

Appendix L: Baseline Performance Assessment

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) – Baseline Performance Assessment

Overview

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

The purpose of this document is to summarize the baseline performance generated by the activity-based model (ABM) data provided by SANDAG for the North County CMCP study area. The data was analyzed to identify trends within the study area and will be used as the baseline for evaluation of improvements proposed as part of the North County CMCP.

Multimodal Focus

MODE SHARE: ALL TRIPS

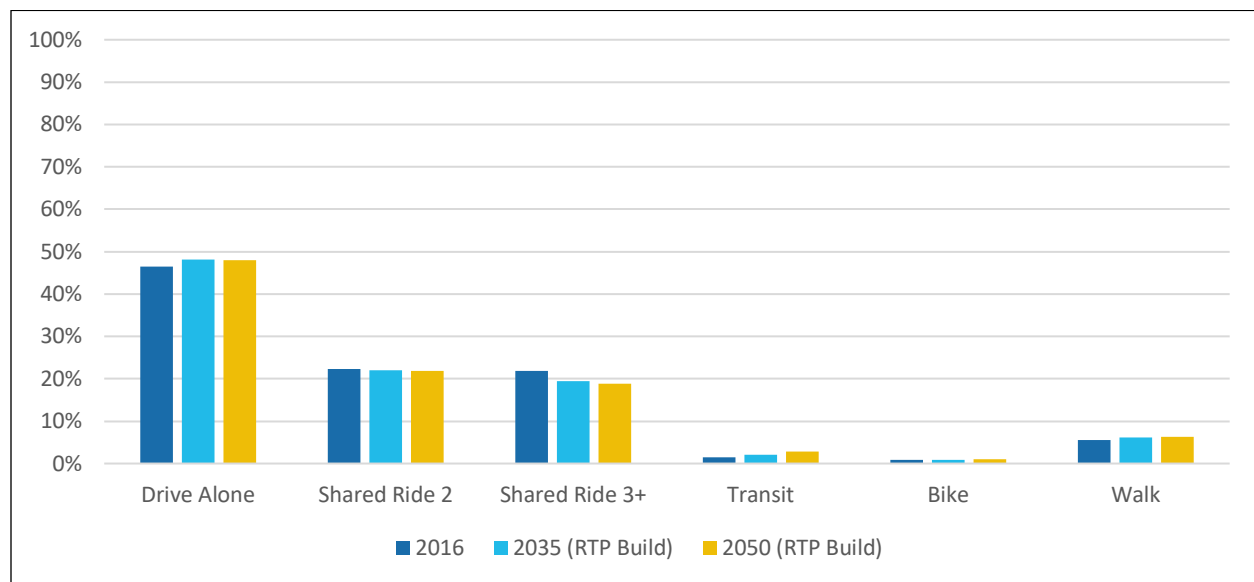
For all trips, people primarily drive alone or with someone else with the existing system:

- About 46% of users drive alone,
- About 44% of users participate in a shared ride of 2 or more (carpool), and
- About 8% of users take transit, bike, or walk.

The mode share does not change drastically with the planned RTP network in 2050.

- About 48% of users drive alone (two percent decrease),
- About 41% of users carpool (three percent decrease), and
- About 10% of users take transit, bike, or walk (two percent increase).

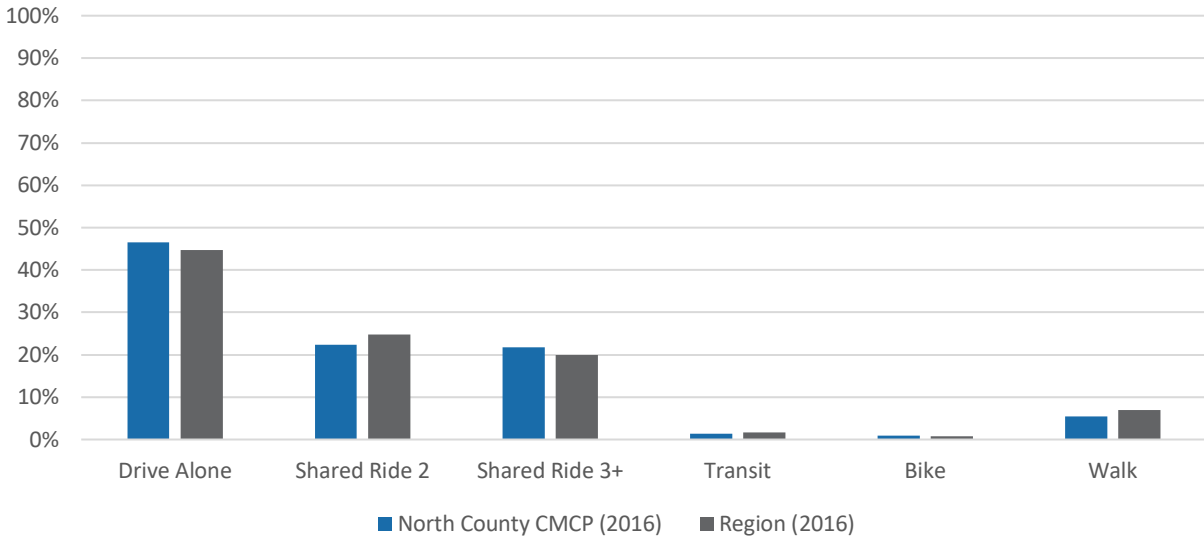
Figure 1: Mode Share for All Trips in North County Study Area by Year



