

Transit

The previous section demonstrates that the demand for transportation has steadily grown at a rate that far outpaces population growth. Furthermore, model forecasts indicate that this extraordinary growth rate will continue. Public transportation services will need to grow, as well, over this planning period for a few important reasons. First, public transportation services such as fixed-route (e.g., regular public bus transit) and demand responsive (e.g., door-to-door van service for the elderly and disabled) are often the only opportunity many people have to make a trip. These people often don't have access to a private vehicle or are unable to drive vehicles for a variety of reasons. In fact, an adopted goal of the long-range plan is to implement a "convenient, accessible, and affordable public transportation system, provided by public and private operators, that enhances mobility and economic development."

Second, public transportation offers an alternative to single-occupancy vehicle trips that contribute significantly to highway congestion and pollution emissions. The current and proposed bus, shuttle and express bus routes run prominently through the most-traveled, most-congested corridors in the MPO, as identified in the AADT and deficiency map analysis in the highway section of this report. This transit service can help to alleviate the congestion in those areas.

Thus, highways are not the only element of the transportation infrastructure that will need significant investment in the next few decades to meet the forecasted strong demand for transportation. Public transportation will need substantial investment, as well. Indeed, this investment is already occurring. The most important service level measurements for the three principal transit systems in the DCHC MPO (i.e., Chapel Hill Transit; Durham Area Transit Authority [DATA]; and, Triangle Transit Authority [TTA]) have grown substantially over the last several years. Between 1996 and 2002, the vehicle and passenger miles, and commitment to operating expenses for all three systems together have expanded from one-half to three-quarters during an eight-year period. These increases translate into exceptional annual growth rates of seven percent to ten percent -- the population growth rate is approximately 1.4 percent. Similarly, the service area for Chapel Hill Transit and DATA increased by one-quarter.

The following section provides a profile for each of the three major public transportation systems in the MPO area.

Chapel Hill Transit (CHT)

Chapel Hill Transit (CHT) provides public transportation service throughout the Chapel Hill, Carrboro, and University of North Carolina areas. CHT, established in 1974, is a municipal department within the Town of Chapel Hill, and is a partnership between the Town of Chapel Hill and Carrboro, each of which has an advisory board to provide operations, funding and service recommendations. The CHT service area is 25 square miles, containing a population of over 59,000 persons. The fixed-route (i.e., schedule buses on regular routes) and demand response (i.e., wheelchair van service for persons with disabilities) provide approximately 17,000 and 200 trips each weekday, respectively, operating about 83 fixed-route vehicles and eleven lift-equipped vans. The total annual budget is \$11 million.

The fixed-route service became fare-free in January 2002, resulting in a substantial increase in ridership. It is a basic radial system in which the Columbia Street/Franklin Street intersection acts as the system center. The fixed-route vehicles can carry wheelchair clients and bicycles. EZ Rider provides demand-responsive service for the area's elderly and disabled who cannot use the regular fixed-route bus service. In addition, CHT provides: service to nine park-and-ride lots; a late evening "safe ride routes" service for UNC; a Tarheel service for special university sporting events; and, the Shared Ride Feeder, which provides service between designated service zones and transfer points to fixed route bus service.

CHT services have grown substantially in the last several years. From 1996 to 2002, the square mileage of the service area has increased from 20 to 25 miles, and the number of passenger miles, vehicle revenue

miles, and passenger trips have all increased at a brisk five percent to eight percent annual rate. Spurred by fare-free service, the current (i.e., 2004) fixed-route daily ridership, 17,000 unlinked trips, represents a 65 percent increase from 1996.

Durham Area Transit Authority (DATA)

The City of Durham assumed the operation of the local bus system in 1991, naming it Durham Area Transit Authority (DATA). DATA is not a legal authority that is separate from the City of Durham, and the DATA board is effectively a policy body. The DATA service area is 93 square miles, containing a population of 179,000 persons. The fixed-route (i.e., schedule buses on regular routes) and demand response (i.e., wheelchair van service for persons with disabilities) provide approximately 12,000 and 500 trips each weekday, respectively, operating about 35 vehicles for each service during the peak service hours. The total annual operating expense is \$8.5 million.

DATA contracts for the provision of its fixed route service and paratransit service every five years. ACCESS is a special van service that is available to persons who are certified as eligible for ADA (Americans with Disabilities Act) paratransit service, and is operated in the same service area as the fixed-route service. Each fixed-route bus is capable of carrying up to two wheelchairs customers and two bicycles. The fixed-route system is a basic radial system ("hub and spoke"), and all the buses converge on the downtown transfer station on the half hour to accommodate passenger transfers to other bus routes.

DATA services have grown substantially in the last several years. From 1996 to 2002, the square mileage of the service area has increased from 74 to 93 miles, and the number of passenger miles, vehicle revenue miles, and passenger trips have all increased at a five percent to nine percent annual rate.

