Appendix K: Isochrone Methodology and Analysis - Existing Condition (2019)

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) – Isochrone Analysis

Overview

The North County Comprehensive Multimodal Corridor Plan (CMCP) will identify integrated transportation solutions that enhance the way people travel throughout North County.

An isochrone is a visualization tool—a geographic shape—that shows the area a traveler can reach within a travel time limit from a specific point of origin. For instance, an isochrone can show the maximum area that can be reached within 30 minutes of a specific location using transit or walking and transit. A series of 30-minute and 60-minute isochrone sheds have been developed and analyzed for the North County Study Area during the PM peak. The isochrone analysis will be valuable in understanding how far existing users of North County can travel utilizing the existing transportation network. This appendix details the methodology and analysis of 13 isochrone origins in the North County study area.

Methodology

STEP 1: ISOCHRONE ORIGIN SELECTION

Isochrone sheds were developed for the following 13 isochrone origins:

- Barham Dr and Campus Way
- Camp Pendleton Gate (Vandergrift)
- Carlsbad Blvd and Carlsbad Village Dr
- College Blvd and SR 76
- Faraday Ave and El Camino Real
- Felicita Ave and Centre City Pkwy
- Maple St and W Grand Ave
- Oceanside Blvd and Avenida del Oro
- Poinsettia Ave and Business Park Dr
- Via Vera Cruz and San Marcos Blvd
- Vista Village Dr and Santa Fe Ave
- West Lake Dr and San Marcos Blvd
- Wisconsin Ave and Coast Highway

STEP 2: ISOCHRONE DEVELOPMENT

To develop the transit-walk isochrone sheds, the following parameters were used:

- Time Limit
  - 30-minute
  - 60-minute
- Time Period[1]
  - PM Peak (4:30 PM, 4:40 PM, 4:50 PM)
- Mode
  - Walk and transit
- Transportation Network[2]
  - North County Transit District General Transit Feed Specification (GTFS) Feeds
  - Underlying Travel Network from OpenStreetMap

Using the parameters indicated above, three isochrones were developed for each isochrone origin at each specified time limit and period, creating a total of 12 isochrones for each origin. The isochrones for each time period varied in size due to alignment with the specific service times within the GTFS Feed. To understand and analyze the variability in transit access, a high likelihood and low likelihood isochrone was mapped for each origin point:

- The **High Likelihood** isochrone represents the overlap between the isochrones generated for each peak period and most accurately reflects a user's reach within a 30-minute travel period
- The **Low Likelihood** isochrone represents how far a user could go if they began their trip at a time that is more aligned with North County's existing transportation network schedule.

To develop the auto isochrone shed, the following parameters were used:

- Time Limit
  - 30-minute
  - 60-minute
- Time Period
  - PM Peak (4:30 PM)
- Mode
  - Auto

Using the parameters indicated above, one isochrone was developed for each isochrone origin at each specified time limit and period. The isochrones were generated using HERE's Real-Time Traffic.

[1] The travel shed process using the GTFS network requires specific time inputs. To better understand the transit network throughout the peak period, three time periods during peak travel times were used to develop the travel sheds.

[2] Note that the transportation network for the isochrone analysis does not include Amtrak services.

STEP 3: REACH ANALYSIS

To understand the destinations within reach for each isochrone origin, the number of users (people), destinations, jobs, housing units, seniors, People of Color, and low-income households were calculated for each isochrone shed.

- Destination Points from SANDAG's Places Shapefile
- Jobs (census block group level) from LEHD LODES Dataset (2018)
- Demographic information (census block group level) from American Community Survey (ACS) 2019 5-Year Estimates
- DS39 demographic information (TAZ level) developed by SANDAG

To capture the number of destinations, people, and jobs accessible within each travel shed, the points and centroids of block groups and TAZs were joined to each isochrone shed. The data for each isochrone shed is summarized in the Isochrone Analysis and Findings section below.

Isochrone Analysis and Findings

This section contains the analysis of the smallest reach and largest reach isochrones generated for each origin point for a 30-minute and 60-minute travel time limit at PM peak. The analysis of each isochrone origin contains a map showing the travel sheds generated and a table summarizing the reach analysis for each isochrone.

The large variation between each of the categories analyzed as part of the reach analysis shows that infrequent transit time significantly impacts a user's accessibility to destinations, housing, and jobs.

SUMMARY OF 30-MINUTE ISOCHRONE REACH ANALYSIS

Table 1 summarizes the average of destinations, housing units, jobs, and housing units reached for each of the isochrone origins at 30 minutes and **Table 2** summarizes the variation between the smallest and largest 30-minute isochrones generated for each isochrone origin for various reach factors. The table also displays a ranking for the level of variation for each reach analysis. The highest ranking (1) represents the isochrone origin that generated travel sheds with the greatest number of destinations, housing units, jobs, or population reached or the largest variation for each factor.

Destinations

Across all the 30-minute isochrones generated, the high likelihood isochrones reach an average of 63 destinations. The Vista Village Dr and Santa Fe Ave origin point generates isochrones that cover the largest number of destinations (139), while the Camp Pendleton Gate (Vandergrift) origin point generates isochrones that cover the smallest number of destinations (3).

The average variation for destinations within reach between each set of 30-minute isochrones generated is 55. The isochrones generated for Vista Village Dr and Santa Fe Ave resulted in the largest variation for destinations, with the low likelihood isochrone encompassing 244 destinations and the high likelihood isochrone encompassing 139 destinations. Excluding Camp Pendleton (Vandergrift), the isochrones generated for Felicita and Centre City Pkwy resulted in the smallest variation for destinations with the low likelihood isochrone encompassing 93 destinations and the high likelihood isochrone encompassing 66 destinations.

Housing Units

Across all the 30-minute isochrones generated, the high likelihood isochrones reach an of 7,348 housing units. The Maple St and W Grand Ave isochrone origin generates isochrones that cover the largest number of housing units (20,974), while the Faraday Ave and El Camino Real isochrone origin generates isochrones that cover the smallest number of housing units (1,399).

The average variation for housing units within reach between each set of 30-minute isochrones generated is 9,517. The isochrones generated for Oceanside Blvd. and Avenida del Oro resulted in the largest variation for housing units, with the high likelihood isochrone encompassing 4,804 housing units and the low likelihood isochrone encompassing 21,537 housing units. Excluding Camp Pendleton (Vandergrift), the isochrones generated for Barham Drive and Campus Way resulted in the smallest variation for housing units with the high likelihood isochrone encompassing 1,912 housing units and the low likelihood isochrone encompassing 5,357 housing units.

Jobs

Across all the 30-minute isochrones generated, an average of 7,348 jobs can be reached. The Maple St and W Grand Ave isochrone origin generates isochrones that cover the largest number of jobs (26,937), while the Camp Pendleton (Vandergrift) isochrone origin generates isochrones that cover the smallest number of jobs (1,014).

The average variation for jobs within reach between each set of 30-minute isochrones generated is 15,334. The isochrones generated for Maple St and W Grand Ave resulted in the largest variation for jobs reached, with the high likelihood isochrone encompassing 26,937 jobs and the low likelihood isochrone encompassing 43,274 jobs. Excluding Camp Pendleton (Vandergrift), the isochrones generated for College Blvd. and SR 76 resulted in the smallest variation for jobs with the high likelihood isochrone encompassing 3,953 jobs and the low likelihood isochrone encompassing 11,987 jobs.

Population

Across all the 30-minute isochrones generated, an average of 21,442 people can be reached. The Maple St and W Grand Ave isochrone origin generates isochrones that reach the largest number of people (68,945), while the Camp Pendleton (Vandergrift) isochrone origin generates isochrones that reach the smallest number of people (3,437).

The average variation for the population within reach between each set of 30-minute isochrones generated is 25,591. The isochrones generated for Vista Village Dr and Santa Fe Ave resulted in the largest variation for population, with the high likelihood isochrone including 56,779 people and low likelihood isochrone including 103,452 people. Excluding Camp Pendleton (Vandergrift), the isochrones generated for Barham Drive and Campus Way resulted in the smallest variation for population with the high likelihood isochrone including 6,050 people and the low likelihood isochrone including 15,875 people.

Table 1: Summary of High Likelihood Reach Analysis by Isochrone Origin (30-Minute Isochrones)

Origin	Destinations Reached	Rank	Housing Units[1] Reached	Rank	Jobs[2] Reached	Rank	Population[1] Reached	Rank
Barham Dr and Campus Way	51	8	1,912	12	15,037	8	6,050	11
Camp Pendleton Gate (Vandergrift)	3	13	2,017	11	1,014	13	3,437	13
Carlsbad Blvd and Carlsbad Village Dr	56	6	7,846	4	12,780	10	14,697	7
College Blvd and SR 76	30	11	7,490	6	3,953	12	26,112	4
Faraday Ave and El Camino Real	35	10	1,399	13	22,844	2	3,911	12
Felicita Ave and Centre City Pkwy	66	4	7,749	5	11,312	11	24,830	5
Maple St and W Grand Ave	136	2	20,974	1	26,937	1	68,945	1
Oceanside Blvd and Avenida del Oro	56	7	4,804	7	13,645	9	15,852	6
Poinsettia Ave and Business Park Dr	29	12	3,636	8	21,485	3	9,434	9
Via Vera Cruz and San Marcos Blvd	65	5	3,507	9	16,048	6	9,116	10
Vista Village Dr and Santa Fe Ave	139	1	17,099	2	15,140	7	56,779	2
West Lake Dr and San Marcos Blvd	39	9	3,122	10	16,653	5	11,675	8
Wisconsin Ave and Coast Highway	115	3	13,974	3	19,959	4	27,906	3

Sources: (1) American Community Survey (ACS) 2019 5-Year Estimates (2) LEHD LODES Dataset (2018)

Table 2: Summary of Reach Analysis Variation (30-Minute Isochrones)

Isochrone Origin	Destination Variation	Rank	Housing[1] Variation	Rank	Jobs[2] Variation	Rank	Population[1] Variation	Rank
Barham Dr and Campus Way	43	9	3,445	12	18,136	5	9,825	12
Camp Pendleton Gate* (Vandergrift)	-	13	-	13	334	13	-	13
Carlsbad Blvd and Carlsbad Village Dr	69	4	12,832	5	9,582	10	25,567	8
College Blvd and SR 76	37	11	13,707	3	8,034	11	34,662	4
Faraday Ave and El Camino Real	40	10	11,685	7	29,117	2	28,523	6
Felicita Ave and Centre City Pkwy	27	12	4,132	11	5,258	12	11,407	11
Maple St and W Grand Ave	52	7	12,990	4	16,337	6	37,793	3
Oceanside Blvd and Avenida del Oro	96	2	16,733	1	18,289	4	46,010	2
Poinsettia Ave and Business Park Dr	85	3	9,956	8	23,930	3	27,728	7
Via Vera Cruz and San Marcos Blvd	43	8	6,570	9	14,704	7	19,218	9
Vista Village Dr and Santa Fe Ave	105	1	14,167	2	29,748	1	46,673	1
West Lake Dr and San Marcos Blvd	56	6	4,748	10	13,051	8	13,268	10
Wisconsin Ave and Coast Highway	56	5	12,761	6	12,823	9	32,010	5

*Note: *Due to the presence/size of the military base, limited data surrounding the base, and small size of isochrones generated, the lack of variation in the reach analysis does not indicate that the base has more consistent transit facilities.*

Sources: (1) American Community Survey (ACS) 2019 5-Year Estimates (2) LEHD LODES Dataset (2018)

SUMMARY OF 60-MINUTE ISOCHRONE REACH ANALYSIS

Table 3 summarizes the average of destinations, housing units, jobs, and housing units reached for each of the isochrone origins at 60 minutes.

Table 4 summarizes the variation between the smallest and largest 60-minute isochrones generated for each isochrone origin for various reach factors. The table also displays a ranking for the level of variation for each reach analysis. The highest ranking (1) represents the isochrone origin that generated travel sheds with the greatest number of destinations, housing units, jobs, or population reached or the largest variation for each factor.

Destinations

Across all the 60-minute isochrones generated, the high likelihood isochrones reach an average of 289 destinations. The Vista Village Dr and Santa Fe Ave origin point generates isochrones that cover the largest number of destinations (505), while the Camp Pendleton (Vandergrift) origin point generates isochrones that cover the smallest number of destinations (3).

The average variation for destinations within reach between each set of 60-minute isochrones generated is 161. The isochrones generated for Barham Drive and Campus Way resulted in the largest variation for destinations, with the high likelihood isochrone encompassing 357 destinations and the low likelihood isochrone encompassing 620 destinations. Excluding Camp Pendleton (Vandergrift), the isochrones generated for Carlsbad Blvd. and Carlsbad Village Dr resulted in the smallest variation for destinations with the high likelihood isochrone encompassing 187 destinations and the low likelihood isochrone encompassing 272 destinations.

Housing Units

Across all the 60-minute isochrones generated, the high likelihood isochrones reach an average of 46,129 housing units. The Vista Village Dr and Santa Fe Ave isochrone origin generates isochrones that cover the largest number of housing units (88,903), while the Camp Pendleton (Vandergrift) isochrone origin generates isochrones that covers the smallest number of housing units (2,017).

The average variation for housing units within reach between each set of 60-minute isochrones generated is 33,096. The isochrones generated for Barham Drive and Campus Way resulted in the largest variation for housing units, with the high likelihood isochrone encompassing 36,870 housing units and the low likelihood isochrone encompassing 93,851 housing units. Excluding Camp Pendleton (Vandergrift), the isochrones generated for College Blvd. and SR 76 resulted in the smallest variation for housing units with the high likelihood isochrone encompassing 57,015 housing units and the low likelihood isochrone encompassing 73,765 housing units.

Jobs

Across all the 60-minute isochrones generated, the high likelihood isochrones reach an average of 73,487 jobs. The Vista Village Dr and Santa Fe Ave origin point generates isochrones that cover the largest number of jobs (118,454), while the Camp Pendleton (Vandergrift) origin point generates isochrones that cover the smallest number of jobs (1,651).

The average variation for destinations within reach between each set of 60-minute isochrones generated is 49,781. The isochrones generated for Barham Drive and Campus Way resulted in the largest variation for jobs reached, with the high likelihood isochrone encompassing 99,971 jobs and the low likelihood isochrone encompassing 170,876 jobs. Excluding Camp Pendleton (Vandergrift), the

isochrones generated for College Blvd. and SR 76 origin point resulted in the smallest variation for jobs with the high likelihood isochrone encompassing 290 jobs and the low likelihood isochrone encompassing 388 jobs.

Population

Across all the 60-minute isochrones generated, the high likelihood isochrones reach an average of 132,890 people. The Vista Village Dr and Santa Fe Ave origin point generates isochrones that reach the largest number of people (259,472), while the Camp Pendleton (Vandergrift) origin point generates isochrones that reach the smallest number of people (3,437).

The average variation for the population within reach between each set of 60-minute isochrones generated is 93,062. The isochrones generated for Barham Drive and Campus Way resulted in the largest variation for population, with the high likelihood isochrone including 115,032 people and the low likelihood isochrone including 290,693 people. Excluding Camp Pendleton (Vandergrift), the isochrones generated for College Blvd. and SR 76 resulted in the smallest variation for population with the high likelihood isochrone including 172,492 people and the low likelihood isochrone including 214,453 people.

Table 3: Summary of High Likelihood Reach Analysis (60-Minute Isochrones)

Isochrone Origin	Destinations Reached	Rank	Housing Units[1] Reached	Rank	Jobs[2] Reached	Rank	Population[1] Reached	Rank
Barham Dr and Campus Way	357	4	36,870	7	99,971	4	115,032	7
Camp Pendleton Gate (Vandergrift)	3	13	2,017	13	1,651	13	3,437	13
Carlsbad Blvd and Carlsbad Village Dr	187	10	34,289	9	43,041	12	74,682	11
College Blvd and SR 76	290	8	57,015	4	51,485	10	172,492	4
Faraday Ave and El Camino Real	131	12	30,454	12	74,930	8	71,717	12
Felicita Ave and Centre City Pkwy	171	11	34,103	11	48,383	11	107,204	10
Maple St and W Grand Ave	306	7	52,906	5	78,535	5	164,770	5
Oceanside Blvd and Avenida del Oro	499	2	81,402	2	103,537	3	232,128	2
Poinsettia Ave and Business Park Dr	247	9	34,997	8	74,852	9	108,512	8
Via Vera Cruz and San Marcos Blvd	404	3	42,776	6	108,593	2	137,030	6
Vista Village Dr and Santa Fe Ave	505	1	88,903	1	118,454	1	259,472	1
West Lake Dr and San Marcos Blvd	323	6	34,190	10	75,234	7	108,152	9
Wisconsin Ave and Coast Highway	333	5	69,761	3	76,671	6	172,937	3

Sources: (1) American Community Survey (ACS) 2019 5-Year Estimates (2) LEHD LODES Dataset (2018)

Table 4: Summary of Reach Analysis Variation (60-Minute Isochrones)

Isochrone Origin	Destination Variation	Rank	Housing[1] Variation	Rank	Jobs[2] Variation	Rank	Population[1] Variation	Rank
Barham Dr and Campus Way	263	1	56,981	1	70,905	3	175,661	1
Camp Pendleton Gate (Vandergrift)	86	12	11,521	13	13,153	13	23,584	13
Carlsbad Blvd and Carlsbad Village Dr	85	13	30,878	7	41,069	10	70,305	10
College Blvd and SR 76	98	11	16,750	12	17,052	12	41,961	12
Faraday Ave and El Camino Real	107	10	30,718	8	33,908	11	71,470	9
Felicita Ave and Centre City Pkwy	151	8	30,048	9	54,186	6	87,113	8
Maple St and W Grand Ave	183	6	29,408	10	45,876	9	90,991	7
Oceanside Blvd and Avenida del Oro	153	7	36,253	5	47,005	8	97,443	6
Poinsettia Ave and Business Park Dr	108	9	20,408	11	50,133	7	47,896	11
Via Vera Cruz and San Marcos Blvd	210	4	53,522	2	60,172	5	156,695	2
Vista Village Dr and Santa Fe Ave	231	2	39,828	4	66,037	4	118,986	4
West Lake Dr and San Marcos Blvd	215	3	41,389	3	72,974	2	130,164	3
Wisconsin Ave and Coast Highway	199	5	32,544	6	74,678	1	97,538	5

Sources: (1) American Community Survey (ACS) 2019 5-Year Estimates (2) LEHD LODES Dataset (2018)

BARHAM DR AND CAMPUS WAY

Figure 1: Barham Dr and Campus Way, 30-Minute Travel Sheds at PM Peak

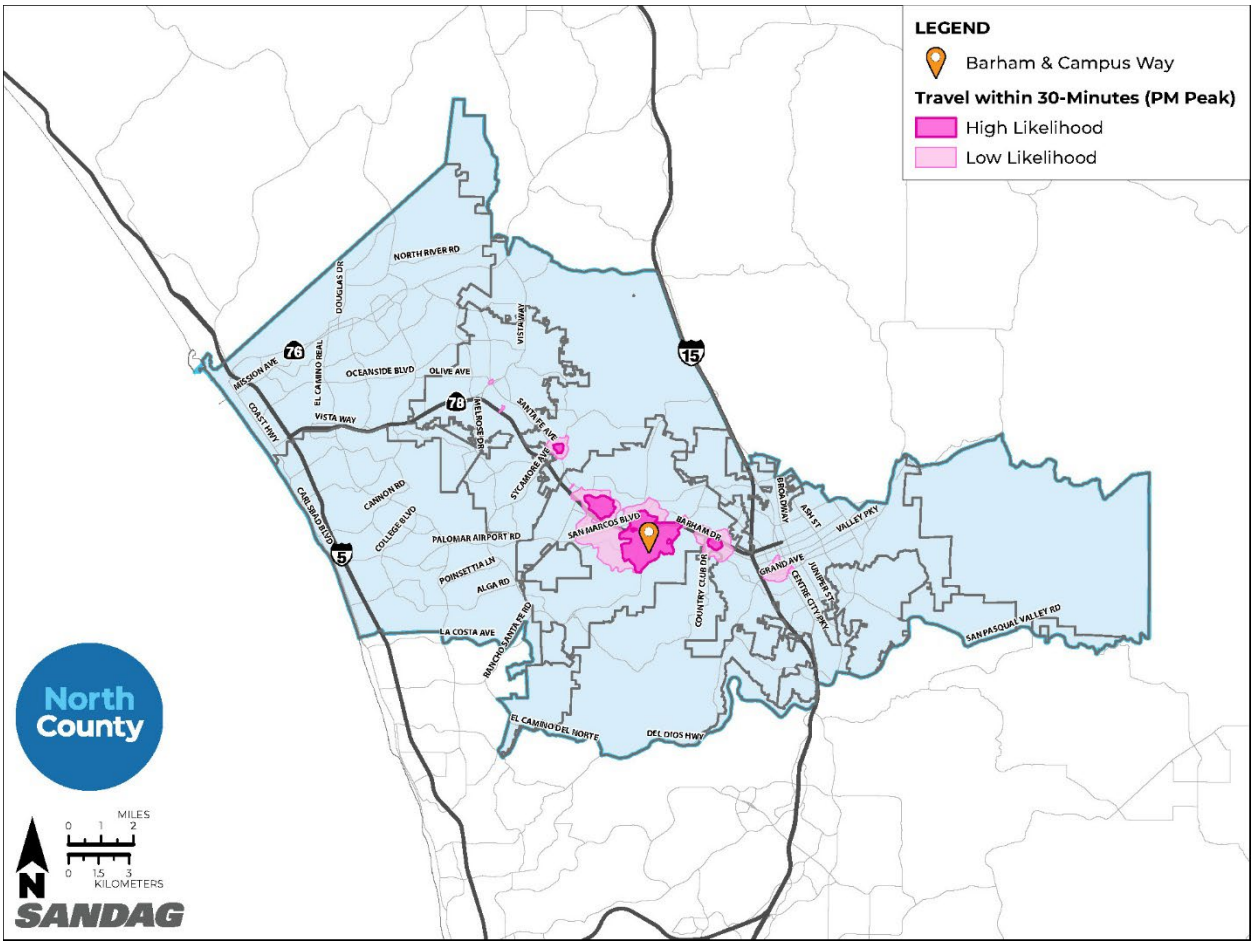
LEGEND
Barham & Campus Way
Travel within 30-Minutes (PM Peak)
High Likelihood
Low Likelihood
NORTH RIVER RD
DOUGLAS DR
MISSION AVE
EL CAMINO REAL
OCEANSIDE BLVD
OLIVE AVE
VISTA WAY
COAST HWY
MELROSE DR
SANTA FE AVE
SYCAMORE AVE
CANNON RD
CARLSBAD BLVD
COLLEGE BLVD
PALOMAR AIRPORT RD
POINSETTIA LN
ALGA RD
LA COSTA AVE
RANCHO SANTA FE RD
EL CAMINO DEL NORTE
DEL DIOS HWY
SAN MARCOS BLVD
BARHAM DR
COUNTRY CLUB DR
BROADWAY
ASH ST
VALLEY PKY
GRAND AVE
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Figure 2: Barham Dr and Campus Way, 30-Minute Transit/Walk and Auto Travel Sheds at PM Peak

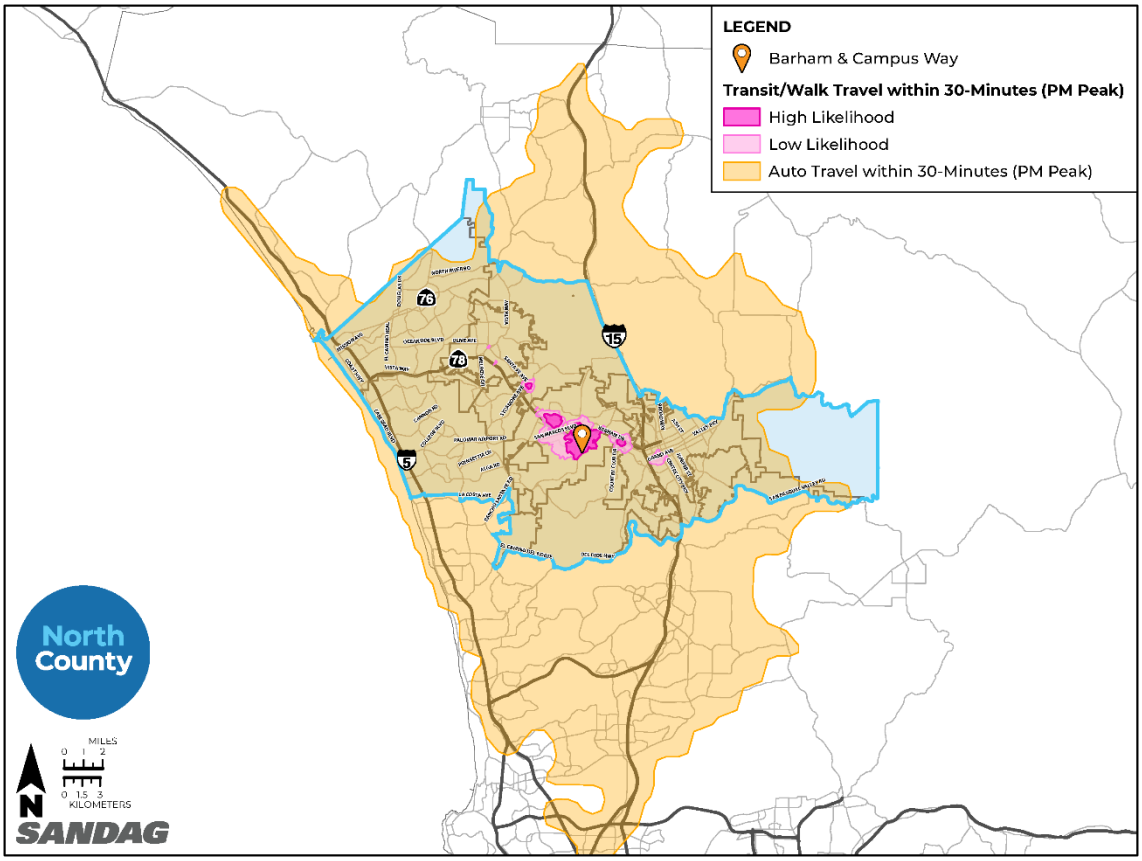

Table 5: Isochrone Summary - Barham Dr and Campus Way (30-Minute)

Characteristic Within Travel Shed	Auto Isochrone	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	1,522	51	94	43
ACS/LEHD Lodes Estimates				
Housing Units[2]	407,371	1,912	5,357	3,445
Jobs[3]	623,255	15,037	33,173	18,136
Low-Income[2]*	95,213	882	2,050	1,168
Senior (65+)[2]	175,100	262	1,596	1,334
Senior (75+)[2]	73,345	115	785	670
People of Color[2]	583,658	5,270	11,178	5,908
Total Population[2]	1,195,379	6,050	15,875	9,825
DS39 Estimates[4]				
Housing Units	411,723	4,168	9,004	4,836
Jobs	652,939	13,665	34,104	20,439
Low-Income	315,938	5,464	12,720	7,256
Senior (75+)	71,218	692	1,413	721
People of Color	579,603	6,286	17,256	10,970
Total Population	1,197,604	12,818	28,536	15,718

*Notes: *Low-Income ACS data collected at the household level.*
Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

