



Southwest Regional Working Group Meeting

February 15, 2023

Agenda – Southwest Regional Working Group Meeting

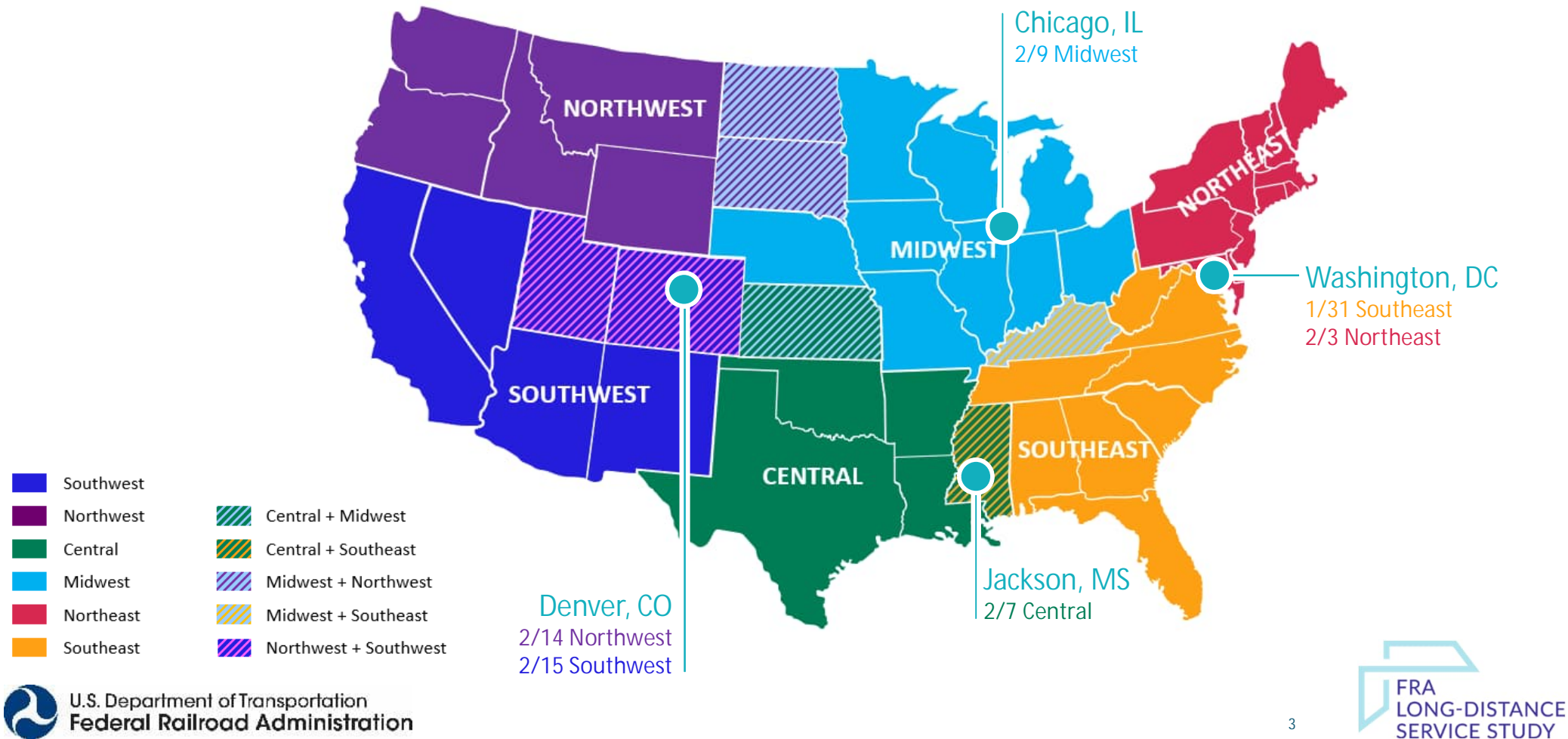
- Welcome & Introductions
- Long-Distance Service 101 and Study Overview
- Current Long-Distance Network and Routes
- Pre-1971 and Discontinued Routes
- Baseline and Market Conditions
- Potential New Market Connections and Opportunities
- Evaluation Factors Review and Discussion
- Amtrak and Communities Working Together
- Closing and Next Steps

This document contains materials specific to the Southwest Region for the following agenda items:

- Current Long-Distance Network and Routes
- Baseline and Market Conditions

Additional materials about the FRA Long-Distance Service Study presented at each Regional Working Group Meeting are available on the project website:
<https://fralongdistancerailstudy.org/meeting-materials/>

Long-Distance Service Study: Working Group Meeting 1 (Southwest)