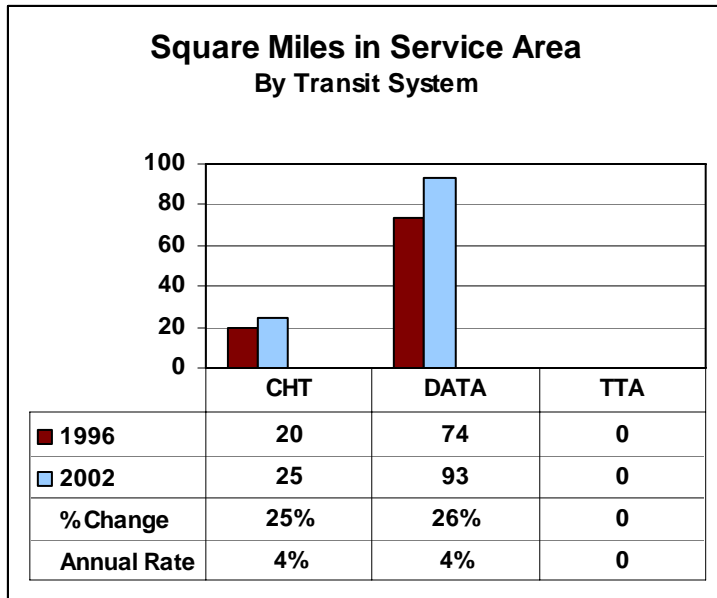
Triangle Transit Authority (TTA)

The 1989 Session of the North Carolina General Assembly enabled the creation of the Triangle Transit Authority as a regional public transportation authority serving Durham, Orange and Wake Counties. This regional service is to coordinate with the existing urban transit providers in the Triangle region (i.e., CATS, DATA, CHT and C-Tran) by providing transit services between the different municipalities and employment centers and administering region-wide programs such as vanpools. TTA services include:

- a regional bus line with connector shuttles;
- vanpool service bringing commuters into the major work centers;
- rideshare matching service; and,
- in the future, a regional rail system that will link Durham, Raleigh, Cary, the RTP, and other municipalities and employment centers together.

TTA is a legal authority, and is governed by a thirteen member Board of Trustees. Ten members are appointed by the region's principal municipalities and counties and three members are appointed by the North Carolina Secretary of Transportation.

TTA financing is somewhat different than the traditional urban service provider that uses State and federal grants, local government revenues, and fares to pay for services. In 1991, the North Carolina General Assembly, subject to County approvals, authorized the TTA to levy a vehicle registration tax of up to \$5 per registration. This tag tax finances the regional bus operations, ridesharing program and planning program. In 1997, the General Assembly, subject to County approvals, authorized the TTA to levy a rental vehicle tax of up to five percent of gross receipts. This tax, effective in 1998, will finance the first phase of the Regional Transit Plan.



* Relevant service area data is not available for TTA

Figure 16

mostly run from four percent to six percent, it might be helpful to note that the annual population growth rate in the MPO area is 1.4 percent.

In terms of square miles and population, the service areas of Chapel Hill Transit (CHT) and the Durham Area Transit Authority (DATA) are rapidly expanding. This service area growth is an indication of the growing population in the area, and specific efforts to make transit services available to a larger portion of the community.

Indicators of the amount of service provided have increased steadily over the last several years for all three transit systems. Perhaps the most remarkable figure is the 138 percent increase in TTA passenger trips from 1996 to 2002. Although TTA provides only one-third to one-fourth of the passenger trips compared to CHT and DATA, respectively, the total TTA passenger miles exceeds the other two systems by almost 50 percent. This relatively high passenger mile statistics makes sense given the relatively longer trips and routes inherent in TTA's regional service.

The TTA service area is 1,525 square miles, containing a population of 1,002,876 persons. The fixed-route service (i.e., schedule buses on regular routes) provides approximately 2,722 trips each weekday, operating about 32 vehicles during the peak service hours. There are about 50 vanpool vehicles in use, as well. The total annual operating expense is \$5.5 million.

TTA services have grown substantially in the last several years. From 1996 to 2002, the number of passenger miles, vehicle revenue miles, and passenger trips have all increased at a seven percent to sixteen percent annual rate.

This next section is a series of six charts, Figure 16 through Figure 21, depicting the growth in service levels for the three transit systems from 1996 to 2002. While reviewing the annual growth rates, which