Figure 3: Barham Dr and Campus Way, 60-Minute Travel Sheds at PM Peak

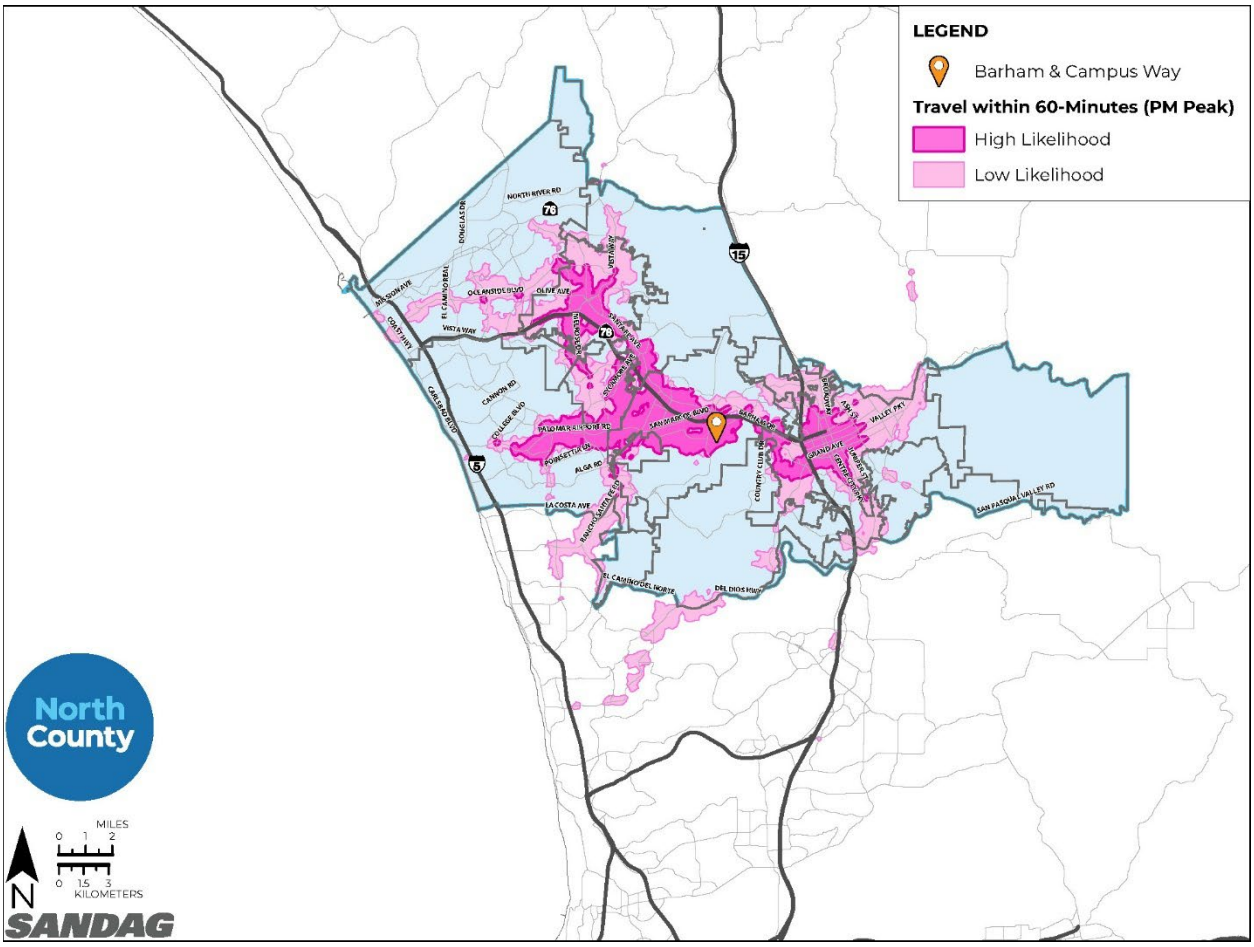

Figure 4: Barham Dr and Campus Way, 60-Minute Transit/Walk and Auto Travel Sheds at PM Peak

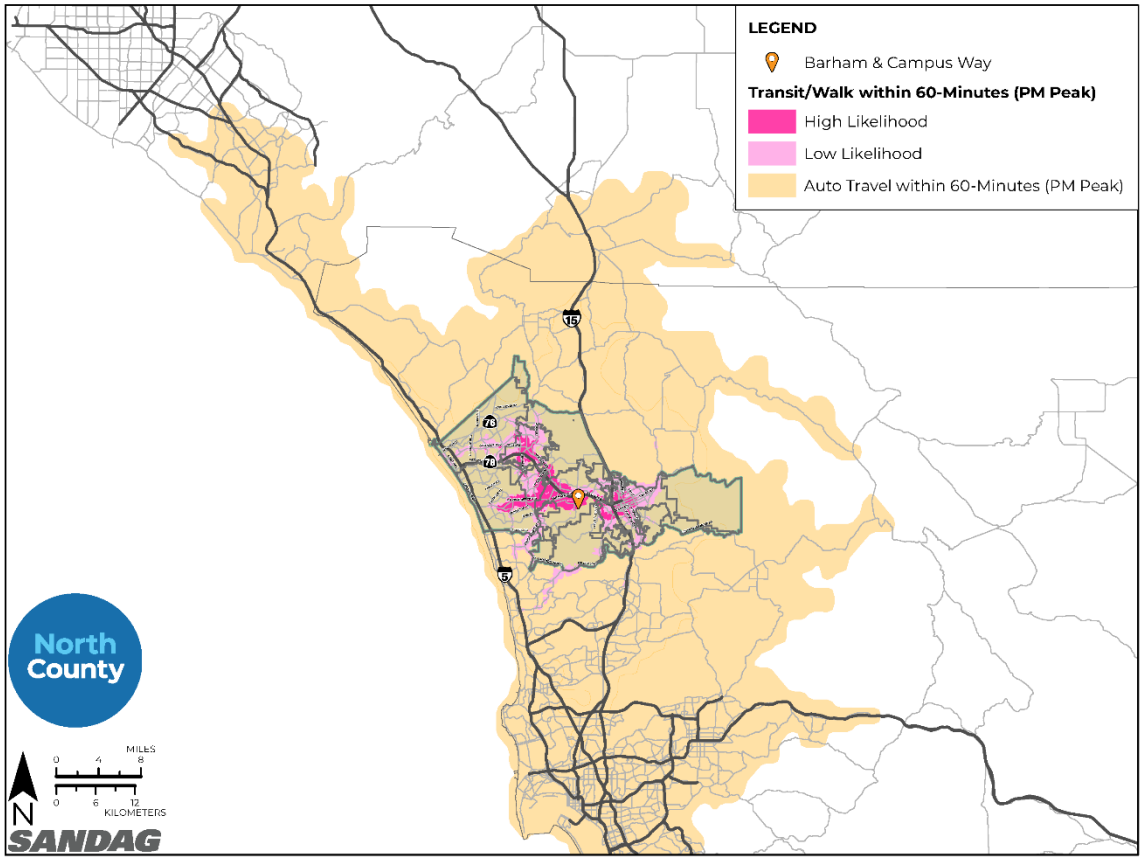

Table 6: Isochrone Summary - Barham Dr and Campus Way (60-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	19,933	357	620	263
ACS/LEHD Lodes Estimates				
Housing Units[2]	1,081,827	36,870	93,851	56,981
Jobs[3]	1,413,481	99,971	170,876	70,905
Low-Income[2]*	309,635	14,883	31,860	16,977
Senior (65+)[2]	435,477	11,882	33,126	21,244
Senior (75+)[2]	186,256	5,498	14,443	8,945
People of Color[2]	1,705,827	82,303	188,051	105,748
Total Population[2]	3,165,907	115,032	290,693	175,661
DS39 Estimates[4]				
Housing Units	1,098,879	39,981	107,886	67,905
Jobs	1,594,192	112,440	193,332	80,892
Low-Income	1,001,572	56,289	127,898	71,609
Senior (75+)	182,640	6,765	17,998	11,233
People of Color	1,694,566	78,301	192,275	113,974
Total Population	3,145,633	124,887	326,191	201,304

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included.
**Low-Income ACS data collected at the household level.*
Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

CAMP PENDLETON GATE (VANDERGRIFT)

Figure 5: Camp Pendleton Gate (Vandergrift), 30-Minute Travel Sheds at PM Peak

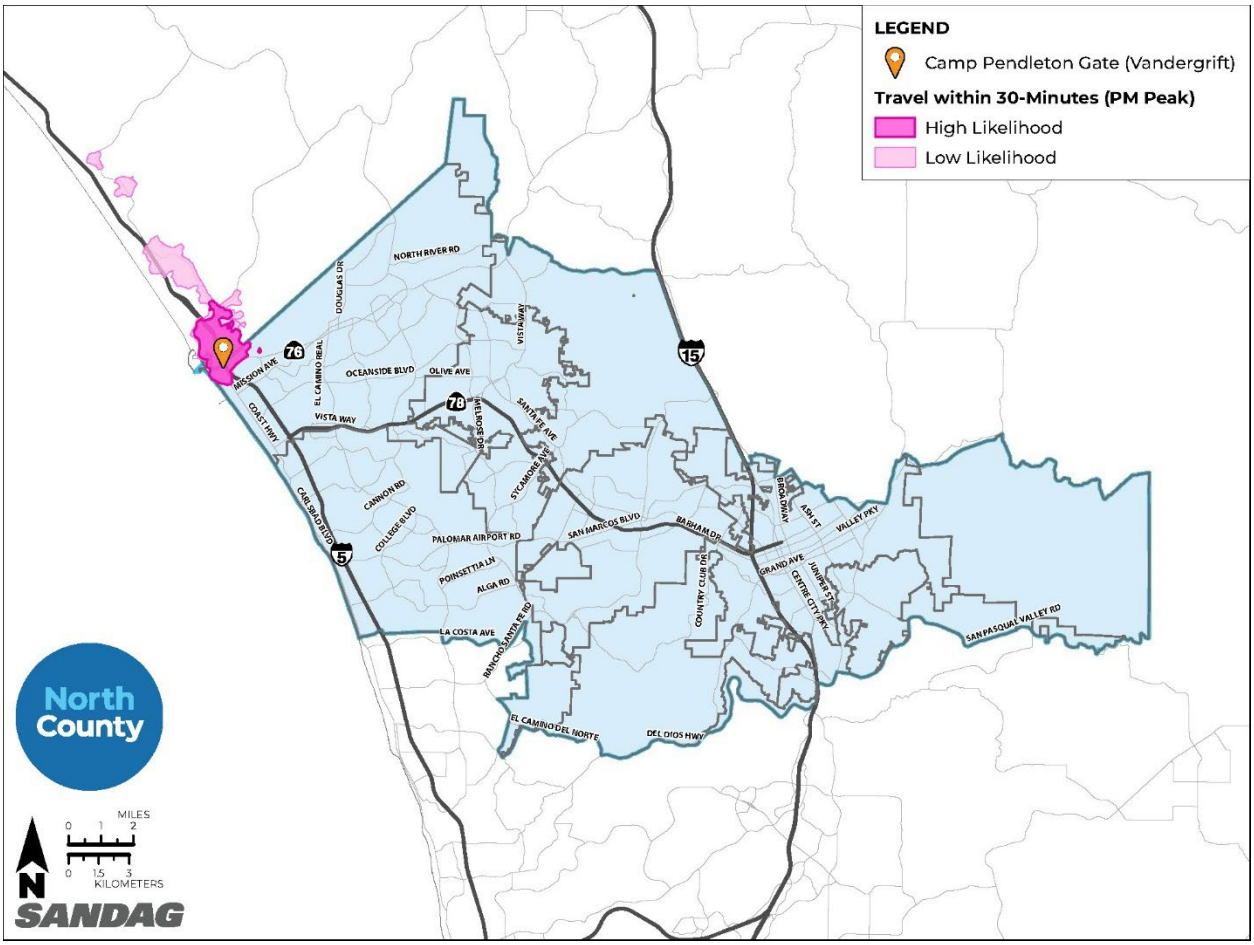

Figure 6: Camp Pendleton Gate (Vandergrift), 30-Minute Transit/Walk and Auto Travel Sheds at PM Peak

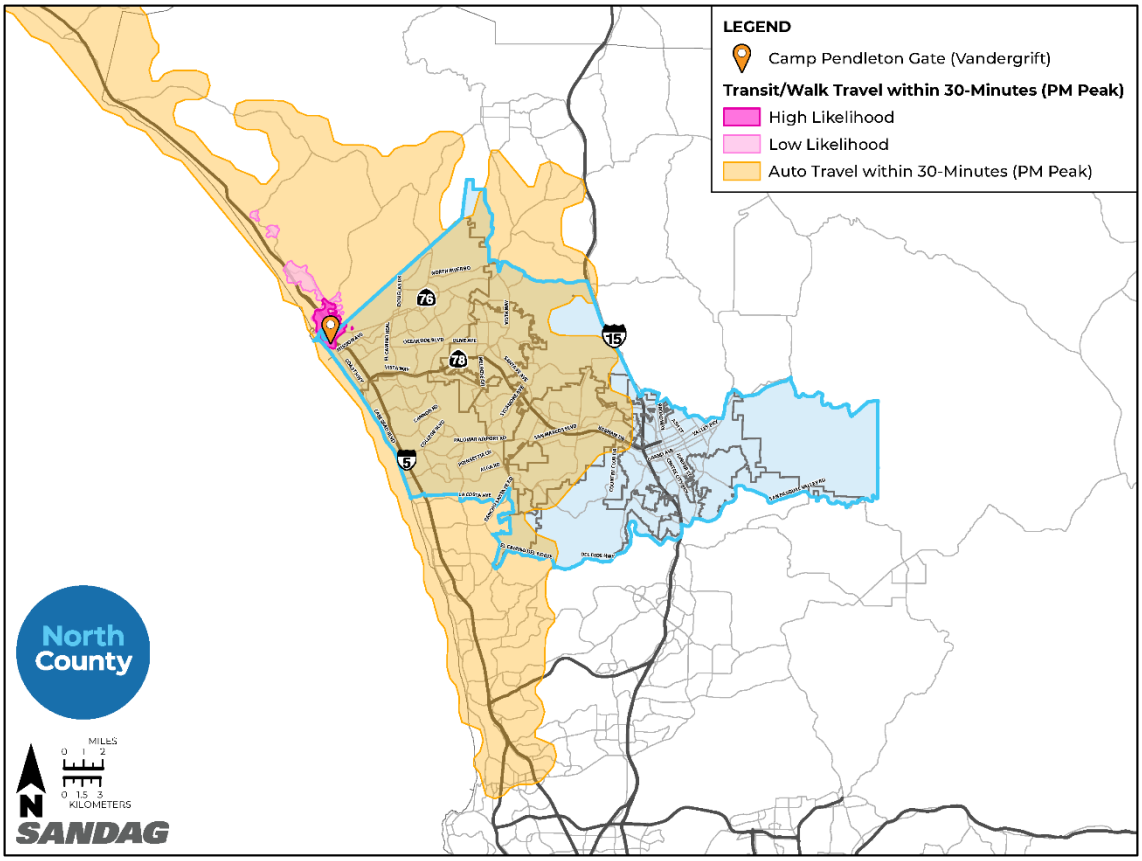

Table 7: Isochrone Summary - Camp Pendleton Gate (Vandergrift) (30-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation**
Destinations[1]	1,230	3	3	-
ACS/LEHD Lodes Estimates				
Housing Units[2]	243,565	2,017	2,017	-
Jobs[3]	395,903	1,014	1,348	334
Low-Income[2]*	60,509	391	391	-
Senior (65+)[2]	103,761	558	558	-
Senior (75+)[2]	44,184	184	184	-
People of Color[2]	315,262	1,564	1,564	-
Total Population[2]	711,744	3,437	3,437	-
DS39 Estimates[4]				
Housing Units	251,591	937	937	-
Jobs	425,838	659	659	-
Low-Income	216,454	788	788	-
Senior (75+)	44,190	132	132	-
People of Color	326,732	1,279	1,279	-
Total Population	729,333	2,512	2,512	-

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included.
**Low-Income ACS data collected at the household level. **Due to the presence/size of the military base, limited data surrounding the base, and small size of isochrones generated, the lack of variation in the reach analysis does not indicate that the base has more consistent transit facilities.*
Sources: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

Figure 7: Camp Pendleton Gate (Vandergrift), 60-Minute Travel Sheds at PM Peak

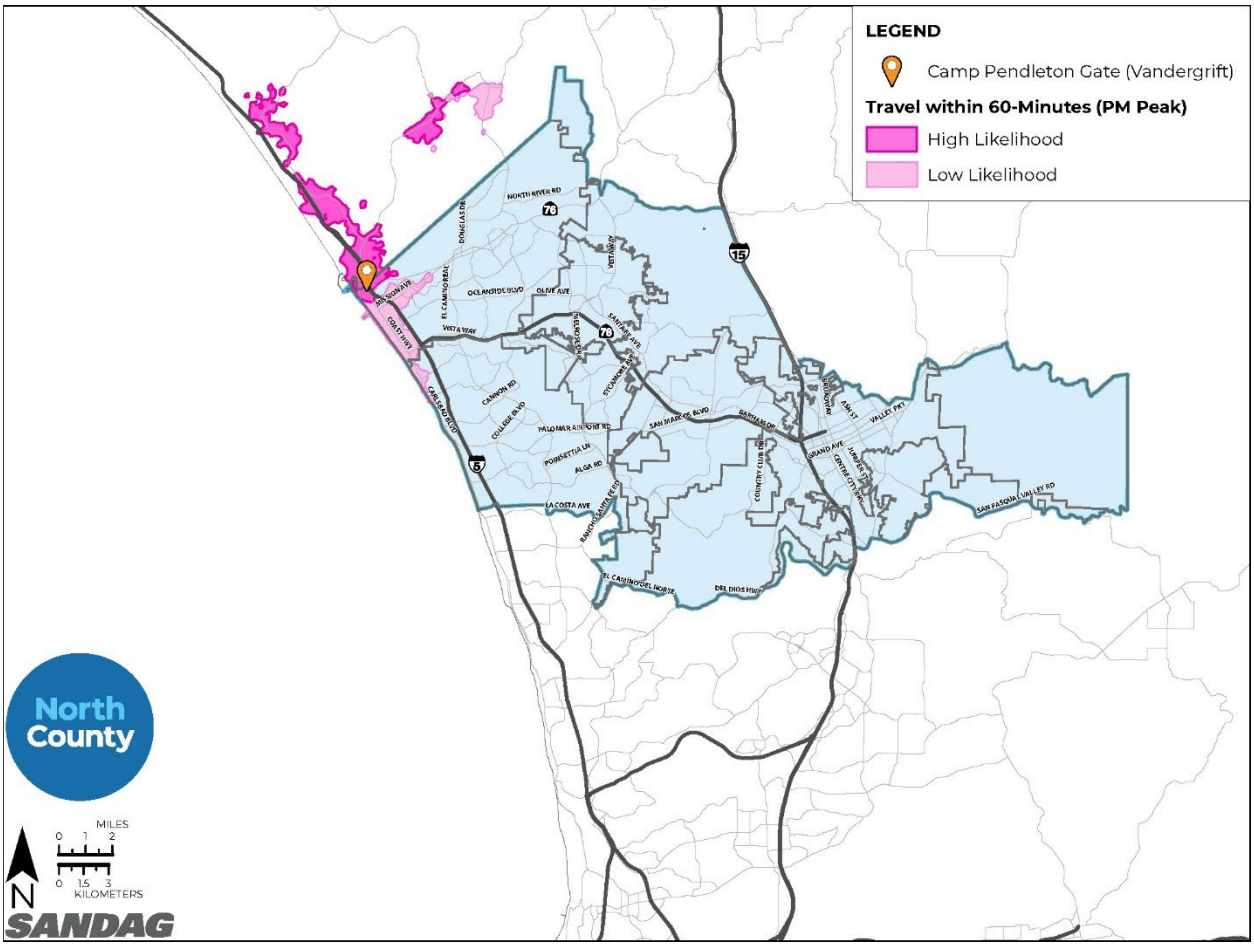

Figure 8: Camp Pendleton Gate (Vandergrift), 60-Minute Transit/Walk and Auto Travel Sheds at PM Peak

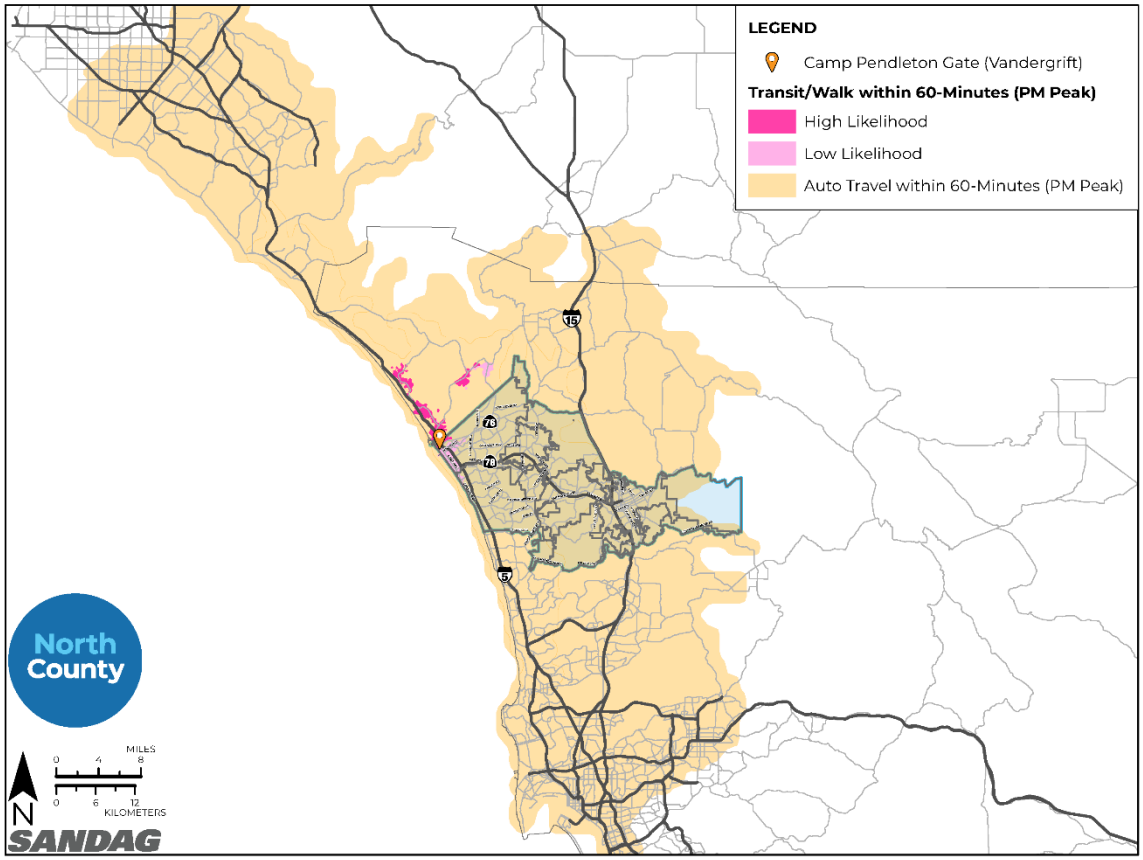

Table 8: Isochrone Summary - Camp Pendleton Gate (Vandergrift) (60-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation**
Destinations[1]	17,155	3	89	86
ACS/LEHD Lodes Estimates				
Housing Units[2]	922,387	2,017	13,538	11,521
Jobs[3]	1,305,599	1,651	14,804	13,153
Low-Income[2]*	261,996	391	4,247	3,856
Senior (65+)[2]	358,911	558	3,933	3,375
Senior (75+)[2]	154,250	184	1,556	1,372
People of Color[2]	1,308,136	1,564	14,429	12,865
Total Population[2]	2,623,596	3,437	27,021	23,584
DS39 Estimates[4]				
Housing Units	937,278	937	13,530	12,593
Jobs	1,483,648	659	13,484	12,825
Low-Income	831,886	788	12,065	11,277
Senior (75+)	155,239	132	1,821	1,689
People of Color	1,314,043	1,279	16,088	14,809
Total Population	2,631,776	2,512	30,716	28,204

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included.
**Low-Income ACS data collected at the household level. **Due to the presence/size of the military base, limited data surrounding the base, and small size of isochrones generated, the lack of variation in the reach analysis does not indicate that the base has more consistent transit facilities.*
Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

CARLSBAD BLVD AND CARLSBAD VILLAGE

Figure 9: Carlsbad Blvd and Carlsbad Village, 30-Minute Travel Sheds at PM Peak

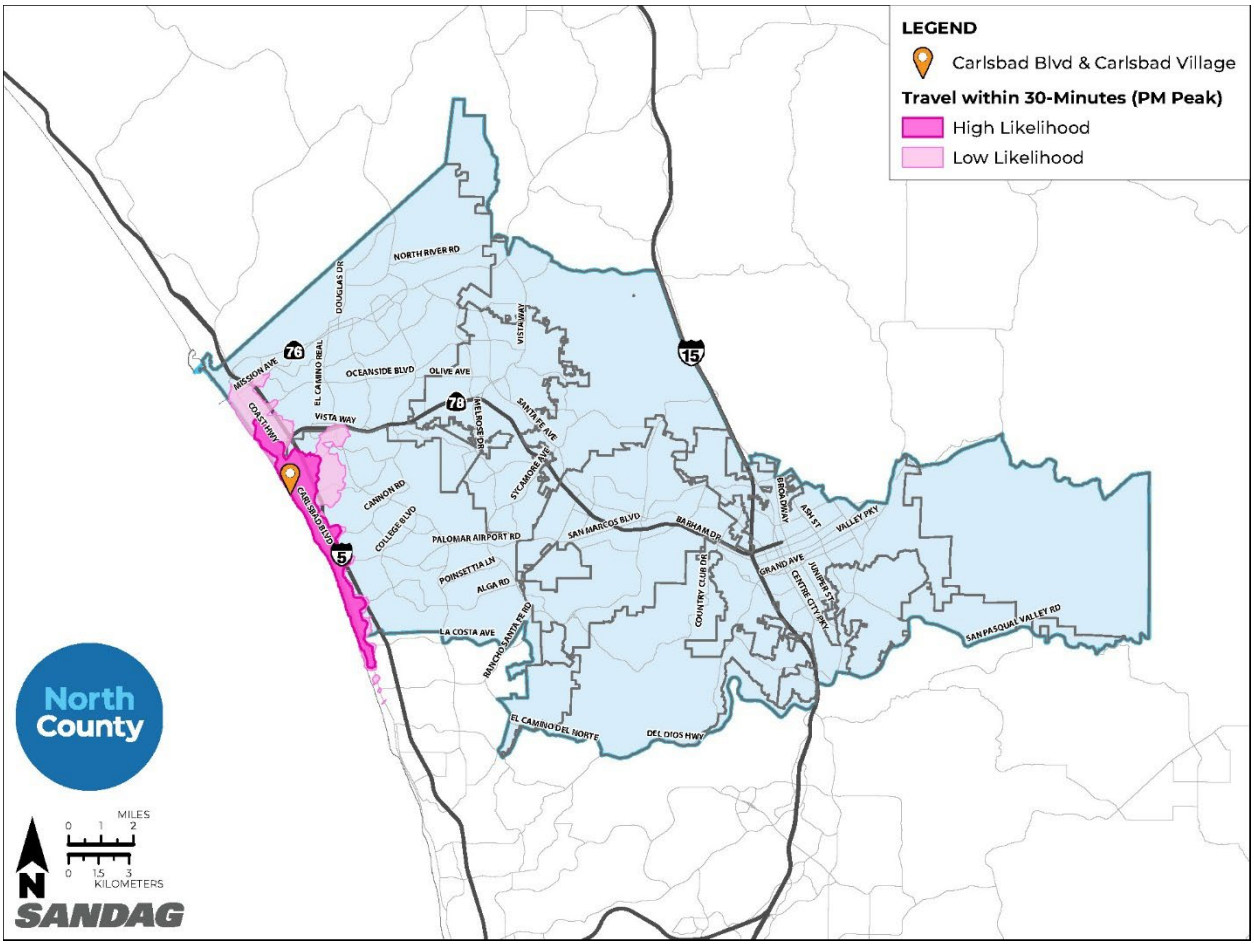

Figure 10: **Carlsbad Blvd and Carlsbad Village, 30-Minute Transit/Walk and Auto Travel Sheds at PM Peak**