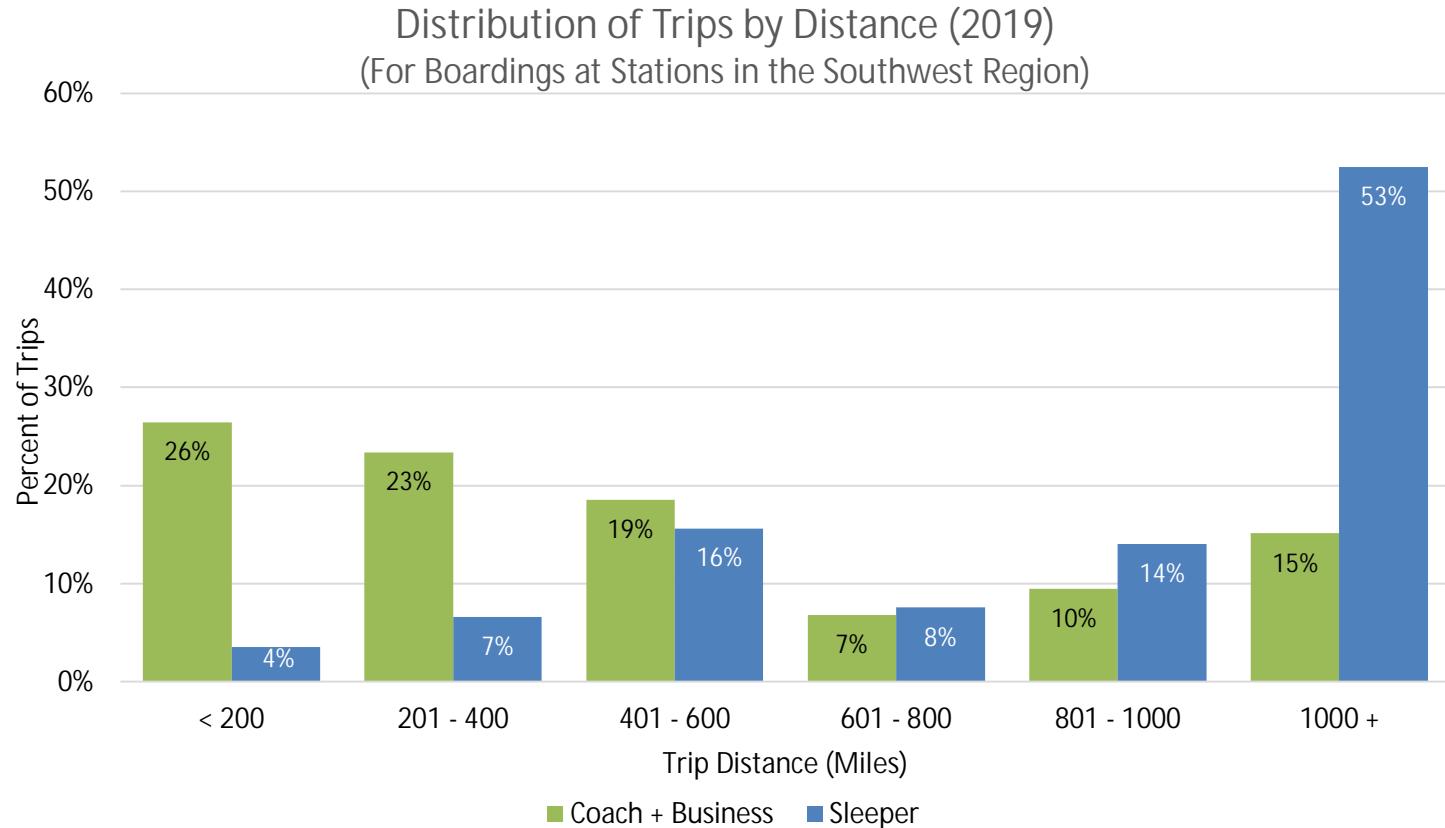


CURRENT LONG- DISTANCE NETWORK & ROUTES – SOUTHWEST

Southwest Long-Distance Service and Performance

Average Trip Length: Southwest Region

- Distribution of trips by trip distance for Long-Distance routes at stations in the Southwest Region
- Only 49% of Coach and Business Class trips are less than 400 miles, compared to 61% for Long-Distance overall
- 53% of Sleeper Class trips are greater than 1,000 miles, compared to 41% for Long-Distance overall



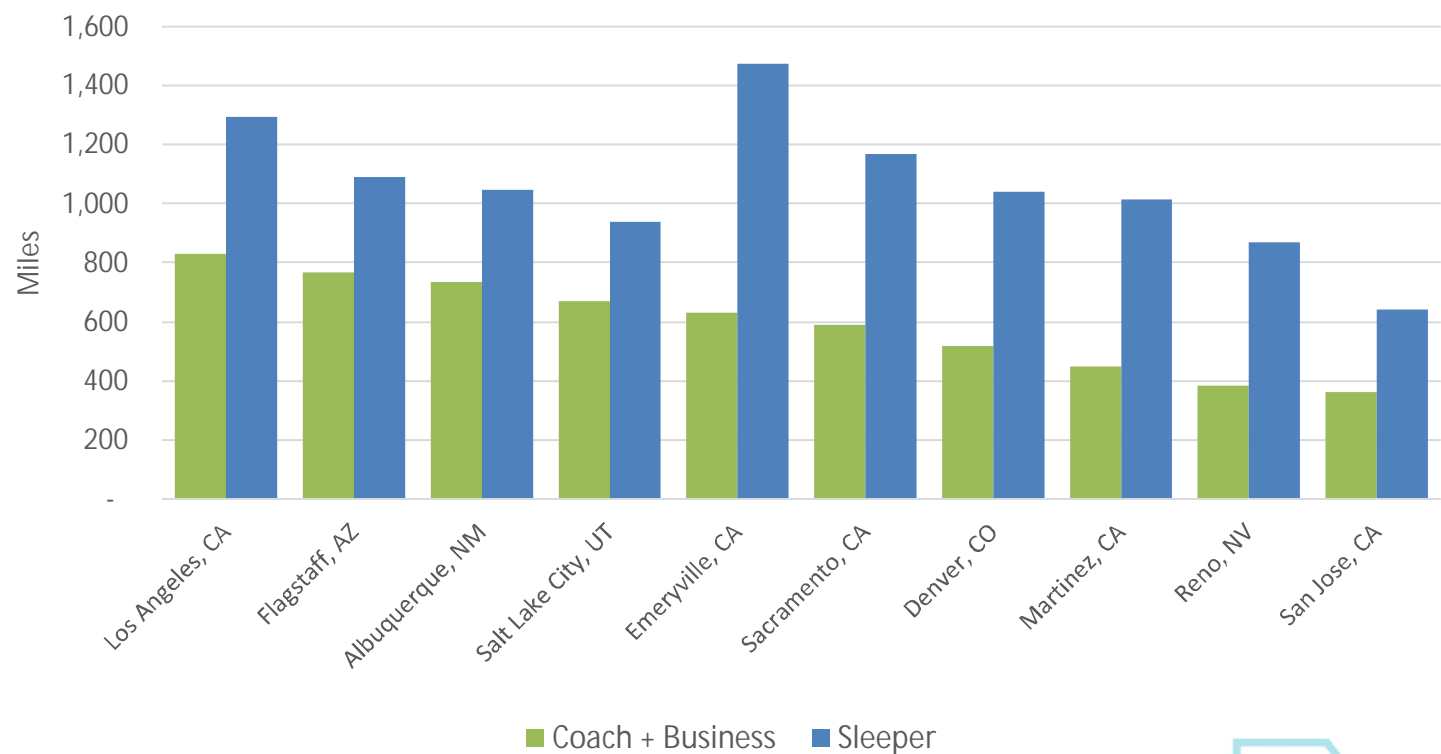
Source: Amtrak, Fiscal Year 2019. Data on trips by route, service class, and trip distance.
Note: One Long-Distance route in the Southwest Region, the *Coast Starlight*, includes Business Class in addition to Coach and Sleeper Class.

Southwest Long-Distance Service and Performance

Trip Length by Service Class

- Average trip length by service class for riders on Long-Distance routes boarding at stations in the Southwest Region
- Los Angeles, CA, served by the *Coast Starlight*, *Southwest Chief*, and *Sunset Limited*, has the longest Coach Class trips on average

Top 10 Stations in the Southwest Region by Total Boardings (2019)
Average Trip Distance by Service Class



Source: Amtrak, Fiscal Year 2019. Data on trips by route, service class, and trip distance.
Note: One Long-Distance route in the Southwest Region, the *Coast Starlight*, includes Business Class in addition to Coach and Sleeper Class.

Southwest Service and Performance Characteristics



Long-Distance Passenger Transfers in the Southwest*

- Stations with more than 2,000 transfers in 2019
- Top transfer stations
 - Los Angeles (57K)
 - Emeryville (31K)
 - Sacramento (20K)
- Bakersfield, CA (15K transfers) and Stockton, CA (8K transfers) are not served directly by Long-Distance routes, but some Long-Distance passengers do make transfers at these stations during their complete journey
- Bakersfield and Stockton are served by the *San Joaquins* state-supported route

* Includes Long-Distance passenger transfers between Amtrak Services (Long-Distance service, State-Supported services, Amtrak Thruway Bus services). Map may not show all Thruway Bus Services.

