

9. TRANSPORTATION DEMAND MANAGEMENT

INTRODUCTION

The purpose of Transportation Demand Management (TDM) is to increase the efficiency of the existing and future transportation network by reducing the number of vehicle trips and maximizing the movement of people and goods throughout the region. A successful TDM program can be implemented to achieve an increase in capacity without physical modifications to the area roadways. If implemented correctly, the TDM strategies will reduce delay and the need for street improvements throughout the community. The implementation will also help to reduce energy consumption and air quality issues in the region.

Some of the benefits of the TDM strategies include congestion mitigation, reduction in environmental impacts that include energy and fuel consumption, savings in the costs to widen existing facilities and construct new facilities, and improved safety and mobility. The TDM program is currently non-existent in the Wilmington region. The *Cape Fear Commutes 2035 Transportation Plan* recommends several options to improve TDM that include the creation of a full-time Transportation Demand Management Coordinator to work collaboratively with the regional partners and re-establish a TDM program for the Wilmington region. Implementation can be accomplished by better coordination with the public schools, UNCW and Cape Fear Community College and working with regional employers to develop programs that incentivize use of alternative modes for employees. Cape Fear Commutes also recommends the strategic placement of park-and-ride lots throughout the region to provide a means to implement a regional rideshare program. The following TDM strategies are included in *Cape Fear Commutes 2035 Transportation Plan* in an effort to reduce congestion throughout the Wilmington Urban Area Metropolitan Planning Organization (WMPO):

STRATEGIES

Full-time TDM Coordinator

The first step to implementing an effective TDM program is for the WMPO to hire a full-time TDM Coordinator. The creation of a full-time TDM Coordinator is an effective way to reduce delay and the need for street improvements through the research and marketing of a TDM program. *Cape Fear Commutes 2035 Transportation Plan* recommends the WMPO hire a full-time Transportation Demand Management Coordinator. The roles and responsibilities of this position will be to promote the TDM program.

Carpooling

The term “carpooling” refers to the shared use of a car. Carpooling can be used for commuting to work, school or even for recreation. This is the most common form of ridesharing. Previous efforts of the Cape Fear Breeze Program developed a ride-matching program over the internet that can be accessed at www.capefearbreeze.com. The intent of the program is to provide an on-line database and interactive opportunity to encourage ridesharing within the community. This program allows users to find opportunities to share a ride or compute the costs of your travel. The strategy is

intended to reduce the number of single-occupant vehicle trips, particularly during the peak periods of travel. Cape Fear Commutes recommends the WMPO evaluate the current Cape Fear Breeze website and develop a website that promotes carpooling. The TDM Coordinator should complete outreach and education materials that demonstrate the benefits of carpooling as a means to reduce congestion and the dependency on single-occupancy vehicles.

Vanpooling

Vanpooling is a form of ridesharing that utilizes vans to commute together on a regular basis. This service is typically funded and supported by employers, non-profits, commuter assistance agencies and/or public transportation authorities. This is an efficient means for between seven and fifteen individuals to commute together to a common place. The operation works with one person typically volunteering to be the coordinator/driver of the van. The riders share a fee, which is usually paid monthly, for the vanpool fare. Some vanpools are self-supporting by the members and others require subsidization from employers, local commuter groups or transportation agencies. This initiative is better served for commutes greater than 10 miles because the greater the commute the greater the savings. The *Cape Fear Commutes 2035 Transportation Plan* recommends the TDM Coordinator work with the large employers and universities to promote a vanpool program. The strategy is intended to reduce the number of single-occupant vehicle trips, particularly during the peak periods of travel.

Alternative Work Weeks and Compressed Work Schedules

A compressed work schedule of four days, ten hours each or nine days, eighty hours in two weeks can reduce commuting trips and is often recognized as an effective and desirable recruitment and retention tool. A four day work week reduces work related travel by 20% and a nine day work period reduces work related travel by 10%. This strategy is an effective means to remove vehicular travel during peak periods. Another effective manner is to schedule employees to arrive at 7 am and depart at 6 pm to reduce the amount of travel during the peak hours. The TDM Coordinator should promote an alternative work week/schedule to employers and businesses.