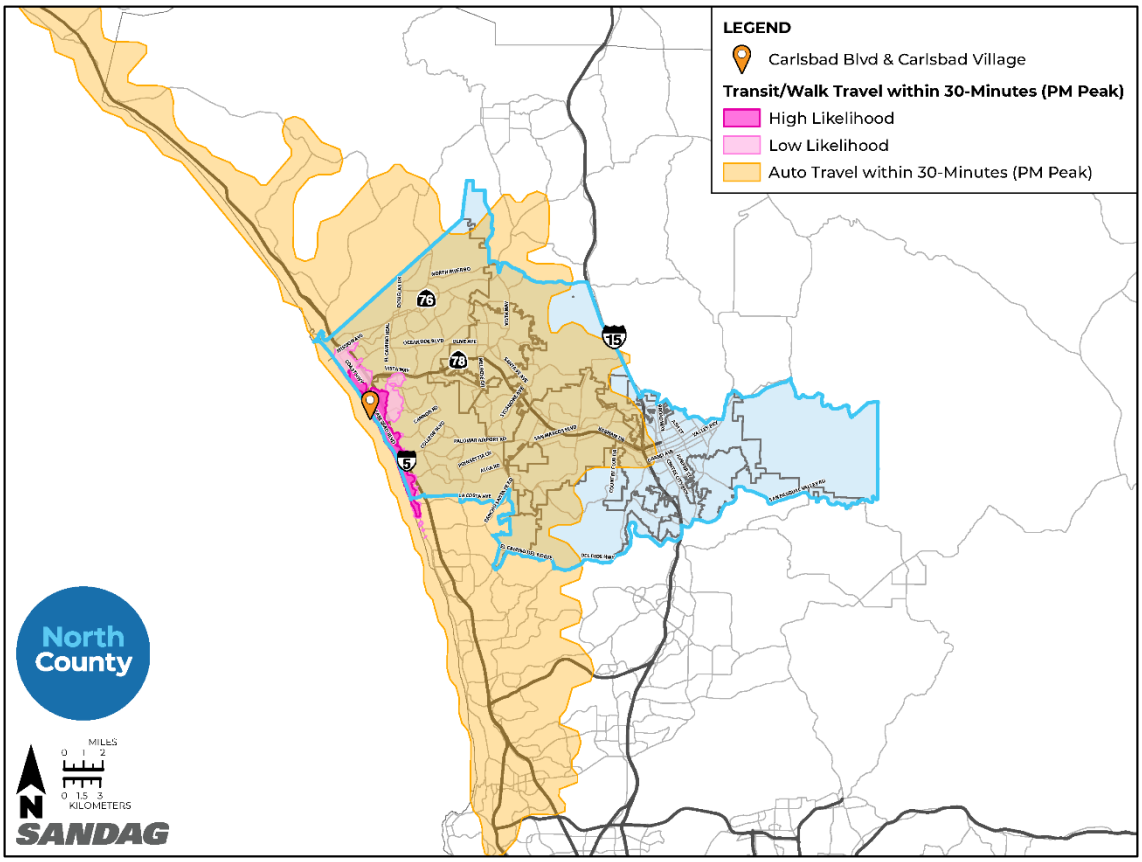

Table 9: Isochrone Summary - Carlsbad Blvd and Carlsbad Village (30-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	1,372	56	125	69
ACS/LEHD Lodes Estimates				
Housing Units[2]	276,864	7,846	20,678	12,832
Jobs[3]	464,850	12,780	22,362	9,582
Low-Income[2]*	67,785	1,903	5,239	3,336
Senior (65+)[2]	113,797	2,682	6,188	3,506
Senior (75+)[2]	48,216	1,162	2,516	1,354
People of Color[2]	359,323	4,907	14,987	10,080
Total Population[2]	801,359	14,697	40,264	25,567
DS39 Estimates[4]				
Housing Units	281,104	7,566	19,508	11,942
Jobs	496,269	10,986	26,915	15,929
Low-Income	229,440	3,461	11,919	8,458
Senior (75+)	49,396	1,134	2,889	1,755
People of Color	363,776	4,869	16,280	11,411
Total Population	805,396	15,919	42,809	26,890

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included.
**Low-Income ACS data collected at the household level.*
Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

Figure 11: Carlsbad Blvd and Carlsbad Village, 60-Minute Travel Sheds at PM Peak

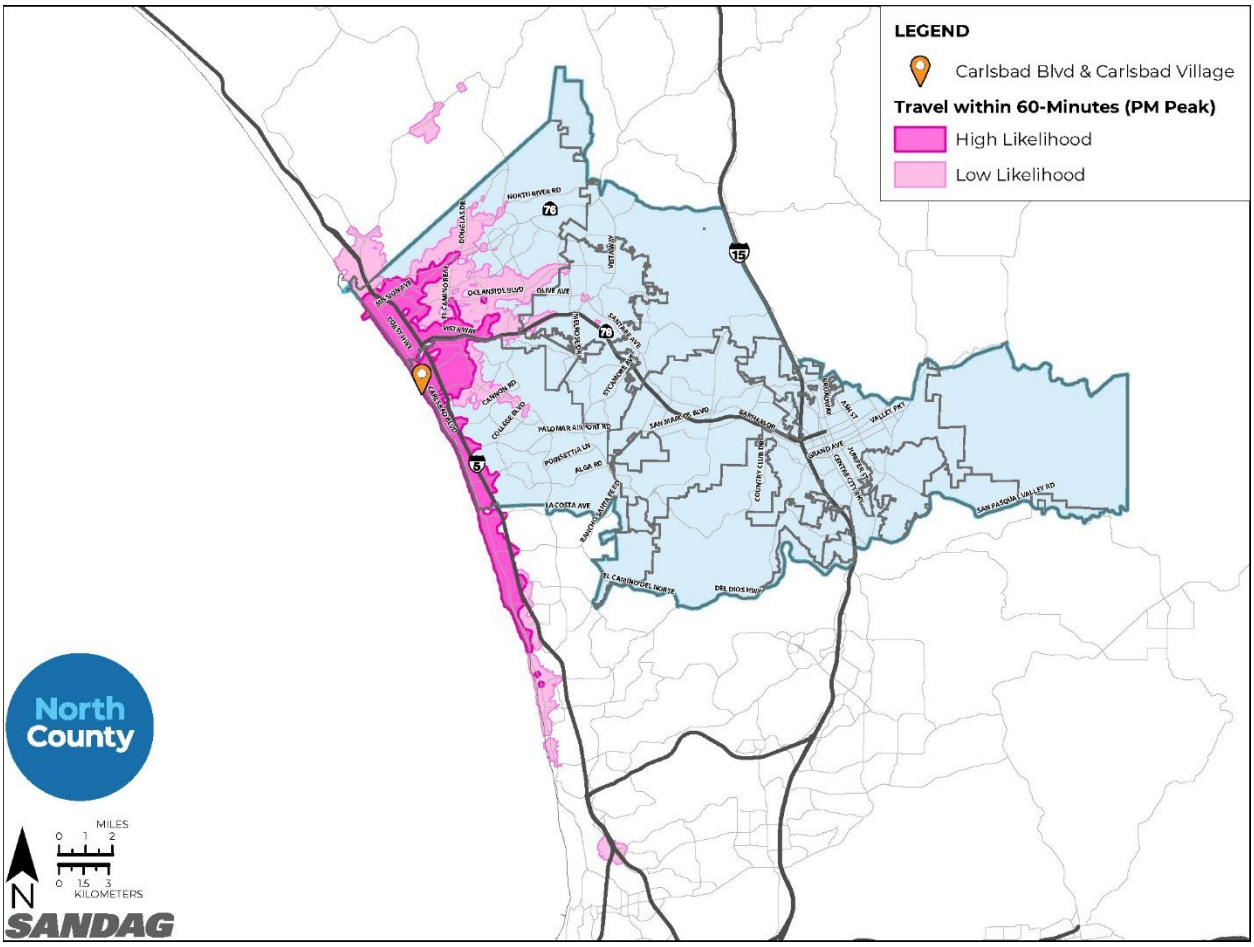

Figure 12: **Carlsbad Blvd and Carlsbad Village, 60-Minute Transit/Walk and Auto Travel Sheds at PM Peak**

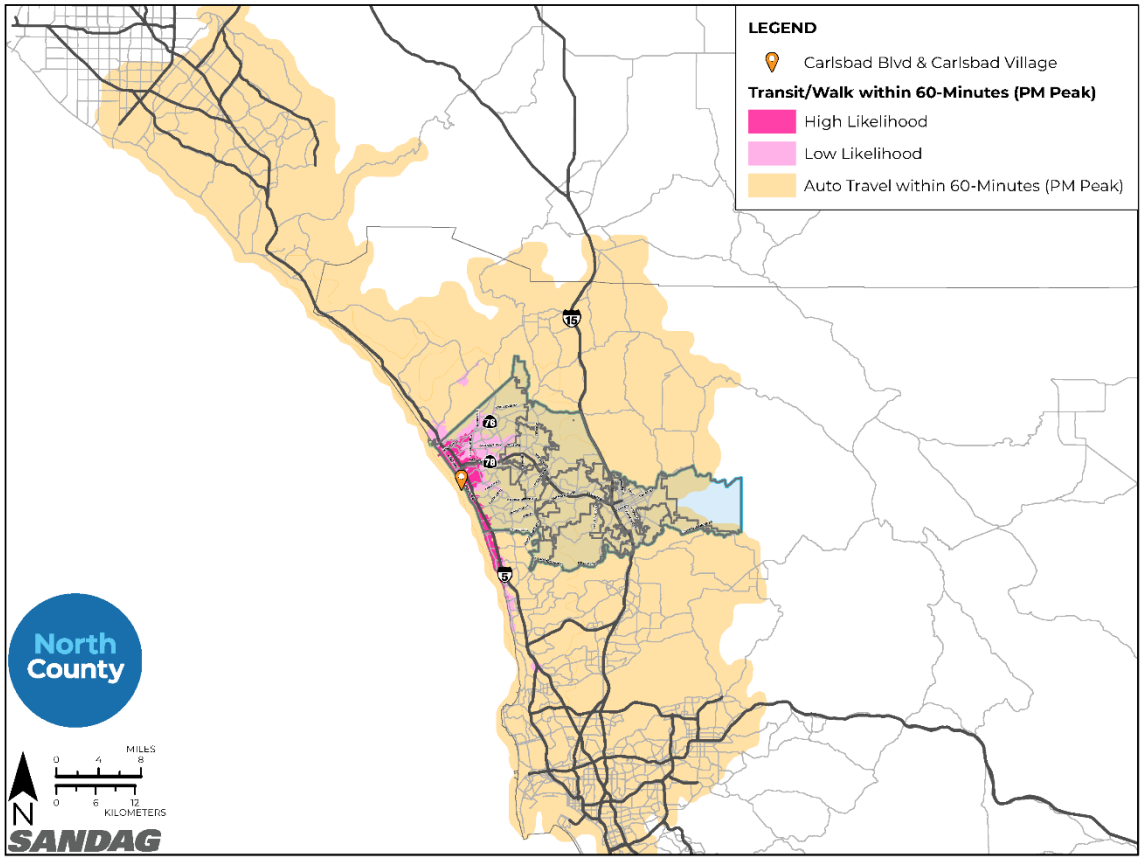

Table 10: Isochrone Summary - Carlsbad Blvd and Carlsbad Village (60-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	18,219	187	272	85
ACS/LEHD Lodes Estimates				
Housing Units[2]	987,833	34,289	65,167	30,878
Jobs[3]	1,343,541	43,041	84,110	41,069
Low-Income[2]*	280,568	9,214	17,521	8,307
Senior (65+)[2]	391,750	10,626	23,706	13,080
Senior (75+)[2]	168,112	4,281	9,643	5,362
People of Color[2]	1,458,466	31,348	61,248	29,900
Total Population[2]	2,842,204	74,682	144,987	70,305
DS39 Estimates[4]				
Housing Units	1,001,615	37,399	66,144	28,745
Jobs	1,537,113	51,295	90,572	39,277
Low-Income	905,509	24,484	46,533	22,049
Senior (75+)	166,703	5,584	10,620	5,036
People of Color	1,456,670	34,167	66,593	32,426
Total Population	2,838,266	85,621	158,100	72,479

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included.
**Low-Income ACS data collected at the household level.*
Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

COLLEGE BLVD AND SR 76

Figure 13: College Blvd and SR 76, 30-Minute Travel Sheds at PM Peak

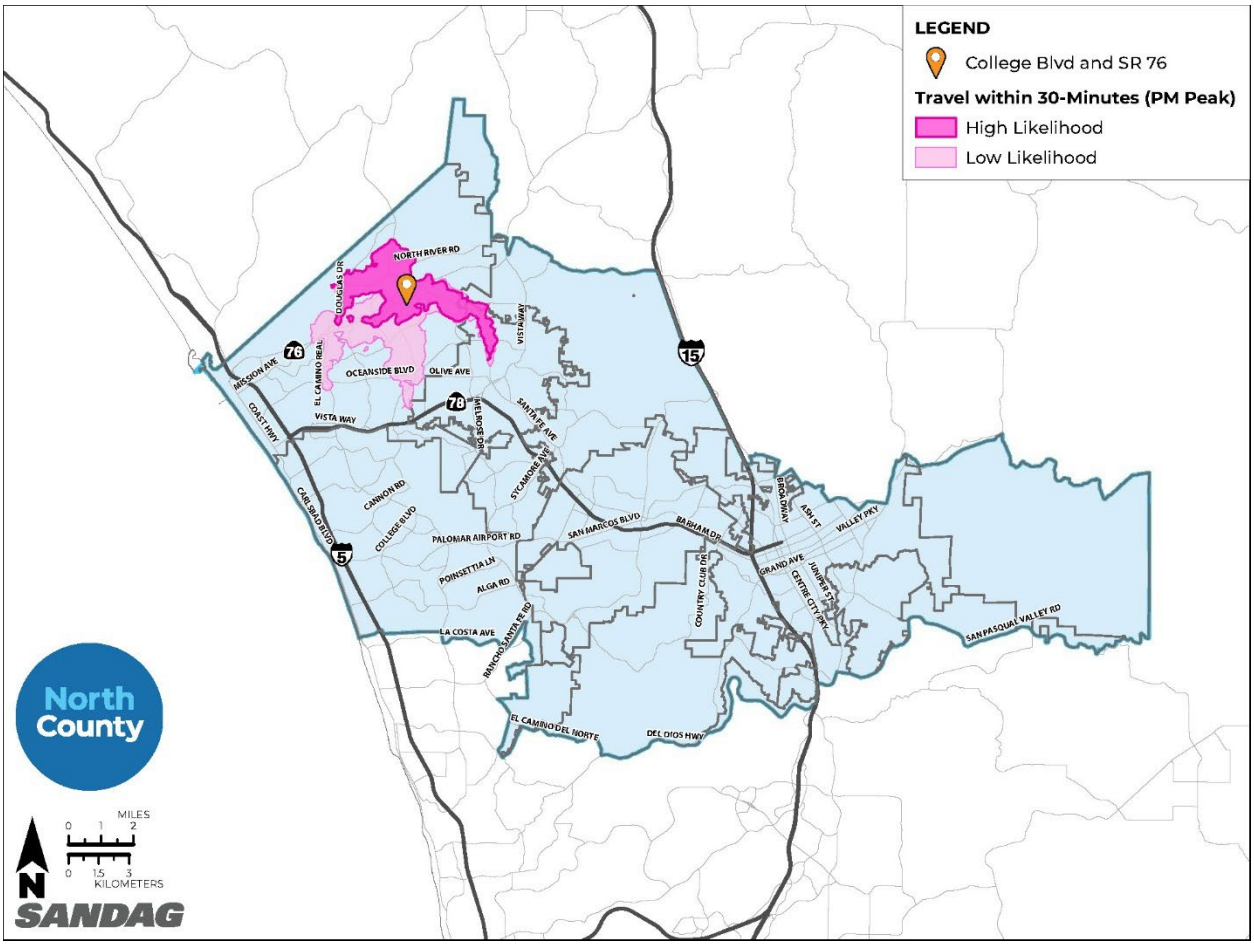

Figure 14: College Blvd and SR 76, 30-Minute Transit/Walk and Auto Travel Sheds at PM Peak

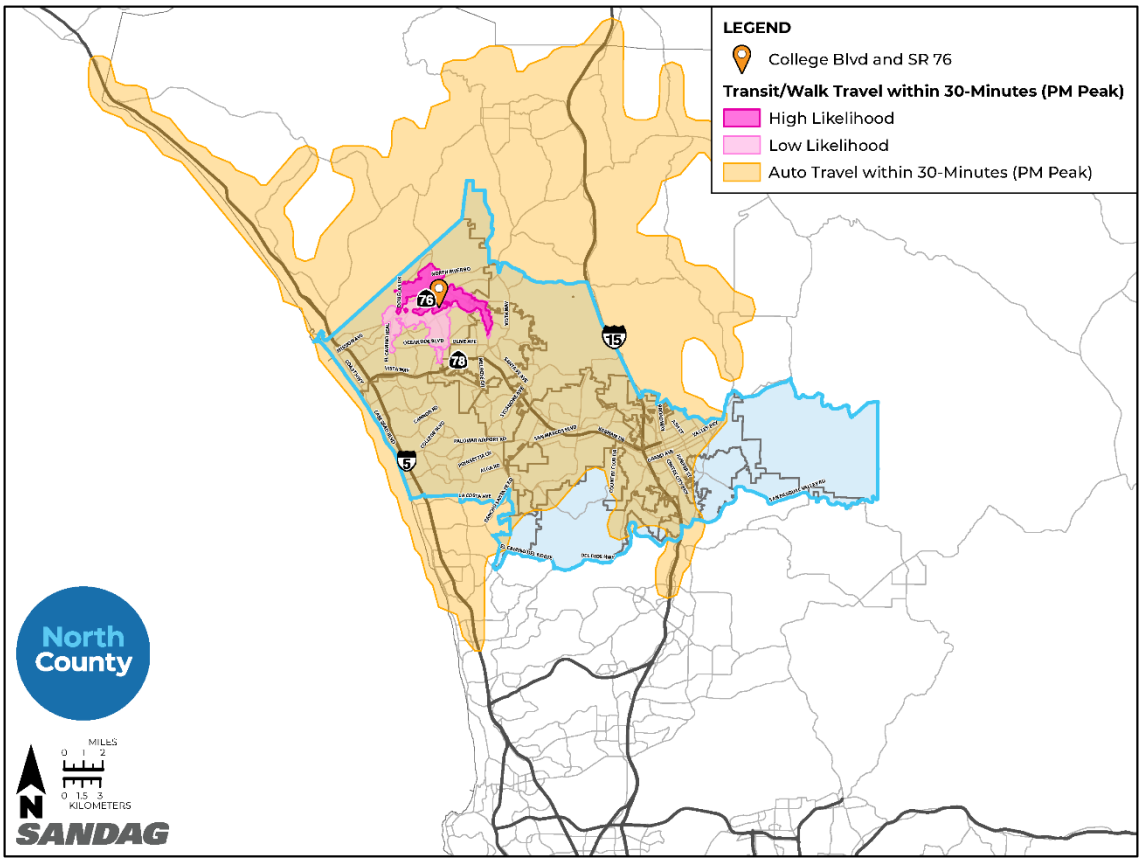

Table 11: Isochrone Summary - College Blvd and SR 76 (30-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	1,008	30	67	37
ACS/LEHD Lodes Estimates				
Housing Units[2]	271,374	7,490	21,197	13,707
Jobs[3]	316,244	3,953	11,987	8,034
Low-Income[2]*	74,076	1,384	6,046	4,662
Senior (65+)[2]	122,812	2,733	9,247	6,514
Senior (75+)[2]	53,371	975	3,833	2,858
People of Color[2]	384,395	17,376	35,527	18,151
Total Population[2]	795,817	26,112	60,774	34,662
DS39 Estimates[4]				
Housing Units	284,108	9,394	22,794	13,400
Jobs	355,409	4,130	12,178	8,048
Low-Income	269,175	8,420	20,682	12,262
Senior (75+)	51,917	1,540	4,111	2,571
People of Color	402,806	16,859	35,291	18,432
Total Population	834,551	27,823	63,675	35,852

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included
**Low-Income ACS data collected at the household level.*
Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

Figure 15: College Blvd and SR 76, 60-Minute Travel Sheds at PM Peak

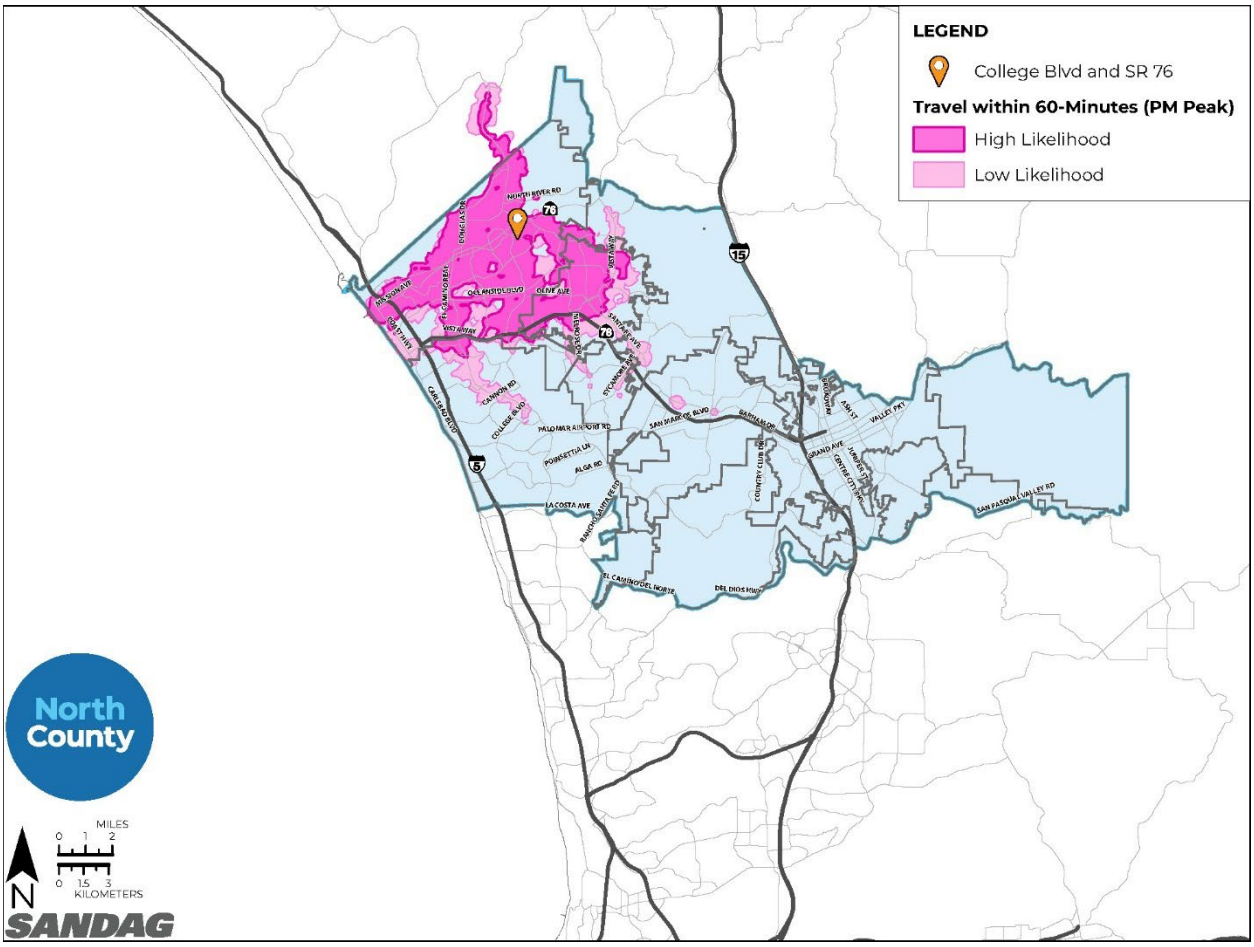

Figure 16: College Blvd and SR 76, 60-Minute Transit/Walk and Auto Travel Sheds at PM Peak

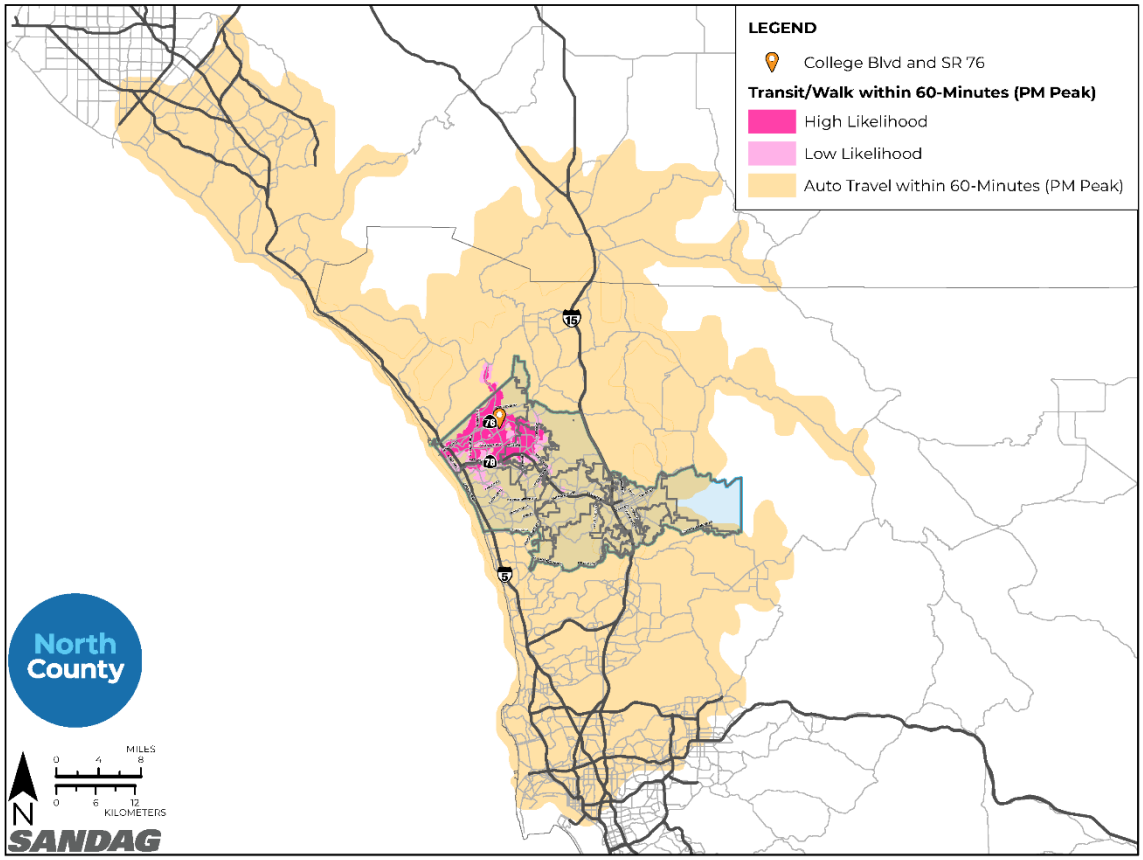

Table 12: Isochrone Summary - College Blvd and SR 76 (60-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	15,612	290	388	98
ACS/LEHD Lodes Estimates				
Housing Units[2]	815,649	57,015	73,765	16,750
Jobs[3]	1,223,454	51,485	68,537	17,052
Low-Income[2]*	218,317	17,398	22,032	4,634
Senior (65+)[2]	313,485	20,148	27,179	7,031
Senior (75+)[2]	134,059	7,783	11,146	3,363
People of Color[2]	1,060,241	111,970	130,088	18,118
Total Population[2]	2,267,476	172,492	214,453	41,961
DS39 Estimates[4]				
Housing Units	827,855	58,181	79,374	21,193
Jobs	1,322,751	52,578	69,254	16,676
Low-Income	660,085	64,760	81,785	17,025
Senior (75+)	137,077	9,530	13,123	3,593
People of Color	1,068,281	104,399	129,724	25,325
Total Population	2,271,411	171,070	227,596	56,526

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included
**Low-Income ACS data collected at the household level.*
Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

FARADAY AVE AND EL CAMINO REAL

Figure 17: Faraday Ave and El Camino Real, 30-Minute Travel Sheds at PM Peak

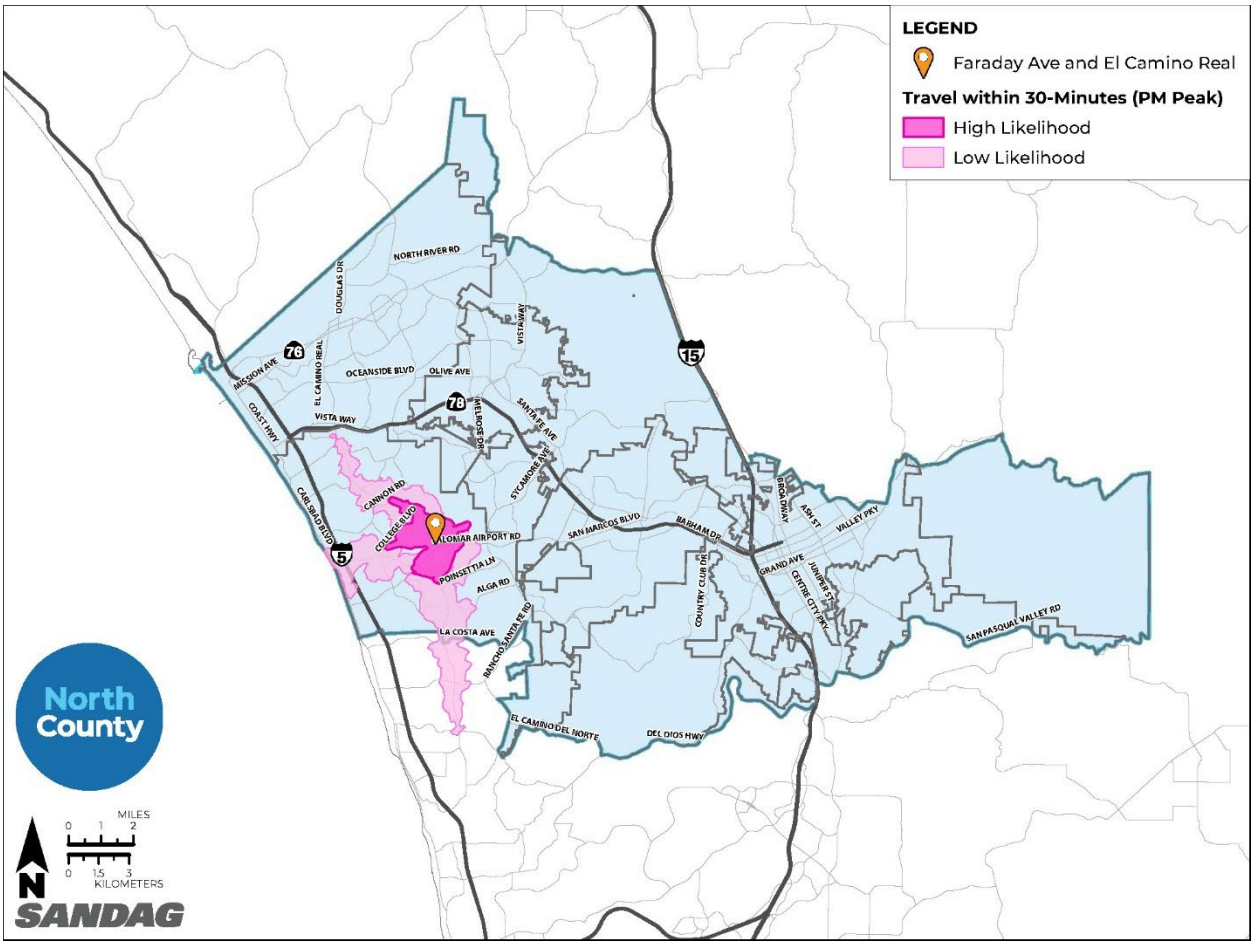

Figure 18: Faraday Ave and El Camino Real, 30-Minute Transit/Walk and Auto Travel Sheds at PM Peak