Source: SANDAG Activity Based Model

Compared to the region, the study area’s drive along mode share is higher for both the existing transportation system and the planned RTP network in 2050 while the mode share for alternative modes such as transit, biking, and walking are lower in both cases.

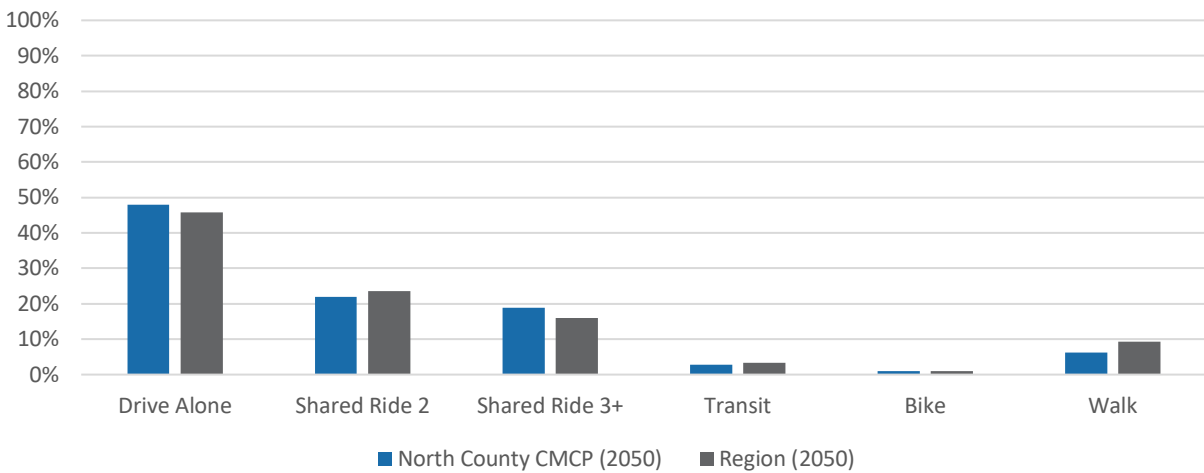
Figure 2: Mode Share of All Trips for the Existing Transit System (North County CMCP vs Region)



Source: SANDAG Activity Based Model

Figure 3: Mode Share of All Trips for the Planned RTP 2050 Network (North County CMCP vs Region)

Mode Share: All Trips (North County vs Region)



Source: SANDAG Activity Based Model

MODE SHARE: COMMUTE TRIPS

People primarily drive alone for their commute and will continue to do so if people are not provided with competitive mobility options that incentivize them to change their current travel behavior.

For commute trips, people primarily drive alone or with someone else with the existing system:

