Report

Transportation Demand Management (TDM) Plan

University Research Park II

December 2009

Report for

University Research Park II

Transportation Demand Management (TDM) Plan

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SECTION 1
INTRODUCTION

1.01 BACKGROUND

The University Research Park (URP) was organized in 1984 by the University of Wisconsin-Madison and the UW Board of Regents. University land no longer conducive to agricultural research was sold to University Research Park, Inc., a separate nonprofit entity that develops the land and leases it to companies interested in maintaining close contact with the university community. Currently there are 34 buildings located on the current URP site. These buildings are occupied by 110 companies employing over 4,100 people.

The URP, located at Whitney Way and Mineral Point Road (see Figure 1.01-1), is almost fully developed. The URP hopes to replicate the success enjoyed by the current Park by developing approximately 50 sites at the Pioneer Neighborhood site for start-up or maturing companies from the UW-Madison technologies. The development of URP II continues the mission of URP to provide quality space to faculty entrepreneurs and assist the UW-Madison in transferring technology from campus to the private sector. It is anticipated that fully absorbed, the site will provide space for companies employing between 10,000 and 15,000 employees. Development of URP II could take up to 15 years depending on the market conditions associated with the desirability of URP.

The URP II is consistent with the vision set forth in the Pioneer Neighborhood Plan for an employment district.

Source: http://photos.news.wisc.edu/view.php?id=4743

Figure 1.01-1 The Original University Research Park in 2005

1.02 PURPOSE

The purpose of this report is to present the URP II's plan to manage transportation demand from its employees and to set up objectives for transportation demand management (TDM) for other developments within this parcel. This plan is required as part of the Specific Implementation Plan for the City of Madison development process.

1.03 DEVELOPMENT DESCRIPTION

The URP II will be located on a 260-acre parcel in the southwest quadrant of the intersection of Mineral Point Road and County M/Junction Road on the far west side of Madison in Dane County, Wisconsin. A location map is shown in Figure 1.03-1.

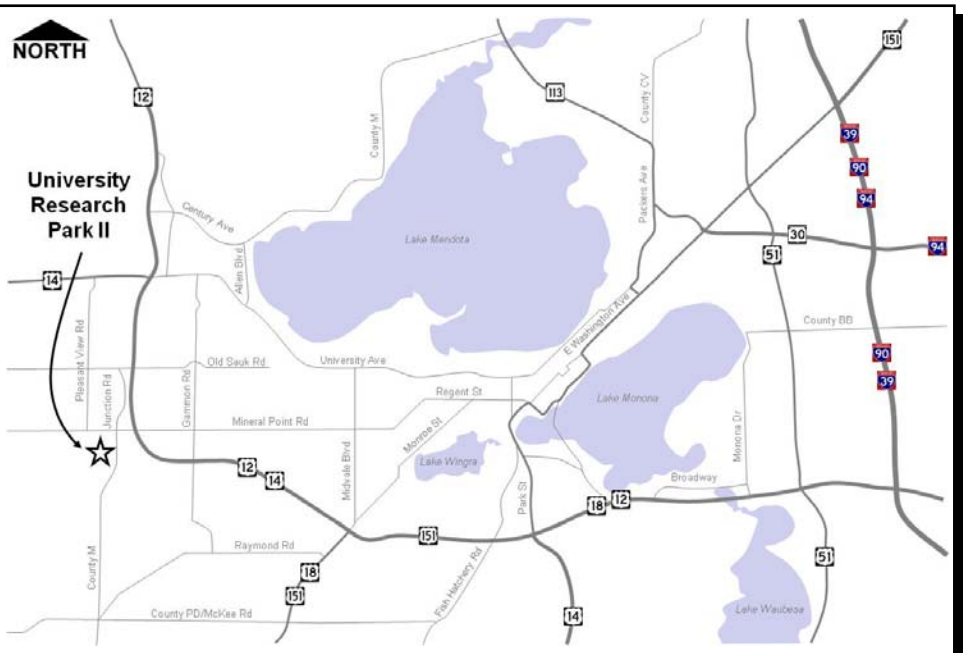


Figure 1.03-1 Location Map

The Pioneer Neighborhood Development Plan describes the research park in detail.

> "Like the existing URP, the primary mission of the Research and Development Center District (URP II) is to develop businesses that are spun-off from research occurring at the University of Wisconsin. These types of start-up companies generally require affordable office and incubator space.
>
> … Planning for on-site building expansion is a critical idea that should be practiced in the Research and Development Center. This will provide a clear path towards achieving recommended "build-out" development densities and help to retain and grow each business without costly relocations."