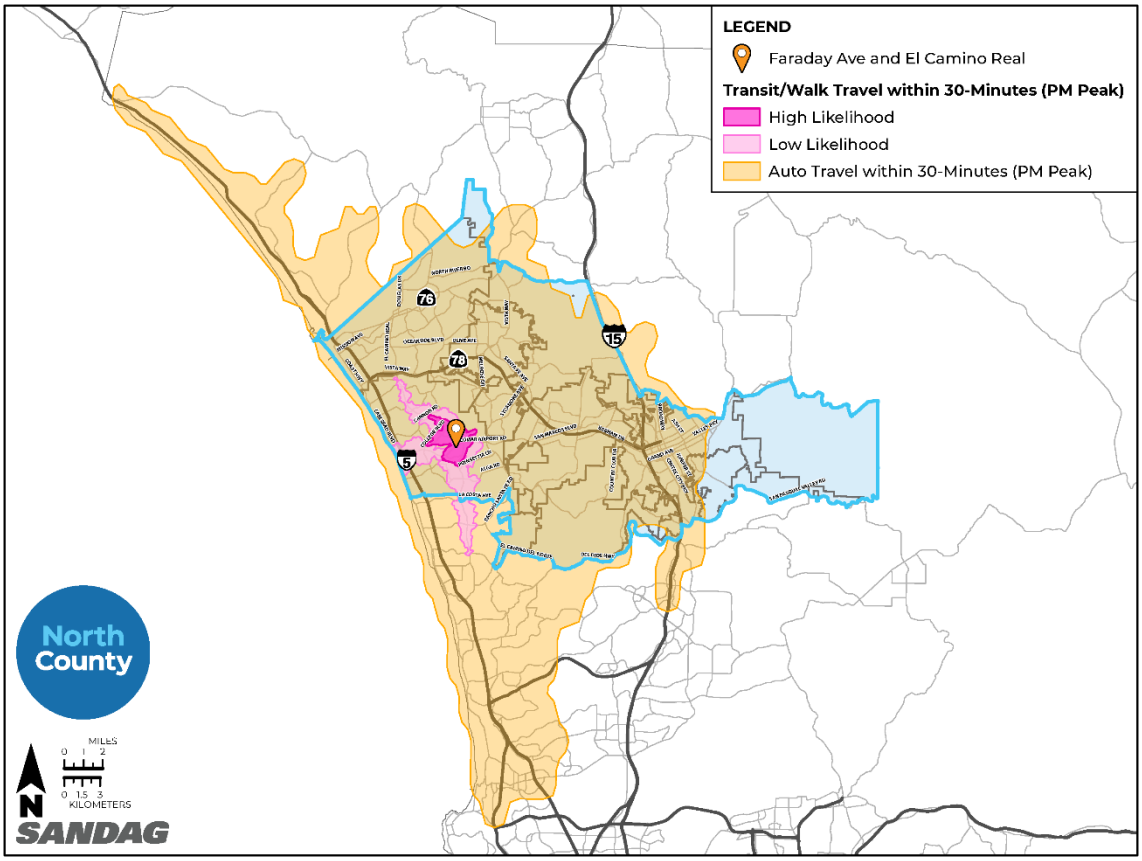

Table 13: Isochrone Summary - Faraday Ave and El Camino Real (30-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	1,465	35	75	40
ACS/LEHD Lodes Estimates				
Housing Units[2]	310,425	1,399	13,084	11,685
Jobs[3]	494,420	22,844	51,961	29,117
Low-Income[2]*	80,018	504	2,421	1,917
Senior (65+)[2]	130,644	308	6,124	5,816
Senior (75+)[2]	56,273	146	2,750	2,604
People of Color[2]	422,518	2,494	8,804	6,310
Total Population[2]	888,821	3,911	32,434	28,523
DS39 Estimates[4]				
Housing Units	318,488	252	11,815	11,563
Jobs	519,768	25,305	53,403	28,098
Low-Income	283,223	131	4,950	4,819
Senior (75+)	55,430	44	1,994	1,950
People of Color	441,705	195	9,155	8,960
Total Population	927,635	628	29,349	28,721

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included
**Low-Income ACS data collected at the household level.*
Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

Figure 19: Faraday Ave and El Camino Real, 60-Minute Travel Sheds at PM Peak

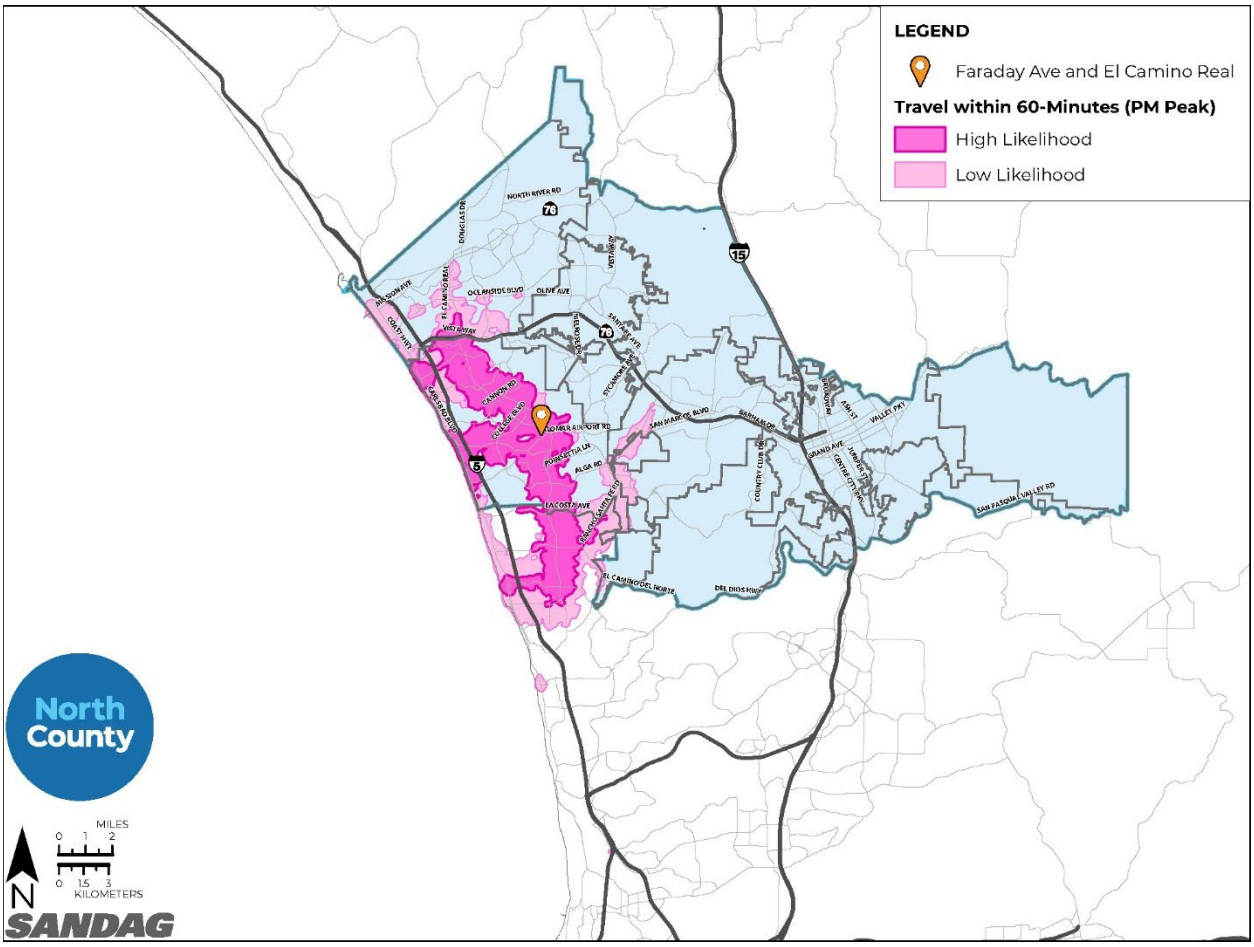

Figure 20: Faraday Ave and El Camino Real, 60-Minute Transit/Walk and Auto Travel Sheds at PM Peak

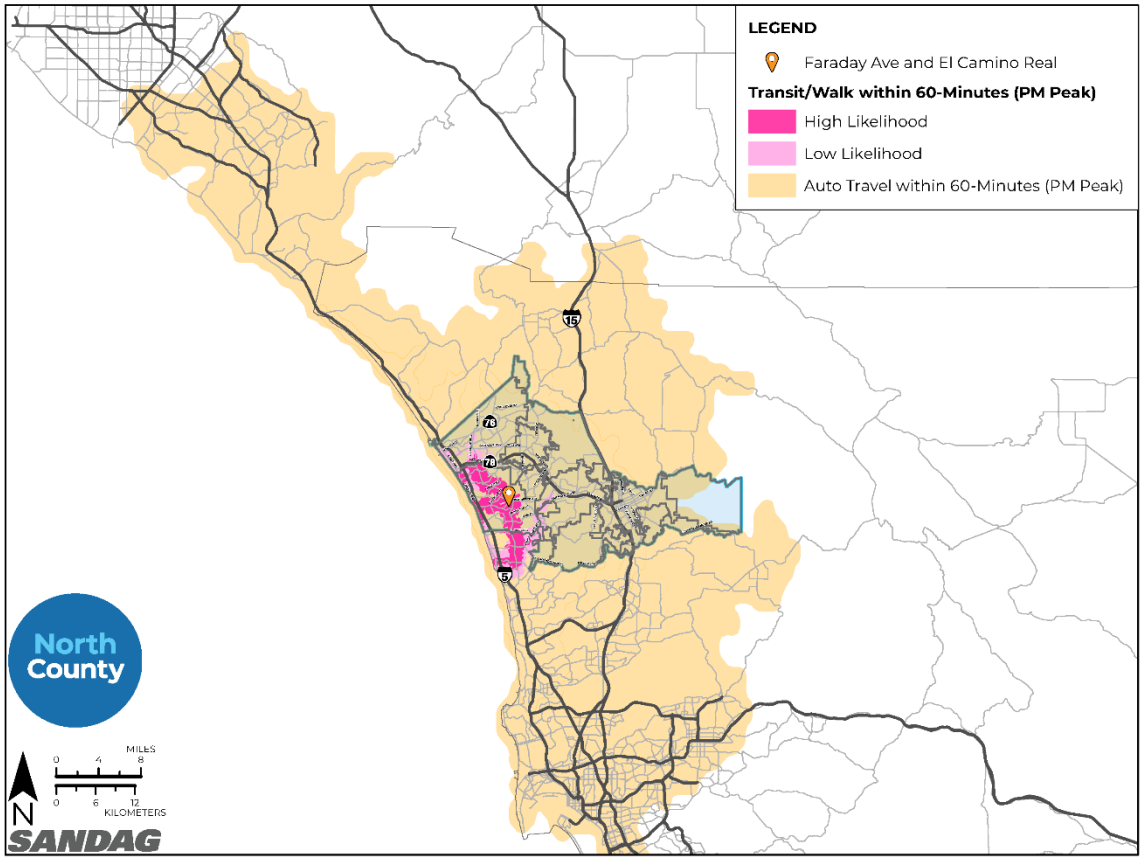

Table 14: Isochrone Summary - Faraday Ave and El Camino Real (60-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	17,832	131	238	107
ACS/LEHD Lodes Estimates				
Housing Units[2]	959,249	30,454	61,172	30,718
Jobs[3]	1,326,906	74,930	108,838	33,908
Low-Income[2]*	272,822	5,414	12,675	7,261
Senior (65+)[2]	377,606	12,784	24,772	11,988
Senior (75+)[2]	162,344	5,370	10,264	4,894
People of Color[2]	1,388,851	19,097	42,299	23,202
Total Population[2]	2,746,423	71,717	143,187	71,470
DS39 Estimates[4]				
Housing Units	973,890	28,818	67,706	38,888
Jobs	1,498,791	76,298	109,764	33,466
Low-Income	865,711	12,017	34,944	22,927
Senior (75+)	161,848	4,786	11,044	6,258
People of Color	1,389,191	20,153	53,859	33,706
Total Population	2,740,930	69,598	164,204	94,606

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included
**Low-Income ACS data collected at the household level.*
Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

FELICITA AVE AND CENTRE CITY PKWY

Figure 21: Felicita and Centre City Pkwy, 30-Minute Travel Sheds at PM Peak

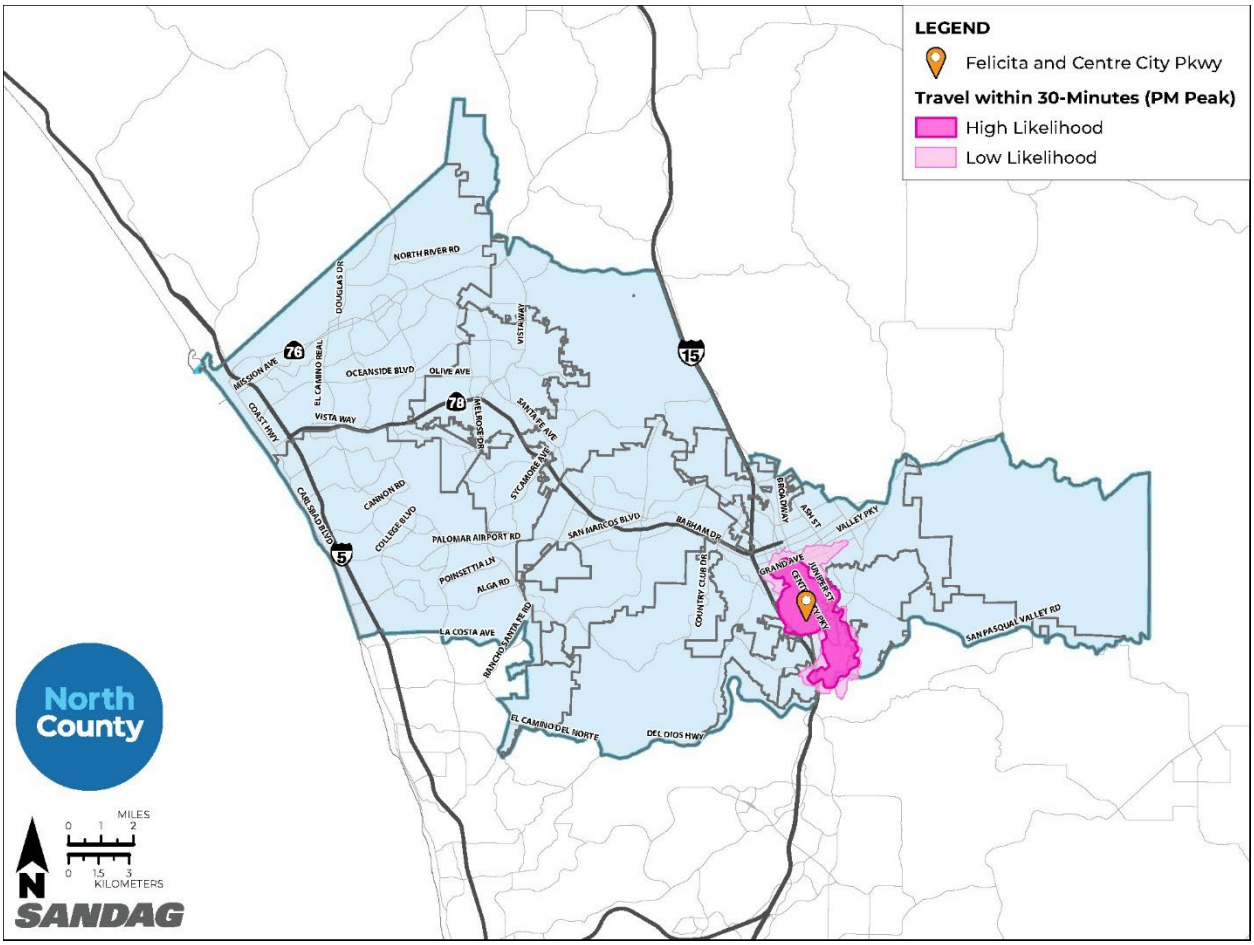

Figure 22: Felicita and Centre City Pkwy, 30-Minute Transit/Walk and Auto Travel Sheds at PM Peak

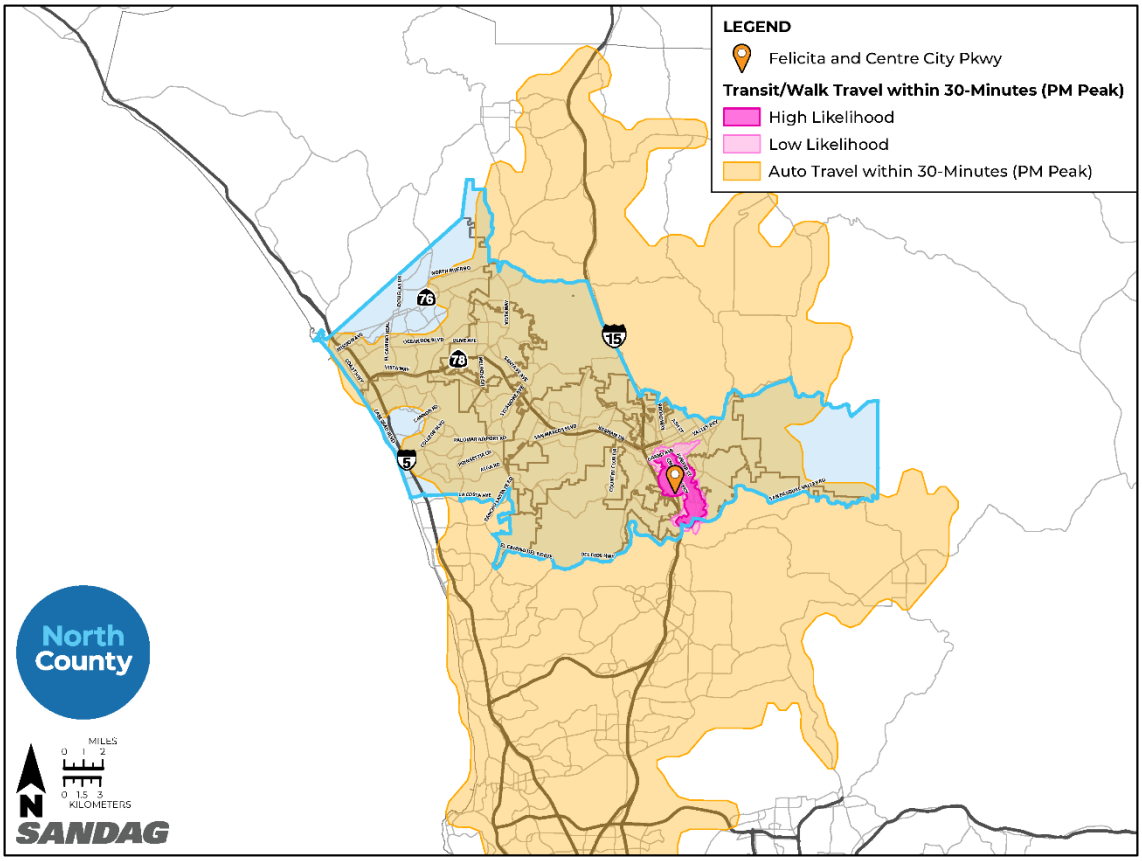

Table 15: Isochrone Summary - Felicita Ave and Centre City Pkwy (30-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	2,286	66	93	27
ACS/LEHD Lodes Estimates				
Housing Units[2]	506,789	7,749	11,881	4,132
Jobs[3]	900,137	11,312	16,570	5,258
Low-Income[2]*	120,062	2,634	4,466	1,832
Senior (65+)[2]	207,275	2,220	3,299	1,079
Senior (75+)[2]	88,578	1,001	1,457	456
People of Color[2]	688,971	16,750	24,442	7,692
Total Population[2]	1,440,529	24,830	36,237	11,407
DS39 Estimates4				
Housing Units	516,698	6,901	12,706	5,805
Jobs	926,960	12,530	19,191	6,661
Low-Income	380,468	8,530	17,132	8,602
Senior (75+)	87,549	1,045	1,953	908
People of Color	690,885	13,712	25,992	12,280
Total Population	1,453,997	21,996	40,103	18,107

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included

**Low-Income ACS data collected at the household level.*

Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

Figure 23: Felicita Ave and Centre City Pkwy, 60-Minute Travel Sheds at PM Peak

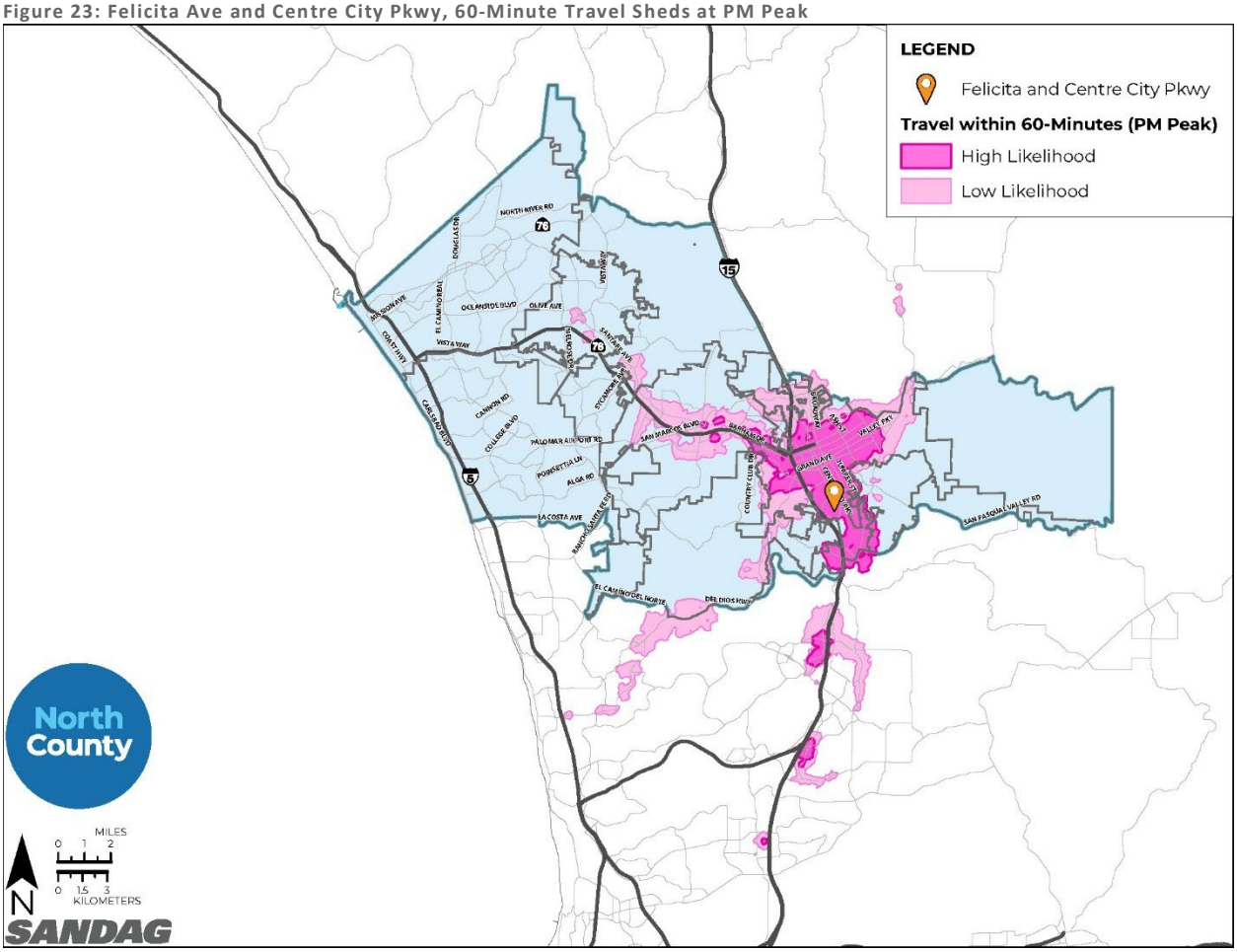

Figure 24: Felicita and Centre City Pkwy, 60-Minute Transit/Walk and Auto Travel Sheds at PM Peak

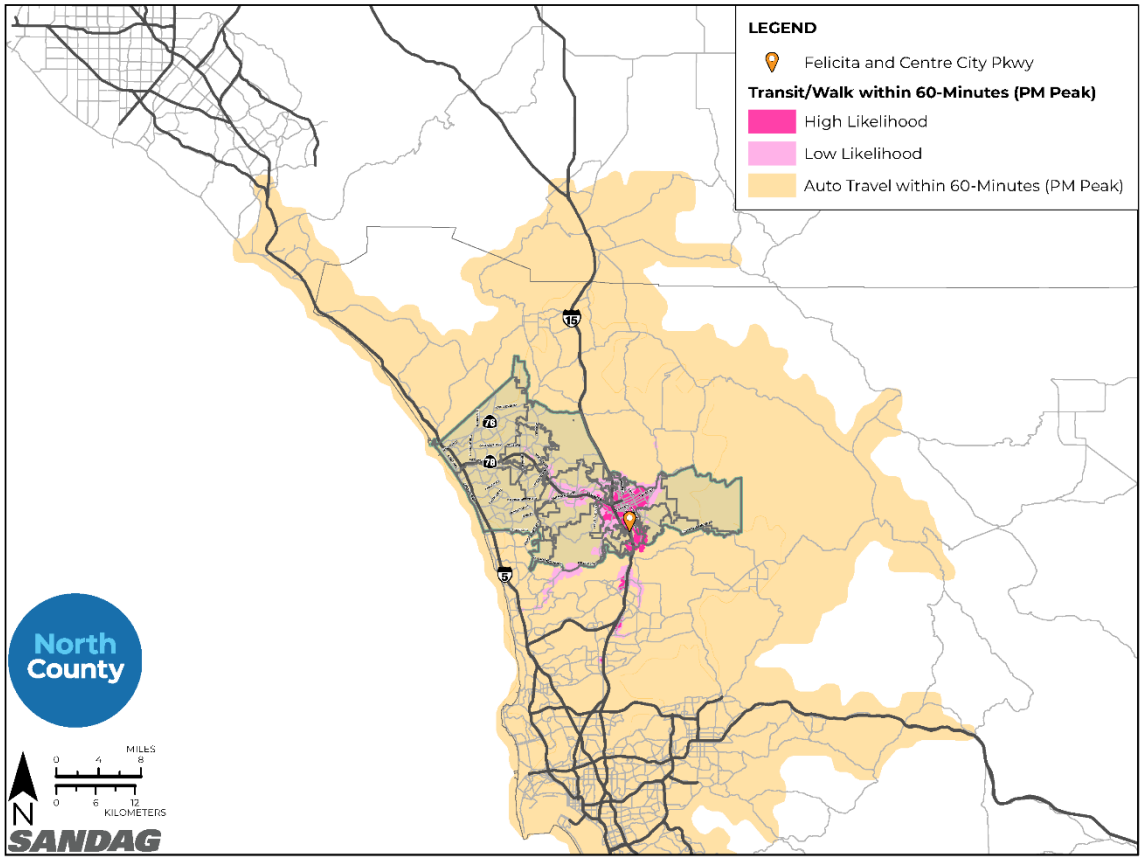

Table 16: Isochrone Summary - Felicita Ave and Centre City Pkwy (60-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	20,945	171	322	151
ACS/LEHD Lodes Estimates				
Housing Units[2]	1,114,675	34,103	64,151	30,048
Jobs[3]	1,436,617	48,383	102,569	54,186
Low-Income[2]*	316,162	13,422	21,318	7,896
Senior (65+)[2]	447,259	11,304	22,673	11,369
Senior (75+)[2]	189,790	5,414	10,633	5,219
People of Color[2]	1,788,866	74,828	126,599	51,771
Total Population[2]	3,281,368	107,204	194,317	87,113
DS39 Estimates[4]				
Housing Units	1,123,674	30,388	68,961	38,573
Jobs	1,622,378	58,139	110,848	52,709
Low-Income	1,021,858	47,335	82,814	35,479
Senior (75+)	186,270	4,786	11,424	6,638
People of Color	1,750,919	66,239	127,489	61,250
Total Population	3,225,309	97,438	208,081	110,643