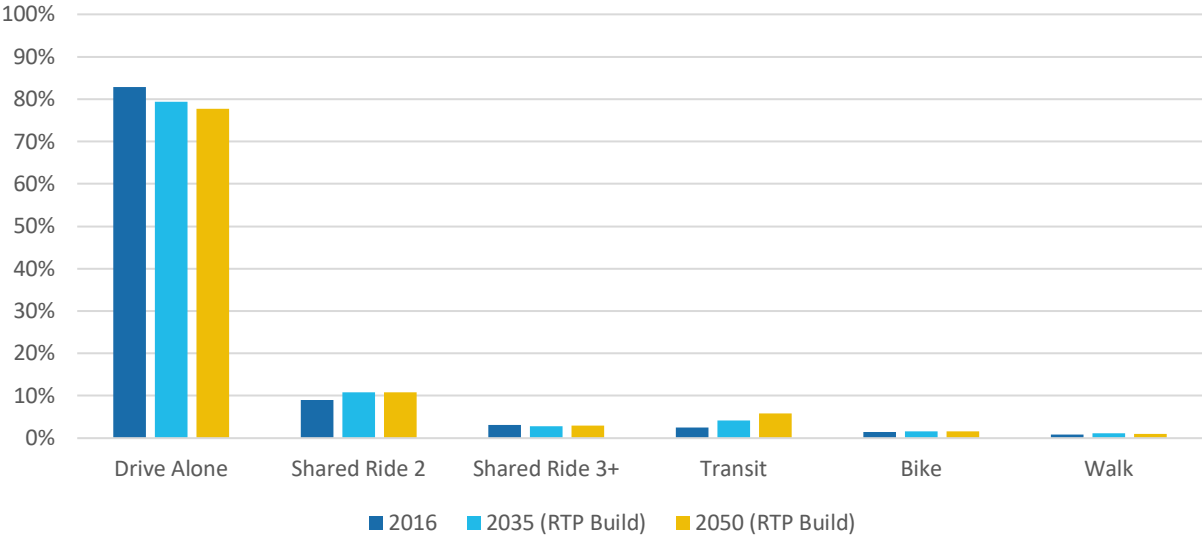
- About 83% of users drive alone,
- About 12% of users carpool; and
- About five percent of users take transit, bike, or walk.

When compared to the mode share of all trips, driving alone represents a larger mode share and carpooling represents a smaller mode share.

The mode share does not change drastically with the planned RTP network in 2050.

- About 78% of users drive alone (five percent decrease),
- About 14% of users carpool (two percent increase), and
- About eight percent of users take transit, bike, or walk (three percent increase).

Figure 4: Mode Share for Commute Trips in North County Study Area by Year



Source: SANDAG Activity Based Model



MODE SHARE: SHORT TRIPS

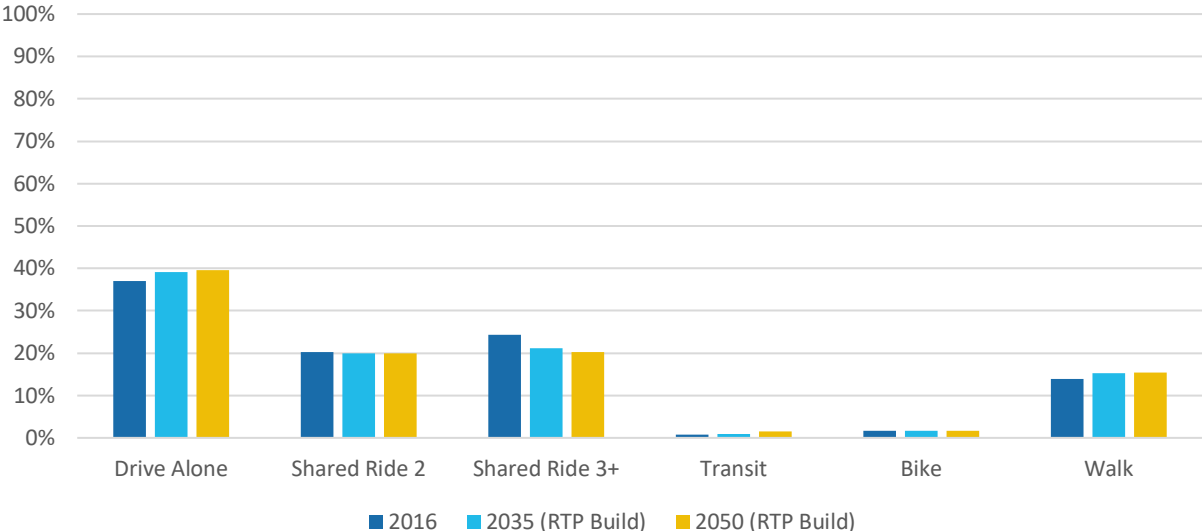
With the existing transportation system, the mode share of short trips (3 miles or less) shows a similar pattern to the mode share of all trips except for there is a higher mode share with walking.

- About 37% of users drive alone,
- About 45% of users carpool, and
- About 16% of users take transit, bike, or walk.

The mode share does not change drastically with the planned RTP network in 2050. There is a slight downward trend in shared rides.

- About 40% of users drive alone (three percent decrease),
- About 40% of users carpool (five percent decrease), and
- About 19% of users take transit, bike, or walk (three percent increase).