Southwest Service and Performance Characteristics



Daytime and Nighttime Service

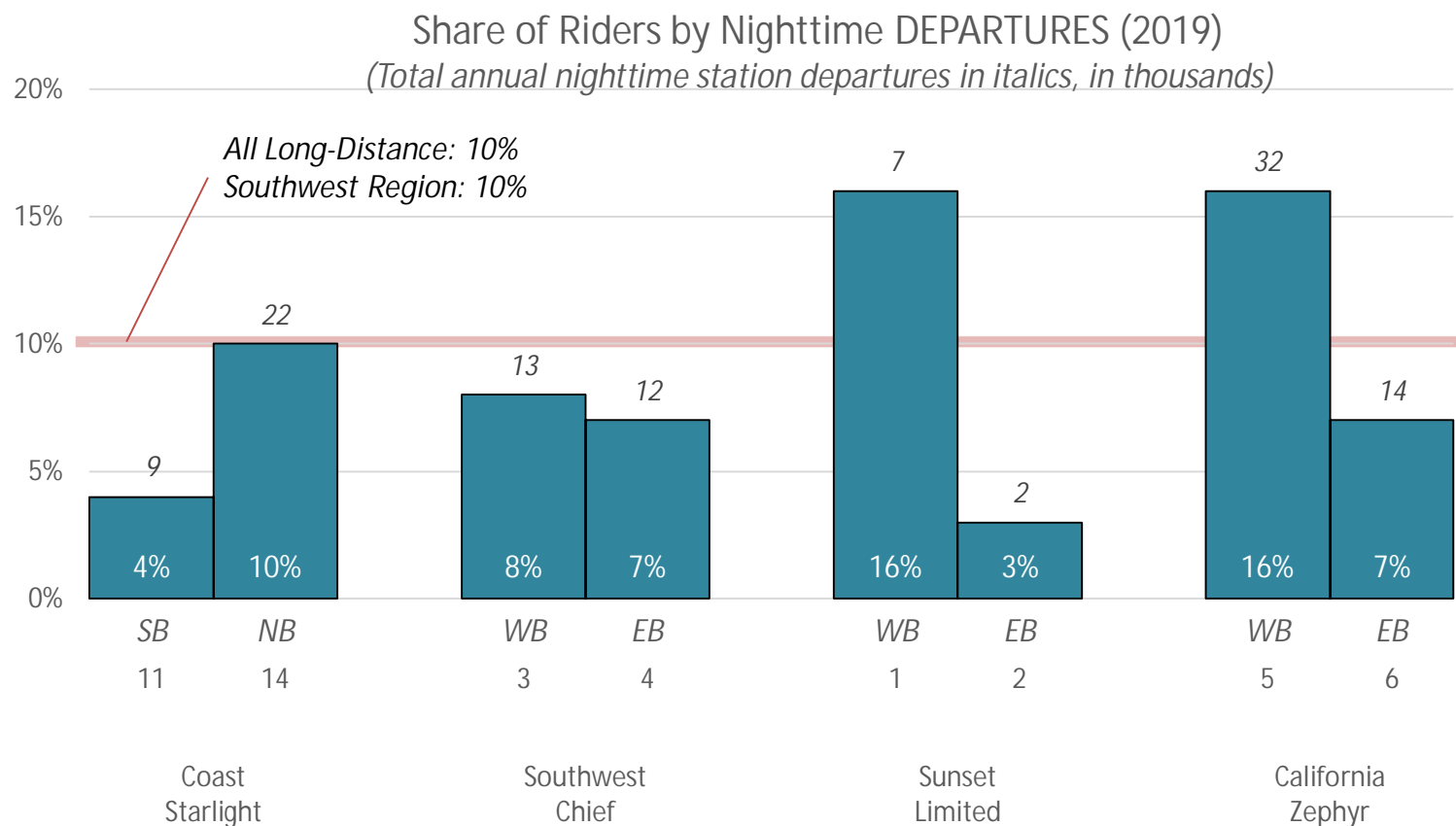
■ Larger markets served at night:

- *California Zephyr*
 - ✓ Salt Lake City (EB/WB)
 - ✓ Elko, NV (WB)
 - ✓ Provo, UT (EB)
- *Coast Starlight*
 - ✓ Sacramento (NB)
 - ✓ Chico, CA (NB/SB)
 - ✓ Redding, CA (NB/SB)
- *Southwest Chief*
 - ✓ Needles, CA (EB/WB)
 - ✓ Kingman, AZ (EB/WB)
- *Sunset Limited*
 - ✓ Palm Springs, CA (EB/WB)
 - ✓ Yuma, AZ (EB/WB)

Southwest Long-Distance Service and Performance

Time of Day Analysis: Nighttime Departures

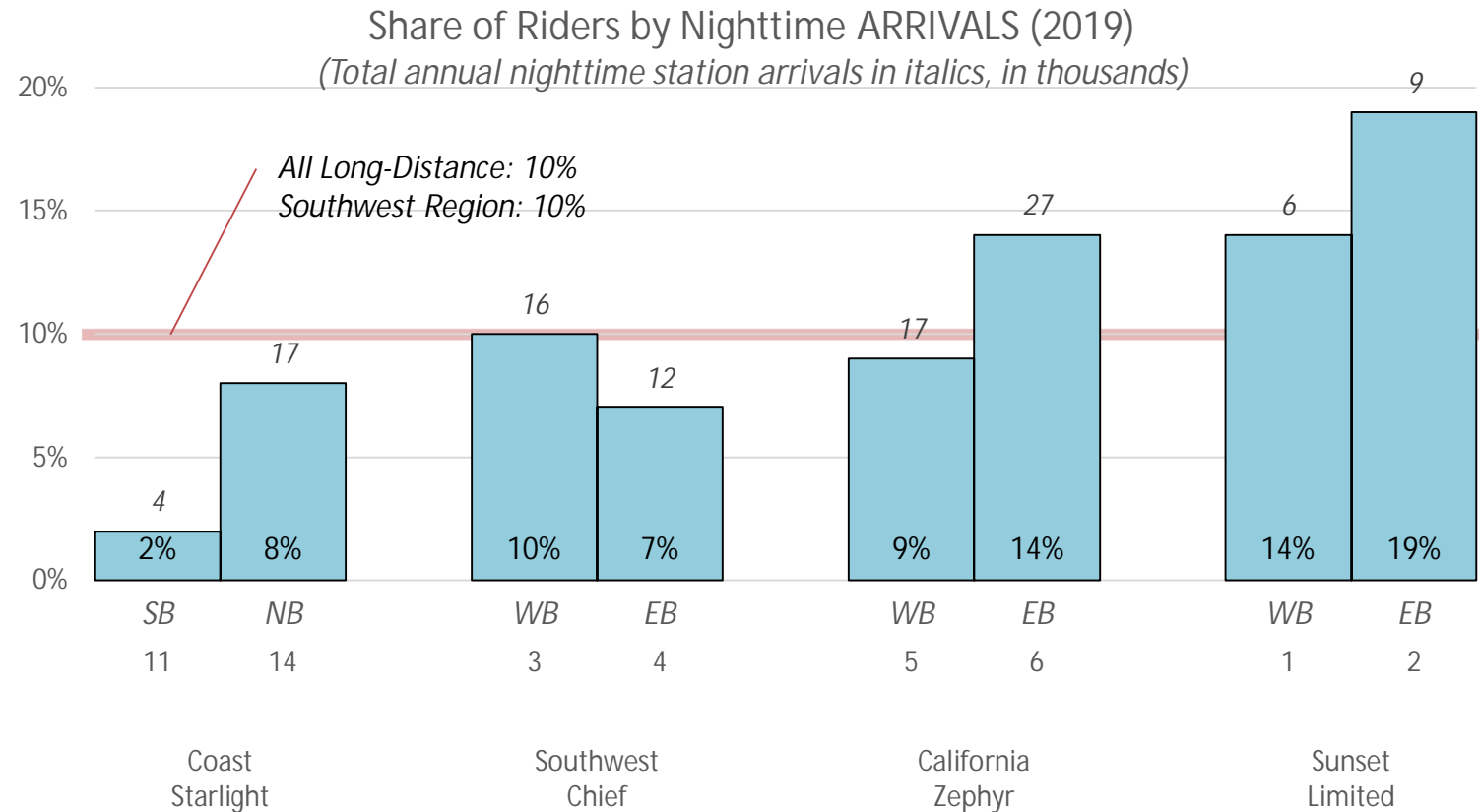
- Departures at stations in the Southwest Region only
- Nighttime service on the *Coast Starlight* runs through Northern California both NB and SB. Of the 22K NB nighttime boardings on the *Coast Starlight*, 16K occur at Sacramento
- Salt Lake City is another large source of nighttime departures, both WB (5) and EB (6) on the *California Zephyr*
- Outside of California and Utah, the highest volume of nighttime departures occurs in Kingman, AZ on the *Southwest Chief*