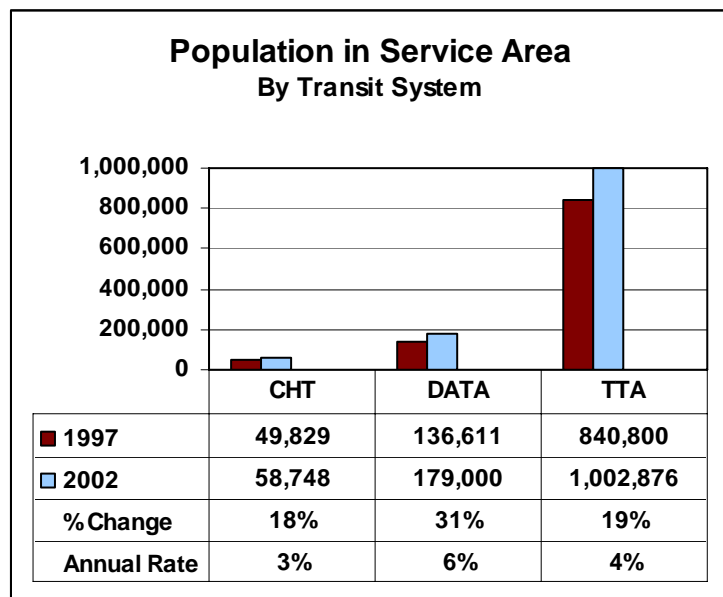


Figure 17

Figure 18

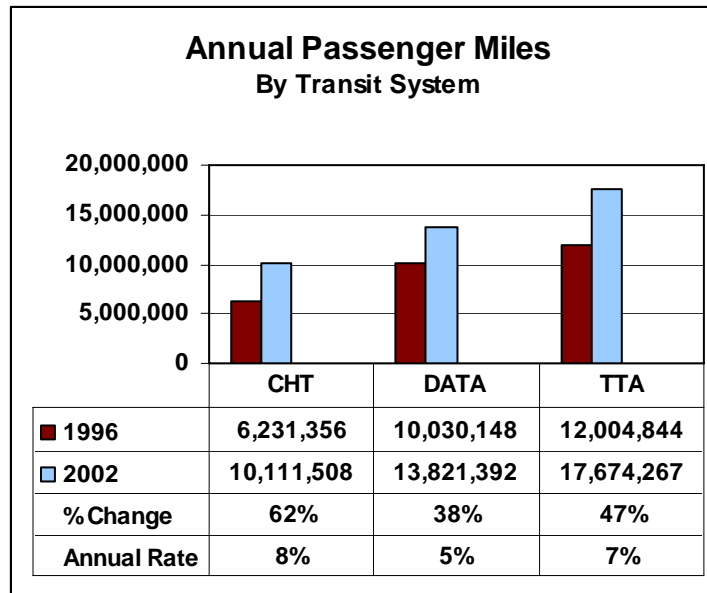
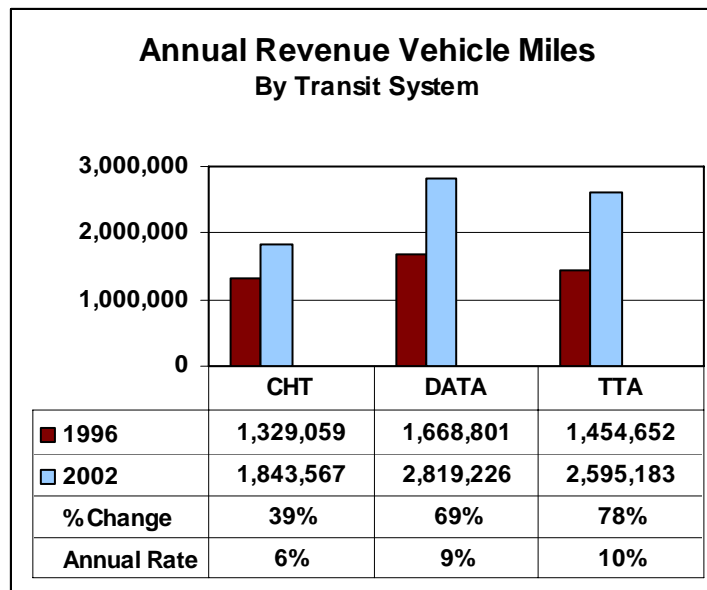


Figure 19



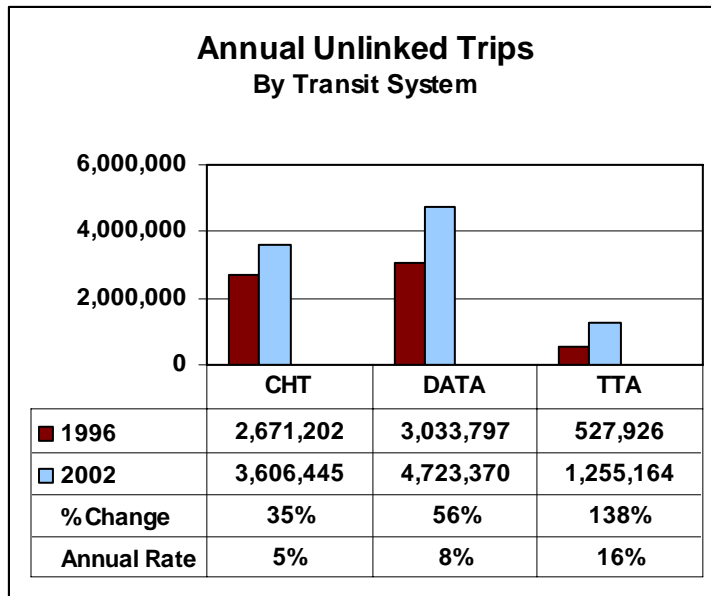
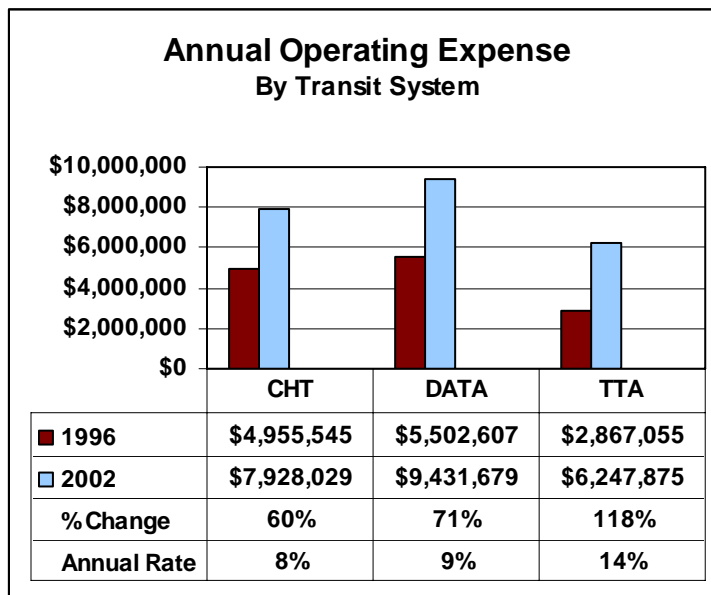


Figure 20

The fast growth in operating expenses points to a commitment by area communities to invest in public transportation services.