Figure 5: Mode Share for Short Trips in North County Study Area by Year



Source: SANDAG Activity Based Model



PERSON TRIPS

Driving is currently the most used mode of travel in North County—often it is the only reasonable option available. Part of the CMCP goals is to give people choices—multimodal choices—especially for short trips. Homes and employment centers have access to streets, there are many in North County without nearby bike lanes/trails, or frequent transit, meaning inconvenient choices to walk, bike, or take transit.

For all trips, the existing system currently experiences about 3.1 million person trips. Of the existing person trips for the system:

- About 10% of person trips are commute trips
- About 40% of person trips are short trips

About 23% of person trips in the region are associated with the transportation system in the North County study area.

Economic Development and Goods Movement

ACCESS TO TIER 1 EMPLOYMENT CENTER

With the existing transportation system, a limited portion of the study area population can access a tier 1 employment center within 45 minutes or less.

- About 0% of the population can access within 30 minutes
- About 1% of the population can access within 45 minutes

There is no change when looking at the planned RTP network in 2050.

ACCESS TO TIER 2 EMPLOYMENT CENTER

With the existing transportation system, about one-third of the study area population can access a tier 2 employment center in 30 minutes and about half can access a tier 2 employment center in 45 minutes.

When looking at the planned RTP network in 2050, there is an increase in the percentage of people who can access a tier 2 employment center within 30 minutes and 45 minutes.

- 7% increase in the study area population who can access a tier 2 employment center in 30 minutes
- 14% increase in the study area population who can access a tier 2 employment center in 45 minutes

ACCESS TO HIGHER EDUCATION

With the existing transportation system, one-fifth of the population can access higher education in 30 minutes and about half of the population can access higher education in 45 minutes.

When looking at the planned RTP network in 2050, there is an increase in the percentage of people who can access a tier 2 employment center within 30 minutes and 45 minutes.

- 8% increase in the study area population who can access higher education in 30 minutes
- 18% increase in the study area population who can access higher education in 45 minutes

FREIGHT VEHICLE HOURS OF DELAY

With the existing transportation system, freight experiences a vehicle hours of delay (VHD) of:

- About 7,115 hours all day
- About 2,896 hours during the peak periods

About 90% of the VHD is being experienced on the local roadway network.

About 36% of the all day VHD for freights in the region is contained in the North County study area.

With the planned RTP Network in 2050, the VHD:

- Increases by about 19% for all day
- Increases by about 17% for peak periods
- Decreases by about 5% from local roadway network to highway

System Operations and Congestion Relief

VEHICLE HOURS OF DELAY

The existing transportation network in the study area creates a daily vehicle hours of delay (VHD) of about 117,800 in total for all vehicle classes. This increases by 20% in 2050 based on the RTP transportation network planned for North County.

About 22% of regional VHD is experienced by the existing system in the study area. This slightly decreases by less than 1% in 2050.

The daily VHD per capita is about 10 minutes for the existing system in the study area. This increases by about 1 minute in 2050.

>>Graphic Note: Insert Performance Dashboard

Low-Income and Social Equity Focus Community

PERCENT OF POPULATION IN PROXIMITY TO HIGH FREQUENCY TRANSIT

Percent of population in proximity to high frequency transit means the percentage of the population within a half-mile of a stop that serves a transit route with a frequency of 15 minutes or less.

About 12% of the study area population is within a half-mile of an existing high frequency transit stop. This is about 20% less than the region.

The percent of population in proximity to a high frequency transit stop increase in 2050 with the planned RTP network. About 44% of the study area population is within a half-mile of a high frequency transit stop with the planned RTP network in 2050. This is about 12% less than the region.

Reduce GHG and VMT

VMT

With the existing transportation system, the North County area sees a daily VMT of 14,891,589. North County contributes about 18% towards the region's daily VMT of 84,488,451. With the 2050 RTP transportation network, the daily VMT increases by 2,376,333 or 16 percent.

For the existing transportation network, the estimated VMT per resident is about 19.45, while the estimated VMT per employee is about 26.28. This is comparable to the VMT per resident (19.0) and employee (27.2) identified for the region. Most areas of North County fall within 100% to 125% of the regional mean.

GREENHOUSE GASES

Transportation is a large (if not the largest) source of greenhouse gas (GHG) emissions in the region, most notably due to the use of private automobiles. Under SB 375, the San Diego region must reduce GHG emissions by 19% per capita by 2035 compared with 2005 emissions.