Southwest Long-Distance Service and Performance

Time of Day Analysis: Nighttime Arrivals

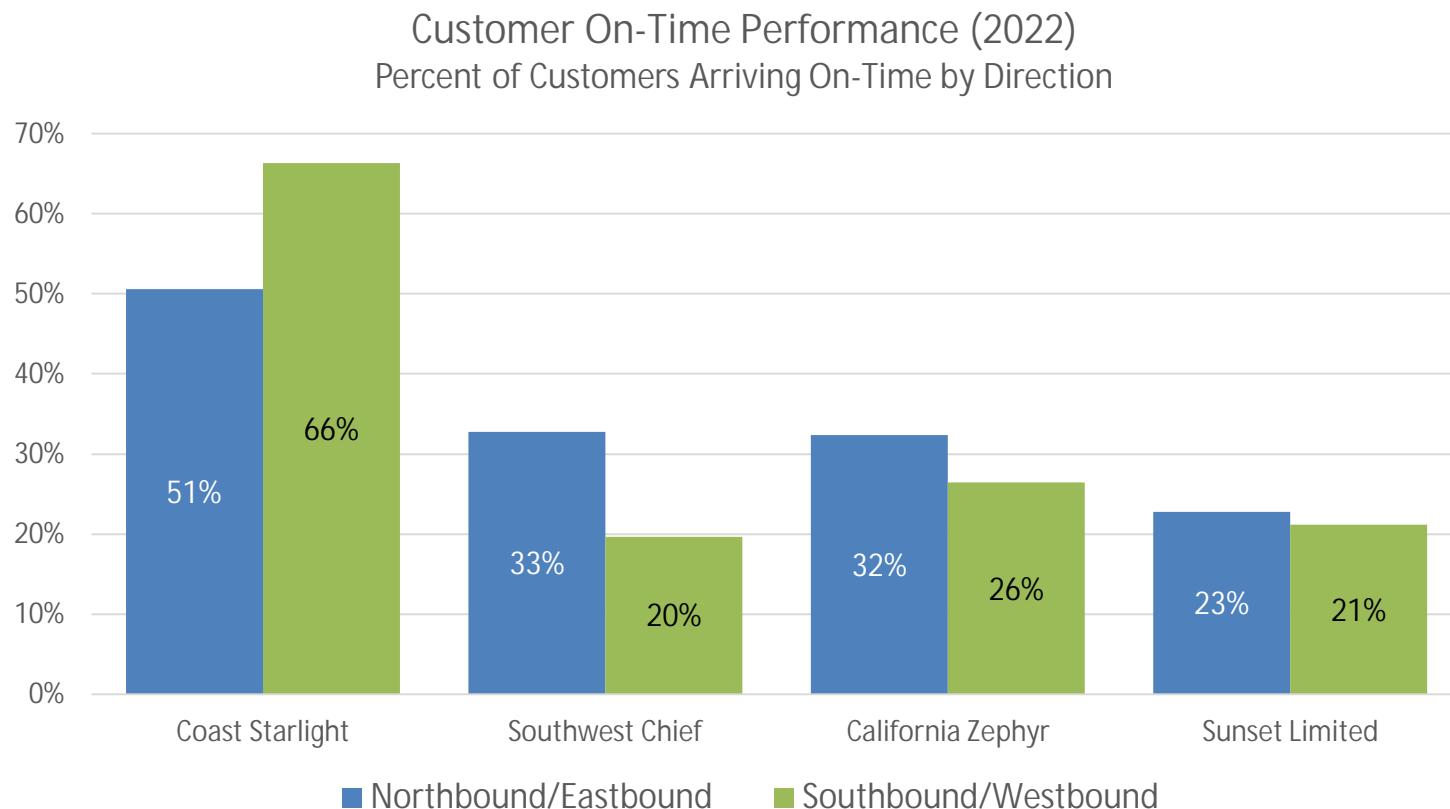
- Arrivals at stations in the Southwest Region only
- Salt Lake City, on the *California Zephyr* in both directions has the highest annual nighttime arrival volumes in the Southwest Region
- A large share of riders pass through northern California stations on the *Coast Starlight* without alighting
- Sacramento is a large station on the *Coast Starlight* with a SB daytime arrival (11) and a nighttime NB arrival (14) resulting in more nighttime arrivals on the NB *Coast Starlight* compared to SB



Southwest Long-Distance Service and Performance

Customer On-Time Performance

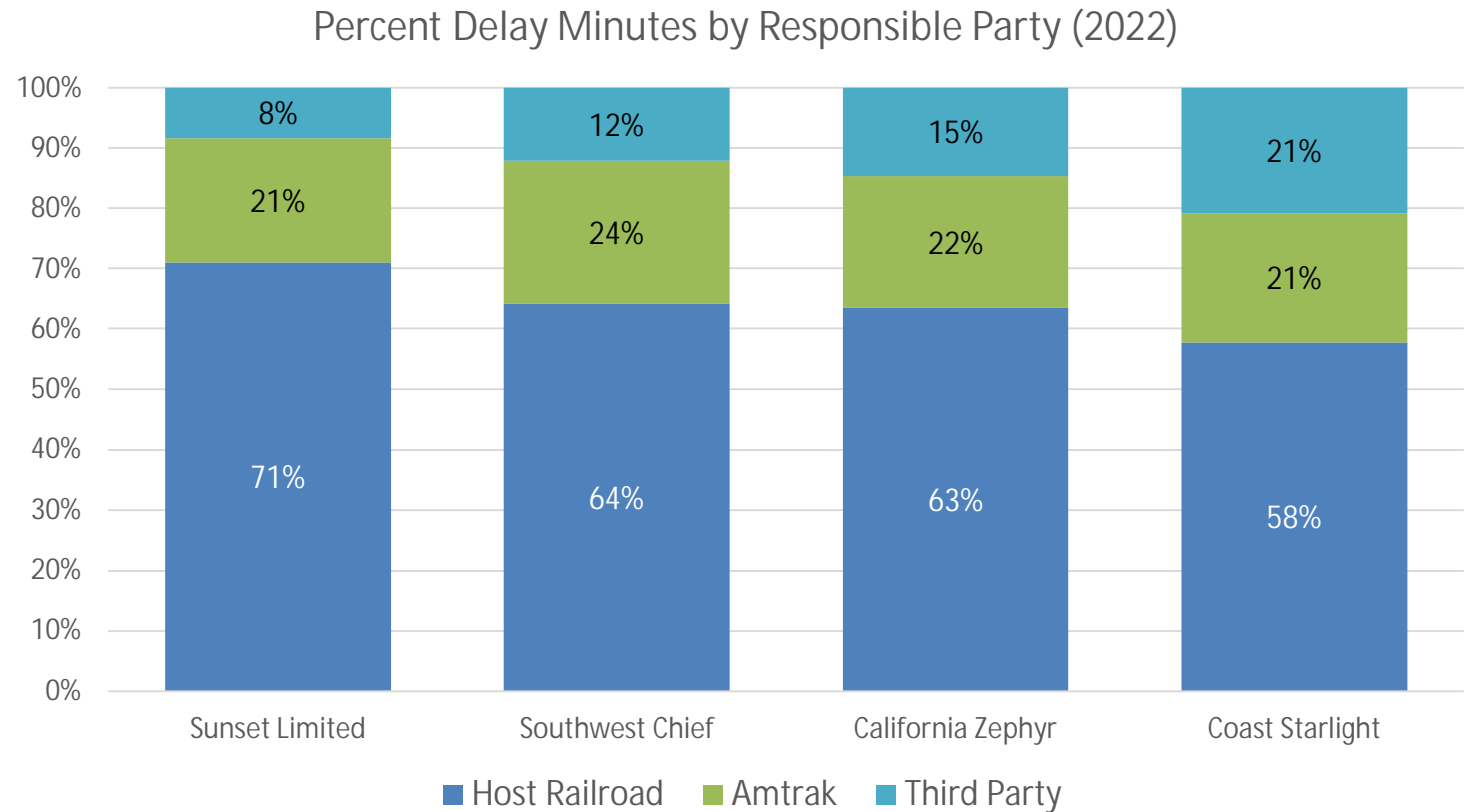
- On-time is defined as percent of customers arriving at a destination station in the Southwest Region within 15 minutes of the scheduled arrival time
- 35% of Long-Distance customers in the Southwest Region arrive on-time