Figure 21



Fixed Guideway

The two fixed guideway projects, i.e., TTA Rail and US 15-501 corridor, provide an alternative to single-occupancy vehicles in the I-40 and NC 147 corridors in the RTP, and the US 15-501 corridor between the City of Durham and Town of Chapel Hill. Based on the AADT and deficiency map analysis presented in the highway section of this report, these are three of the most-traveled and most-congested corridors in the region. Fixed Guideway directly supports many of the principal goals of the long-range plan that have already been discussed, such as the implementation of an effective, multimodal, accessible transportation system. In addition, fixed guideway

systems support the following specific goals and objectives:

- “Integrates local land use plans and development policies;”
- “Identifies and recommends land use patterns and development policies that increase overall mobility and that support compact, mixed-use, transit-friendly, walkable development;” and
- “Identifies and recommends land use patterns that improve and support transportation efficiency.”

TTA Rail stations, for example, encourage the placement of dense, mixed-use developments adjacent to and near the stations, thus supporting regional efforts to encourage more compact forms of development. Compact, mixed-use development plans have already been submitted for the Triangle Metro Center station, and a large residential apartment complex is almost complete near the Ninth Street station.

TDM, TSM and ITS

Besides building highways, implementing transit services and routes, and building fixed guideway systems, there are three other effective and efficient project types to address growing transportation demand and congestion. These project types are characterized by relatively low costs and favorable impacts on air quality, making them attractive alternatives to costly road widening and new road alignment. These project types include:

Transportation Demand Management (TDM)

TDM basically eases the demand on the highway system through low-cost strategies that make more efficient use of existing transportation facilities. A few TDM examples include rideshare programs and flexible and staggered work hours. TDM programs are especially supportive of the plan goals to “reduce congestion and increase efficiency” because the programs target the congested peak travel hours and larger employer sites.

Transportation System Management (TSM)

TSM intends to make the existing transportation system function more efficiently. A few TSM examples include the dynamic synchronization of traffic signals and the addition of lanes at key intersections. TSM programs are especially supportive of the plan goals to “reduce congestion and increase efficiency” because the programs target the highest volume and most-congested intersections and corridors in the transportation system.

Intelligent Transportation Systems (ITS)

Examples of ITS solutions include an integrated traffic control system in the busiest highway corridors and automated vehicle locator (AVL) technology for transit buses. Like TSM, ITS projects will be implemented in the highest volume, most congested highway corridors and transit routes.

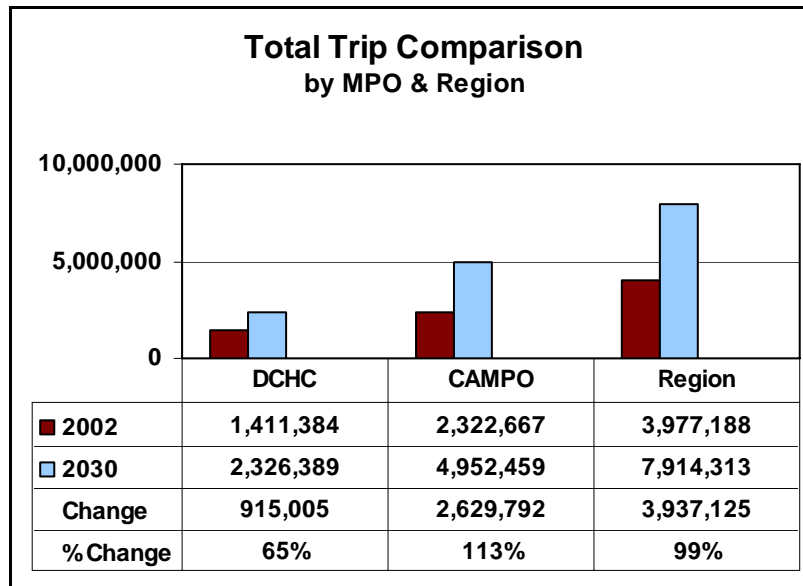
Performance Measures

As discussed in a previous section of this report, the 2030 LRTP is an update to the existing 2025 LRTP. The development process of the 2030 LRTP did not include a phase to select a preferred option by analyzing dozens of varied options, instead, the 2030 LRTP included the projects from the 2025 LRTP with some adjustments to account for updated financial and project implementation information.

Nonetheless, the set of projects in the 2030 LRTP still needed to be analyzed using a set of performance measures that indicate the level of effectiveness and efficiency resulting from project implementation. This section reviews the principal 2030 LRTP performance measures for the years 2002 (base year) and 2030. While reviewing the performance measures, remember that the figures for the Region include areas outside of the DCHC and CAMPO MPOs that were part of the transportation model area, and thus are greater than the sum of the two MPOs.

Total Trips -- Figure 22 shows the total number of trips made in DCHC, CAMPO and the region are all increasing significantly from 2002 to 2030. The rate of increase of CAMPO (113 percent) is greater than in DCHC (65 percent) primarily due to the greater population and employment growth in CAMPO.