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included
**Low-Income ACS data collected at the household level.*
Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

MAPLE ST AND GRAND AVE

Figure 25: Maple St and W Grand Ave, 30-Minute Travel Sheds at PM Peak

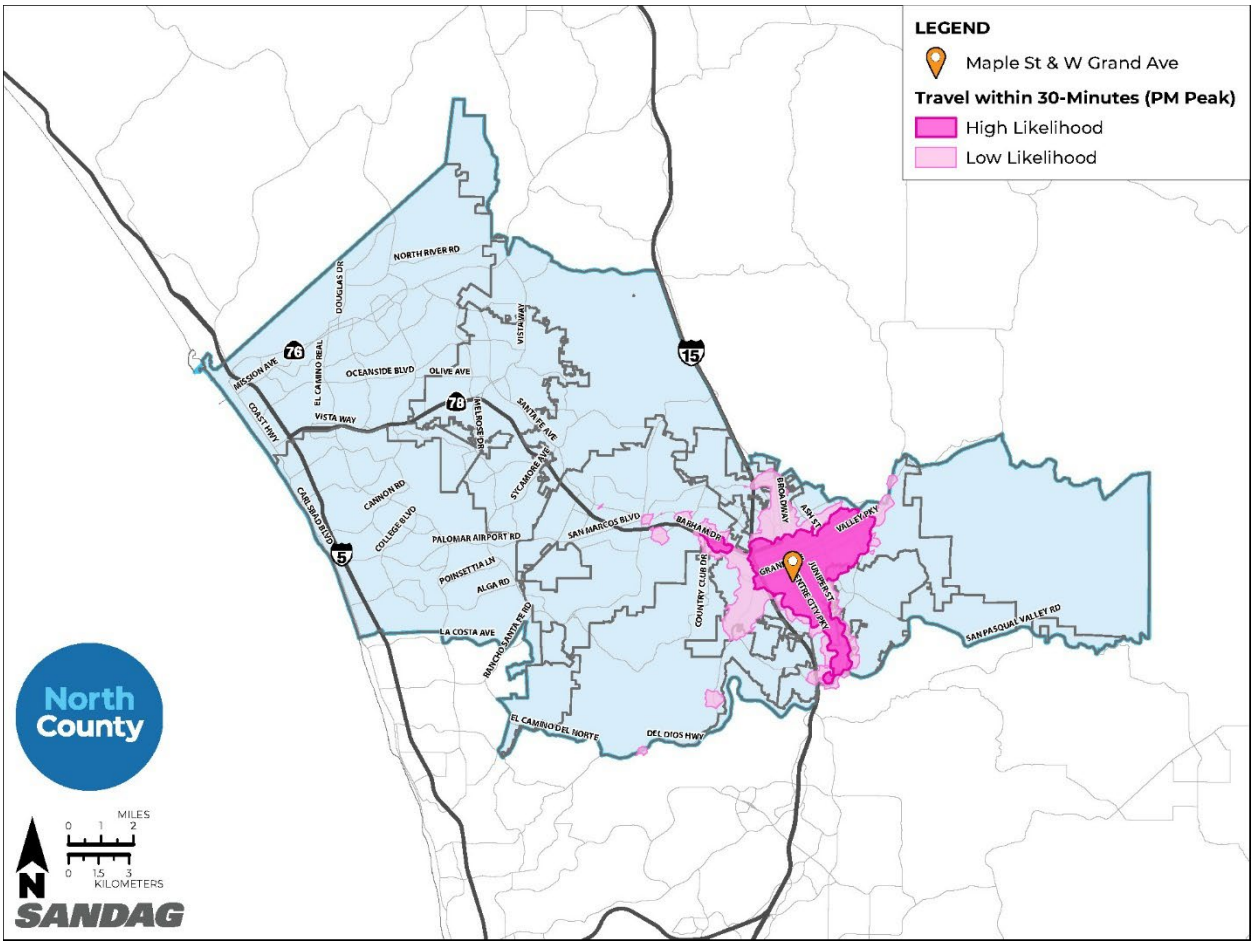

Figure 26: Maple St and W Grand Ave, 30-Minute Transit/Walk and Auto Travel Sheds at PM Peak

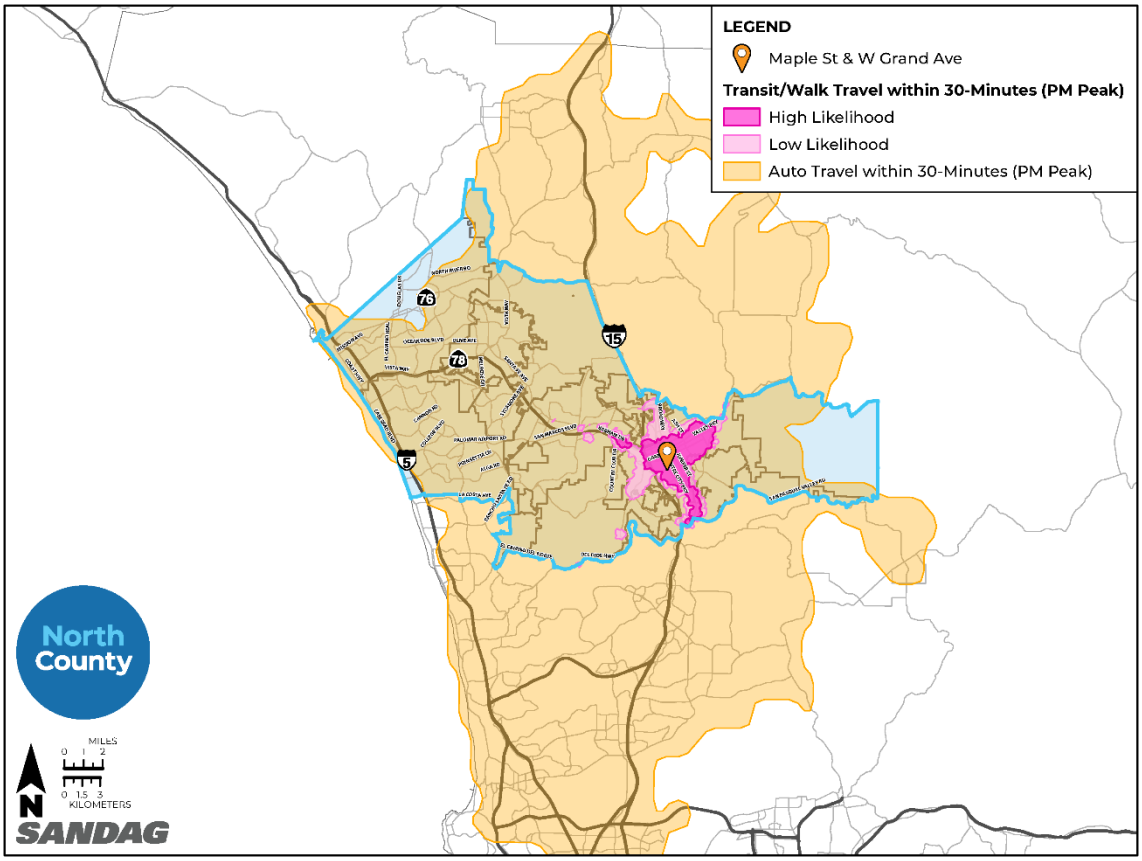

Table 17: Isochrone Summary - Maple St and W Grand Ave (30-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	2,060	136	188	52
ACS/LEHD Lodes Estimates				
Housing Units[2]	460,531	20,974	33,964	12,990
Jobs[3]	795,144	26,937	43,274	16,337
Low-Income[2]*	108,540	9,357	13,686	4,329
Senior (65+)[2]	193,330	6,115	11,235	5,120
Senior (75+)[2]	81,859	2,893	5,329	2,436
People of Color[2]	651,779	52,275	75,461	23,186
Total Population[2]	1,336,804	68,945	106,738	37,793
DS39 Estimates[4]				
Housing Units	471,159	22,861	35,613	12,752
Jobs	815,355	31,788	49,537	17,749
Low-Income	358,700	38,509	53,290	14,781
Senior (75+)	81,262	3,499	5,594	2,095
People of Color	655,244	53,319	74,894	21,575
Total Population	1,354,691	74,351	112,135	37,784

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included
**Low-Income ACS data collected at the household level.*
Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimate (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

Figure 27: Maple St and W Grand Ave, 60-Minute Travel Sheds at PM Peak

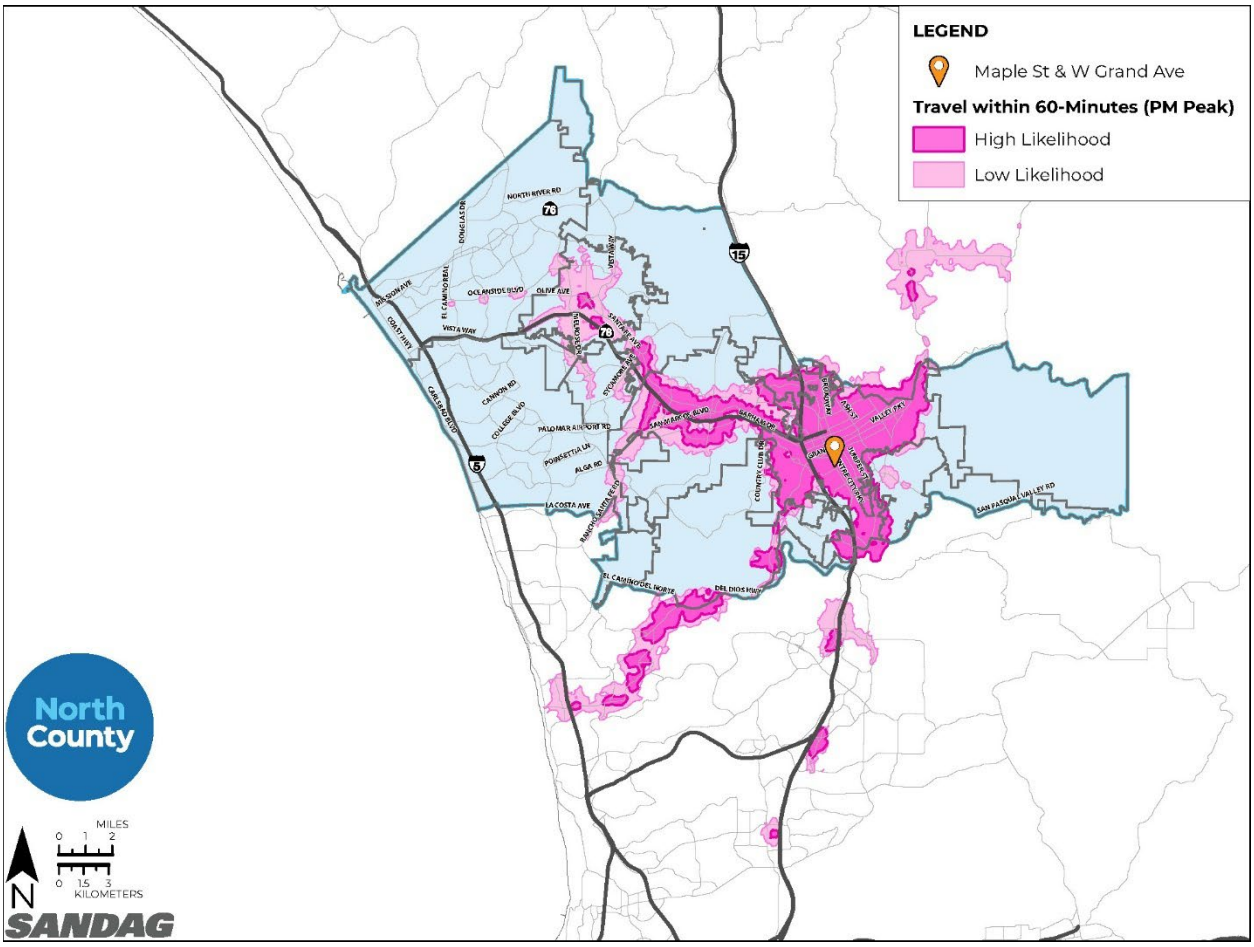

Figure 28: Maple St and W Grand Ave, 60-Minute Transit/Walk and Auto Travel Sheds at PM Pea

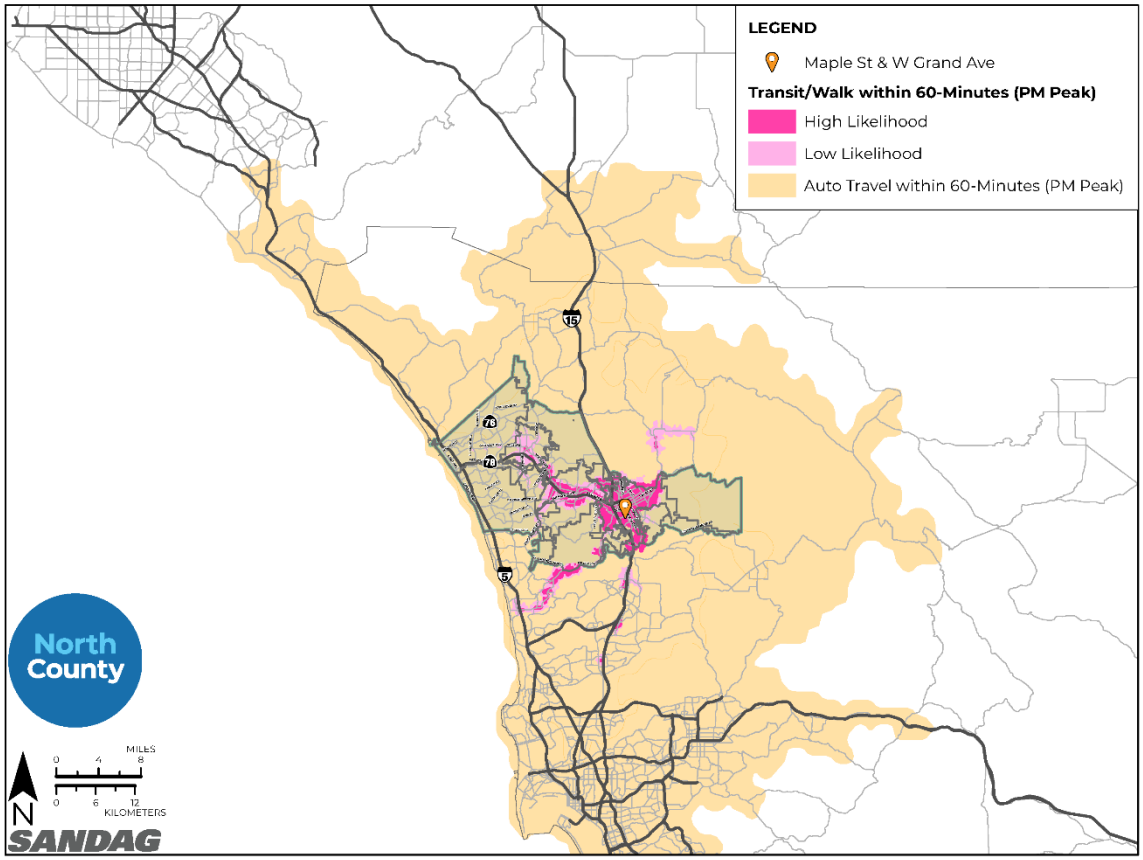

Table 18: Isochrone Summary - Maple St and W Grand Ave (60-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	20,696	306	489	183
ACS/LEHD Lodes Estimates				
Housing Units[2]	1,111,242	52,906	82,314	29,408
Jobs[3]	1,429,336	78,535	124,411	45,876
Low-Income[2]*	315,197	19,123	27,503	8,380
Senior (65+)[2]	445,208	18,349	28,407	10,058
Senior (75+)[2]	189,285	8,565	12,983	4,418
People of Color[2]	1,785,510	114,218	167,621	53,403
Total Population[2]	3,270,774	164,770	255,761	90,991
DS39 Estimates[4]				
Housing Units	1,121,598	56,984	93,490	36,506
Jobs	1,613,531	93,327	137,712	44,385
Low-Income	1,020,593	76,012	111,494	35,482
Senior (75+)	185,888	9,082	15,819	6,737
People of Color	1,748,334	112,997	169,403	56,406
Total Population	3,219,150	176,903	282,720	105,817

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included
**Low-Income ACS data collected at the household level.*
Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

OCEANSIDE BLVD AND AVENIDA DEL ORO

Figure 29: Oceanside Blvd and Avenida del Oro, 30-Minute Travel Sheds at PM Peak

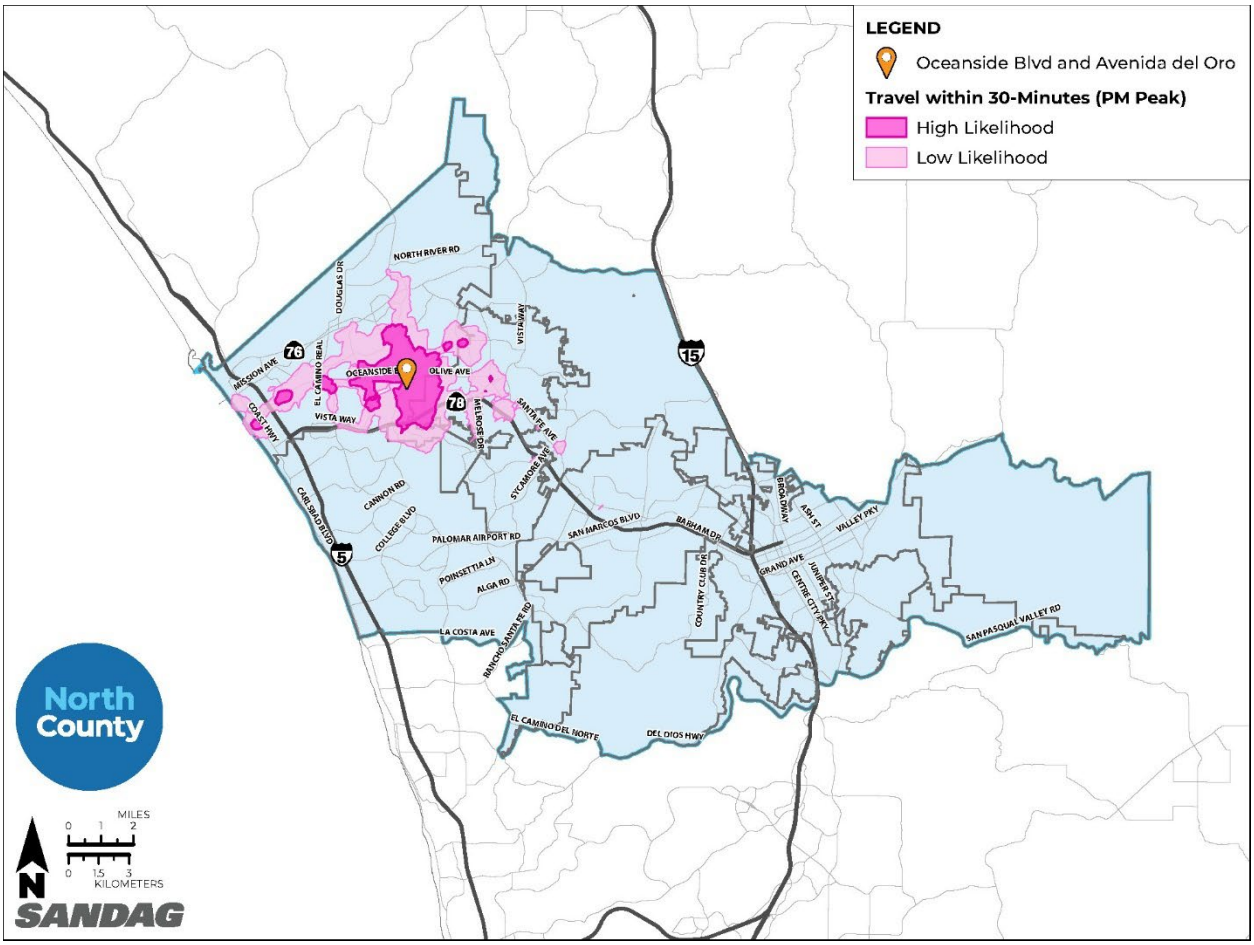

Figure 30: Oceanside Blvd and Avenida del Oro, 30-Minute Transit/Walk and Auto Travel Sheds at PM Peak

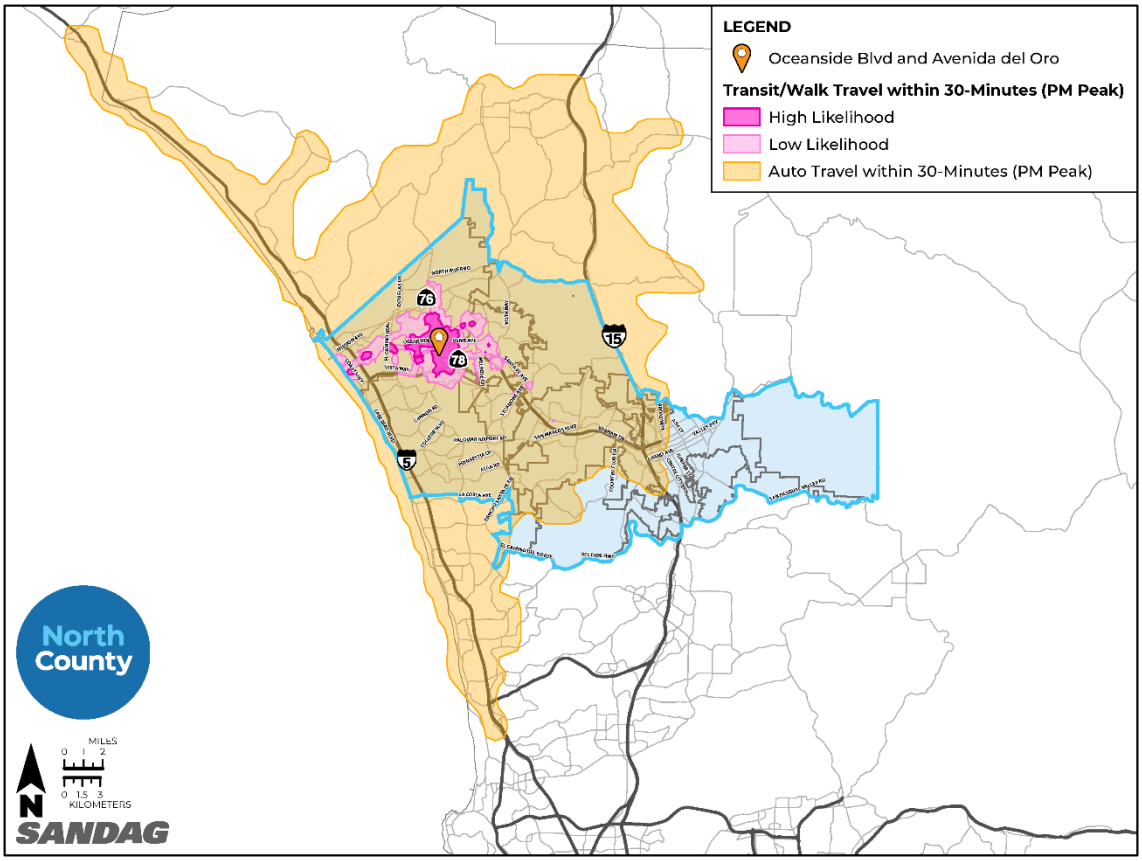

Table 19: Isochrone Summary - Oceanside Blvd and Avenida del Oro (30-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	936	56	152	96
ACS/LEHD Lodes Estimates				
Housing Units[2]	257,621	4,804	21,537	16,733
Jobs[3]	321,033	13,645	31,934	18,289
Low-Income[2]*	67,943	1,282	6,710	5,428
Senior (65+)[2]	114,571	1,589	8,308	6,719
Senior (75+)[2]	49,359	739	3,477	2,738
People of Color[2]	344,277	10,146	37,721	27,575
Total Population[2]	759,059	15,852	61,862	46,010
DS39 Estimates[4]				
Housing Units	260,746	7,010	31,919	24,909
Jobs	350,370	15,961	32,646	16,685
Low-Income	228,728	7,928	33,399	25,471
Senior (75+)	47,735	1,059	5,012	3,953
People of Color	342,084	13,611	52,691	39,080
Total Population	751,131	21,226	91,829	70,603

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included
**Low-Income ACS data collected at the household level.*
Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

Figure 31: Oceanside Blvd and Avenida del Oro, 60-Minute Travel Sheds at PM Peak

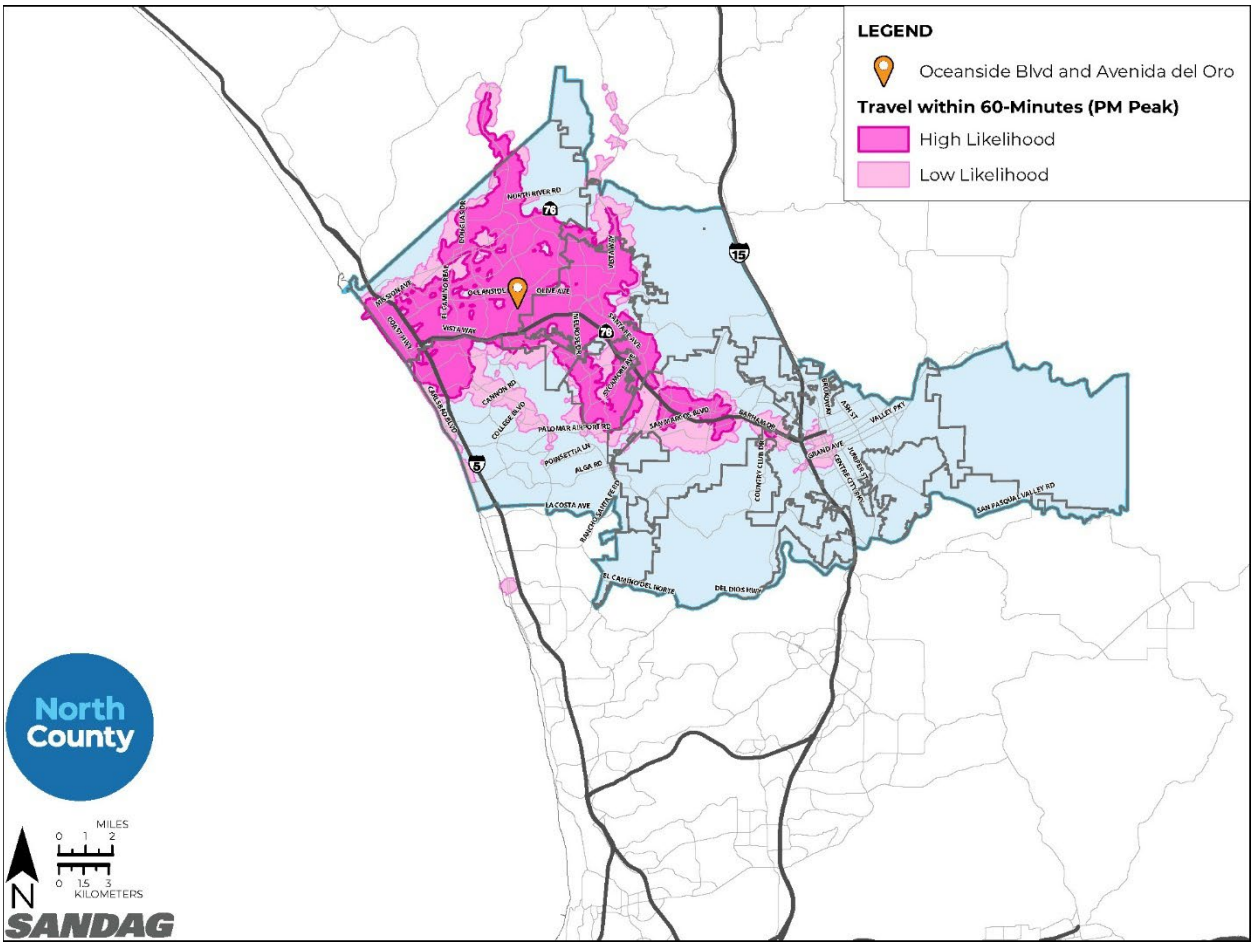

Figure 32: Oceanside Blvd and Avenida del Oro, 60-Minute Transit/Walk and Auto Travel Sheds at PM Peak

