



City of Santa Barbara
Transportation and Circulation Committee

Staff Report

DATE: June 27, 2024
TO: Transportation and Circulation Committee
FROM: Jessica W. Grant, Supervising Transportation Planner
SUBJECT: Understanding Regional Travel Patterns

RECOMMENDATION:

That the Transportation and Circulation Committee receive a presentation from the Santa Barbara County Association of Governments on the findings from the “Understanding Regional Travel Patterns” report with a specific focus on travel into, out of, and within the City of Santa Barbara.

BACKGROUND:

On January 18, 2024, the Santa Barbara County Association of Governments’ (SBCAG) Board of Directors (Board) approved the “Understanding Regional Travel Patterns” report (Report). The Board is a thirteen-member governing board consisting of all five members of the Santa Barbara County Board of Supervisors and one representative from each city council of the eight cities within Santa Barbara County. The Board provides a forum for regional collaboration and to create transformative regional change.

SBCAG worked on the Understanding Regional Travel Patterns Project as part of an assigned regional work effort. SBCAG used Replica, a big-data platform, to assess how people move into, out of, and within Santa Barbara County, and summarized the findings in the Report.

Replica creates a representation of reality through an activity-based travel demand model, which is the current best practice for travel modeling and enables the consideration of linked trips, such as: leaving home, dropping a child off at a childcare facility, stopping for coffee, going to work or a restaurant for lunch, etc.

Replica’s activity-based model is not used to forecast future conditions; it is calibrated to the highest level of accuracy to existing conditions, with updates in the spring and fall of each year. To build the model, Replica creates a virtual representation of the built environment (transportation network, buildings, etc.) and layers demographic data from the US Census Bureau. The model is then calibrated using mobile location data (cell

phones and GPS units) and economic data (credit card swipe activity). An additional layer of calibration comes from ground-truth data such as existing and known traffic volumes, transit ridership, etc.

The use of third-party data – mobile location and economic activity – enables a high degree of accuracy in modeling the existing condition, but it is not perfect. While privacy protections built into the data prevent a true representation of reality, Replica enables the most accurate analyses feasible. For purposes of the Report, Replica data is from fall of 2022.

This staff report specifically focuses on travel into, out of, and within the City of Santa Barbara (City) while the overall Report focuses on travel into, out of, and within Santa Barbara County.

DISCUSSION:

The Report contains two data analyses for the City: Attachment 1, “Work Trips Originating in the City,” and Attachment 2, “Work Trips Destined for the City.”

As referenced in Attachment 1, there were 48,300 trips originating in the City for the purpose of traveling to work. 66.0% of these trips (31,878 trips) are destined for a location within the City and 92.7% of those trips (44,774 trips) are destined within South County (City of Goleta, Isla Vista, Montecito, Carpinteria). Attachment 1 also breaks down the current mode split for traveling to work, with 60.1% commuting by single-occupant vehicles, 25.6% commuting by carpool, 9.6% commuting by foot, 2.6% commuting by bike, and 1.2% commuting by transit.

It is important to note that 16.1% of commuters (7,776 commuters) live within a mile of their workplace and 59.7% of commuters live within four miles of their workplace. One half to one mile is a typical distance someone will walk before another mode choice is selected, and four to five miles is a typical distance for cyclists to bike before another mode choice is selected. This highlights the importance of providing a safe, comfortable multimodal road network, so driving is not perceived as a necessity for this large percentage of City commuters. For 32.5% of commuters living between 4-16 miles from their work, and the 7.8% of commuters living 16 to over 64 miles from work, there are possibilities for strengthening transit and incentivizing carpooling.

Regional partners are working on ways to incentivize e-bikes as a commute method, which is ideal for commutes around 15 miles or less. The City will continue to coordinate with other regional partners to strengthen transit options. SBCAG’s Traffic Solutions Program focuses on carpooling, telecommuting, and vanpooling programs for county residents. The Santa Barbara Metropolitan Transit District provides transit within the South County. The Clean Air Express provides transit from North County to Goleta and Santa Barbara and the Coastal Express provides transit from Ventura into South County.

As referenced in Attachment 2, there were 56,600 trips ending in the City for the purpose of traveling to work. Of the work trips ending in the City, 43.7% (24,734 trips) began outside of the City. Take note that 83.4% (47,204 trips) of work-bound trips originated within the South County, with only 8% (4,528 trips) originating from North County and 6.6% (3,396 trips) originating from Ventura County. From a land use and transportation perspective, most residents living in South County are close to their work. In addition, the recent City Council-adopted Housing Element contains many housing policies and programs to incentivize housing within the City to ensure residents live closer to their jobs.