Telecommuting

Telecommuting is an effective strategy for reducing trips to/from work and home. This can be accomplished through the use of telecommunications (telephone, fax, e-mail, website, video conferencing, etc.) to substitute for travel. This program allows employees to work from home or another location to reduce the amount of travel. This program can be utilized on a part-time or temporary basis. The TDM Coordinator should work with employers to determine opportunities for telecommuting.

Guaranteed Ride Home

The Guaranteed Ride Home program is typically part of the commute trip reduction program for carpooling or vanpooling. The Guaranteed Ride Home program offers rides to commuters during emergency or unexpected situations. The strategy provides participants of the ride sharing program with the ability to get home during an emergency. The TDM Coordinator should work with

employers to develop a Guaranteed Ride Home program for employees who participate in the TDM program.

Park-and-Ride Lots

Park-and-ride facilities provide commuters with an opportunity to park their personal vehicle and connect with mass transportation or carpool partners for at least a portion of their trip. Park-and-ride facilities are locations where commuters can park their personal vehicles and connect with public transportation, carpool partners, rail, etc. The personal vehicles are stored at the park-and-ride facilities during the day and then retrieved following the tasks. These facilities are generally located in the suburbs or outer edges of the city. Park-and-ride lots aim to reduce congestion by making it easier for travelers to utilize mass transportation, carpooling and reduce the need to park vehicles in the center city where there are other competing land uses. However, these facilities are not necessarily required to be located with convenient access to mass transportation and can serve for carpooling and vanpooling to reduce the number of single-occupancy vehicles on the roadway. These facilities allow commuters to avoid the stress of driving in congested areas, can provide convenient access to mass transportation and help to reduce emissions.

The *Cape Fear Commutes 2035 Transportation Plan* recommends the construction of 15 park-and-ride lots within the Wilmington Urban Area by 2035. These locations include:

- Cape Fear Skyway at River Road (NC 133)
- Carolina Beach Road (US 421) at Snows Cut Bridge
- Carolina Beach Road (US 421) at South College Road (NC 132)
- I-40 at Holly Shelter Road
- Market Street (US 17 Business) at Middle Sound Loop Road
- Market Street (US 17 Business) at Porters Neck Road
- Ocean Highway (US 17) at Magnolia Greens Drive
- US 17 at Island Creek Road (NC 210)
- US 17-74-76 at River Road (NC 133)
- WAVE Central Station
- Wilmington Bypass (I-140) at Andrew Jackson Highway (US 74-76)
- Wilmington Bypass (I-140) at Castle Hayne Road (NC 133)
- Wilmington Bypass (I-140) at Cedar Hill Road
- Wilmington Bypass (I-140) at Ocean Highway (US 17)
- Wilmington Bypass (I-140) at US 421

The plan also recommends that park-and-ride lots be constructed outside the Wilmington Urban Area in Boiling Springs Lakes, Bolivia, Burgaw, Maco, Rocky Point, Shallotte, and Southport. The WMPO and TDM Coordinator should work with the Cape Fear Public Transportation Authority, Brunswick County Transit, Pender Adult Services, municipal/county planning departments and property owners to integrate park-and-ride lots along mass transportation corridors and on major highways.

Public Outreach

This tool refers to the utilization of communications opportunities within the Wilmington Urban Area to promote the TDM program. This can be accomplished through the use of communications efforts such as cable television, websites, newsletters and signage to communicate TDM information to the public. The TDM Coordinator should attend functions such as Azalea Festival, Riverfest, Earth Day and other events to promote the TDM activities. This tool will allow the MPO to communicate with the public without a significant amount of resources invested.

TDM Marketing

The creation of a TDM program is only the first step in reducing vehicular trips on area roadways. Once the TDM program is established, it is important to market the program. The TDM coordinator should create a marketing plan to promote the activities. These marketing efforts to create public awareness can be accomplished by marketing, advertising, public relations, television, brochures, websites, outreach, mail inserts, e-mails, events, media buy, etc. The purpose of this strategy is to create a wide-spread public awareness of the TDM program.