Southwest Long-Distance Service and Performance

Amtrak-Reported Delay Minutes: Reason for Delay

- Three types of delay minute responsibility: Amtrak-responsible, Host Railroad-responsible, and third-party
- Freight train interference is the top source of Host Railroad delays, accounting for 46% of Host Railroad delay minutes
- Delays related to crews are the largest source of Amtrak responsible delay, accounting for 26% of Amtrak responsible delay minutes



Current Long-Distance Network & Routes – Southwest Summary

- Trips originating in the Southwest Region are longer than for Long-Distance service overall
 - 25% of Coach and Business Class trips are over 800 miles long compared to 15% on Long-Distance routes overall
 - 53% of Sleeper Class trips are over 1,000 miles long compared to 41% on Long-Distance routes overall
- Los Angeles and Sacramento have the highest number of transfers in the region, and serve as the meeting point for multiple Long-Distance services
- Arizona, Utah, and California north of Sacramento and east of Los Angeles have nighttime service only
 - Salt Lake City, on the California Zephyr, is the largest market in the Southwest Region with only nighttime Long-Distance service
- Eastbound trains (toward Chicago) generally have better customer on-time performance than their westbound counterparts (*Southwest Chief, California Zephyr, Sunset Limited*)
- For stations in the Southwest Region, those served by the *Coast Starlight* have higher customer on-time performance than for Long-Distance overall
 - Southbound trains (train 11) from Seattle have the best customer on-time performance compared to all Long-Distance trains in the region

BASELINE AND MARKET CONDITIONS – SOUTHWEST

Overview of Sources and Methods

- Trip Flow Data:
 - Total trips for all modes between MSAs from Federal Highway Administration's (FHWA) Next-Gen National Household Travel Survey National Passenger origin-destination (O-D) data (2020) (<https://nhts.ornl.gov/od/>)
 - Represents annual trips by the U.S. population throughout all of 2020
 - 2020 data impacted by COVID-19 conditions
 - Provides insights into travel demand between cities
- Amtrak O-D Pairs Data:
 - Volume of trips on Long-Distance passenger trains from Amtrak (2019) between station pairs
 - Provides insights into Long-Distance passenger train travel between stations
- Trips analyzed were at least 100 miles in length

Definitions

Market

- Trip making to or from a community (for example, a city or a larger geography such as an entire region)

MSA

- Metropolitan Statistical Area: A standardized county or equivalent-based area having at least one urbanized area of 50,000 or more population

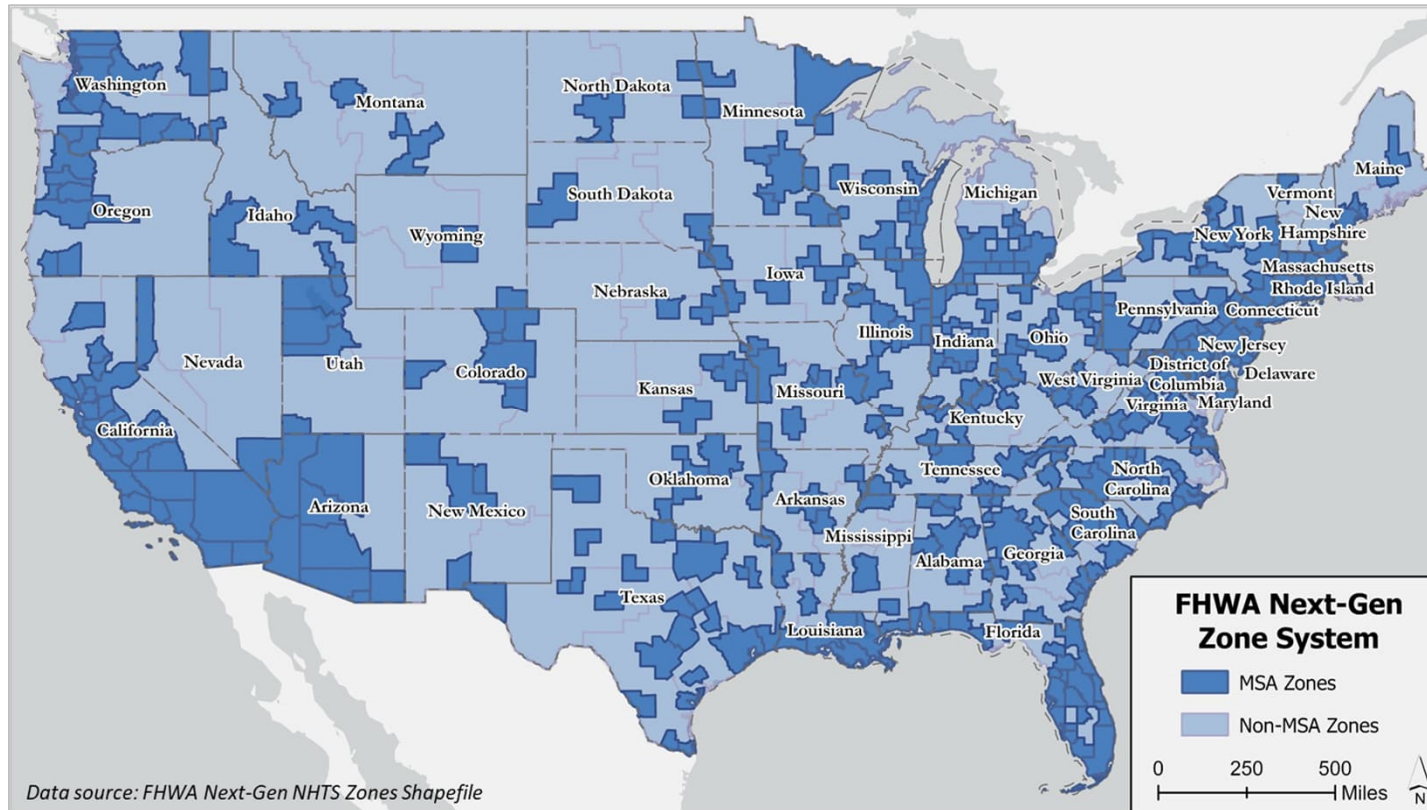
Smaller MSA

- MSA with a population less than 250,000 residents

Small Community

- Community served by an Amtrak station located outside an MSA

FHWA Next-Gen Zones



- FHWA Next-Gen data represent trips between and within zones
- About 600 zones nationwide
- About 450 zones are either an MSA or part of an MSA
- Areas outside of MSAs are grouped into non-MSA zones. Non-MSA zones often are large in terms of land area

