

# Appendix H: Travel Shed

---

To: San Diego Association of Governments and Caltrans District 11

From: North County Comprehensive Multimodal Corridor Plan (CMCP) Project Team

Date: October 2022

Subject: North County Comprehensive Multimodal Corridor Plan (CMCP) – Travel Shed

---

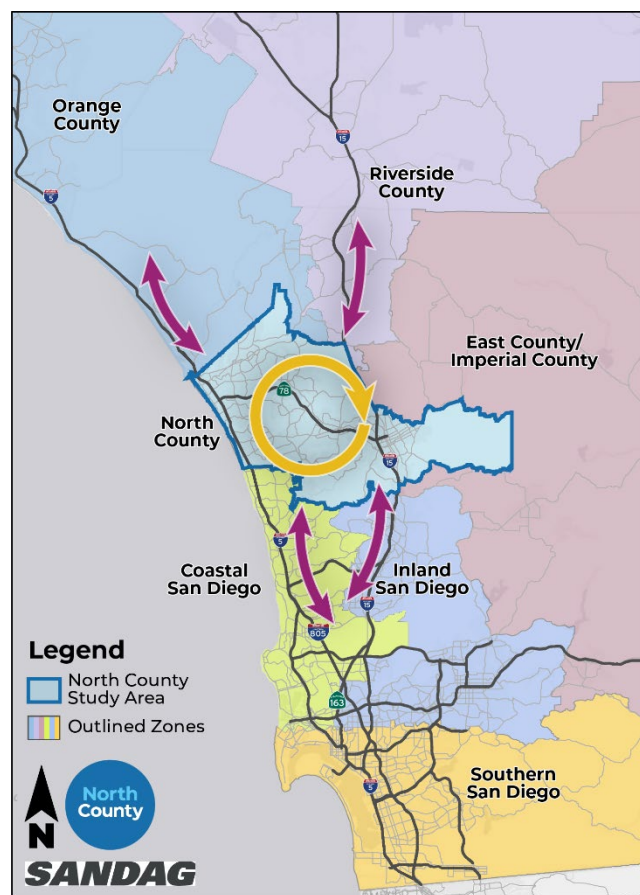
## Overview

The North County Comprehensive Multimodal Corridor Plan (CMCP) identifies integrated transportation solutions that enhance the way people travel throughout North County. To better understand access to key destinations and travel patterns within the regional corridor, a travel shed analysis was conducted. This memo documents the analysis developed to map the travel shed in the North County study area.

# North County Regional Corridor Travel Shed

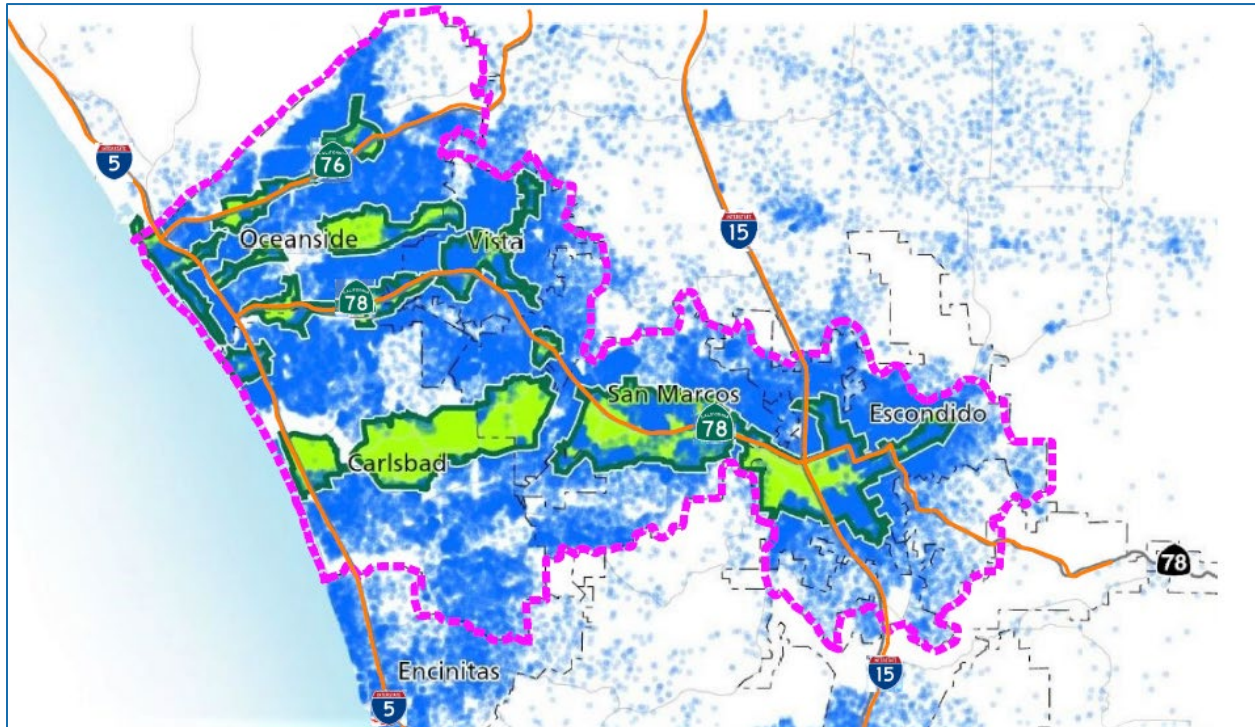
The North County Regional Corridor (NCRC) is in the Northern portion of San Diego County, encompasses the Cities of Escondido, San Marcos, Vista, Oceanside, Carlsbad, and portions of unincorporated County of San Diego—and is centrally located in a larger mega region between San Diego, Orange, and Riverside counties as shown in **Figure 1**. The NCRC travel shed shown in **Figure 2** is approximately 17 miles long and includes primary east-west travel routes such as State Route 78 (SR 78), State Route 76 (SR 76), North County Transit District (NCTD) SPRINTER Rail Line, and San Marcos Boulevard/Palomar Airport Road. The travel shed is bounded by Camp Pendleton to the north, the Pacific Ocean to the west, Batiquitos Lagoon/Lake Hodges to the south, and the Center City Parkway in Escondido to the east.