The marketing plan outlines the process to promote the TDM activities and outlines the process to implement an effective TDM program. Some potential applications include:

- Presence on local municipalities/counties and WMPO website
- Informational e-mails, brochures, posters survey forms etc.
- Exhibit booth
- Direct mails, newsletters, flyers, handouts and news releases
- Promotion of incentives such as free bus passes, vanpool rides, store gift cards etc. in exchange for participation in the program
- Outreach, special events and speaking engagements

Employer Outreach

The employers set the work schedules and have the most influence over the commuting habits of their employees. Employers are typically not aware of the benefits TDM activities and transit. These employers have an interest of their employees arriving on-time to work and without delay. Employers can offer commuting opportunities such as vanpooling and transit passes. Employers can also offer their employees incentives such as free transit or vanpool passes or preferential parking to employees that carpool. The TDM Coordinator should attend employer functions and events to promote the TDM program. This strategy is designed to give employers the tools necessary to promote a TDM program to their employees. Employers benefit from learning of these subsidized programs and the promotion of an effective TDM program will help to recruit and retain employees.

Outreach to Public School System

The public school system provides education to today's youth. As we have progressed, so has the desire for parents to drop off and pick up their children at school. We have seen less reliance on bus transportation and longer lines during drop off and departure times at these school facilities. In an

effort to improve transportation throughout the region, the *Cape Fear Commutes 2035 Transportation Plan* recommends that Brunswick, New Hanover and Pender County Schools consider a “walk/bicycle/bus first” policy. This policy will serve as a means to communicate to parents the desire of the school systems to utilize other transportation modes of transportation provided by the schools and community instead of picking up and dropping off the students at school. The TDM Coordinator should draft the “walk/bicycle/bus first” policy and present this policy to the school system. The WMPO would recommend the public /private school systems stagger start times outside of the peak periods. The WMPO acknowledges the need to better communicate with the public school transportation managers and should amend the Memorandum of Agreement to include the public school transportation managers on the WMPO’s Technical Coordinating Committee.

Outreach to University of North Carolina Wilmington and Cape Fear Community College

The University of North Carolina Wilmington and Cape Fear Community College provide college level curriculum and higher learning education opportunities within the Wilmington Urban Area. The University of North Carolina Wilmington enrolls nearly 12,500 students annually and Cape Fear Community College enrolls over 26,000 students annually. These students have a significant impact on the transportation infrastructure of the region. The University of North Carolina Wilmington has instituted a policy which will not provide a parking pass within a 1-mile radius of campus. In an effort to reduce vehicular trips to/from the University of North Carolina Wilmington and Cape Fear Community College, the WMPO recommends these institutions consider a “walk/bicycle/bus first” policy. This policy will serve as a means to communicate to the students the desire of the universities to utilize other transportation modes of transportation outside the single occupancy vehicles. The TDM Coordinator should draft the “walk/bicycle/bus first” policy and present it to UNCW and CFCC. The WMPO acknowledges the need to better communicate with the public school transportation managers and should amend the WMPO’s Memorandum of Agreement to include the university/college transportation managers on the Technical Coordinating Committee.

Parking Management

Parking management refers to specific strategies that encourage the efficient use of existing parking facilities and improve overall parking facility design. This strategy can be used to address a wide range of transportation problems including a lack of information on parking availability and pricing for the pay-to-park facilities. Parking management can also achieve a wide variety of transportation, land use and environmental concerns. Some parking management strategies include:

- Shared parking: accommodates more users with fewer spaces
- Regulated parking use: regulate parking facilities to encourage more efficient use
- Accurate and flexible parking standards: parking standards that are derived from the local community
- Parking maximums: limit the maximize amount of allowable parking
- Parking policies: parking policies that integrate transportation and land use to create more accessible, less automobile dependent land use patterns
- Improved information: provide information on parking availability and price

The TDM Coordinator should work with the City of Wilmington Parking Manager to determine more efficient ways to promote parking in downtown Wilmington. The TDM Coordinator should work with the member jurisdictions to review and improve the current parking policies and regulations including parking use, standards and parking maximums.

Transit Oriented Development

Transit Oriented Development (TOD) has been an advocated solution to traffic and congestion problems throughout the country. It is a tool for promoting smart growth and supporting economic development. TOD means to direct development and redevelopment in and around transit stops and nodes in an effort to maximize the utilization of the transit service and promote an effective means of transportation. TODs can be developed at or near bus stops. This strategy provides guidelines and regulations for development and business.