Phase 1 is scheduled for development over the next ten years. The complimentary land uses will be developed in phases in response to market demand. The Land Use Map is included as Figure 1.03-2 and illustrates the lot sizes, locations, and land uses. Four districts are envisioned:

1. Research and Development — Lots 2-5, 10, 11, 13-31, 33-61
2. Urban Mix — Lots 7, 8, 9, 32
3. Medium/High Density Residential — Lots 6, 12
4. Drainage/Open Space — Lot 1, Outlots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

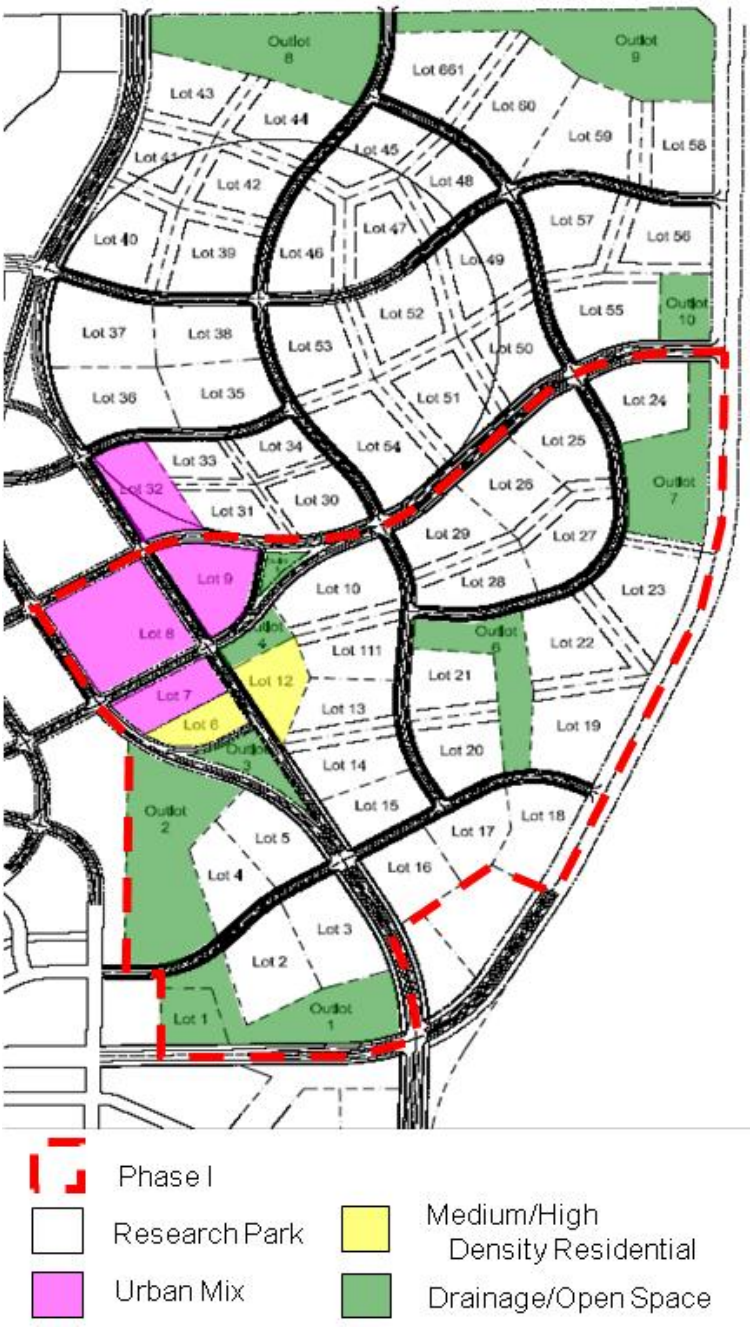


Figure 1.03-2 University Research Park II Land Use Map

A. Research and Development

Research, development, and testing uses are permitted in the 53 centrally located lots of this district, as shown in Figure 1.03-2. Professional offices and business incubators are also permitted. This district will employ approximately 10,000 to 15,000 workers when fully built out.

B. Urban Mix

This urban mix district encompasses four lots on the western edge of the URP II area. The district creates a pedestrian-oriented mixed-use district with sidewalks and on-street parking. This district permits ground floor uses from neighborhood retail, offices, and services. On the upper floors, this district allows housing, lodging, offices, and research.

C. Medium/High Density Residential

The two lots designated as medium/high density residential are permitted to have multifamily housing. Ancillary recreational facilities, community spaces, and services for residents are also permitted in this area.

D. Drainage/Open Space

The Open Space district integrates civic gathering spaces and stormwater management systems. Several lots are dedicated to this use and will include a commons.

1.04 SUMMARY

URP II will develop its site layout in a way that effectively manages transportation demand. As the developer and the site reviewer, URP II will implement the following TDM measures:

1. Design the site in a manner that encourages alternative modes of travel.
2. Appoint a TDM coordinator for the research park.
3. Create the framework and funding mechanism for a transportation management association (TMA) within the research park.
    a. This creation will occur by the time the research park is 30 percent occupied, or by June of 2012, whichever is sooner.
    b. Membership in the TMA will be automatic for every business that locates in URP II regardless of size.
    c. The TMA will have the authority to assess TDM fees to all park members.
4. Require employers with 30 or more employees to develop a trip reduction plan that conforms to the URP II TDM plan.
5. Provide bicycle and pedestrian amenities including bicycle racks.
6. Advocate the installation of locker rooms with showers in third party buildings, and install them in buildings constructed by URP II.
7. Support and advocate for the further extension of Madison Metro Transit lines.

