facilities can take several forms depending on their location, types of transit services offered and passenger characteristics. General descriptions of different terminal facility models are presented below. In most cases any specific facility will not fall neatly into one category, but rather will have characteristics of two or more types.

#### 3.4.1 Intercity Terminal

An Intercity Terminal serves passengers traveling relatively long distances. Transit services tend to be less frequent than those tailored to commuters, and peak periods of demand during the day are less concentrated. Passengers are typically occasional or infrequent users who spend more time in the facility than commuters and need information. They also require connections (by transit or private transportation) throughout the region. These facilities may have a large degree of transfer between modes, in the form of connections to local public transit, regional feeder services or, in the case of a major hub, transfer between intercity services. Significant amounts of parking may be provided at Intercity Terminals, similar to airport terminals. Examples of facilities that are principally Intercity Terminals include the Sacramento Greyhound Terminal and Union Station in Washington, DC.

#### 3.4.2 Downtown Commuter Transit Center

A Downtown Commuter Transit Center primarily serves commuters traveling between suburban residential areas and employment centers. It is strategically located within a central business district. Transit operations generally consist of frequent peak period service connecting the central business

district to locations within a reasonable commuting distance. A large share of passengers typically travels between the terminal facility and places of employment by walking. Transfer between modes is generally limited to connections on local public transportation. Passengers tend to be regular users who place a high value on convenience and access to the local area. Minimal parking is provided at these facilities. Examples of terminals that are principally Downtown Commuter Transit Centers include the Transbay Terminal in San Francisco and Grand Central Station in New York City.

#### 3.4.3 Interchange

An interchange is a specialized intermodal facility that principally serves as a place for passengers to transfer between transit services. These facilities predominately serve commuters. They are located where two or more major services meet, where feeder services link to a trunk line, or the terminus of a major service. Transit service is frequent and passengers' primary concern is the ease of transfer. Most passengers typically both enter and leave an Interchange on transit. The need for parking and local access is generally limited, although in some cases a major interchange may also include a significant Park & Ride component. Examples of major Interchange facilities include the Millbrae BART Station and the New Jersey Transit, PATH and Ferry Terminal in Hoboken, New Jersey.

#### 3.4.4 Park and Ride

Park and Ride facilities provide parking at transit stations for commuters. They are typically located in lower density suburban areas where passengers rely on their private vehicles to travel between their homes and the station. Land for parking facilities is also more readily available. Large concentrations of parking are provided at Park and Ride facilities. Regular commuters are the predominate users, valuing the convenience of access to the roadway network, and proximity of parking to the transit boarding areas. Sacramento has several Park and Ride facilities serving the Regional Transit Light Rail Transit system. Locations?

#### 3.4.5 On-Street Transit Facilities / Transit Mall

Intermodal facilities can also be located on surface streets in the form of transit malls or districts. These are typically located in downtown areas where numerous bus and/or light rail lines meet. Passengers include both commuters and general local public transit users. In some cases, private vehicle access may be restricted. These facilities provide access to local areas, create transit priority, concentrate transit activity and create opportunities for convenient transfers between routes. Examples of On-Street Transit Facilities include the 7th, 8<sup>th</sup>, J, K and L Streets in Sacramento and the Downtown Transit Mall in Portland, Oregon.