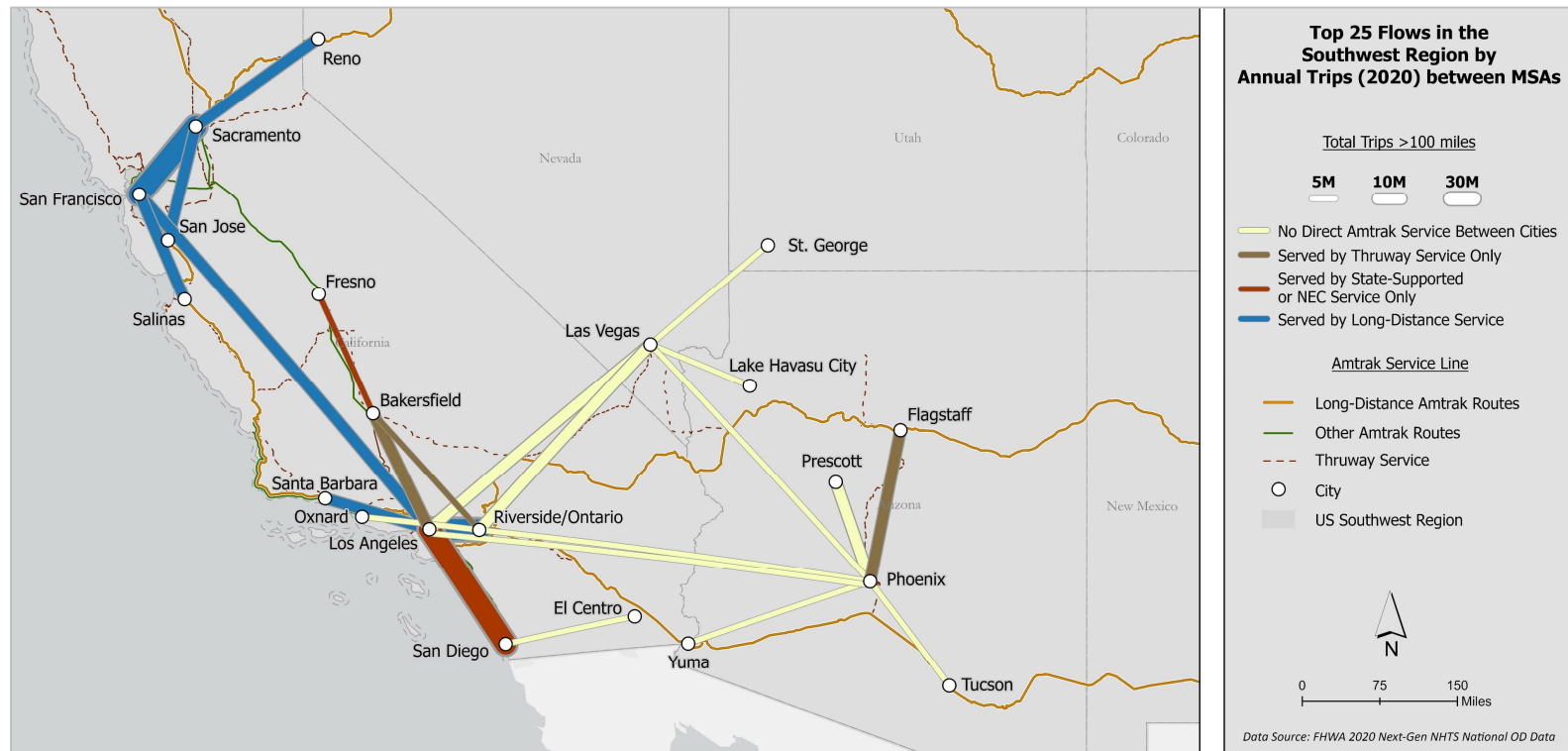
Southwest Region – Market Opportunities

- The next few slides are based on FHWA Next-Gen data for all trips and all travel modes

Southwest Region – Market Opportunities

Top 25 Trip Flows

- Trip flows with one trip end in the Southwest Region
- Based on Next-Gen and showing total trips over 100 miles across all modes
- Trip flow colors indicate availability of Amtrak service between MSAs