Additionally, URP II will strongly encourage the TMA (which will include major employers and building tenants) to voluntarily implement other measures such as the following:

1. Subsidize bus passes for employees.

2. Provide parking cash-out incentive for employees who use alternative modes of transportation.

3. Place a Community Car or company vehicles on-site for employee use during the business day.

4. Provide carpool/vanpool matching and priority parking for registered carpools and vanpools.

5. Permit employees to telecommute or have flexible work hours or compressed work weeks.

6. Participate in Rideshare, Etc., including the Guaranteed Ride Home program.

7. Participate in shuttle bus program to transport employees from residences or park-and-ride lots.

SECTION 2
IMPORTANCE OF TDM

2.01 OVERVIEW

The far west side of Madison has been experiencing an explosion in growth over the last several years. This growth has brought with it an above-average increase in motor vehicle traffic. According to Pioneer Neighborhood Phase A/B/C's Traffic Impact Analysis, the build-out of three neighborhoods on the City's west side (the Pioneer Neighborhood, the Junction Neighborhood, and the Elderberry Neighborhood) is anticipated to add almost 180,000 motor vehicle trips per day to the roadway system. Other outlying traffic from County Highway S adds to the traffic volumes. This amount of traffic is too much for the existing roadway system to handle, even in an expanded condition. In fact, the traffic analysis completed for the Pioneer Neighborhood evaluated only 85 percent of the projected traffic generated from the three neighborhoods mentioned above because the roadway network, even in an expanded condition could not accommodate the full 100 percent of the trips. This emphasizes the need for effective TDM measures.

2.02 TDM STIMULI

Congestion and pollution are two of the issues that TDM can address.

Figure 2.02-1 identifies four TDM stimuli:

1. Roadway capacity
2. Mobility and equity
3. Parking supply
4. Health and welfare

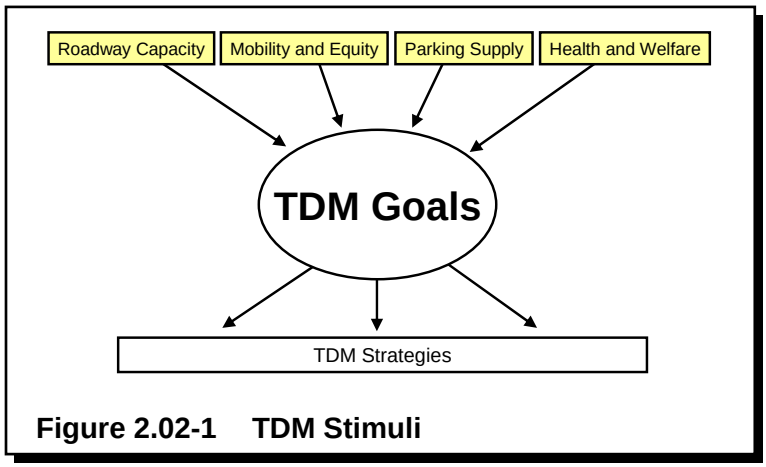


Figure 2.02-1 TDM Stimuli

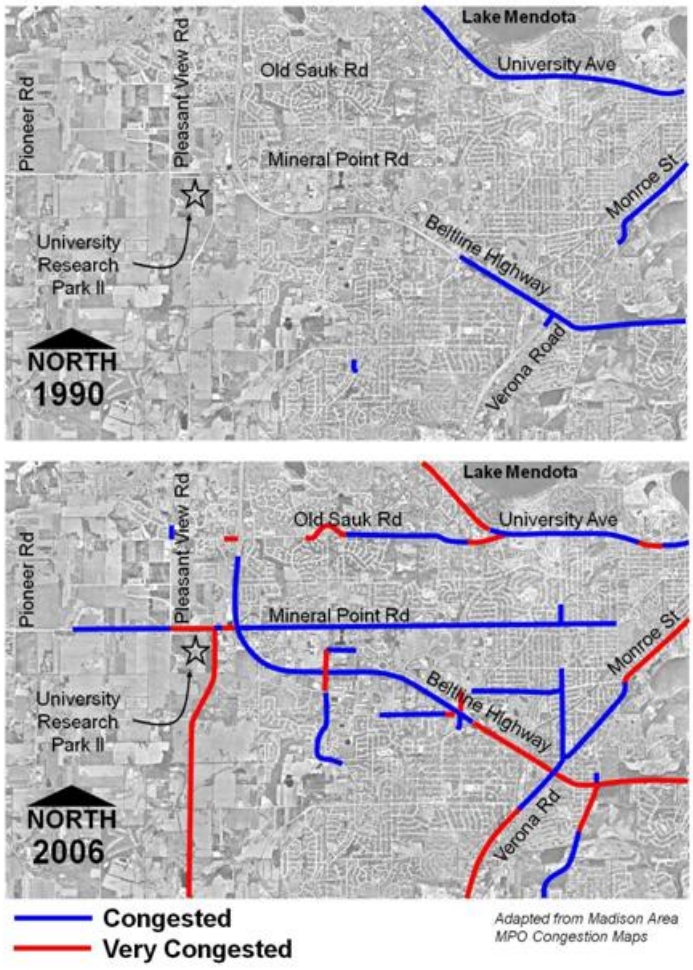
The following subsections briefly discuss these stimuli, which compel the implementation and shape the goals of a TDM program.