For work trips ending in the City of Santa Barbara, 13.8% of commuters are within a mile of their workplace (walking distance) and 51.8% are within 4 miles of their workplace (biking distance). Again, there is a tremendous opportunity to increase walking and cycling commutes by providing safe multimodal road networks. For 31.3% of commuters living between 4-16 miles from their work and the 16.9% of commuters living 16 to over 64 miles from work, there are possibilities for strengthening transit and incentivizing carpooling and e-bike commuting.

Attachment 3 indicates 5% of households in the City do not own a vehicle. Of those households with no vehicle, 40.3% use biking as their primary way to travel followed by walking (35%) and transit (16.2%). 28.7% of households own one-vehicle, 40% own two-vehicles, and 24.8% own three or more vehicles.

Attachment 4 indicates residents within the City have the shortest average trips at 7.5 miles (16.8 minutes) to work and school across all modes in Santa Barbara County.

NEXT STEPS:

The regional travel pattern analysis will be conducted every four years to inform how our county analyzes regional and local planning activities. It is anticipated that SBCAG and regional partners will have access to Replica data until June of 2039. Access to data beyond June of 2039 would need to be approved by the SBCAG Board.

ATTACHMENTS:

1. Work Trips Originating in the City of Santa Barbara
2. Work Trips Destined for the City of Santa Barbara
3. Mobility of Zero-Car Households
4. Equity Indicators

Work Trips Originating in the City of Santa Barbara

For the analysis period, 48,300 trips began in the City of Santa Barbara for the purpose of traveling to work. The destination of those work trips is provided in the following table.

Table 70: Santa Barbara Journey-to-Work Destinations (n = 48,300)

Destination	% of all work trips originating in Santa Barbara (>= 2%)
City of Santa Barbara	66.0%
City of Goleta	9.6%
Isla Vista	3.5%
Montecito	3.1%
South County	92.7%
North County	3.7%
Ventura County	2.2%

66.0% of all work trips originating in the City of Santa Barbara are destined for a location within the City of Santa Barbara.

The following table provides the primary commute mode for work trips originating in the City of Santa Barbara.

Table 71: Originating in Santa Barbara Primary Mode for Work Trips (n = 48,300)

Mode of Travel	% for all work trips originating in Santa Barbara
Private Auto	60.1%
Auto Passenger	25.6%
Walk	9.6%
Bike	2.6%
Transit	1.2%

The following table provides the trip distance for work commute trips originating in the City of Santa Barbara.

Table 72: Originating in Santa Barbara Work Trip Distance (n = 48,300)

Distance (miles)	% for all work trips originating in Santa Barbara
0.5 or less	6.6%
0.5 - 1	9.5%
1 - 2	18.7%
2 - 4	24.9%
4 - 8	18.9%
8 - 16	13.6%
16 - 32	1.3%
32 - 64	3.9%
64 or more	2.6%

Work Trips Destined for the City of Santa Barbara

For the analysis period, 56,600 trips ended in the City of Santa Barbara for the purpose of traveling to work. The origin of those work trips is provided in the following table.

Table 73: Santa Barbara Journey-to-Work Origins (n = 56,600)

Origin	% of all work trips destined for Santa Barbara (>/= 2%)
City of Santa Barbara	56.3%
City of Goleta	8.8%
City of Ventura	2.6%
Montecito	2.5%
City of Santa Maria	2.2%
City of Carpinteria	2.1%
South County	83.4%
North County	8.0%
Ventura County	6.6%

Of work trips ending in the City of Santa Barbara, 43.7% began outside of the City of Santa Barbara.

The following table provides the primary commute mode for work trips destined for the City of Santa Barbara.

Table 74: Destined for Santa Barbara Primary Mode for Work Trips (n = 56,600)

Mode of Travel	% for all work trips destined for Santa Barbara
Private Auto	59.5%
Auto Passenger	27.7%
Walk	8.3%
Bike	2.2%
Transit	1.2%

The following table provides the trip distance for work commute trips destined for the City of Santa Barbara.

Table 75: Destined for Santa Barbara Work Trip Distance (n = 56,600)

Distance (miles)	% for all work trips destined for Santa Barbara
0.5 or less	5.7%
0.5 - 1	8.1%
1 - 2	15.9%
2 - 4	22.1%
4 - 8	18.1%
8 - 16	13.2%
16 - 32	2.3%
32 - 64	10.8%
64 or more	3.8%

Mobility of Zero-Car Households

This section quantifies how people who do not have a vehicle travel.

The first table provides automobile availability by jurisdiction.

Table 154: Automobile Availability by Jurisdiction

Jurisdiction	1 Vehicle	2 Vehicles	3 or More	No Vehicle
Buellton	25.5%	42.0%	31.9%	0.6%
Carpinteria	22.8%	39.4%	33.9%	3.3%
Goleta	20.4%	36.7%	34.0%	2.8%
Guadalupe	16.2%	35.6%	45.1%	3.1%
Lompoc	20.5%	34.8%	32.4%	5.0%
Santa Barbara	28.7%	40.0%	24.8%	5.0%
Santa Maria	20.4%	34.4%	41.3%	2.9%
Solvang	19.9%	43.0%	33.3%	2.5%
North County	18.5%	35.5%	41.0%	2.9%
South County	22.9%	36.3%	29.5%	4.2%
Countywide	20.6%	35.9%	35.6%	3.5%

The following table considers age to account for elderly residents that zero car may not be a choice.