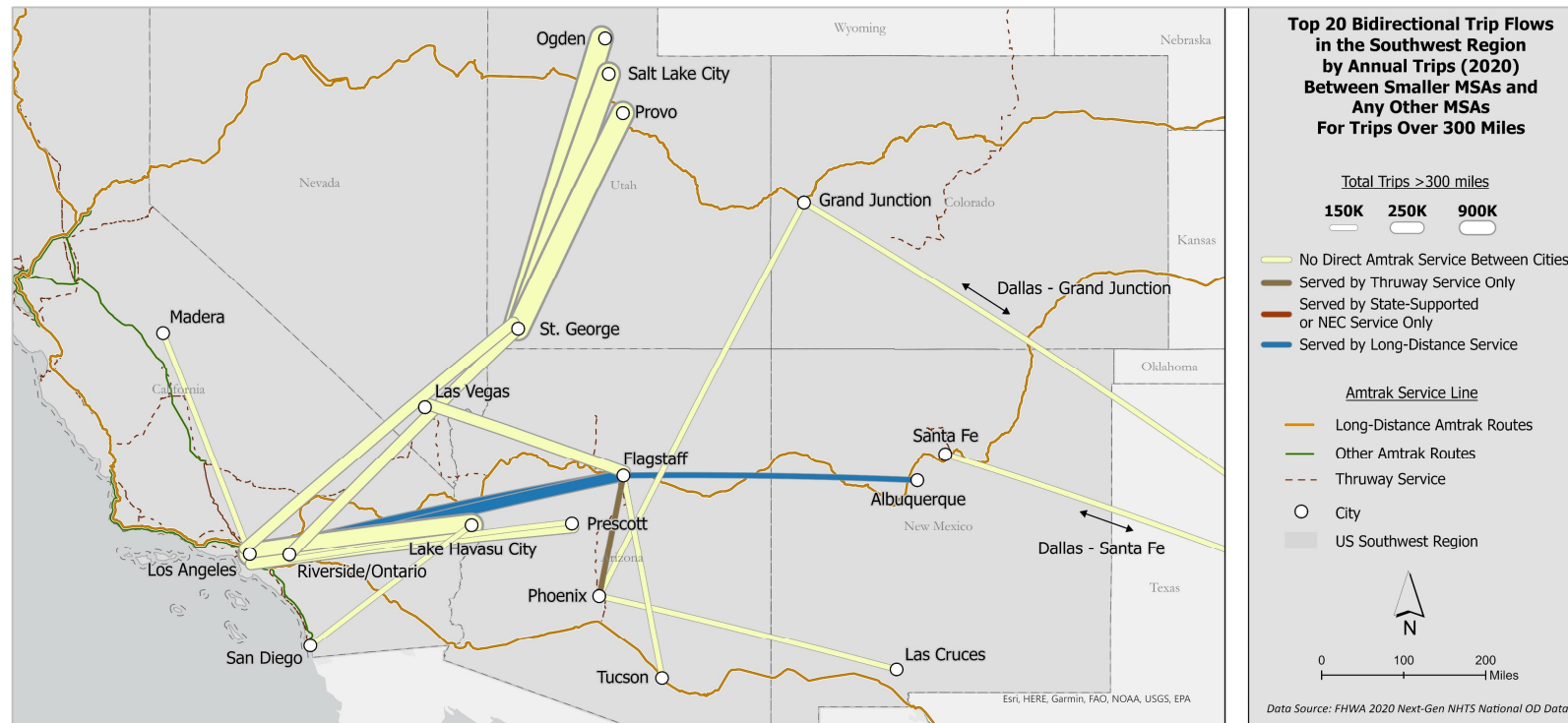


May not show all Thruway Bus Services

Southwest Region – Market Opportunities for Smaller MSAs

Top 20 Trip Flows Connecting Smaller MSAs

- Trip flows between MSAs with one trip end in a smaller MSA in the Southwest Region
- Total trips over 300 miles across all modes
- Top flows are mostly between MSAs not directly connected by Amtrak service



May not show all Thruway Bus Services

Southwest Region – Current Amtrak O-D Pairs

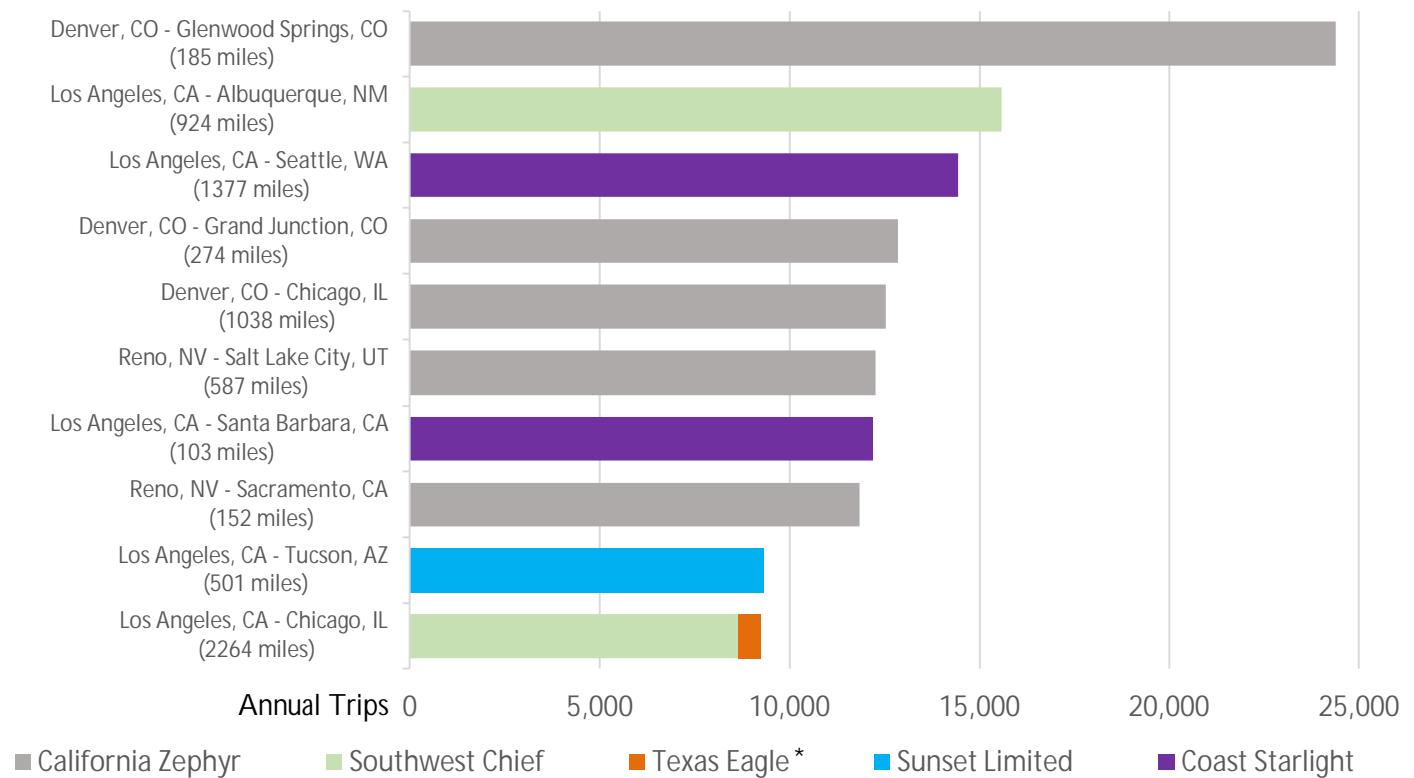
- The next few slides are based on Amtrak FY 2019 ridership data for rail trips over 100 miles in length on Long-Distance passenger trains
- The slides focus on top station pairs overall and on trips connecting to a small community

Southwest Region – Current Amtrak O-D Pairs

Amtrak Ridership: Top 10 Station Pairs

- Five of the top 10 pairs connect with Los Angeles
- Three pairs leave the Southwest Region
- Denver – Glenwood Springs is the national top station pair with a connection to a small community
- Los Angeles-Santa Barbara is also connected by the *Pacific Surfliner*
- Two station pairs, Los Angeles – Chicago and Los Angeles – Seattle, are end-to-end routes

Top 10 Long-Distance Station Pairs by Volume of Annual Trips (2019)