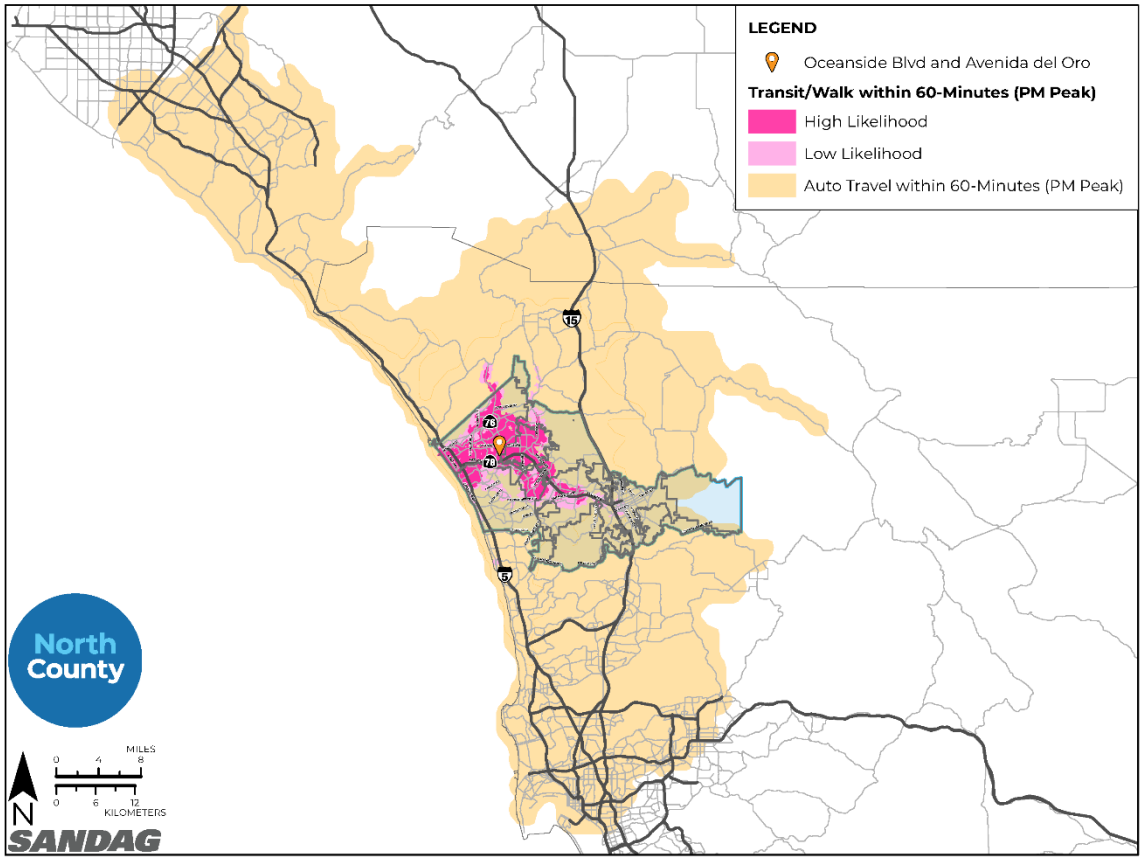

Table 20: Isochrone Summary - Oceanside Blvd and Avenida del Oro (60-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	16,159	499	652	153
ACS/LEHD Lodes Estimates				
Housing Units[2]	855,189	96,637	96,285	-352
Jobs[3]	1,248,552	81,402	117,655	36,253
Low-Income[2]*	235,431	103,537	150,542	47,005
Senior (65+)[2]	328,944	24,186	34,697	10,511
Senior (75+)[2]	140,836	29,252	44,593	15,341
People of Color[2]	1,162,729	12,330	19,145	6,815
Total Population[2]	2,406,257	135,892	187,024	51,132
DS39 Estimates[4]				
Housing Units	866,413	89,598	124,988	35,390
Jobs	1,407,456	106,955	166,726	59,771
Low-Income	737,829	90,155	122,620	32,465
Senior (75+)	143,164	14,784	21,048	6,264
People of Color	1,165,237	140,562	189,218	48,656
Total Population	2,410,423	254,674	351,012	96,338

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included
**Low-Income ACS data collected at the household level.*
Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

POINSETTIA AVE AND BUSINESS PARK DR

Figure 33: Poinsettia Ave and Business Park Dr, 30-Minute Travel Sheds at PM Peak

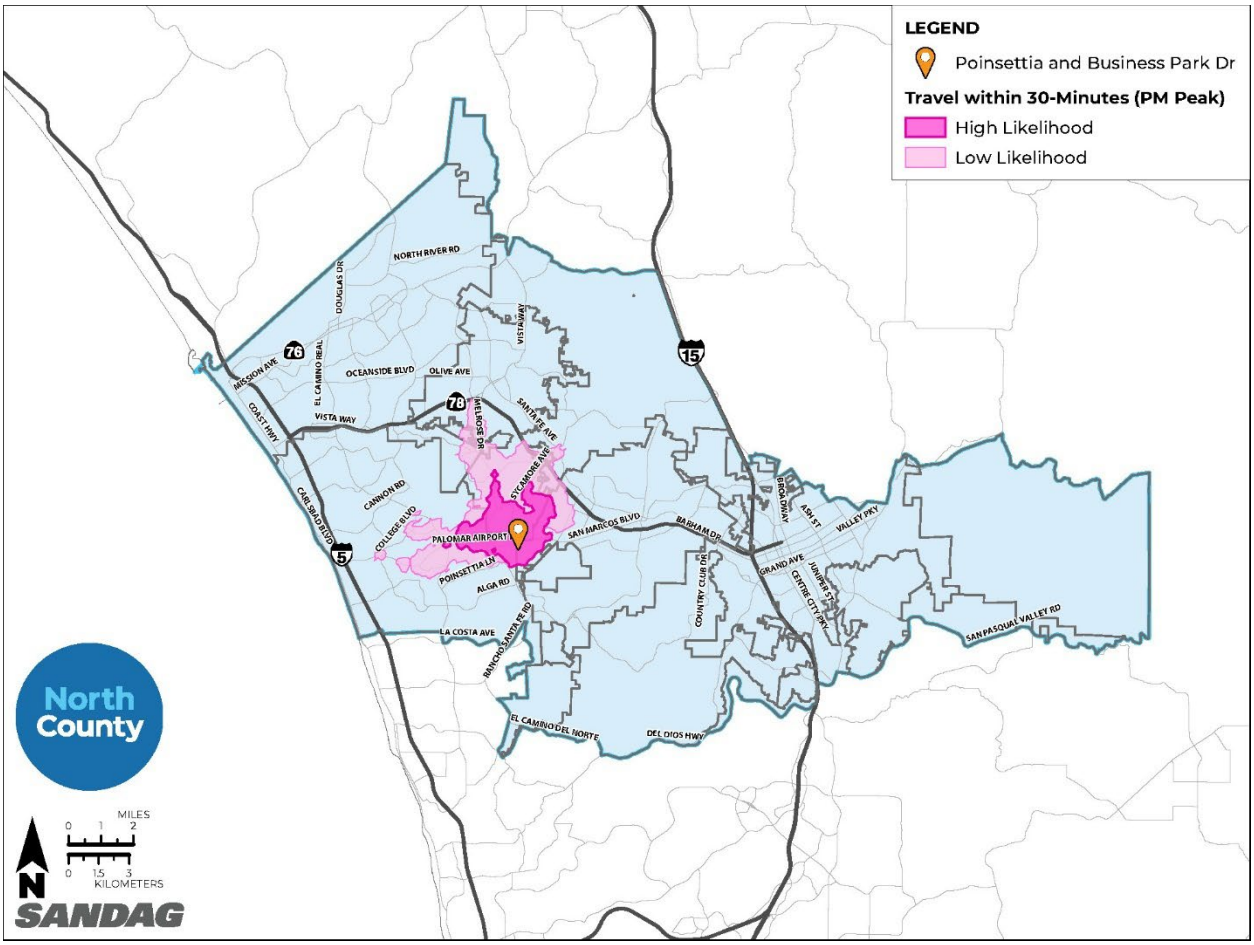

Figure 34: Poinsettia Ave and Business Park Dr, 30-Minute Transit/Walk and Auto Travel Sheds at PM Peak

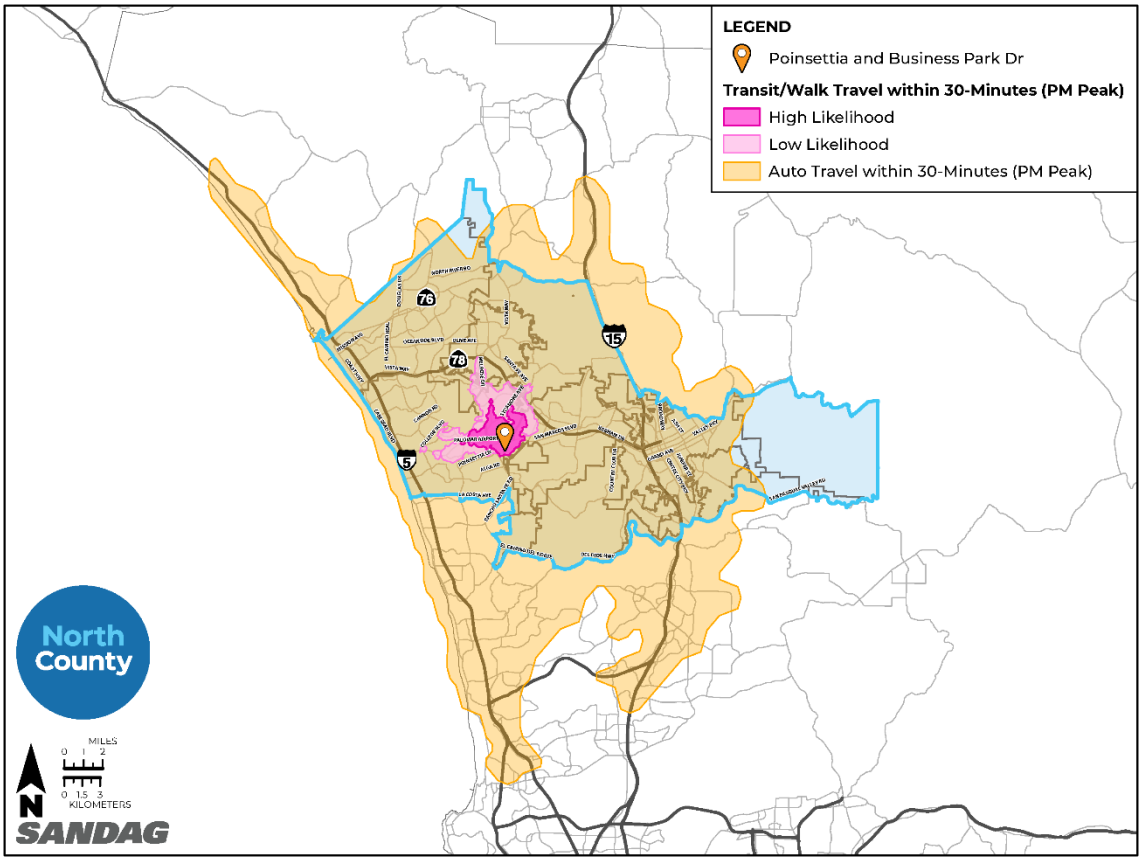

Table 21: Isochrone Summary - Poinsettia Ave and Business Park Dr (30-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	1,347	29	114	85
ACS/LEHD Lodes Estimates				
Housing Units[2]	332,583	3,636	13,592	9,956
Jobs[3]	440,508	21,485	45,415	23,930
Low-Income[2]*	81,800	989	4,058	3,069
Senior (65+)[2]	145,702	2,060	5,688	3,628
Senior (75+)[2]	62,393	730	2,438	1,708
People of Color[2]	457,224	2,785	17,590	14,805
Total Population[2]	963,352	9,434	37,162	27,728
DS39 Estimates[4]				
Housing Units	336,321	1,866	13,206	11,340
Jobs	471,797	21,742	57,396	35,654
Low-Income	282,260	1,220	11,022	9,802
Senior (75+)	59,623	301	2,660	2,359
People of Color	461,497	2,299	16,529	14,230
Total Population	977,789	5,202	36,568	31,366

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included
**Low-Income ACS data collected at the household level.*
Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

Figure 35: Poinsettia Ave and Business Park Dr, 60-Minute Travel Sheds at PM Peak

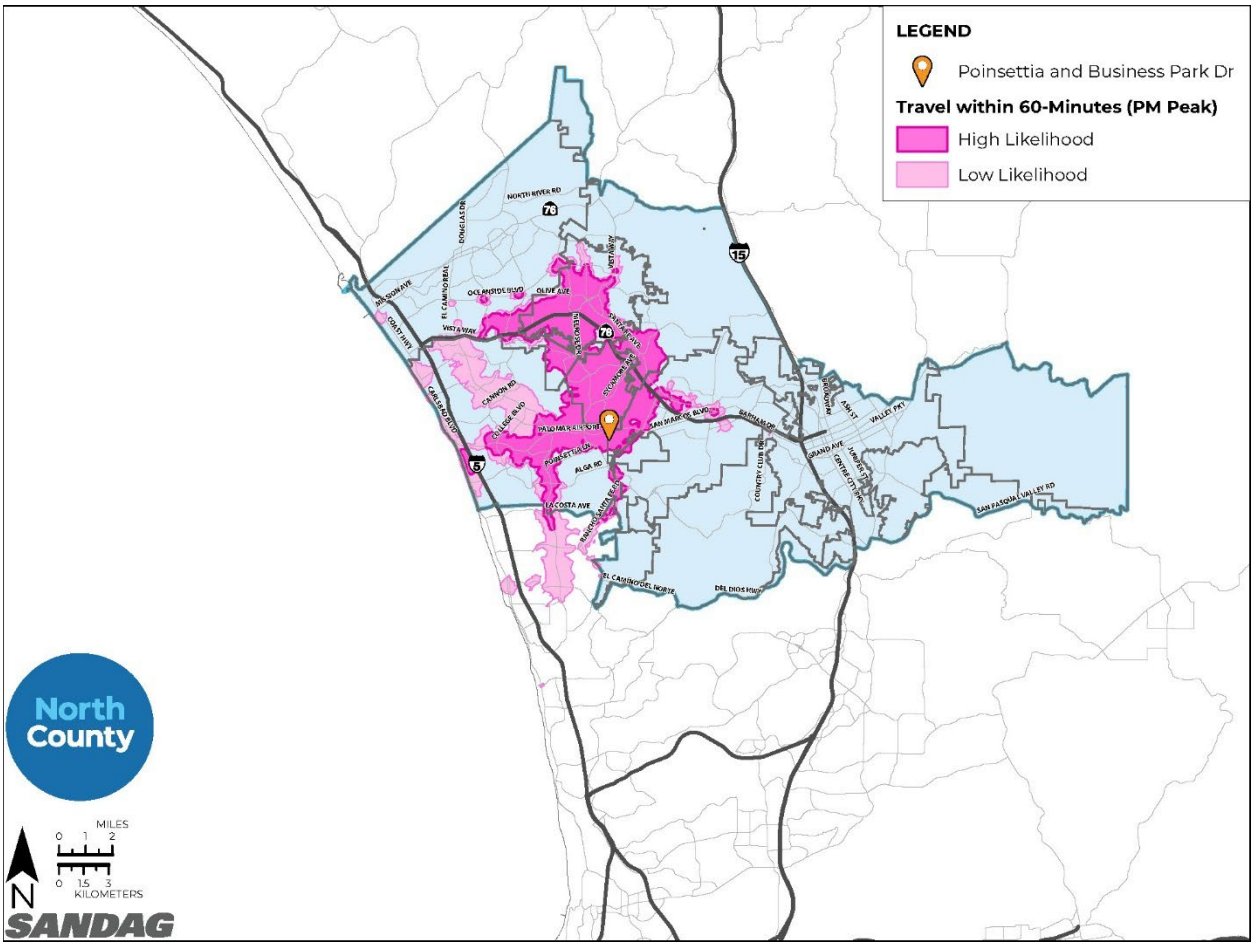

Figure 36: Poinsettia Ave and Business Park Dr, 60-Minute Transit/Walk and Auto Travel Sheds at PM Peak

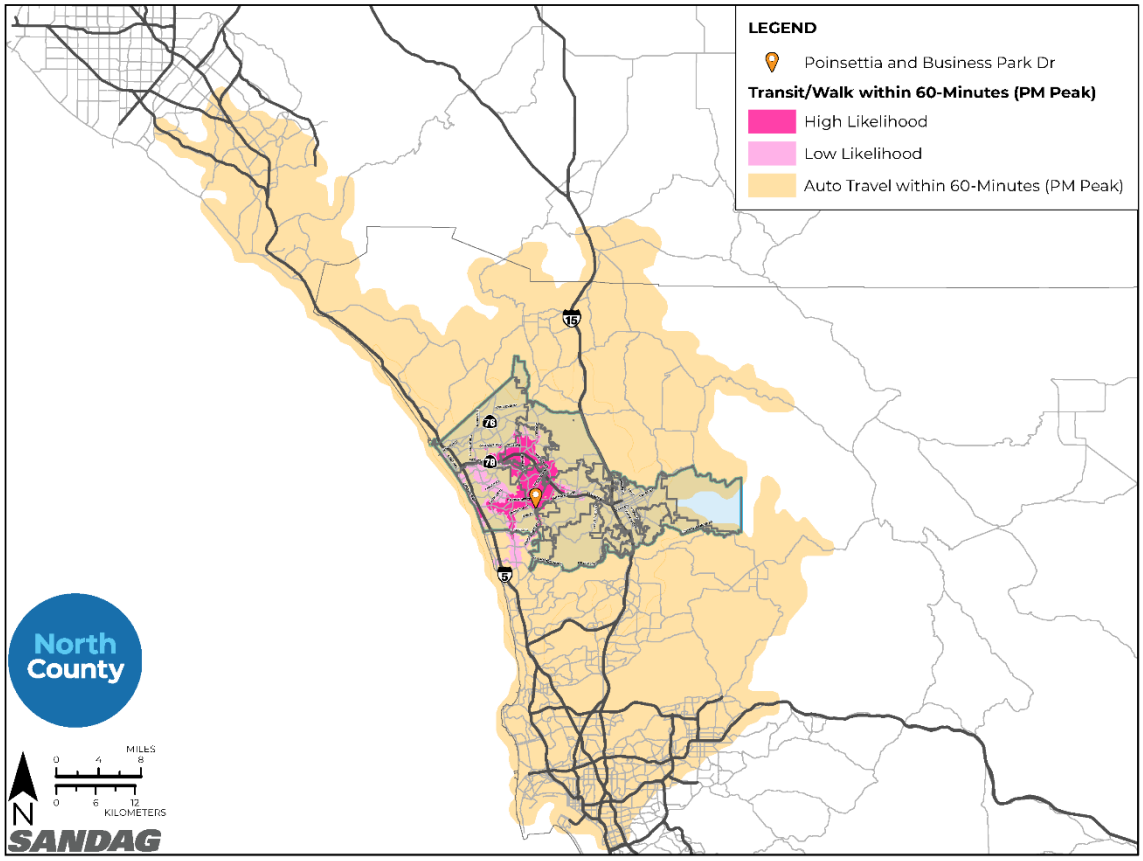

Table 22: Isochrone Summary - Poinsettia Ave and Business Park Dr (60-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	17,332	247	355	108
ACS/LEHD Lodes Estimates				
Housing Units[2]	918,265	34,997	55,405	20,408
Jobs[3]	1,297,069	74,852	124,985	50,133
Low-Income[2]*	258,363	9,742	14,896	5,154
Senior (65+)[2]	358,793	12,910	22,128	9,218
Senior (75+)[2]	153,825	5,595	10,159	4,564
People of Color[2]	1,285,031	63,149	80,584	17,435
Total Population[2]	2,613,071	108,512	156,408	47,896
DS39 Estimates[4]				
Housing Units	929,056	37,205	62,614	25,409
Jobs	1,453,282	78,571	129,650	51,079
Low-Income	805,627	40,356	56,420	16,064
Senior (75+)	154,009	6,565	11,015	4,450
People of Color	1,280,632	62,395	85,845	23,450
Total Population	2,595,612	111,122	175,355	64,233

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included
**Low-Income ACS data collected at the household level.*
Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

VIA VERA CRUZ AND SAN MARCOS BLVD

Figure 37: Via Vera Cruz and San Marcos Blvd, 30-Minute Travel Sheds at PM Peak

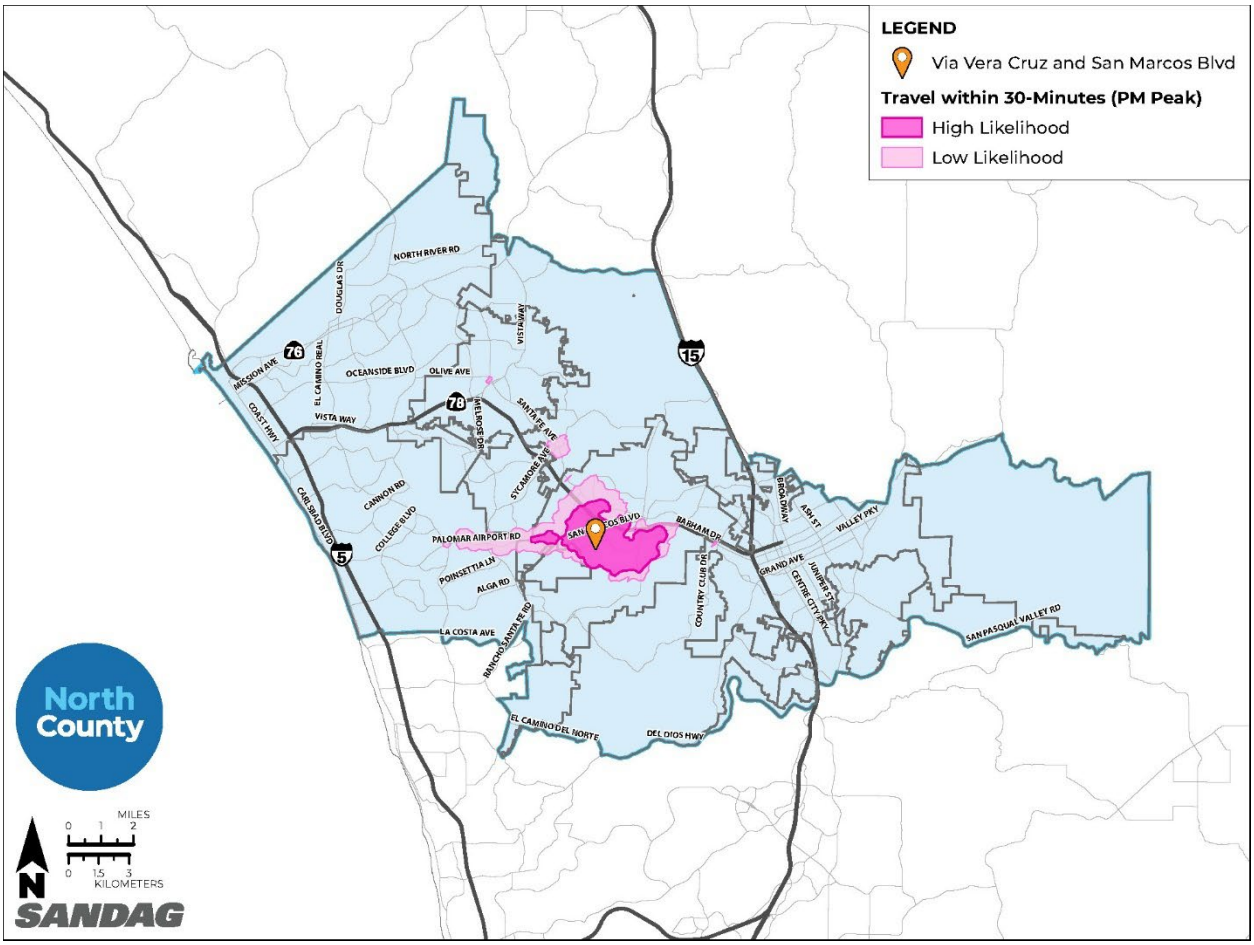

Figure 38: Via Vera Cruz and San Marcos Blvd, 30-Minute Transit/Walk and Auto Travel Sheds at PM Peak

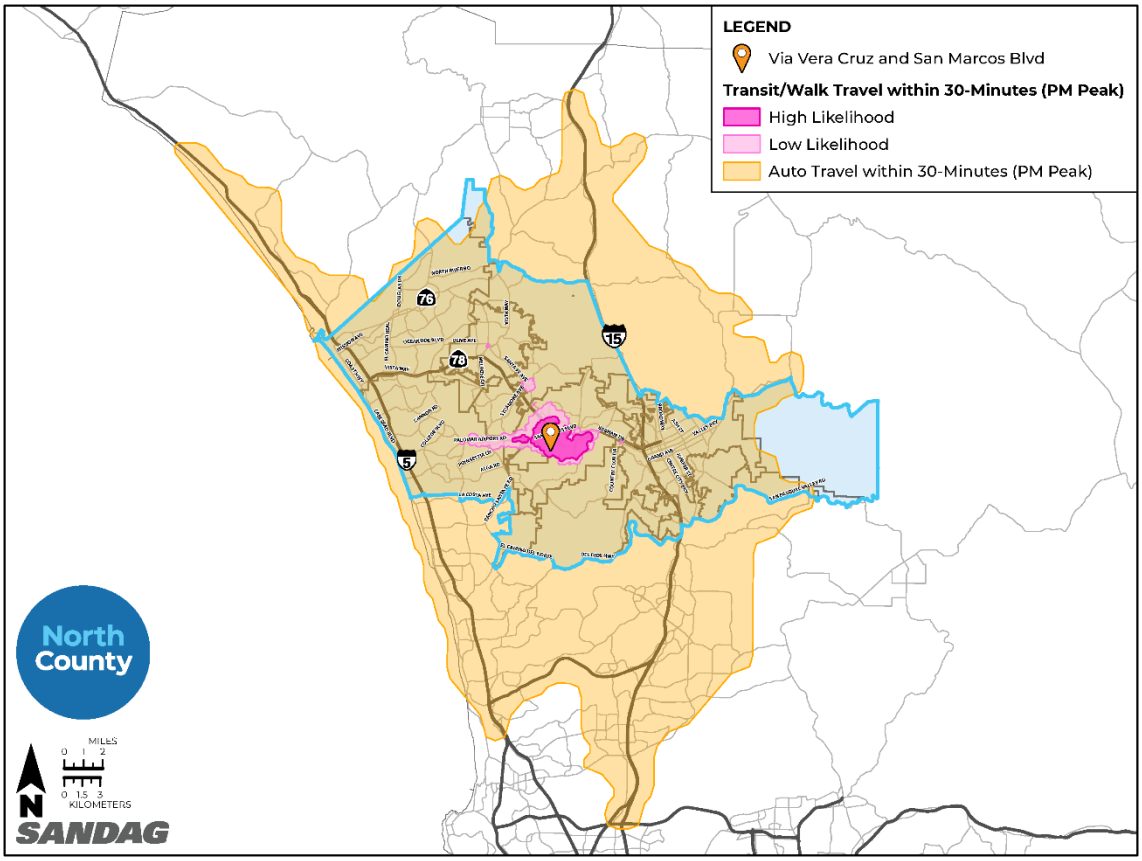

Table 23: Isochrone Summary - Via Vera Cruz and San Marcos Blvd (30-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	1,368	65	108	43
ACS/LEHD Lodes Estimates				
Housing Units[2]	389,967	3,507	10,077	6,570
Jobs[3]	456,737	16,048	30,752	14,704
Low-Income[2]*	91,073	1,388	3,516	2,128
Senior (65+)[2]	169,767	1,126	4,846	3,720
Senior (75+)[2]	71,107	531	2,292	1,761
People of Color[2]	553,557	5,801	17,324	11,523
Total Population[2]	1,144,171	9,116	28,334	19,218
DS39 Estimates[4]				
Housing Units	393,877	5,911	12,967	7,056
Jobs	483,092	16,259	34,288	18,029
Low-Income	305,332	7,609	15,805	8,196
Senior (75+)	68,485	1,046	2,489	1,443
People of Color	549,036	9,003	21,856	12,853
Total Population	1,144,950	17,992	39,130	21,138