Figure 22



Total Travel Distance and Time -- Figure 23 and Figure 24 illustrate that vehicle miles of travel and vehicle hours of travel in DCHC, CAMPO, and the region are projected to increase significantly at rates ranging from 75 percent to 134 percent. The growth rates of travel miles and travel hours is greater than the projected increases in population, employment and trips, indicating that people will not only make more trips, but they will travel greater distances and spend more time traveling, as well.

Figure 23

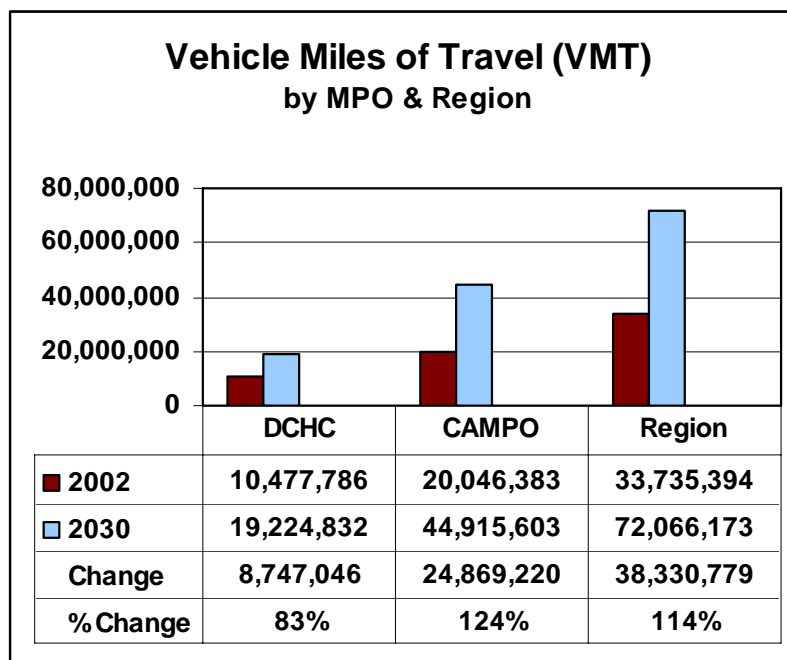
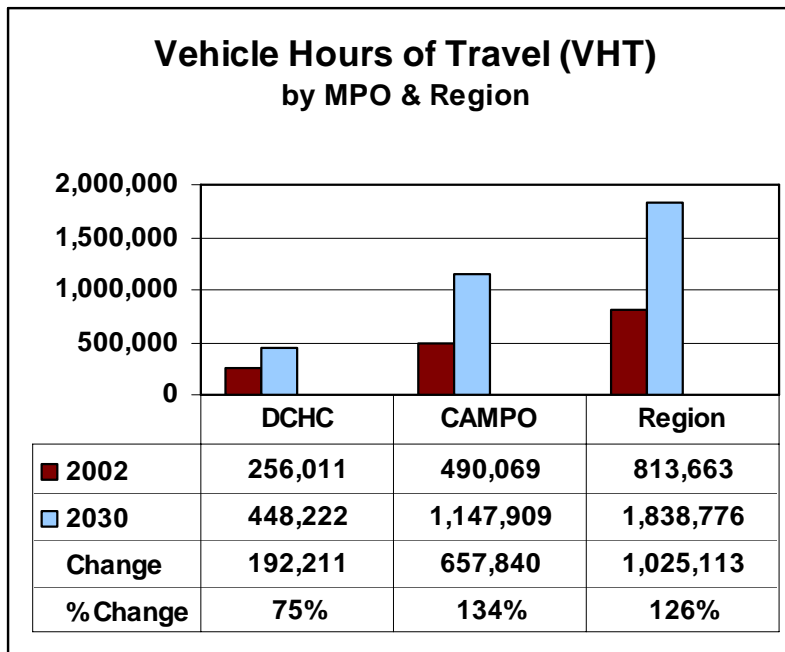
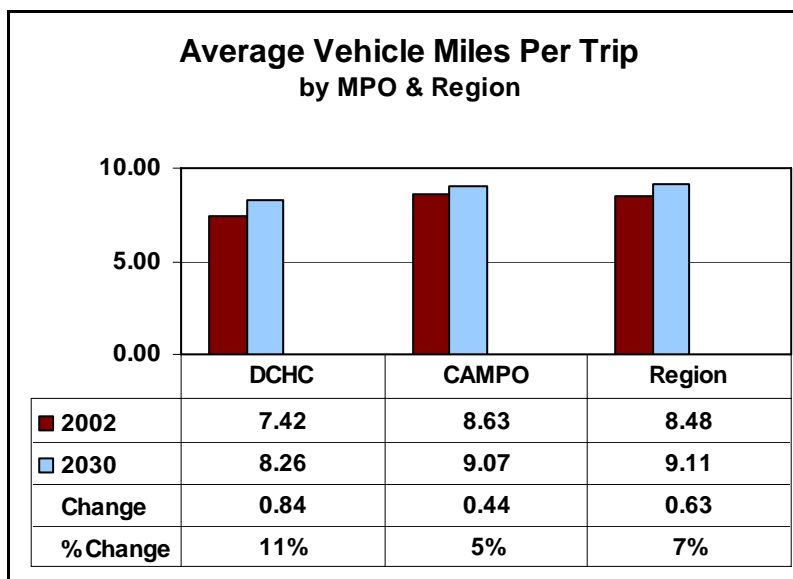


Figure 24



Trip Distance and Time -- Figure 25 and Figure 26 show that the average trip distance and time will moderately increase at rates ranging from five percent to thirteen percent. Although DCHC residents will see a greater increase in the distance of their trip than residents in CAMPO, they will see less of an increase in their travel time.