Active Transportation and Micromobility

BICYCLE AND PEDESTRIAN MILES TRAVELED

The existing active transportation network in North County study area sees a daily miles traveled of about 1,381,651 miles. About 79% of this is traveled by foot while about 21% is traveled by bike.

The planned RTP active transportation network in 2050 sees a daily miles traveled of about 2,346,346 miles. There is no real change in the percentage by foot or by bike.

Improve Jobs-Housing Balance

POPULATION IN MULTIFAMILY RESIDENCES IN PROXIMITY TO A TRANSIT STOP

The population in multifamily residences in proximity to high frequency transit means the percentage and number of the population in multifamily residences within a quarter-mile of a transit stop.

About 161,295 people in multifamily residences (about 78%) are within a quarter-mile of a transit stop. This is about 3% less when looking at the region. About 80% of the region's population in multifamily residences (about 884,648 people) are within quarter-mile of a transit stop

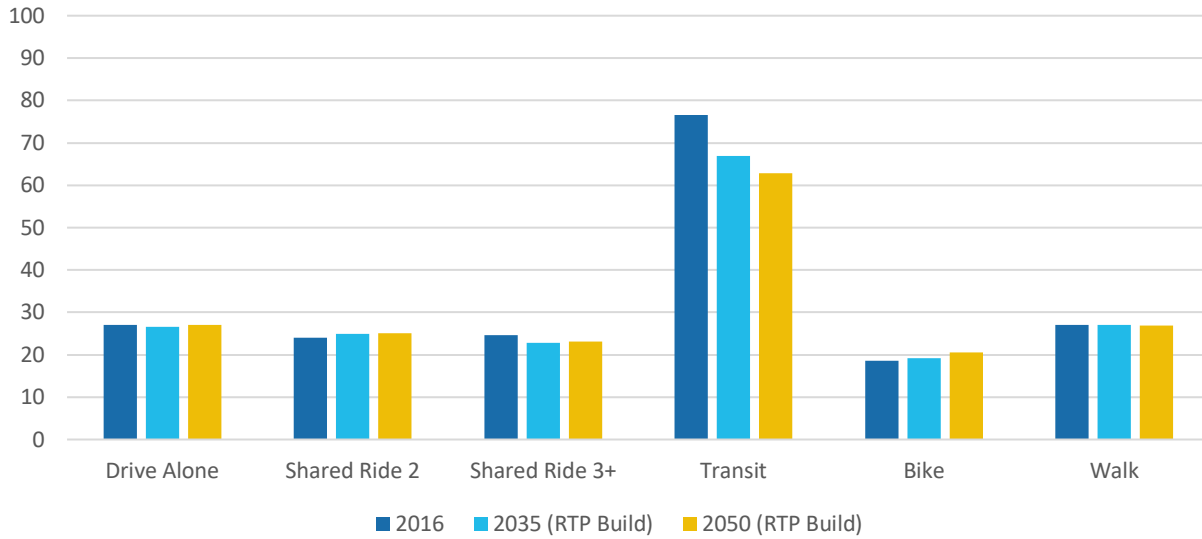
In 2050, there is only about a 1% increase of the study area's population in multifamily residences that are within a quarter-mile of a transit stop.

AVERAGE PEAK PERIOD COMMUTE TIME TO WORK

On average, with the existing transportation network in the North County study area, transit takes about 2.5 times longer to commute to work during peak period. On average, it takes about an hour and 15 minutes for person taking transit to commute to work while it takes a little less than 30 minutes for person driving alone.

In 2050, with the planned RTP network, the average peak period commute time to work decreases for most modes. Transit sees the largest decrease of about 14 minutes followed by shared ride of 3 or more people by 2 minutes.