Figure 1: Regional Context



The limits of this travel shed were developed utilizing the travel patterns of the Tier 1 and Tier 2 employment centers, travel nodes, mobility options, major activity centers, and geographical features within the corridor. Primary data collection has relied on SANDAG’s Series 13 Activity Based Model for network and land use; location-based data (Streetlight’s Data) for Origin and Destination, PeMS for highway AADT and other traffic metrics, and NCTD for SPRINTER and BREEZE metrics. The main NCRC commuter travel pattern is an east/west movement, primarily on State Route 78 (SR 78) carrying approximately 160,000 vehicles per day.

Figure 2: North County Regional Corridor Travel Shed



State Route 76 (SR 76) and Palomar Airport Road are other major parallel facilities within the Corridor and carry approximately (52,000 and 50,000 respectively). There are also shorter north/south trips on local arterials that cross SR 78 at interchanges, under crossings, and bridges.

Most interregional and regional trips make connections to NCRC at the Interstate 5 (I-5) and Interstate 15 (I-15) connectors, with only around 10% traversing the entire length of the corridor on weekdays and 15% on weekends. This shows that most trips are intraregional within NCRC.

Situated along the corridor are multiple regional and interregional destinations. Legoland, State Beach Campgrounds, and Camp Pendleton are some of the major interregional draws on the west end of the corridor. The corridor also provides an interregional connection to eastern destinations outside the study area including the San Diego Safari Park and Tribal Gaming locations such as Pechanga, Rincon, and Barona, and recreational area such as Borrego Springs. Regional Education and Medical Centers along the corridor are a major destination for students, patients and employees. Land use patterns have created industrial and commercial centers in pockets throughout the study area. Some of these centers are adjacent to SR 78 and the western end of SR 76, with Carlsbad locating its job center along Palomar Airport Road. With housing and commercial uses separated, increased congestion occurs from local trips that traverse regional travel routes.