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included
**Low-Income ACS data collected at the household level.*
Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

Figure 39: Via Vera Cruz and San Marcos Blvd, 60-Minute Travel Sheds at PM Peak

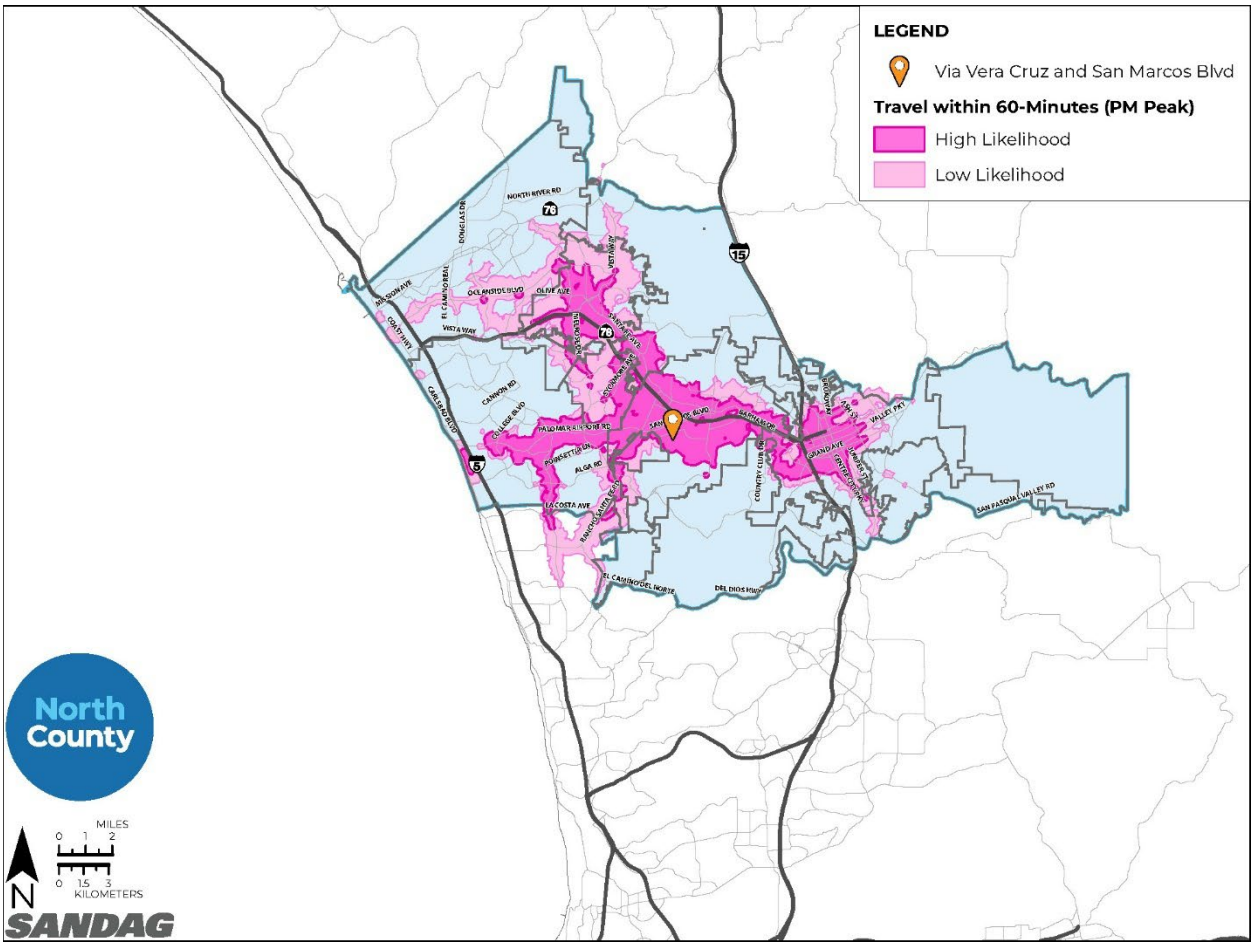

Figure 40: Via Vera Cruz and San Marcos Blvd, 60-Minute Transit/Walk and Auto Travel Sheds at PM Peak

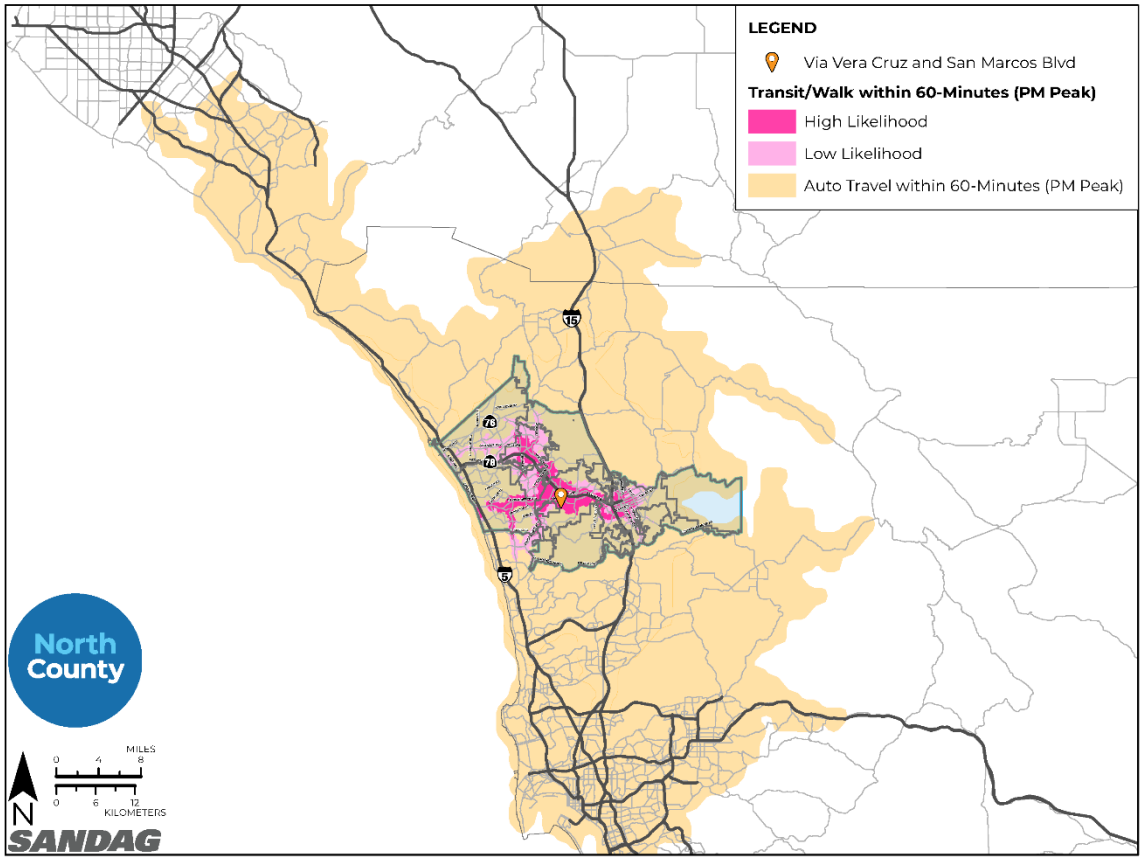

Table 24: Isochrone Summary - Via Vera Cruz and San Marcos Blvd (60-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	19,012	404	614	210
ACS/LEHD Lodes Estimates				
Housing Units[2]	1,023,420	42,776	96,298	53,522
Jobs[3]	1,365,330	108,593	168,765	60,172
Low-Income[2]*	290,231	16,390	29,816	13,426
Senior (65+)[2]	408,567	14,087	33,295	19,208
Senior (75+)[2]	174,684	6,381	14,415	8,034
People of Color[2]	1,532,830	95,944	182,524	86,580
Total Population[2]	2,960,964	137,030	293,725	156,695
DS39 Estimates[4]				
Housing Units	1,036,427	50,227	107,851	57,624
Jobs	1,542,499	120,553	186,258	65,705
Low-Income	926,705	68,735	123,737	55,002
Senior (75+)	172,788	8,291	17,723	9,432
People of Color	1,519,241	98,385	186,359	87,974
Total Population	2,936,076	156,975	324,039	167,064

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included
**Low-Income ACS data collected at the household level.*
Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

VISTA VILLAGE DR AND SANTA FE AVE

Figure 41: Vista Village Dr and Santa Fe Ave, 30-Minute Travel Sheds at PM Peak

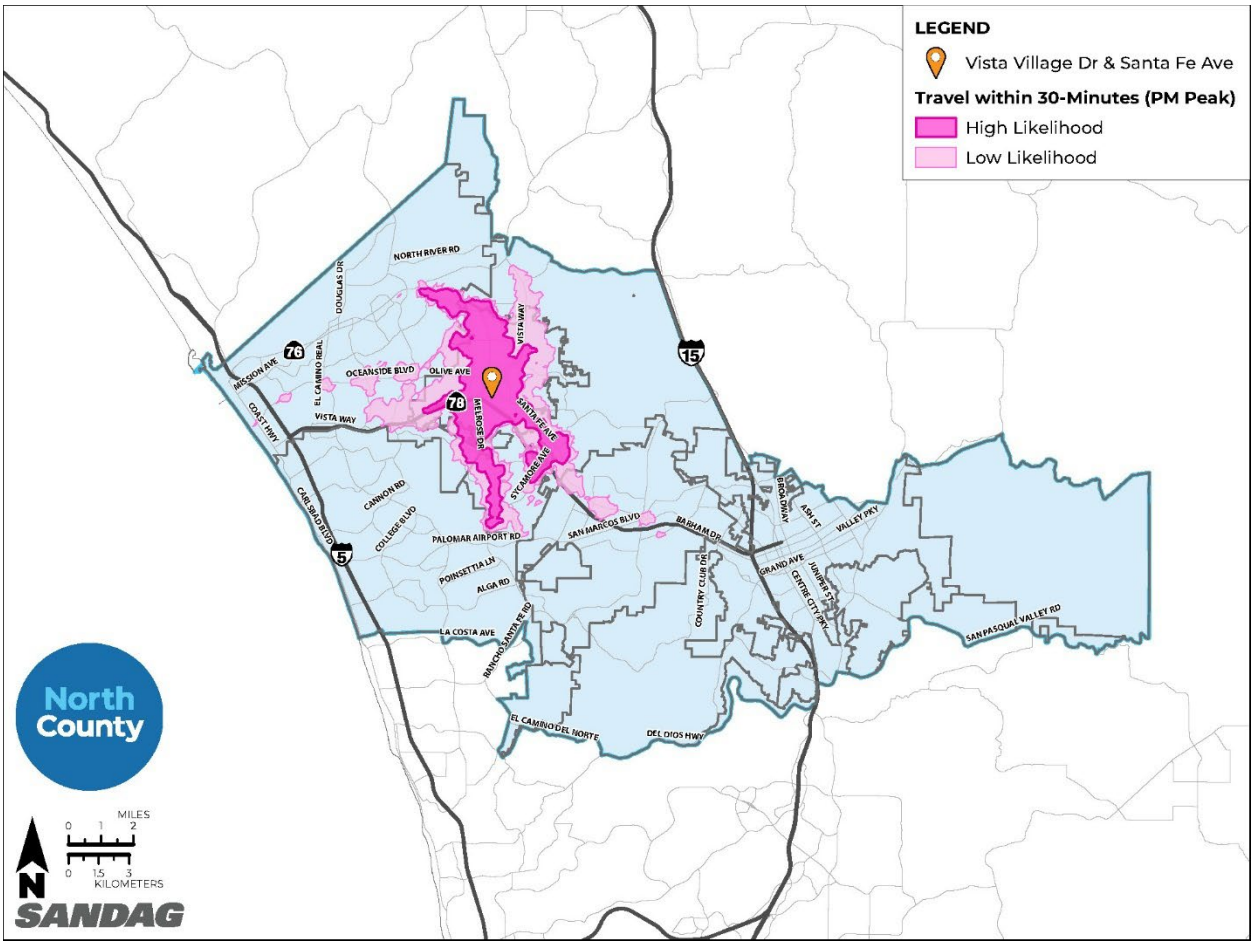

Figure 42: Vista Village Dr and Santa Fe Ave, 30-Minute Transit/Walk and Auto Travel Sheds at PM Peak

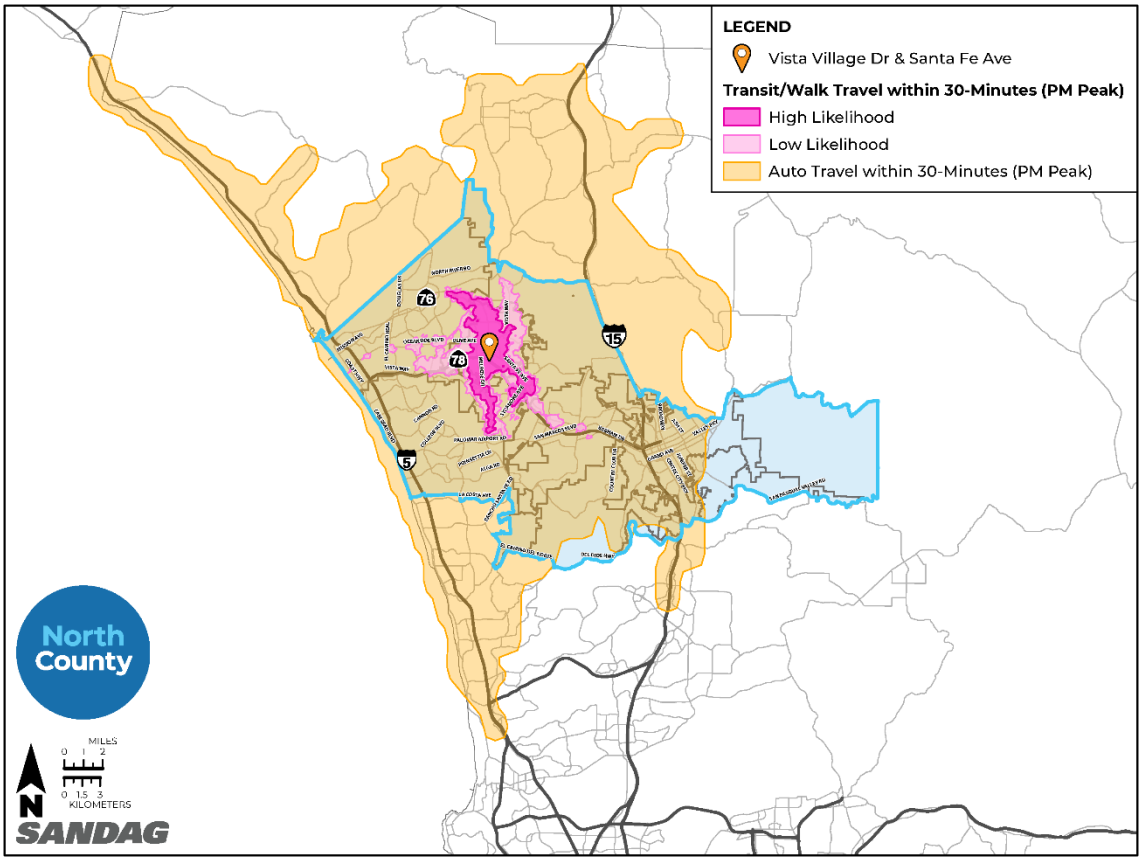

Table 25: Isochrone Summary - Vista Village Dr and Santa Fe Ave (30-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	1,059	139	244	105
ACS/LEHD Lodes Estimates				
Housing Units[2]	287,844	17,099	31,266	14,167
Jobs[3]	357,777	15,140	44,888	29,748
Low-Income[2]*	76,321	4,933	8,946	4,013
Senior (65+)[2]	130,752	4,913	9,312	4,399
Senior (75+)[2]	56,639	1,960	3,664	1,704
People of Color[2]	395,142	36,730	67,168	30,438
Total Population[2]	836,334	56,779	103,452	46,673
DS39 Estimates[4]				
Housing Units	299,981	15,787	38,010	22,223
Jobs	386,616	16,663	46,080	29,417
Low-Income	271,870	21,107	45,438	24,331
Senior (75+)	54,623	2,498	6,437	3,939
People of Color	411,808	33,092	71,035	37,943
Total Population	872,851	51,837	118,070	66,233

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included
**Low-Income ACS data collected at the household level.*
Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

Figure 43: Vista Village Dr and Santa Fe Ave, 60-Minute Travel Sheds at PM Peak

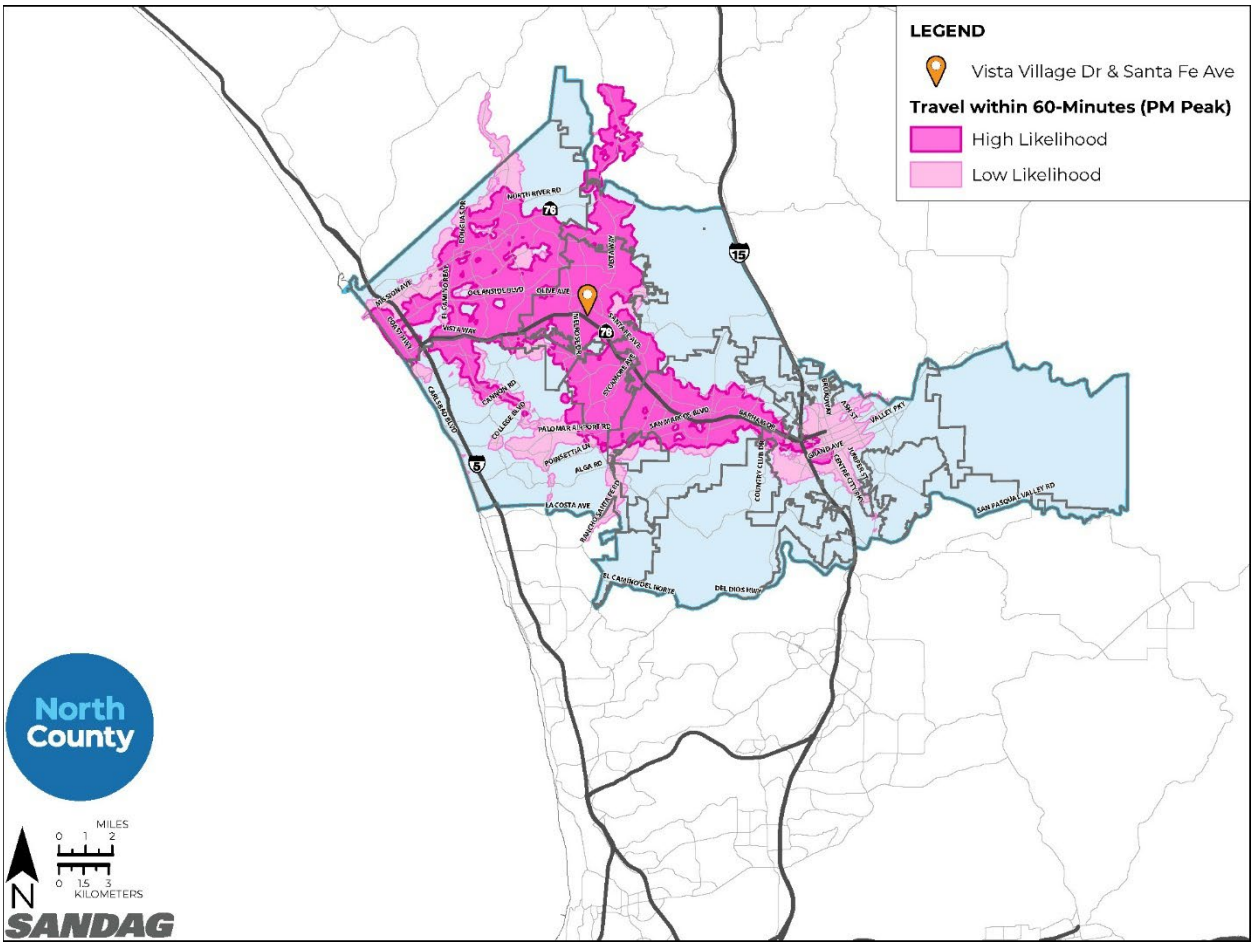

Figure 44: Vista Village Dr and Santa Fe Ave, 60-Minute Transit/Walk and Auto Travel Sheds at PM Peak

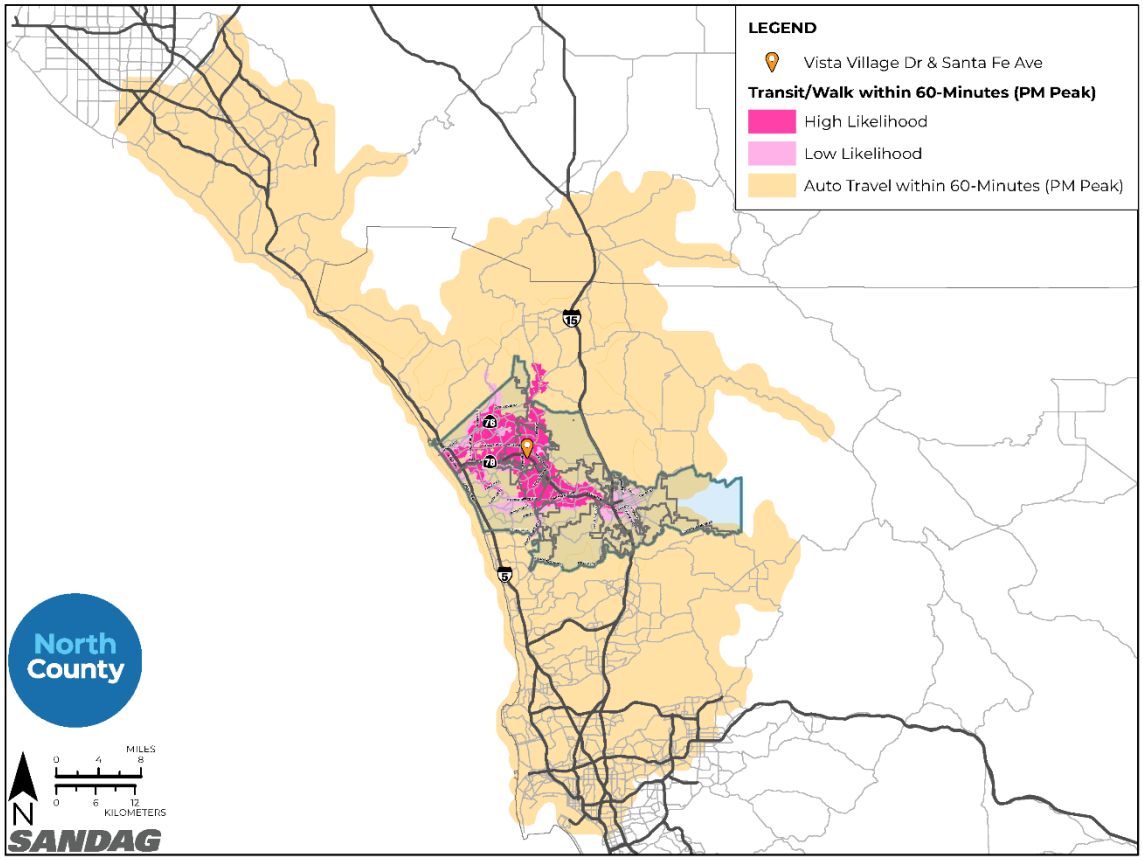

Table 26: Isochrone Summary - Vista Village Dr and Santa Fe Ave (60-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	16,367	505	736	231
ACS/LEHD Lodes Estimates				
Housing Units[2]	863,300	88,903	128,731	39,828
Jobs[3]	1,254,482	118,454	184,491	66,037
Low-Income[2]*	237,834	26,521	40,393	13,872
Senior (65+)[2]	333,407	33,160	47,647	14,487
Senior (75+)[2]	142,981	13,777	20,594	6,817
People of Color[2]	1,176,006	154,216	230,355	76,139
Total Population[2]	2,431,923	259,472	378,458	118,986
DS39 Estimates[4]				
Housing Units	874,439	91,946	143,209	51,263
Jobs	1,394,844	128,140	205,286	77,146
Low-Income	735,131	97,557	156,360	58,803
Senior (75+)	144,602	15,892	24,144	8,252
People of Color	1,174,731	150,284	235,692	85,408
Total Population	2,424,683	265,815	415,310	149,495

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included
**Low-Income ACS data collected at the household level.*
Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

WEST LAKE DR AND SAN MARCOS BLVD

Figure 45: West Lake Dr and San Marcos Blvd: 30-Minute Travel Sheds at PM Peak

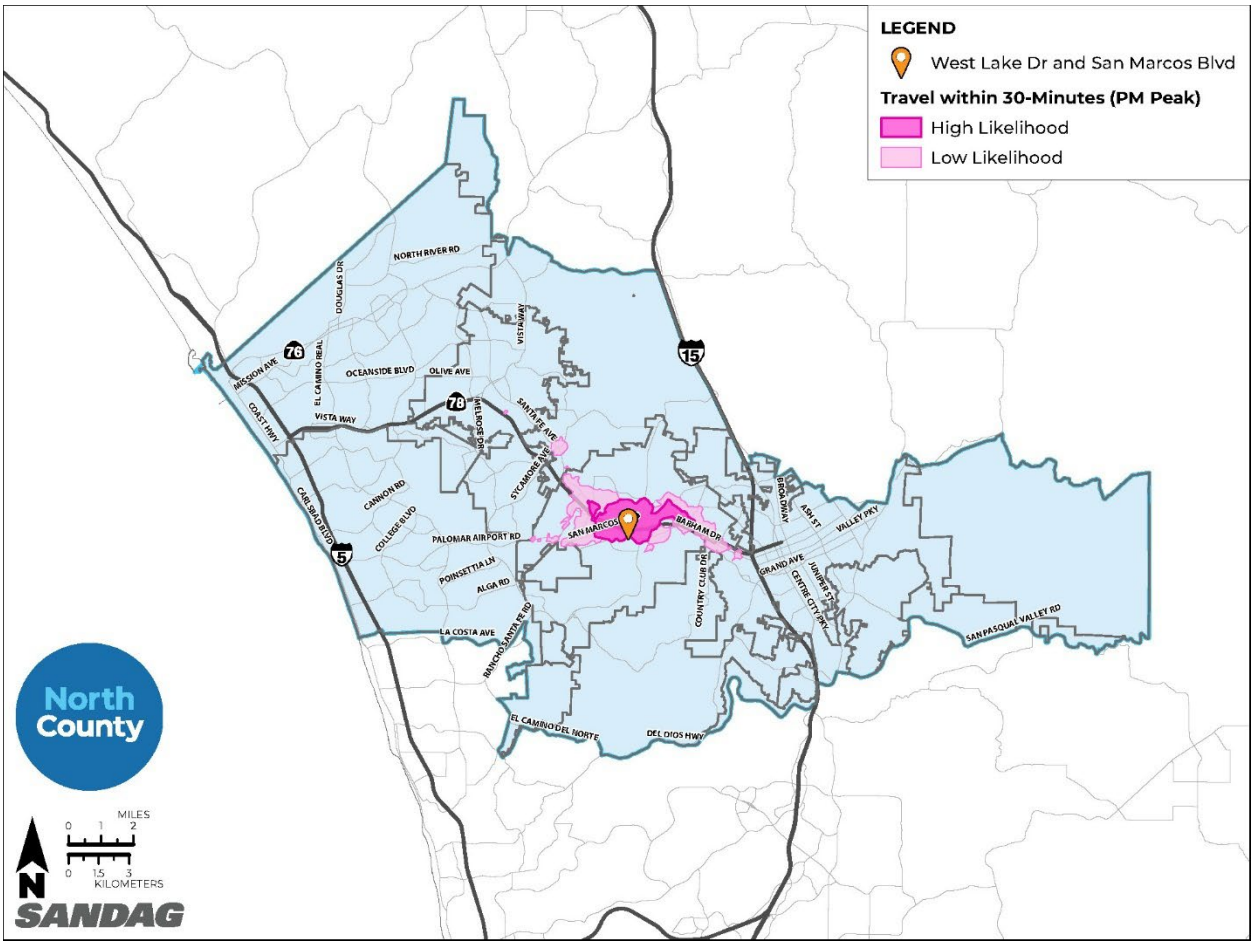

Figure 46: West Lake Dr and San Marcos Blvd: 30-Minute Transit/Walk and Auto Travel Sheds at PM Peak