Table 155: Age Distribution of Zero Car Household Residents

Jurisdiction	n	0-17	18-34	35-49	50-64	65+
North County	6,235	18.6%	20.0%	12.7%	21.6%	27.2%
South County	10,572	4.5%	28.3%	9.8%	9.9%	47.5%
County	16,798	9.7%	25.2%	10.9%	14.3%	39.9%

The following four tables focus on the working-age zero car household population under the assumption that living in a zero-car household may be a choice for this population.

Table 156: Income Distribution for Zero Car Household Residents Aged 18-64 Years

Jurisdiction	<\$25k	\$25-50k	\$50-75k	\$75-100k	\$100-200k	>\$200k
North County	35.4%	27.5%	8.1%	3.0%	21.0%	5.1%
South County	47.9%	18.4%	7.0%	7.3%	11.5%	8.1%
County	42.9%	22.0%	7.4%	5.6%	15.3%	6.9%

Table 157: Race for Zero Car Household Residents Aged 18-64 Years

Jurisdiction	White non-Hispanic	Hispanic / Latino	Asian	Black
North County	35.1%	54.1%	3.5%	1.0%
South County	43.3%	26.5%	20.0%	7.5%
County	40.1%	37.5%	13.5%	4.9%

Table 158: Primary Mode of Travel for Zero Car Household Residents Aged 18-64 Years for All Trip Purposes

Jurisdiction	Bike	Walk	Transit	Auto Passenger	Other
North County	6.8%	48.2%	1.1%	17.6%	26.3%
South County	40.3%	35.0%	16.2%	1.0%	7.5%
County	23.4%	41.7%	8.6%	10.5%	15.8%

Table 159: Primary Mode of Travel for Zero Car Household Residents Aged 18-64 Years for Work or School Trips

Jurisdiction	Bike	Walk	Transit	Auto Passenger	Other
North County	2.4%	39.4%	1.1%	15.6%	41.5%
South County	48.4%	30.8%	14.1%	3.0%	3.7%
County	28.9%	34.4%	8.7%	8.3%	19.7%

Equity Indicators

The following table averages the trips to work and school by jurisdiction, considering all primary modes of transportation (i.e., private automobile users, automobile passengers, walkers,

bicyclists, and public-transit users), all ages, income levels, races, and ethnicities. This table provides a baseline.

Table 170: Average Work or School Commute Attributes by Jurisdiction

Geography	Avg. Trip Distance in Miles (All Modes)	Avg. Trip Duration in Minutes (All Modes)	Avg. Bike Distance in Miles	Avg. Bike Duration in Minutes	Avg. Walk Distance in Miles	Avg. Walk Duration in Minutes	Avg. Public Transit in Miles	Avg. Public Transit in Minutes
County	9.7	20.0	2.2	12.5	0.9	16.7	4.9	34.9
Buellton	22.8	28.9	3.3	17.6	0.6	11.4	N/A	N/A
Carpinteria	10.4	19.5	2.3	12.7	0.7	13.8	12.8	51.5
Goleta	8.4	18.9	2.9	16.8	1.0	18.7	4.7	34.1
Guadalupe	10.7	23.7	6.5	35.8	0.8	15.2	N/A	N/A
Lompoc	14.6	26.3	2.1	11.9	1.2	23.2	N/A	N/A
Santa Barbara	7.5	16.8	2.3	12.7	0.9	16.1	5.0	35.1
Santa Maria	8.2	17.1	1.8	9.4	0.7	13.4	6.7	36.7
Solvang	15.5	25.6	2.6	13.7	0.7	13.1	N/A	N/A

Across all modes, City of Buellton residents take the longest trips to work or school, averaging 22.8 miles and 28.9 minutes. City of Santa Barbara residents have the shortest average trips at 7.5 miles and 16.8 minutes across all modes in the County. For bicyclists, Guadalupe residents have the longest trips at an average 6.5 miles and 35.8 minutes whereas Santa Maria commuters have the shortest trips at an average of 1.8 miles and 9.4 minutes. For walkers, Lompoc residents have the longest trips at an average of 1.2 miles and 23.2 minutes whereas Buellton residents have the shortest trips at an average of 0.6 miles and 11.4 minutes. Among the reported data on public-

transit users in the County, residents in Carpinteria averaged the longest trips at 12.8 miles and 51.5 minutes while Goleta residents averaged the shortest average trips at 4.7 miles and 34.1 minutes.