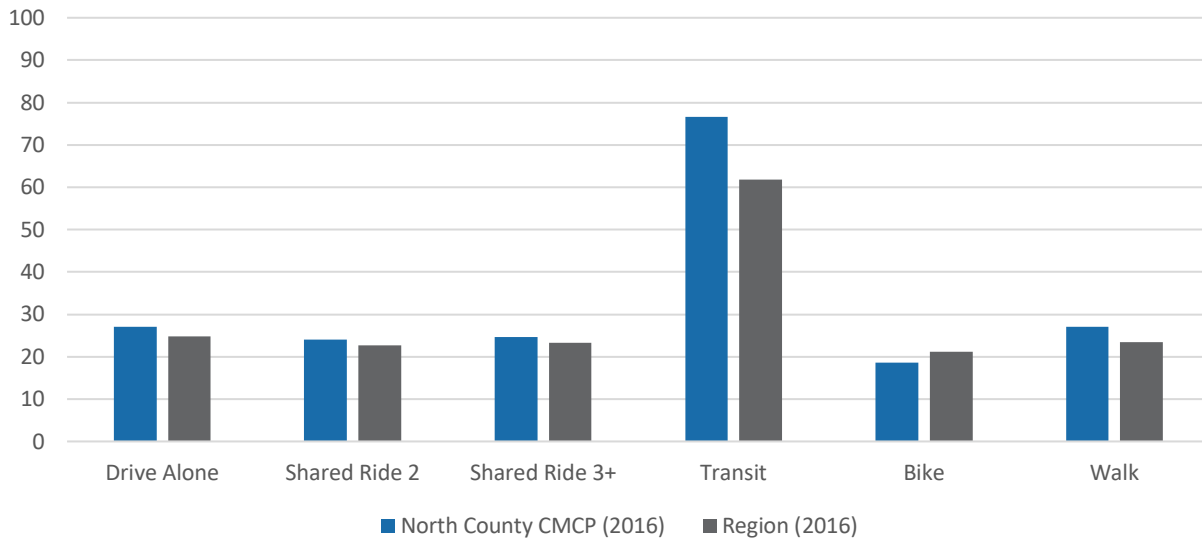
Figure 6: Average Peak Period Commute Time to Work for North County Study Area



Source: SANDAG Activity Based Model

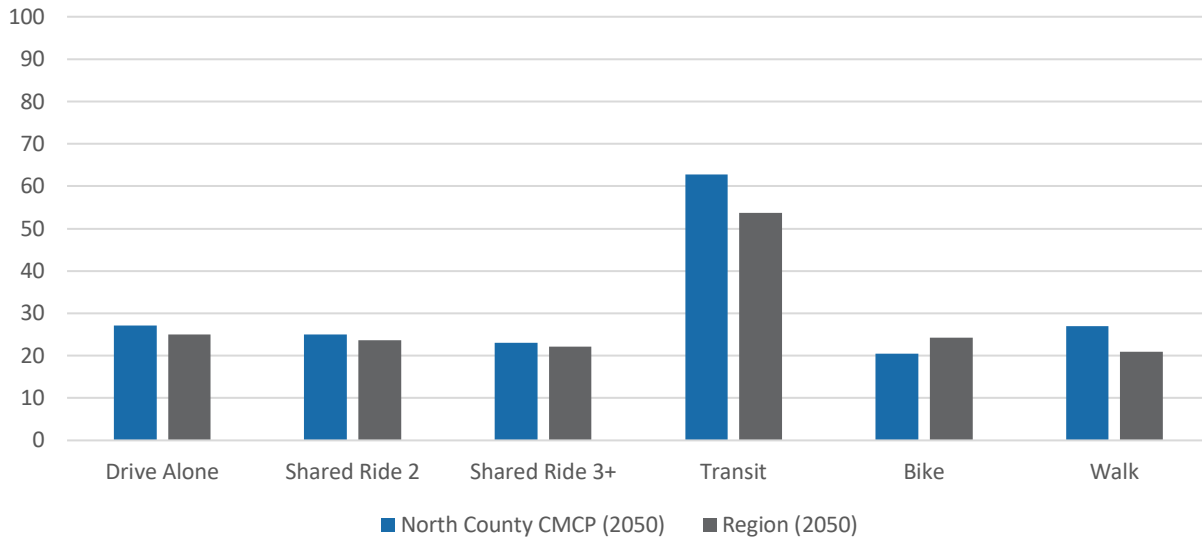
All modes with the exception of biking have a higher average commute time than the region for both the existing system and in 2050 with the planned RTP network.

Figure 7: Average Peak Period Commute Time to Work (in Minutes) for the Existing Transportation Network (North County CMCP vs Region)



Source: SANDAG Activity Based Model

Figure 8: Average Peak Period Commute Time to Work (in Minutes) for the Planned RTP Network in 2050 (North County CMCP vs Region)



Source: SANDAG Activity Based Model

Increase Supply of Affordable Housing

MULTIFAMILY HOUSING UNITS IN PROXIMITY TO HIGH FREQUENCY TRANSIT

About 16,391 multifamily housing units in the study area (about 23%) is within a half-mile of the existing high frequency transit network. This increases by about 53% in 2050 with the planned RTP network.

About 78,977 multifamily housing units (about 78%) is within a half-mile of the planned high frequency transit network.