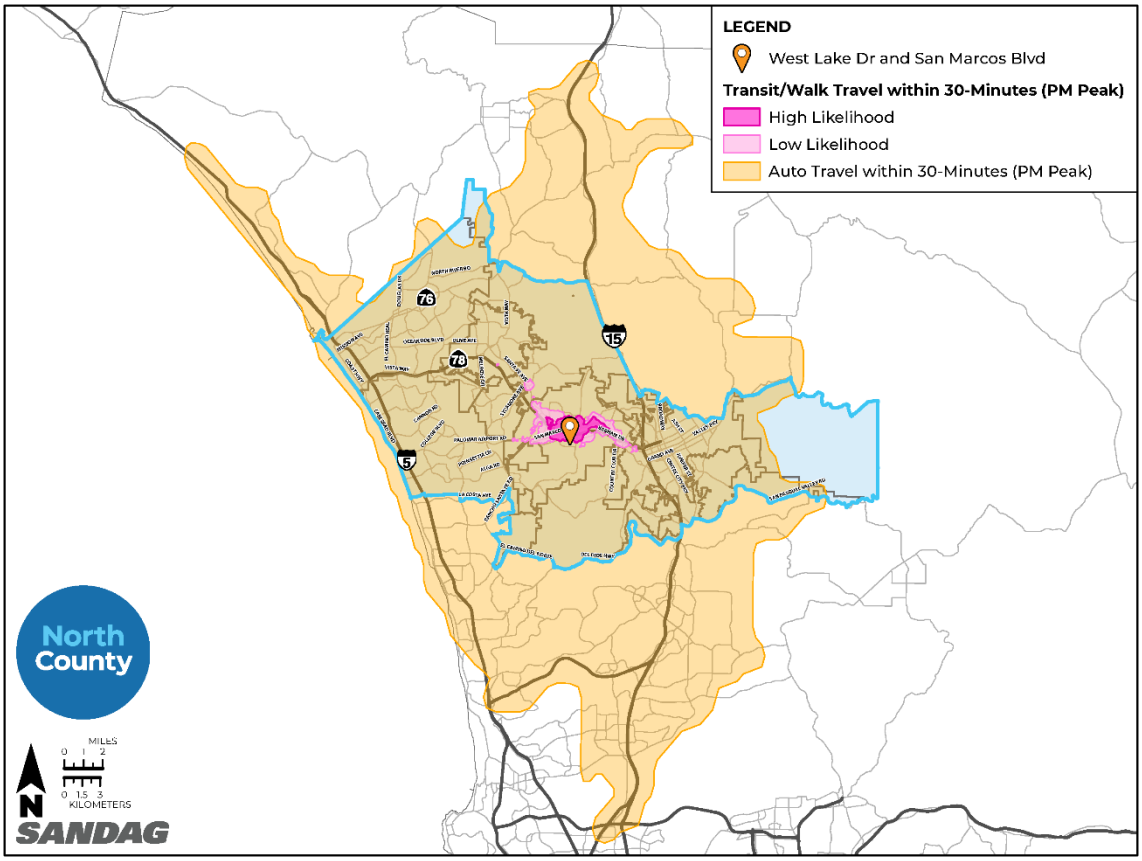

Table 27: Isochrone Summary - West Lake Dr and San Marcos Blvd (30-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	1,384	39	95	56
ACS/LEHD Lodes Estimates				
Housing Units[2]	390,347	3,122	7,870	4,748
Jobs[3]	471,683	16,653	29,704	13,051
Low-Income[2]*	91,371	1,236	3,038	1,802
Senior (65+)[2]	170,998	616	2,148	1,532
Senior (75+)[2]	71,657	254	984	730
People of Color[2]	554,427	10,157	18,873	8,716
Total Population[2]	1,147,163	11,675	24,943	13,268
DS39 Estimates[4]				
Housing Units	393,178	3,433	8,222	4,789
Jobs	509,309	13,199	32,109	18,910
Low-Income	306,471	6,135	13,169	7,034
Senior (75+)	68,429	480	1,162	682
People of Color	551,181	9,451	19,110	9,659
Total Population	1,144,996	11,678	27,256	15,578

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included
**Low-Income ACS data collected at the household level.*
Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

Figure 47: West Lake Dr and San Marcos Blvd: 60-Minute Travel Sheds at PM Peak

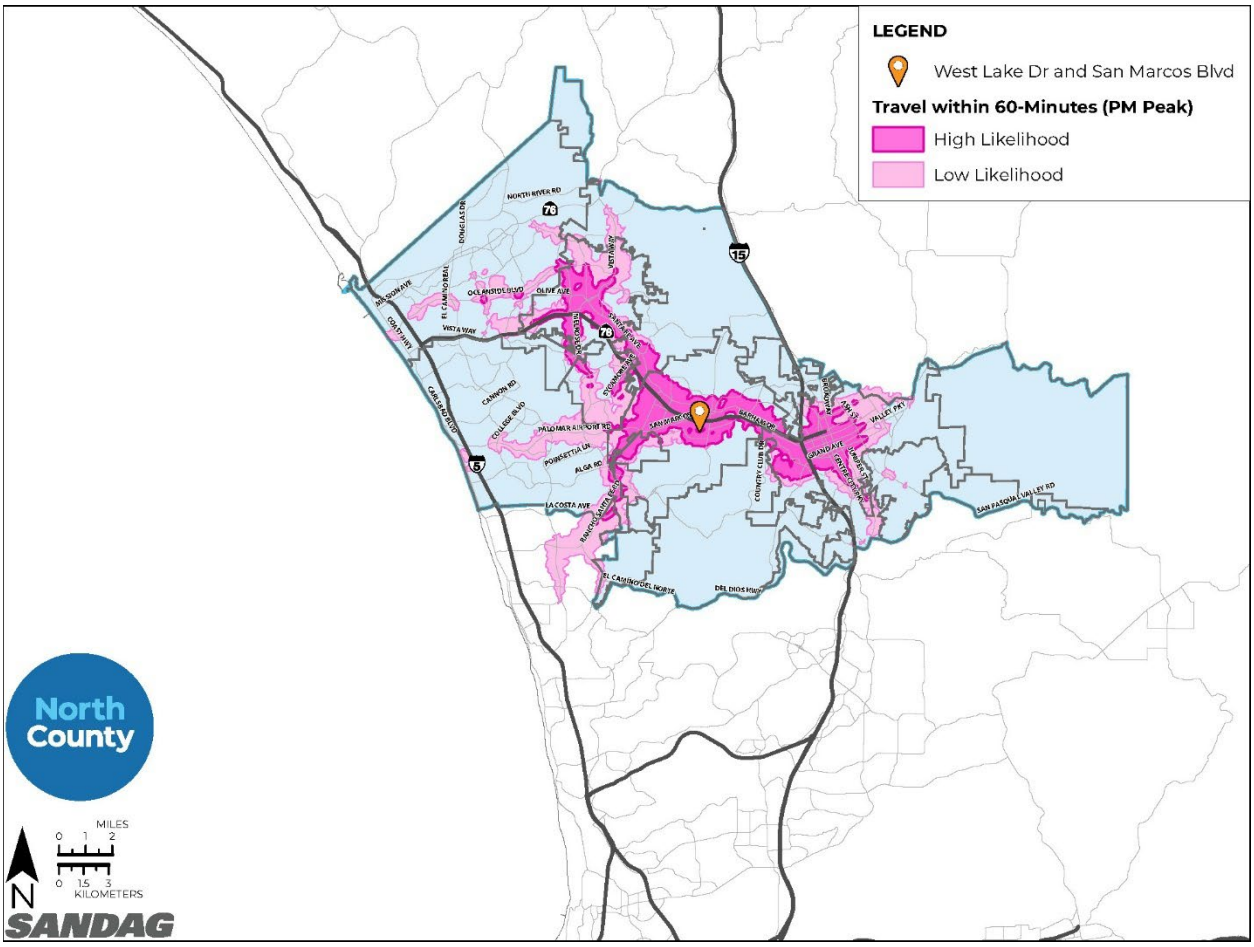

Figure 48: West Lake Dr and San Marcos Blvd: 30-Minute Transit/Walk and Auto Travel Sheds at PM Peak

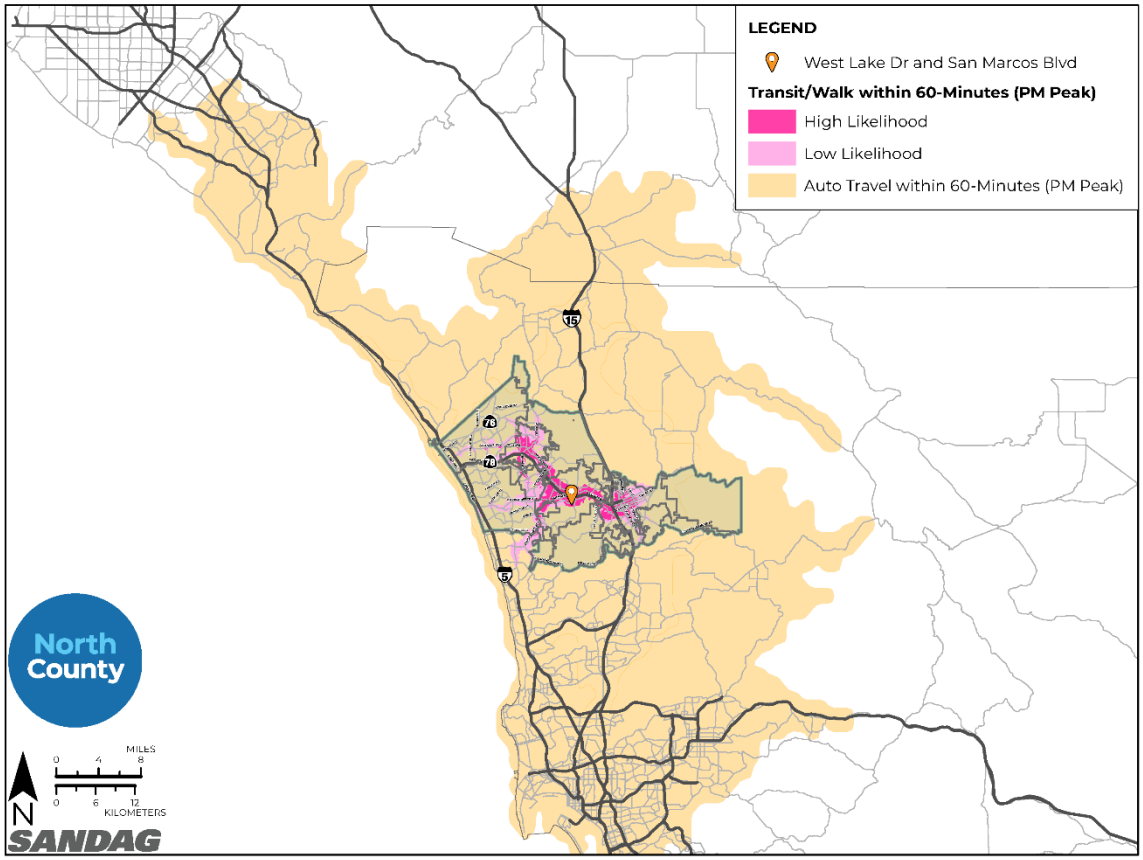

Table 28: Isochrone Summary - West Lake Dr and San Marcos Blvd (60-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	19,239	323	538	215
ACS/LEHD Lodes Estimates				
Housing Units[2]	1,035,658	34,190	75,579	41,389
Jobs[3]	1,377,327	75,234	148,208	72,974
Low-Income[2]*	293,875	14,677	25,615	10,938
Senior (65+)[2]	415,025	11,211	26,227	15,016
Senior (75+)[2]	177,739	5,250	11,495	6,245
People of Color[2]	1,565,709	80,380	155,856	75,476
Total Population[2]	3,001,511	108,152	238,316	130,164
DS39 Estimates[4]				
Housing Units	1,050,625	37,503	80,818	43,315
Jobs	1,552,667	86,582	167,112	80,530
Low-Income	943,135	57,796	102,364	44,568
Senior (75+)	175,030	6,163	12,996	6,833
People of Color	1,557,955	80,765	152,631	71,866
Total Population	2,983,257	120,164	250,247	130,083

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included
**Low-Income ACS data collected at the household level.*
Source: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

WISCONSIN AVE AND COAST HIGHWAY

Figure 49: Wisconsin Ave and Coast Highway, 30-Minute Travel Sheds at PM Peak

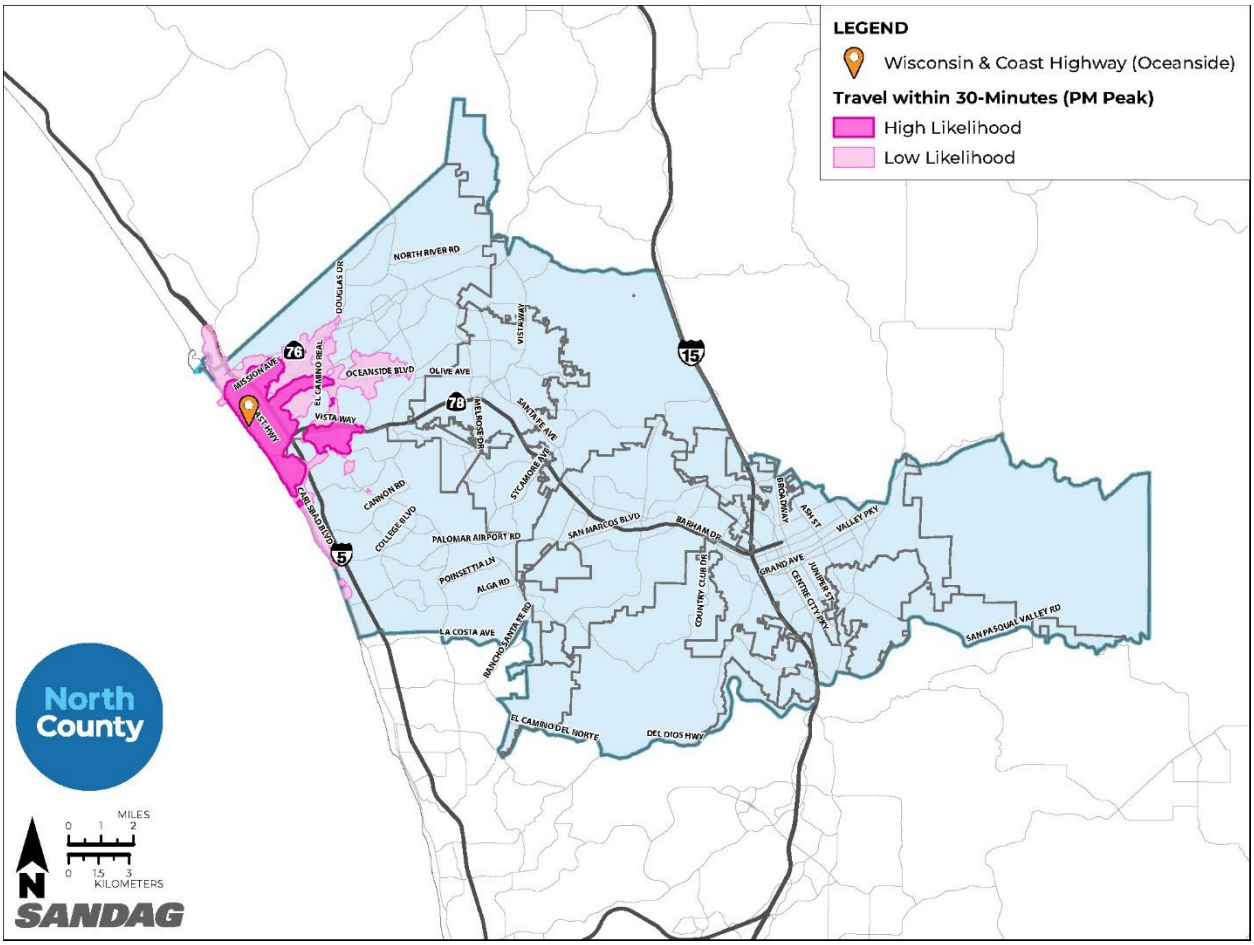

Figure 50: Wisconsin Ave and Coast Highway, 30-Minute Transit/Walk and Auto Travel Sheds at PM Peak

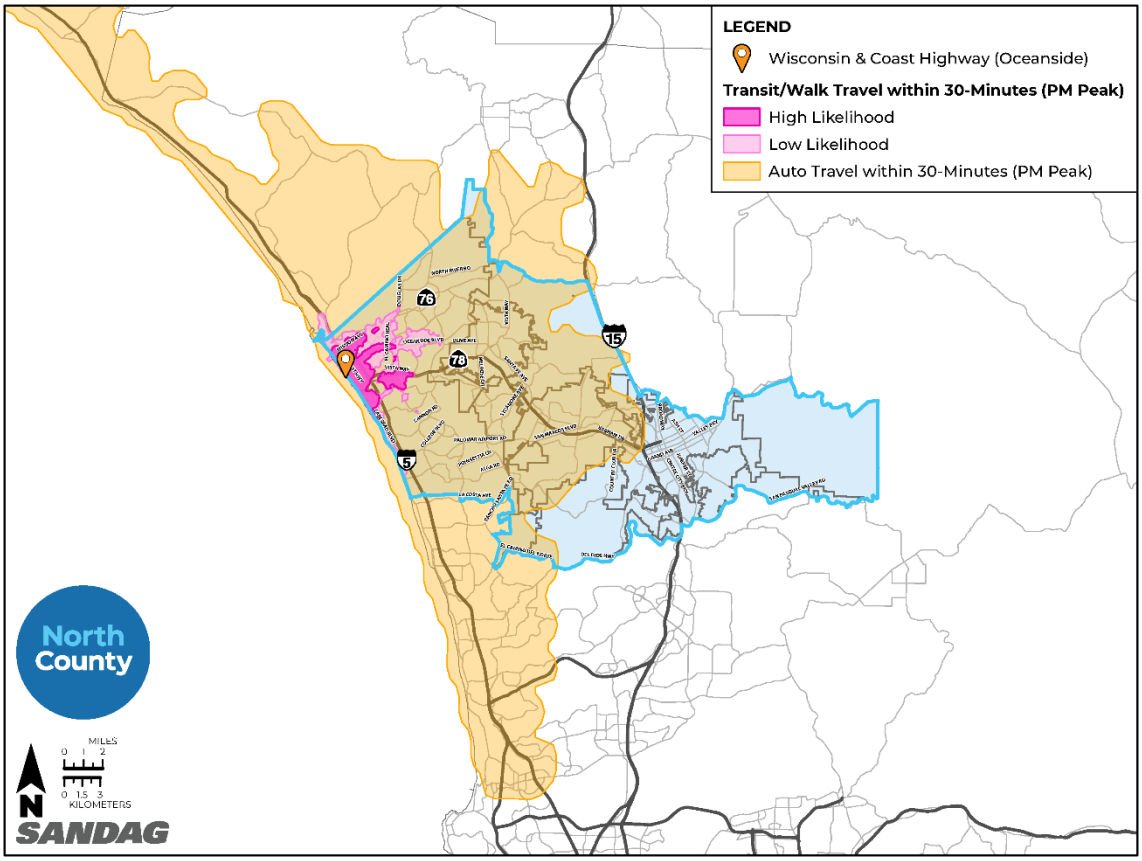

Table 29: Isochrone Summary - Wisconsin Ave and Coast Highway (30-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	1,245	115	171	56
ACS/LEHD Lodes Estimates				
Housing Units[2]	257,365	13,974	26,735	12,761
Jobs[3]	418,174	19,959	32,782	12,823
Low-Income[2]*	64,496	4,206	8,825	4,619
Senior (65+)[2]	106,865	4,116	8,781	4,665
Senior (75+)[2]	45,443	1,692	3,523	1,831
People of Color[2]	333,879	12,680	31,292	18,612
Total Population[2]	745,561	27,906	59,916	32,010
DS39 Estimates[4]				
Housing Units	264,107	17,153	26,312	9,159
Jobs	440,427	19,716	33,132	13,416
Low-Income	224,426	14,364	21,398	7,034
Senior (75+)	45,874	2,406	3,774	1,368
People of Color	345,499	19,763	30,503	10,740
Total Population	761,605	40,435	62,794	22,359

*Notes: *Low-Income ACS data collected at the household level.*
Sources: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).

Figure 51: Wisconsin Ave and Coast Highway, 60-Minute Travel Sheds at PM Peak

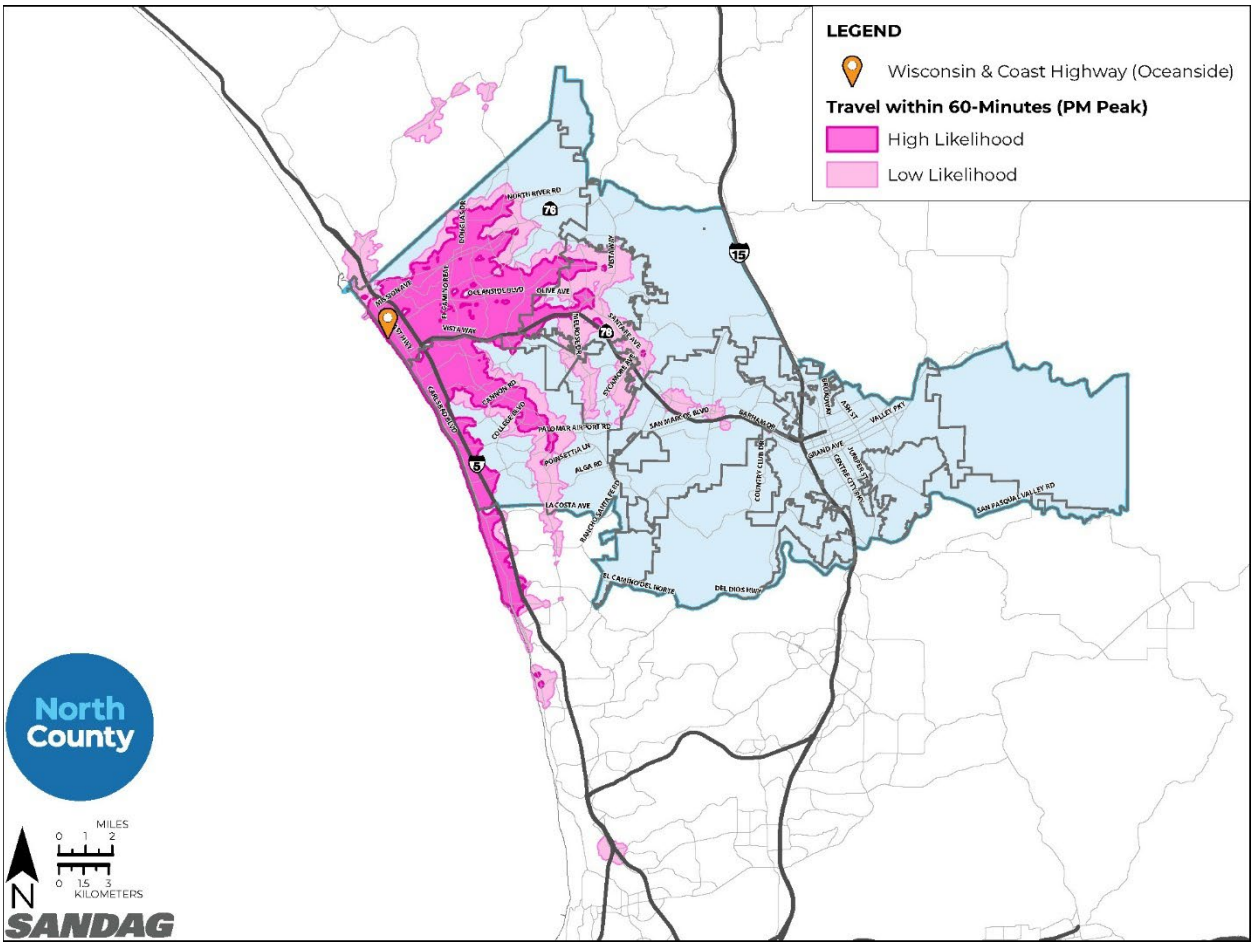

Figure 52: Wisconsin Ave and Coast Highway, 60-Minute Transit/Walk and Auto Travel Sheds at PM Peak

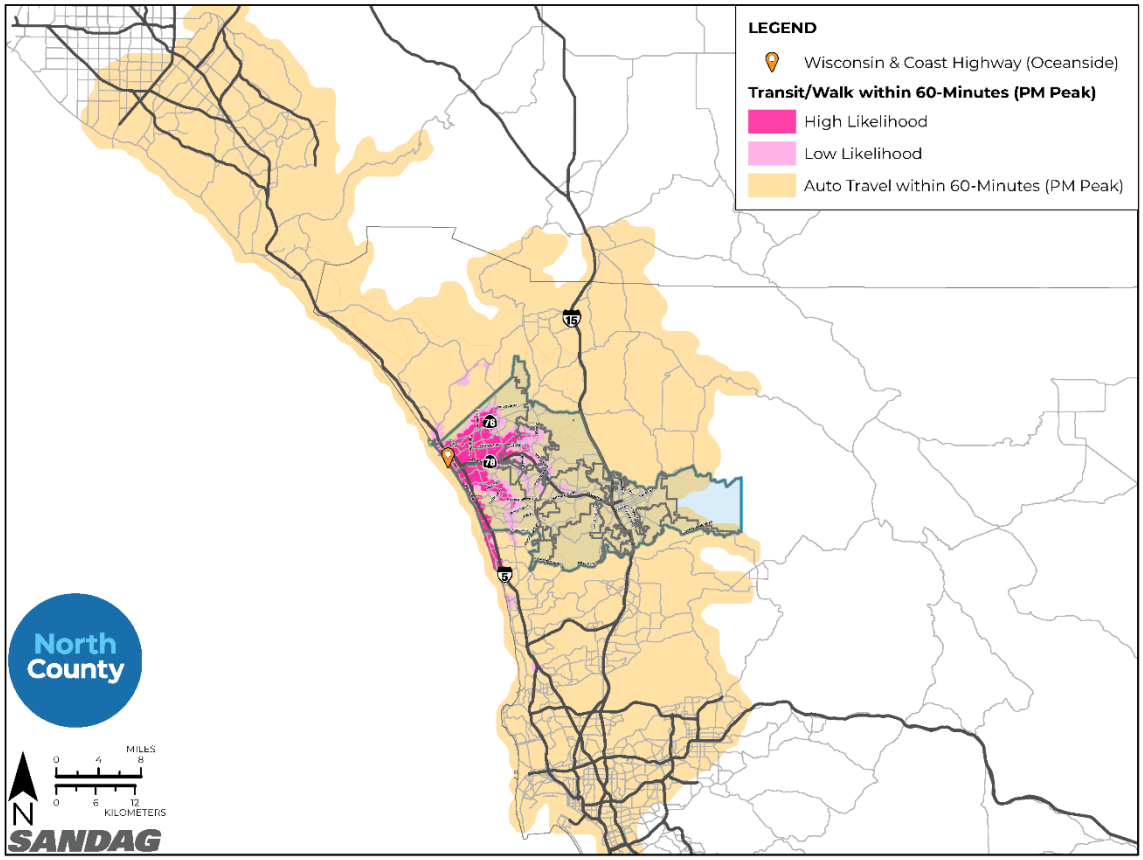

Table 30: Isochrone Summary - Wisconsin Ave and Coast Highway (60-Minute)

Characteristic Within Travel Shed	Auto Isochrone†	High Likelihood Isochrone	Low Likelihood Isochrone	Variation
Destinations[1]	17,340	333	532	199
ACS/LEHD Lodes Estimates				
Housing Units[2]	937,531	69,761	102,305	32,544
Jobs[3]	1,313,603	76,671	151,349	74,678
Low-Income[2]*	266,489	20,209	28,659	8,450
Senior (65+)[2]	367,201	26,392	37,337	10,945
Senior (75+)[2]	158,010	11,324	15,776	4,452
People of Color[2]	1,343,660	86,863	143,389	56,526
Total Population[2]	2,674,198	172,937	270,475	97,538
DS39 Estimates[4]				
Housing Units	951,701	72,042	114,319	42,277
Jobs	1,491,089	87,542	162,827	75,285
Low-Income	848,407	57,762	97,752	39,990
Senior (75+)	157,865	11,801	18,854	7,053
People of Color	1,346,452	88,254	150,894	62,640
Total Population	2,676,478	183,759	303,861	120,102

Notes: †Reach analysis only uses data from the San Diego region, data for auto isochrones extending beyond the region's boundary was not included
**Low-Income ACS data collected at the household level.*
Sources: (1) SANGIS/Places Shapefile (2) American Community Survey (ACS) 2019 5-Year Estimates (3) LEHD LODES Dataset (2018) (4) SANDAG DS39 Forecast Estimates 2016 Baseline (2021).