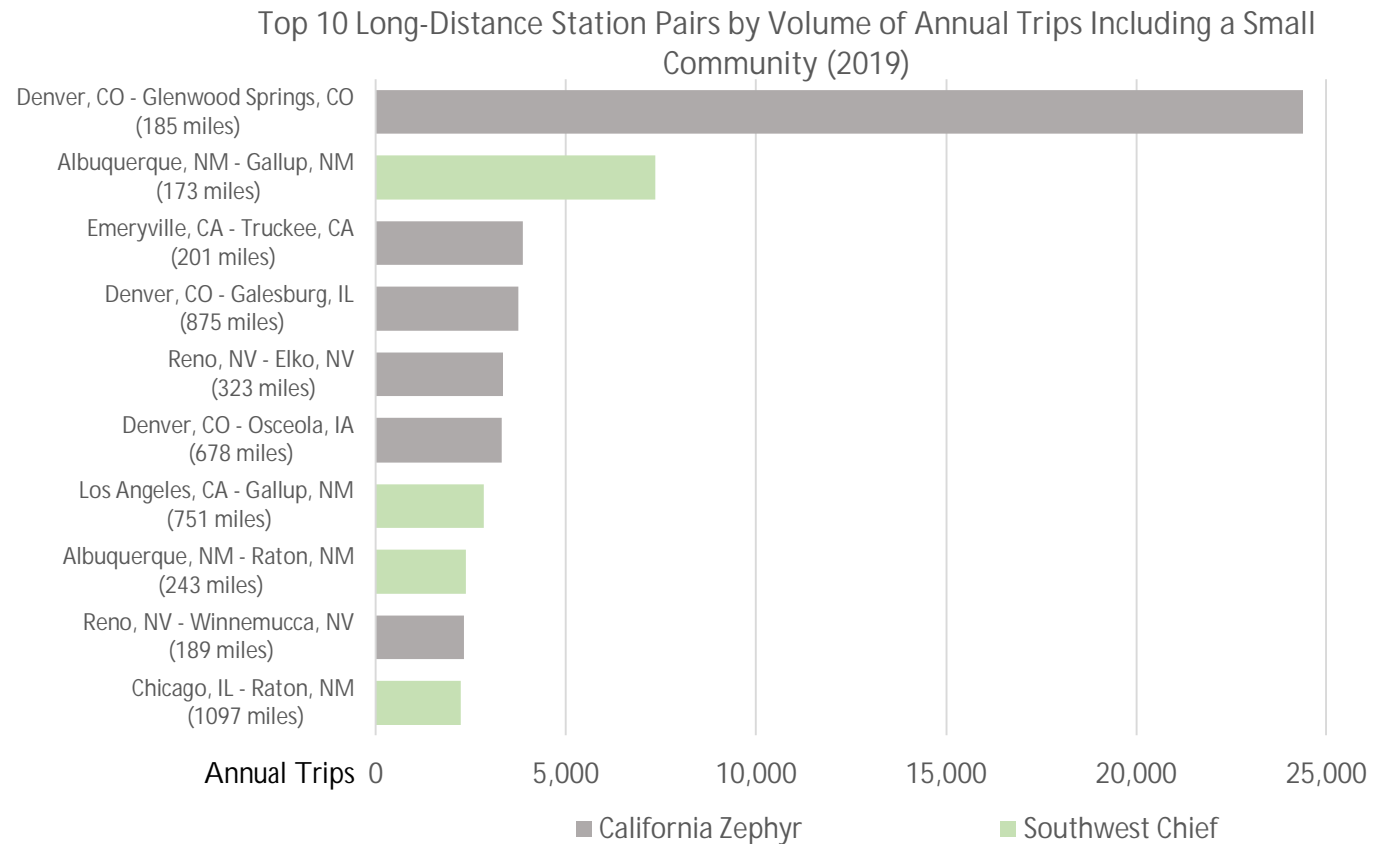


* Texas Eagle connects to Sunset Limited and continues from San Antonio, TX to Los Angeles, CA three times a week

Southwest Region – Current Amtrak O-D Pairs

Amtrak Ridership: Top 10 Station Pairs Serving Small Communities

- Seven of these pairs stay within the Southwest Region
- The remaining three connect with the Midwest Region

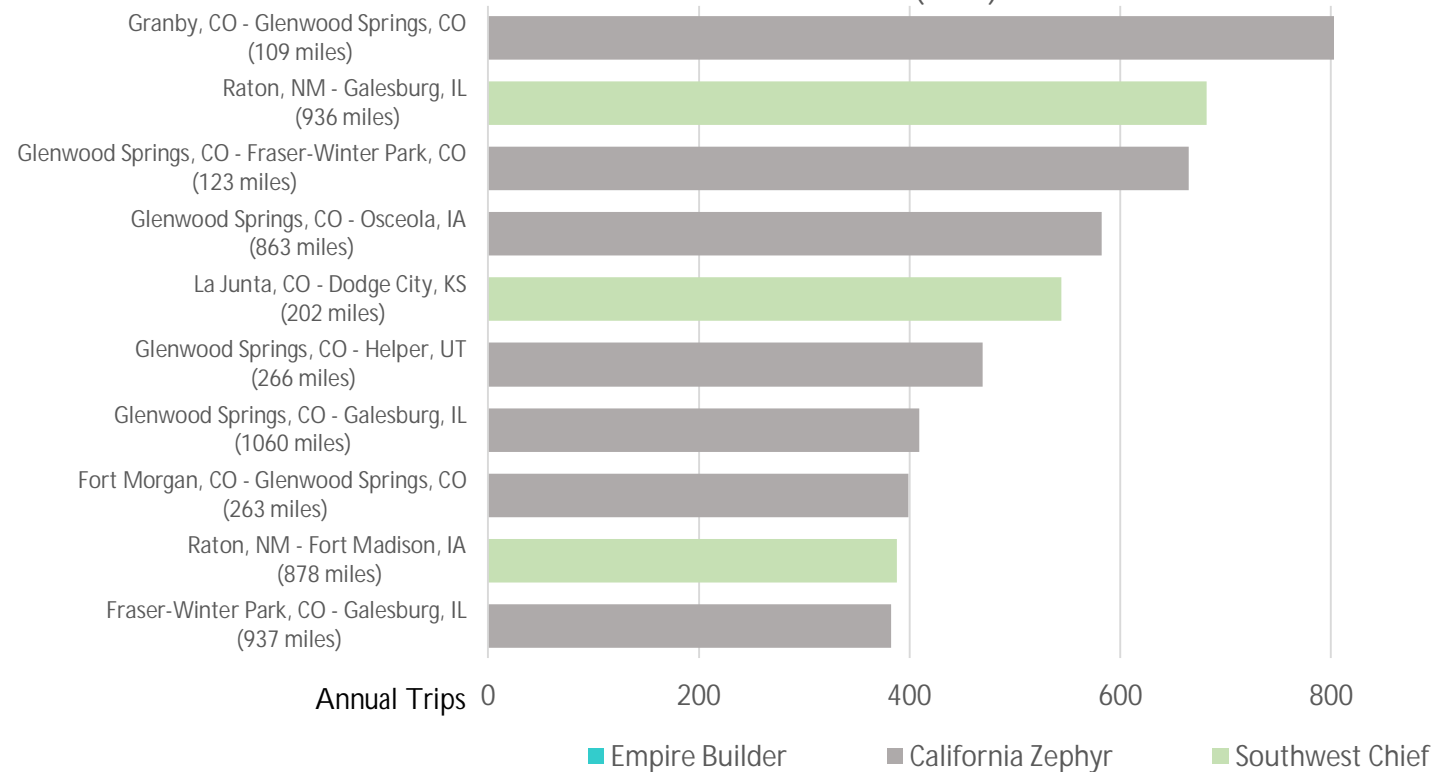


Southwest Region – Current Amtrak O-D Pairs

Amtrak Ridership: Top 10 Station Pairs Connecting Small Communities

- Glenwood Springs appears in six station pairs
- Fraser-Winter Park appears in two pairs
- These are both skiing destinations

Top 10 Long-Distance Station Pairs by Volume of Annual Trips Connecting Two Small Communities (2019)



Southwest Market Conditions Summary

- Los Angeles, San Francisco, and Sacramento are the largest markets for travel in the Southwest Region, connecting trips on Long-Distance routes with state-supported services (*Capitol Corridor*, *Pacific Surfliner*, and *San Joaquins*)
- Los Angeles, Bakersfield, and Phoenix are large markets that are served by Amtrak Thruway Bus service
- Los Angeles is the largest station for trips on Long-Distance routes in the Southwest Region
 - Five of the top 10 station pairs include Los Angeles
 - The *Coast Starlight*, *Southwest Chief*, and *Sunset Limited* terminate in Los Angeles and connect with *Pacific Surfliner* and Amtrak Thruway Bus services
- The *California Zephyr* connects many of the top station pairs serving small communities, including Glenwood Springs, CO and Fraser-Winter Park, CO