The opportunities to create TODs in the Wilmington Urban Area are limited due to the transit headways. However, the WMPO should review the existing policies and regulations to identify best practices that can be implemented in each community the WMPO serves. Where applicable, the WMPO should promote higher density development along transit corridors. The WMPO should draft and present policy and ordinance recommendations to implement TODs. The WMPO should also work with the Cape Fear Public Transportation Authority, Brunswick Transit System and Pender Adult Services to fund and implement improved service that will reduce transit headways and better serve the community. The WMPO should continue to work with the City of Wilmington Planning Division to encourage redevelopment of downtown Wilmington as a dense, walkable, mass transportation supported regional center. The local municipalities and counties should utilize the tools available to encourage mode choice in the Wilmington Urban Area.

Trip Reduction Ordinance/Planning Policies

Trip reduction ordinances are enacted to regulate larger trip generators including major employers and large employment centers. The employers are usually regulated because they have control over the commuting habits of their employees and can offer incentives such as transit passes, vanpools and rewards. This strategy formalizes the TDM activities into an ordinance that is typically utilized for new developments and re-development. The TDM Coordinator should work with local municipalities and counties to develop a Trip Reduction Ordinance that the local municipalities and counties can consider as part of their codes and ordinances.

Employer Transportation Coordinator

An Employer Transportation Coordinator is someone on the employer's staff who will manage and promote the TDM activities. This staff member will serve as the liaison between the WMPO and the employer to promote the TDM program. This person is charged with distributing information to employees and provides training and educational materials to ensure the program's success. This strategy provides a "point person" for TDM activities at each employer and provides a means to disseminate information to employees. The TDM Coordinator should work with the employers to identify an Employee Transportation Coordinator within each of the employers to serve as a "point person" and distribute information to the employees.

Education and Outreach

A key component of the TDM program is education and outreach to employers within the community. This outreach and marketing of a TDM program can be accomplished through working with local employers to promote and incentivize the TDM program. Incentives can include preferential employee parking, store gift cards, employee days off, etc. for employees that participate in the program. The TDM Coordinator should work employers within the community to provide information regarding preferential parking, promotional activities, etc. to promote the TDM program. The education and outreach should be consistent with the TDM marketing plan to ensure a successful TDM program.

Market Research

Market Research can be a valuable tool used to ensure the effectiveness of the market and advertising program. This research can be used to target specific populations prior to the release of a product or to determine satisfaction with a program. This research should provide benchmarks and determine effectiveness of the program. The communities' opinion should serve as the basis for the development of the TDM program and activities. This market research will reveal the specific TDM tools and programs that will work in different areas. The strategy is designed to provide feedback from the community regarding the TDM program. This research is a useful tool for pre and post deployment and implementation of a TDM program or activity. Surveys can be a useful tool in identifying preferences and can also serve as an advertising tool to create awareness of the program.

The WMPO should consider partnering with the local municipalities and counties or the local chambers of commerce to conduct a transportation needs assessment survey. This survey should focus around the TDM program and can be accomplished through the dissemination of surveys at participating businesses, churches, community organizations etc. The WMPO can also survey commuters, residents, visitors and employers on current commuting patterns and request recommendations to improve TDM. The surveys can also be placed on the WMPO and local municipalities/counties websites and staff should work with the local newspapers to determine the feasibility of advertising the survey in the local publications.

Bicycle Sharing Program

The bicycle sharing concept has been spreading throughout Europe since the first technology-based programs in the late 1990s. There are now more than 30 European cities with a third-generation bicycle sharing program in place. It is currently being considered by cities throughout North America as well, including San Francisco, Chicago, Portland, Oregon, Vancouver, and Montreal. The District of Columbia has the first third-generation bicycle sharing program in the United States, which opened in July 2008. Bicycle sharing allows individuals to have the benefits of bicycle use, when needed, without having to purchase a bicycle, store it, or bring it into town. The bicycle purchase and maintenance costs are borne by the service. To access the bicycles, users can swipe a credit card deposit to ensure they will return the bicycles and users are then charged an hourly rate. The plentiful distribution of rental stations within the Wilmington Urban Area would make bicycles readily available and a practical alternative to making short trips by car. Cape Fear Commutes recommends the WMPO work with the University of North Carolina Wilmington, Cape Fear

Community College, Wilmington Downtown Inc., and large employers to implement a bicycle sharing program in the City of Wilmington.