A. Roadway Capacity

Roadways, and especially their intersections, have limited vehicle capacities. As volumes approach these capacities, operations degrade substantially. Traffic may also divert to neighborhood streets.

Figure 2.02-2 shows the congestion on Madison roadways in 1990 and 2006 obtained from the Madison Area Metropolitan Planning Organization (MPO). While in 1990 very few of the roadways on the far west side of Madison were considered to be congested, in 2006, several major roads, including portions of Mineral Point Road and County M are now categorized as "congested" or "very congested." With the approval of both the Elderberry and Pioneer Neighborhood Plans, the transportation needs along this corridor will grow.

It is difficult to increase roadway capacity in an urban environment like Madison. Roadway expansion is limited by its cost, land needs, and suitability. Therefore additional solutions are needed.



Source: Madison Area MPO

Figure 2.02-2 Roadway Congestion in Madison–1990 vs. 2006

TDM maximizes existing transportation resources. Raising the occupancy of vehicles can increase the number of people a roadway carries without increasing the number of vehicles. Shifting trips to less congested periods can reduce congestion during peak periods without reducing the daily throughput of the roadway. Similarly, even when roadways are congested with motor vehicles, there is often plenty of capacity for bicycles and pedestrians.

B. Mobility and Equity

Mobility suffers when a transportation network is incomplete, inefficient, or both.

A transportation system is incomplete when it fails to serve all potential users. A neighborhood without sidewalks does not serve pedestrians. A busy street with narrow lanes and no bicycle accommodations does not serve bicyclists. A business district without transit does not serve those employees who want or need to use public transportation.

A transportation system is inefficient when it fails to move people and goods in a timely manner. Travel times (and costs) increase when vehicles must wait through more than one traffic signal cycle, when pedestrians are unable to cross a busy street, when bicyclists must use indirect routes, and when bus riders must transfer multiple times.

Reduced mobility has direct and indirect costs, including the following.

1. Problems with employee tardiness, stress, morale, recruitment, and retention.
2. Higher costs for deliveries and supplies.
3. Operational inefficiencies associated with multiple sites.

TDM can improve mobility and equity by directing resources toward alternate modes of travel.

C. Parking Supply

Once drivers reach their destinations, they need some place to park their vehicles. On-street parking can disrupt neighborhoods and displace residents. Off-street parking is expensive to construct, maintain, and operate, and it also consumes land that could be used for other purposes. An effective TDM program can reduce a facility's parking needs. If fewer employees drive alone to work, there will be fewer cars to store during the workday. Similarly, if patrons of an establishment use alternative modes of travel such as carpooling, busing, bicycling, or walking, there will be fewer cars to store during peak shopping times or large events. Additionally, shared parking facilities that serve land uses with different traffic peaks can reduce the total amount of parking needed. By implementing a TDM program, an employer can delay, reduce, or eliminate costly parking expansions.

D. Health and Welfare

The URP II is committed to improving the lives of its employees. TDM can promote good health and fitness. Employees who walk or bike to the research park (or to a transit stop) are likely to have more energy and less stress.

TDM can also reduce motor vehicle use. Employees who drive alone to work can make a 20 percent difference by choosing an alternate mode just one day each week. The United States Environmental Protection Agency (USEPA) observes that "driving a private car is probably a typical citizen's most polluting daily activity."[1] According to the USEPA, motor vehicle emissions include:

1. Carbon monoxide, which impairs mental and visual acuity at urban concentrations.
2. Particulate matter, which impairs respiratory function and contributes to haze.
3. Hazardous air pollutants (HAP) including acetaldehyde, acrolein, benzene, 1,3-butadiene, chromium, formaldehyde, nickel, and polycyclic organic matter.
4. Hydrocarbons and nitrogen oxides, which contribute to smog, ground-level ozone, and acid rain.
5. Carbon dioxide, which is a primary greenhouse gas.

Other effects include noise pollution and stormwater runoff.

[1] From the USEPA's Fact Sheet OMS-5 (EPA 400-F-92-007)

SECTION 3
PROGRAM GOALS

3.01 OVERVIEW

The staff of URP recognizes the importance of TDM. They know that providing the framework and incentives to encourage alternative modes of transportation will attract high-quality businesses to URP II that will in turn attract excellent employees. The following sections summarize URP II's TDM goals.