Figure 25



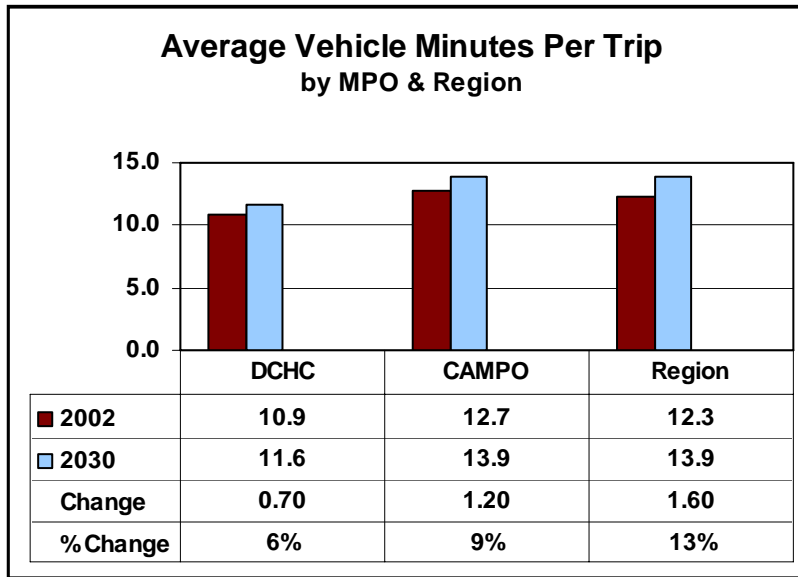


Figure 26

Mode Share -- Figures 27 through 29 show the mode share for DCHC, CAMPO and the region for 2002 and 2030. The figures indicate that driving alone will continue to be the most popular mode of transportation and will actually increase, mostly to the detriment of the carpool mode. Although only 2.1 percent, or less, of trips are transit in 2002, that percentage will increase in 2030.

Be aware that carpool trips include much more than formal carpools that employees might organize for

commuting purposes. Carpool trips include any automobile trip in which there is at least one occupant besides the driver, such as trips to take children to school or trips in which family members or friends ride together to go shopping or engage in recreational activities.