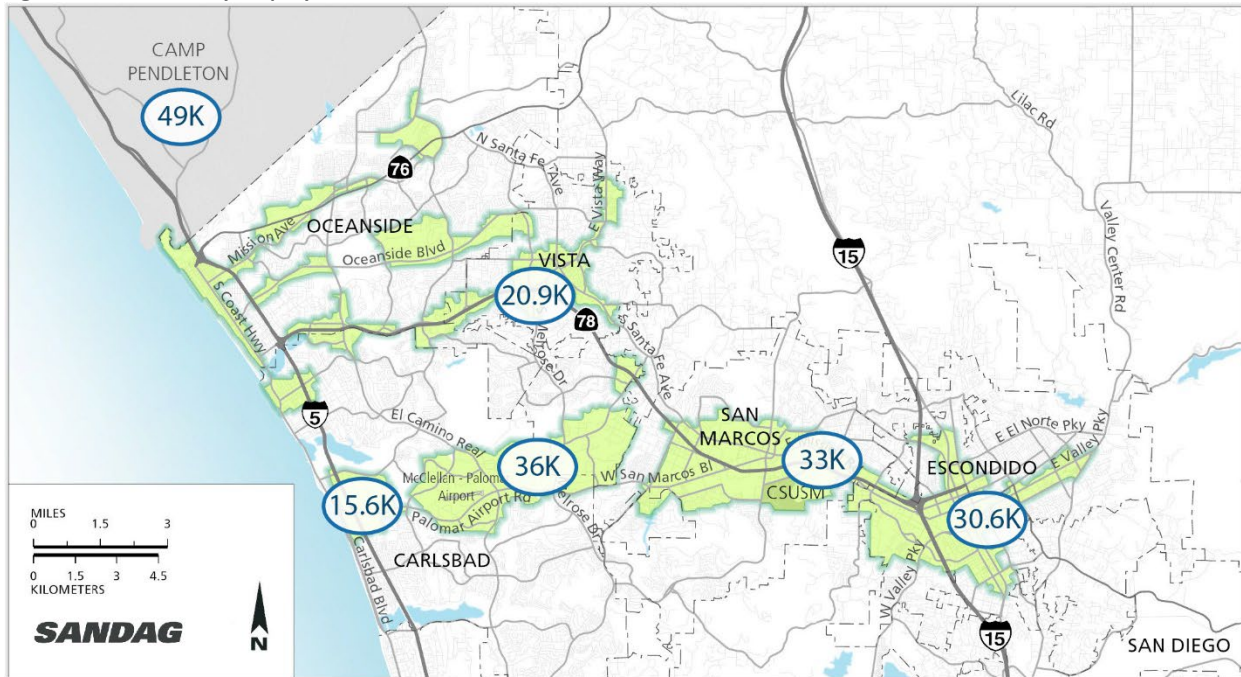
SR 78 serves as the primary facility for local and regional east-west travel in the North County Regional Corridor. The corridor serves interregional travel to from San Diego County to the Counties of Riverside, Orange, and Los Angeles. In San Diego County, the corridor facilitates trips to and from multiple County destinations east of I-15, such as Julian, Ramona, and Valley Center. In addition, the highway accommodates shorter, more local trips that would typically be served by a network of arterial streets. There are few other continuous, east-west roadways within the corridor, particularly in the east end of the corridor. The I-15 and SR 78 connector experience high levels of delay and speed reduction from

during both AM and PM peaks for the north to west movement and the east to south movement. This typical begins/extends to Woodland Parkway.

The west end of the corridor experiences congestion at the I-5 Interchange, particularly for the westbound SR 78 to southbound I-5 movement that is controlled by a traffic signal. The westbound traffic queues onto the SR 78 freeway lanes as it approaches the I-5 Interchange and can block the northbound ramp. While the west end of the corridor experiences congestion related to the interchange with I-5, it is not as extensive as congestion found in the San Marcos and Escondido area of the corridor. The west end of the corridor has relatively continuous east-west arterial streets both north and south of SR 78, which provide a broader roadway network and alternative route options for short trip drivers.

The concentrations of employment within the study area are represented by the employment centers shown in Figure 3. The key job centers show that the largest employment centers by number of employees in the study area are located in Carlsbad, San Marcos, and Escondido. These employment centers are anticipated to continue growing.

Figure 3: North County Employment Estimates, 2016



Source: SANDAG Employment Estimates, 2016

Table 1: Weekday Daily Trips for Each City

Outlined Zones	Weekday Daily Trips (Carlsbad)	Weekday Daily Trips (Oceanside)	Weekday Daily Trips (San Marcos)	Weekday Daily Trips (Escondido)	Weekday Daily Trips (Vista)
San Diego Inland	3.4%	2.4%	6.5%	13.3%	3.6%
Los Angeles/Orange County	3.8%	9.8%	2.2%	1.4%	4.3%
East County/Imperial County	0.4%	0.5%	2.5%	8.1%	0.9%
Riverside/San Bernardino County	1.7%	3.3%	3.9%	3.9%	3.0%
Southern San Diego	2.7%	1.7%	2.1%	2.8%	1.6%
Coastal San Diego	31.3%	6.9%	10.9%	7.1%	6.6%
North County Study Area	56.7%	75.1%	72.0%	63.4%	79.9%
<i>Carlsbad</i>	35.8%	10.2%	6.5%	1.3%	9.3%
<i>Encinitas</i>	1.3%	0.1%	1.5%	0.1%	0.2%
<i>Escondido</i>	1.1%	1.2%	9.1%	44.1%	2.7%
<i>Oceanside</i>	9.2%	50.6%	3.5%	1.5%	17.0%
<i>San Marcos</i>	4.1%	2.0%	37.1%	6.5%	6.7%
<i>San Diego County</i>	1.9%	2.8%	9.8%	8.5%	9.9%
<i>Vista</i>	3.4%	8.2%	4.5%	1.5%	34.1%

Source: 2019 Streetlight Analytics