3.02 REDUCE SINGLE-OCCUPANCY VEHICLE (SOV) TRIPS

A successful TDM program for URP II will help increase the number of employees and visitors who travel to the development regularly by some means other than SOV. One goal of TDM is to use limited transportation resources as efficiently as possible. In practice, this means reducing the number of SOV trips. Assuming that the total number of trips stays constant, the number of SOV trips will decrease as the alternative mode share increases.

3.03 STAGGER TRANSPORTATION DEMAND

One goal of TDM is to shift transportation demand to periods when transportation resources are less congested. This leads to a more efficient utilization of the transportation infrastructure and increases the people-carrying capacity of the infrastructure. Examples of demand shifting include staggering work hours and integrating land uses that have different peak periods, such as office and residential land uses.

3.04 REDUCE PARKING DEMAND

A successful TDM program for URP II will help reduce overall parking demand. Parking is expensive to construct and reducing the parking demand could delay, decrease, or eliminate the need for additional parking. Parking demand is reduced when other alternative modes of transportation (transit, carpools) are feasible.

3.05 ENHANCE HEALTH AND WELFARE

A successful TDM program for the URP II will inform 100 percent of employees about their individual transportation options. By providing specific information on transportation options and impacts, URP II and businesses within the park will give their employees and patrons the tools necessary to make informed choices appropriate to their individual circumstances.

3.06 ENHANCE RECRUITMENT AND RETENTION

A successful TDM program for URP II will make its businesses more attractive to current and potential employees. According to one source, "…studies show that 86 percent of the workers in the United States believe commuter benefits are valuable employee benefits. Commuter benefits improve employee morale, which in turn increases employee job satisfaction, reduces employee absenteeism, reduces employee turnover, and increases productivity."[1]

[1] Best Workplaces for Commuters for Employers, January 7, 2005, http://www.bwc.gov/employ/attract.htm.

SECTION 4
CONDITIONS AND RESOURCES

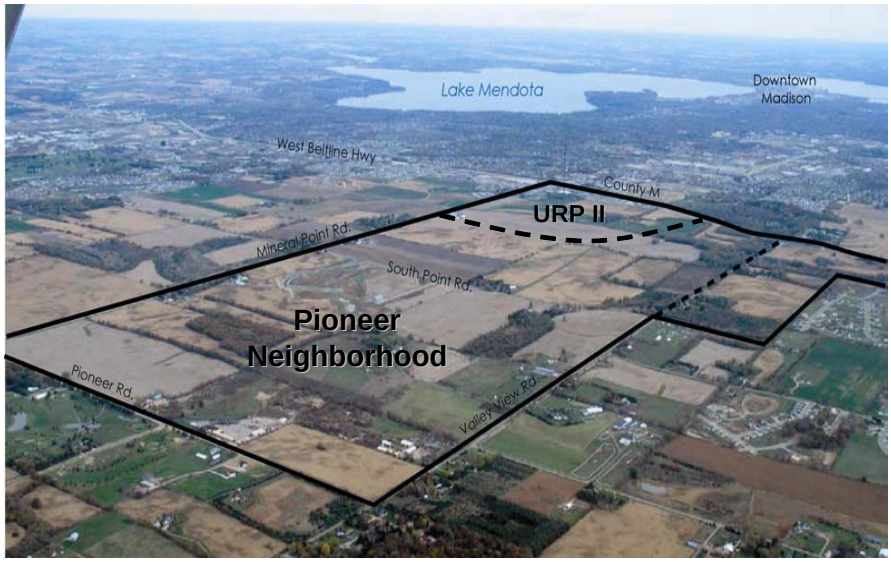
4.01 OVERVIEW

This section describes the transportation conditions and resources that affect URP II's TDM Program.

4.02 EXISTING CONDITIONS

A. Land Use

The 260-acre parcel is near the western periphery of the Madison urbanized area as shown in Figure 4.02-1. Currently, the land use is predominantly agricultural with a scattering of rural residential buildings. Adjacent land uses to the north are a mix of residential and commercial uses. To the west, the land is primarily rural agriculture. To the south, there is rural vacant land transitioning to residential use. To the east, the land use is a mix of commercial, multifamily residential, single-family residential, and institutional uses. At this time, the parcel is served by Mineral Point Road and County M.



Source: City of Madison, Pioneer Neighborhood Development Plan

Figure 4.02-1 Aerial Photo of Pioneer Neighborhood and URP II Development Site

This parcel is within the planning area for the Pioneer Neighborhood, which is bounded by Mineral Point Road on the north, Valley View Road on the south, County M on the east, and Pioneer Road on the west as shown in Figure 4.02-1. The Pioneer Neighborhood Development Plan was completed in 2004 and indicates the desire of the neighborhood to integrate "an urban employment center, a mixed-use neighborhood center, light industrial uses, small-scale neighborhood commercial uses, institutional uses, and a mix of residential dwelling types, densities, and prices developed as a true neighborhood." The URP II is consistent with the development goals of the Pioneer Neighborhood Development Plan.