Figure 27

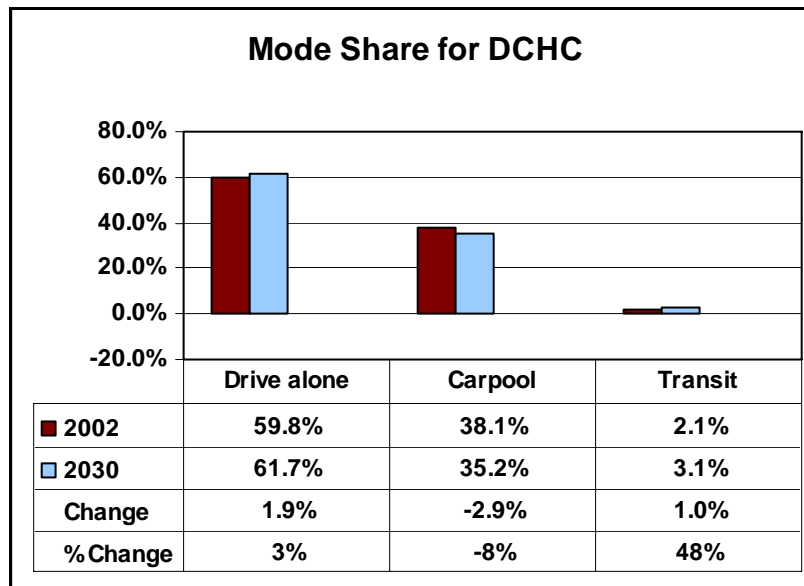


Figure 28

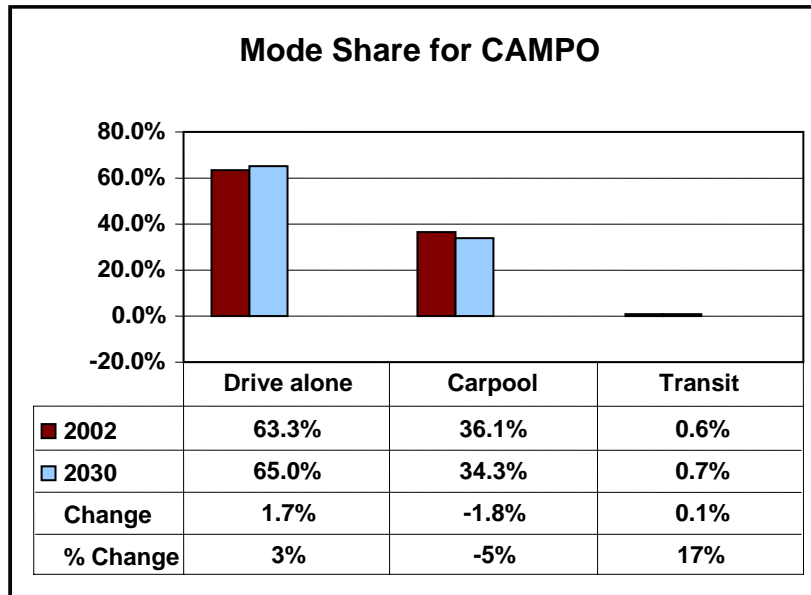
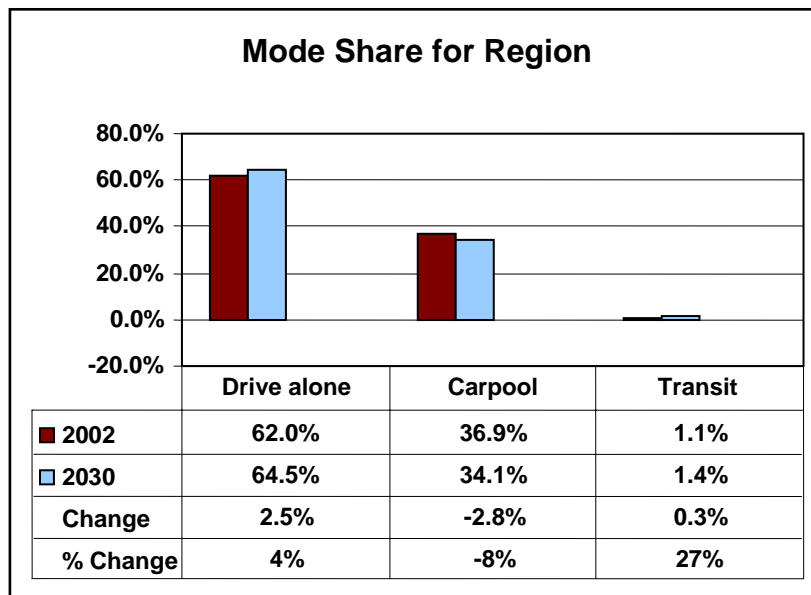


Figure 29



Congestion -- Figure 30 indicates the total percent of the vehicle miles in congestion on the road network analyzed in the transportation model will almost double in the DCHC MPO from 4.5% in 2002 to 8.5% in 2030, and that congestion is generally worse in the CAMPO area. Freeway congestion is currently greater than that on the general road system in the DCHC MPO, and will continue to be so in future. Figure 31 shows freeway congestion at 5.9% and 10.0% in 2002 and 2030, respectively, for the DCHC MPO. The current percentage of freeway miles traveled in congestion in the CAMPO area is significantly lower than in the DCHC area. This is due in part to recent construction and the underutilization, at the time of data collection, of the new I-540 roadway and to the fact that there are fewer freeway miles in DCHC but these freeways carry much of the traffic in the area.

Figure 30

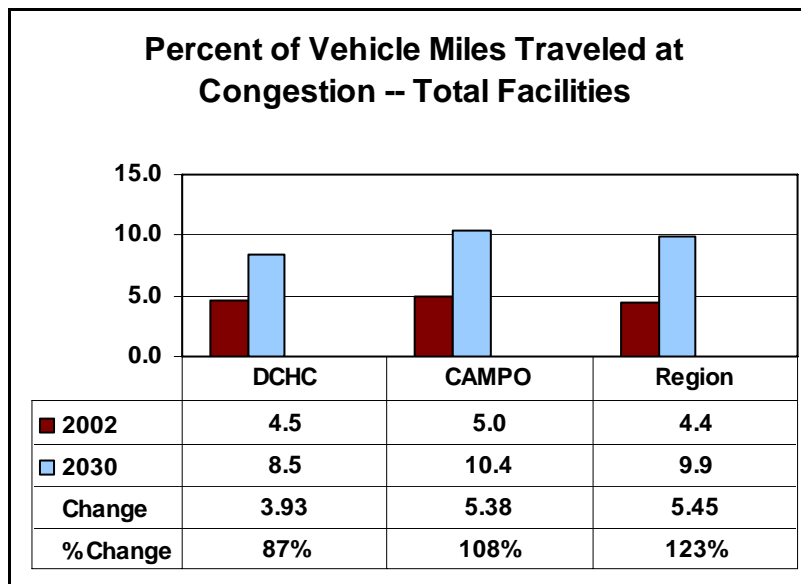
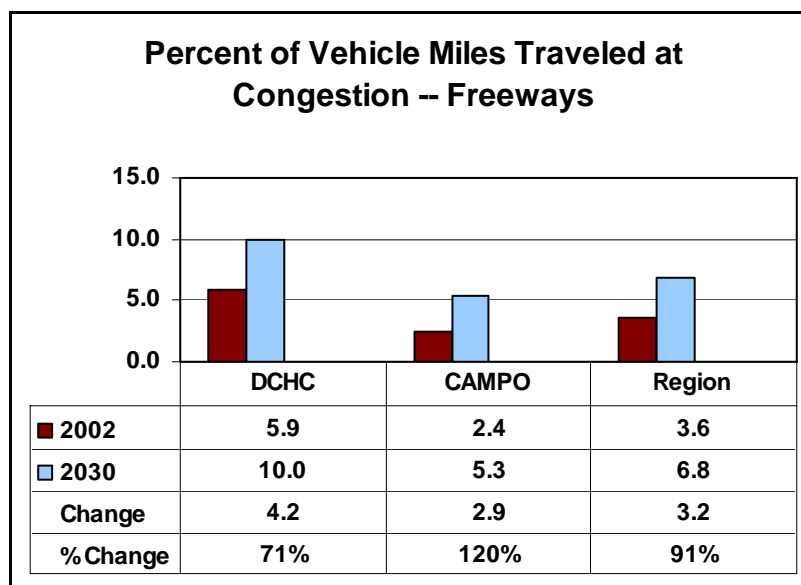