B. Traffic

A traffic impact analysis (TIA) was prepared for the Pioneer Neighborhood in December 2003 by Strand Associates, Inc.®

Mineral Point Road, between Pioneer Road and County M/Junction Road, is a two-lane rural roadway, with a posted speed limit of 45 mph. Currently, there are no sidewalks on Mineral Point Road in the project area. County M, south of Mineral Point Road, is a two-lane rural roadway, with a posted speed limit of 35 mph from Mineral Point Road to the curve in the road south of Watts Road and 45 mph south of the curve.

City of Madison traffic counts indicate that in the year 2008, Mineral Point Road carried 36,650 vehicles a weekday between the Beltline and County M/Junction Road and 15,150 vehicles a day west of County M/Junction Road. County M carried 30,250 vehicles a day south of Mineral Point Road. As mentioned earlier, traffic in this area is expected to increase at a rate of 5 percent per year.

C. Employees

According to the University of Wisconsin System Administration, “It is anticipated that fully absorbed, the site will provide space for companies employing between 5,000 and 8,000 employees. Development of URP II could take up to 15 years depending on the market conditions associated with the desirability of URP.” In the urban mix areas adjacent to the research and development sites, additional employees will be attracted to job opportunities provided by the restaurants and shops.

4.03 RESOURCES

This section describes the transportation resources that are available and will be integrated into URP II’s TDM Program.

A. Rideshare, Etc.

Rideshare, Etc. is a comprehensive transportation alternatives program sponsored by the City of Madison in partnership with the MPO, Metro Transit, the State Vanpool Program, and area employers. Figure 4.03-1 shows the program’s service area, which includes most of southern Wisconsin.

Rideshare serves employers and individuals.

1. Rideshare works with employers to develop, promote, and sustain a targeted commuter information and assistance program.

2. Rideshare works with individuals to identify specific opportunities to commute by foot, bike, bus, carpool, or vanpool.

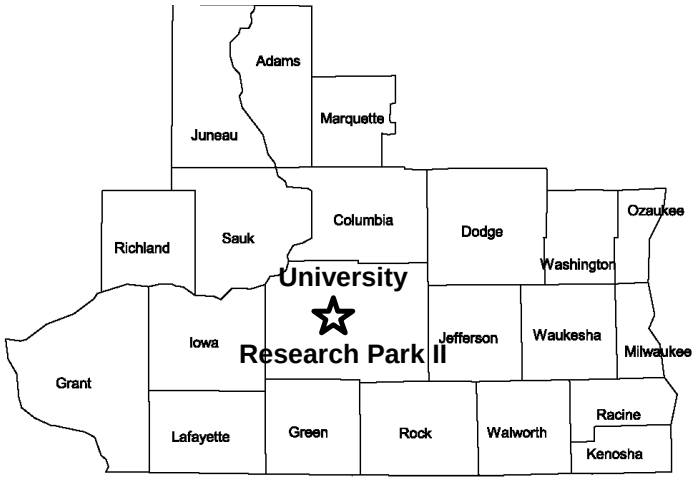


Figure 4.03-1 Rideshare Service Area

Prospective ridesharers benefit from Rideshare's Ride-Pro system, which includes every Metro Transit bus route, state vanpool, and registered carpool. A commuter who contacts Rideshare receives a personalized report and map of transportation options. The report also identifies individuals in the commuter's area who are interested in starting a new carpool.

Existing ridesharers benefit from Rideshare's Guaranteed Ride Home program (GRH), which provides emergency taxicab vouchers. Commuters can use an alternate mode knowing that should an unexpected situation arise, they will be able to return home. In this way, GRH acts as a safety net that both serves and reassures ridesharers. Rideshare currently limits each commuter to six free rides (up to $75 each) each year but works with employers that wish to provide even more flexibility to their employees.

B. Transit

Currently, Madison Metro is the primary mass transit provider in the Madison area. However, other transit options such as street cars and rail alternatives are currently under study. The following paragraphs describe the current and potential future forms of transit.

1. Bus Transit

The City of Madison's Metro Transit serves Madison and several adjacent communities. Since coverage is a system priority, most Madison residents live near a bus route. However, travel times to and from the city's periphery can be long. Headways for individual routes can be as low as 15 minutes during peak periods and as high as one hour during off-peak periods.

Figure 4.03-2 shows the closest bus routes on weekdays when the majority of the travel to and from the site would occur. Although it appears that a route does touch the northeast corner of the site, the closest bus stop to that corner is 0.26 miles away. Routes 15, 63, and 73 are located on Junction Road, directly adjacent to URP II. Route 15, which also is located along

Mineral Point Road, operates on weekdays with 30-minute headways during peak periods. This bus goes past the intersection of Mineral Point and Junction Road headed outbound during the AM and outbound during the PM. It is not available going the other direction during these periods. Route 73 operates on weekdays with 30-minute headways during the peak periods. Route 63 operates on weekends with hourly service along Junction Road between Prairie Town Center and the West Transfer Point. Madison Metro has the difficult task of balancing limited resources with a quickly growing metropolitan area. As the development of URP II progresses in the Pioneer Neighborhood, it may become more viable to create a new transit route serving the area, but the new route may need to be subsidized. Until that occurs, no future service is planned for the research park. Depending on the number of bus trips to the site during the peak and off-peak periods, a new route between the West Transfer Point and the URP II would cost between $231,000 and $323,000 a year to operate.