Figure 31



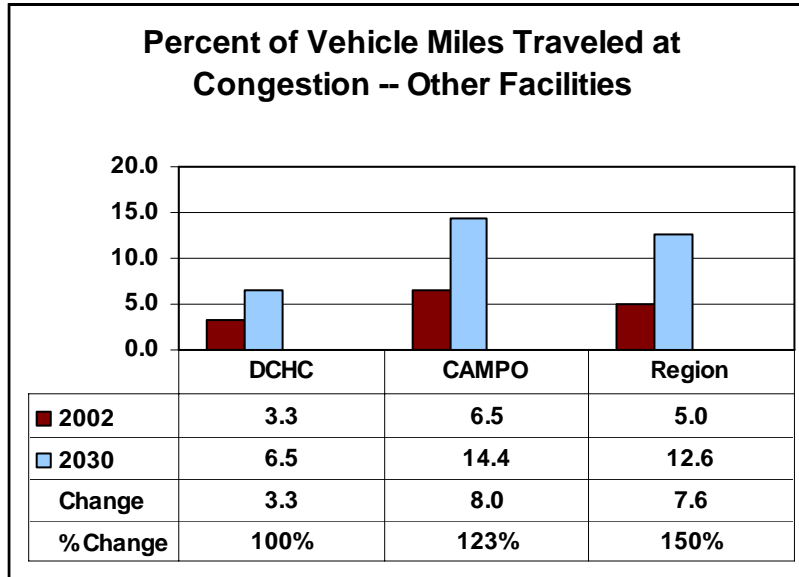


Figure 32

Figure 32 indicates that congestion on other facilities (i.e., non-freeway roadways) throughout the Region is expected to double from 2002 to 2030. The percentage of congestion on other facilities is significantly lower in the DCHC area than in the CAMPO area.

QUALITATIVE – BY THE PEOPLE (PUBLIC INVOLVEMENT)

Decisions cannot be made based on numbers alone. Even if the TRM could perfectly forecast the future and provide us with the precise performance impacts of transportation options and projects, we would still need the feedback from our citizens to judge these impacts. It is difficult to attach numbers and value to open space, cleaner air, less congestion, safe and quiet neighborhoods, wetlands, streams and rivers, and economic development. As a result, the 2030 LRTP employed a comprehensive public involvement process to gather and use citizen input for providing this critical evaluation.

This process met and exceeded the DCHC MPO's Public Involvement Policy for developing a transportation plan. This policy is designed to ensure early and adequate opportunities for citizens and public officials (including elected officials) to be involved in the plan development, and to provide gradual progression from the general information (goals, objectives, policies, and evaluation criteria) pertaining to the plan to very specific information regarding projects and options.

Citizens and public officials have been involved at all the key decision points in the plan development, as demonstrated in Figure 33. Activities, such as the availability of draft documents at public libraries and government offices, public meetings, and media notification in major local newspapers, have been completed for all key decisions in this LRTP update. Staff used a focused mailing list to notify interested citizens about public workshops and hearings. The Lead Planning Agency provided many formats for receiving public comment, including e-mail, Web site feedback links, voicemail, and public workshops and hearings, and made sure these formats were listed in media notification.

Feedback in all these formats was accepted throughout the lengthy public comment period, which extended from June 11, 2004 to September 22, 2004. Staff compiled and drafted responses to all public comments, and reviewed these responses with the TAC. Appendix G provides a summary of the comments as well as the responses.

The Citizens Advisory Council (CAC) was not convened for review of this plan. The 2030 LRTP was an update to the existing 2025 LRTP, and therefore the 2030 LRTP process adopted the major projects and financial assumptions of the existing plan. The CAC had been involved in the development and review of the existing plan, and there were thus no substantial review tasks for the CAC in the 2030 LRTP process.

**Figure 33
Public Involvement Activities**

Decision	Activity				
	TAC Approval	Public Hearing	Open Houses	Draft Available for Public	Media Notification
Goals and Objectives	5/11/04	3/9/04		2/11/04	✓
Socio-economic forecasts	2/11/04	1/14/04	Dec., 2003	11/12/03	✓
Model calibration	9/29/04				✓
Deficiency analysis*					
Evaluation criteria & performance measures	9/29/04				✓
Alternatives Evaluation*					
Preferred Option*					
Financially Constrained Preferred Option*					
Draft 2030 LRTP	9/29/04	8/24/04	Aug. 2004	6/23/04	✓
Adopted 2030 LRTP and AQ Conformity Report	3/9/05	2/9/05		1/28/05	

* Not a formal step in the 2030 LRTP update, and thus there were no related public involvement activities.

The input of local elected officials was also an important element of the public involvement process. The elected bodies of member governments, such as the Town of Chapel Hill, Town of Carrboro, and Orange County, often provided resolutions to the TAC that carried considerable weight in determining the types of projects in the various options, and the specific projects in the draft plan.