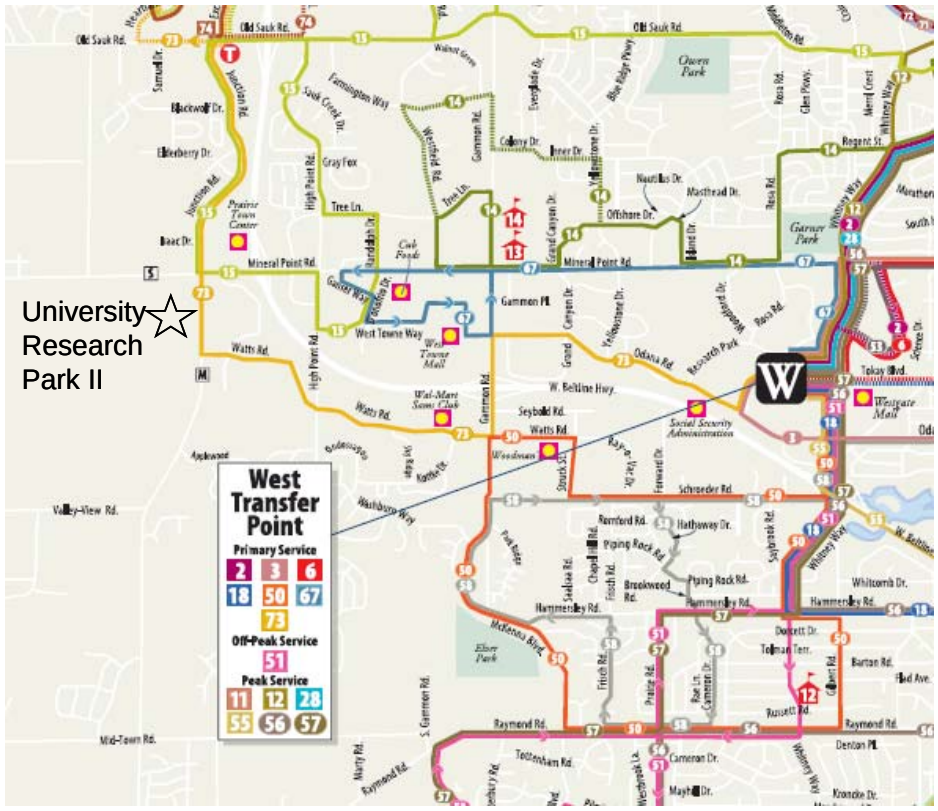


Figure 4.03-2 Madison Metro Bus Routes 2009

2. Streetcars and Urban Rail

Several studies have been undertaken to examine the feasibility of street cars and other rapid transit alternatives in Madison. The Madison Streetcar Preliminary Feasibility Study is being headed by the City of Madison to examine whether a streetcar or light rail system similar to that already in place in Portland, Oregon, is a viable transportation alternative for Madison.

Figure 4.03-3 shows the study area for the streetcar system, serving the UW-Madison campus to the east isthmus and to the south as well as other locations in the downtown area. The system, at its initiation, is unlikely to extend to URP II.

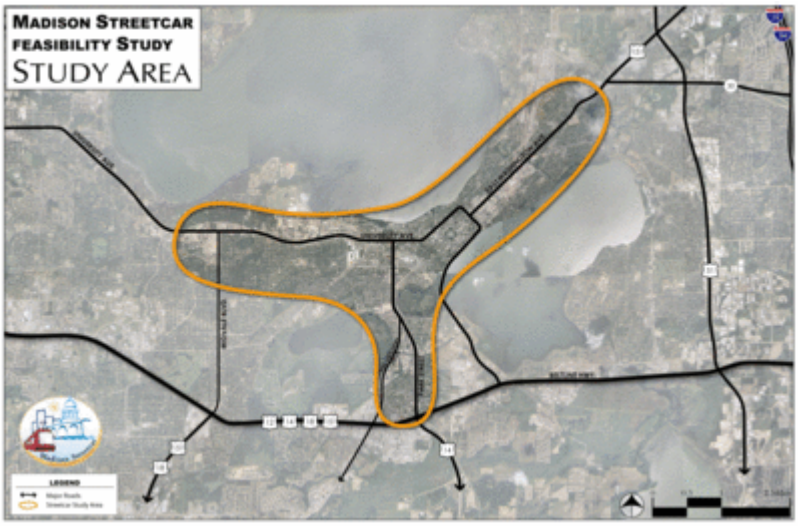


Figure 4.03-3 Streetcar Study Area

3. Light Rail and Rapid Transit

The second study is Transport 2020, which is developing alternative systems for improving transportation in the greater Madison metropolitan area. As of June 2008, the "long-term vision" recommended by the Transport 2020 study group is a multimodal system that includes streetcars, enhanced bus service, commuter park-and-ride lots, and a commuter rail system. Three of the six alternatives currently being explored terminate near the northeastern edge of the URP II's property. Two of these alternatives, shown in Figure 4.03-4, include bus rapid transit to the Capitol area and East Towne Mall and light rail along railroad right-of-way and city streets.

In 1998, Dane County completed Phase I of a study examining commuter rail options for persons commuting from the surrounding area to Madison. According to the Commuter Rail Feasibility Study, commuter rail is defined as "a mode of passenger transportation using vehicles with steel wheels on steel rails using tracks that are part of a general rail network." The study found that the feasibility of a commuter rail system for Dane County was determined to be quite favorable both in terms of costs (both capital and operating) per new transit rider, in examining projected operating costs per passenger mile traveled on the rail lines, and in terms of meeting Wisconsin Department of Transportation's (WisDOT's) farebox recovery criterion.

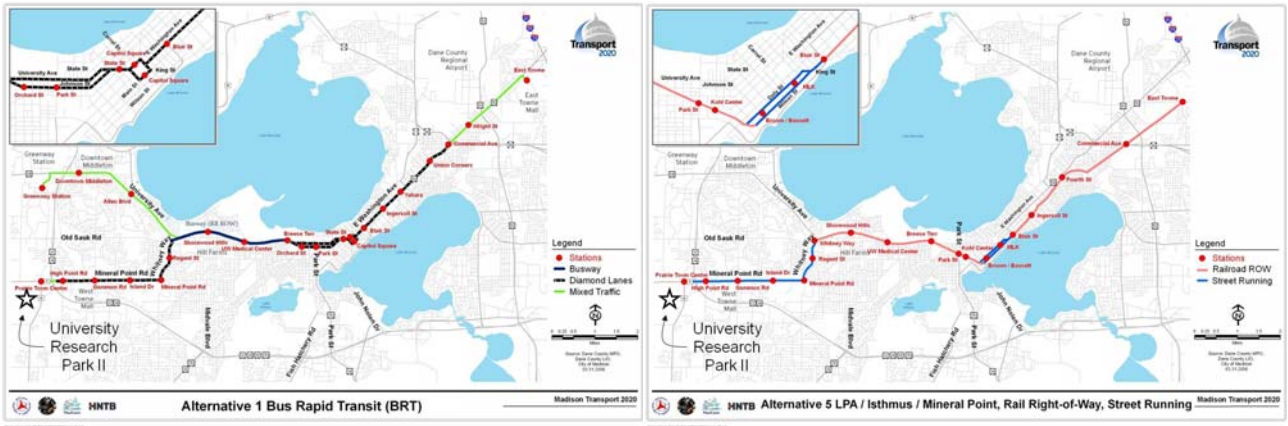


Figure 4.03-4 Transport 2020 Alternate Routes Serving the URP II Area

C. Carpools

A university research park is a prime land use to facilitate carpooling. The high employment concentration of such a district makes carpooling extremely feasible. Carpool matching is one of the free services provided by Rideshare, Etc.

D. Bicycling

Bicycling is a popular alternative mode of transportation and recreation in the Madison area. In the 2000 census, approximately 4 percent of employees used bicycles to commute to work. Bicyclists in Madison can use any of the following facilities:

1. All streets (except limited access highways)
2. Bike lanes
3. Bike paths
4. Sidewalks that do not abut buildings (although generally discouraged)
5. Metro Transit buses

In selecting a route, a bicyclist evaluates comfort, convenience, and safety. An experienced commuter may choose the most direct route, regardless of the level of bicycle accommodation. Even so, preferred bicycle facilities tend to be bike paths, bike lanes, and low-volume through streets.

According to the Bicycle Federation of Wisconsin's *Parking for Free: A Bicycle Commute Guide for Madison Area Employers*, bicycle commuting is most practical for those employees who live within 5 miles of work. Figure 4.03-5 shows that most of Middleton, portions of Verona, and much of the west side of Madison is located within 5 miles of the URP II site.

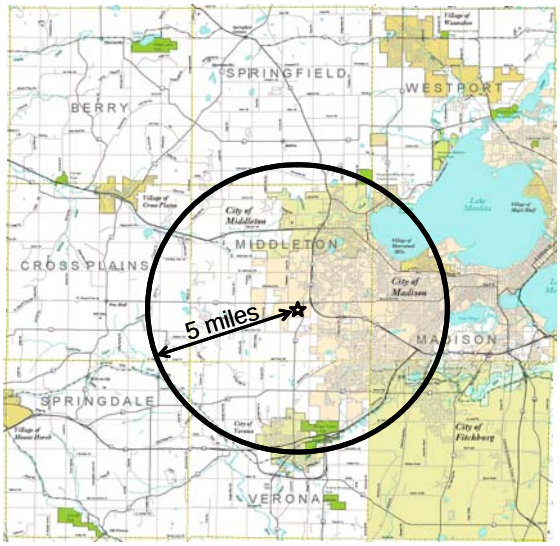
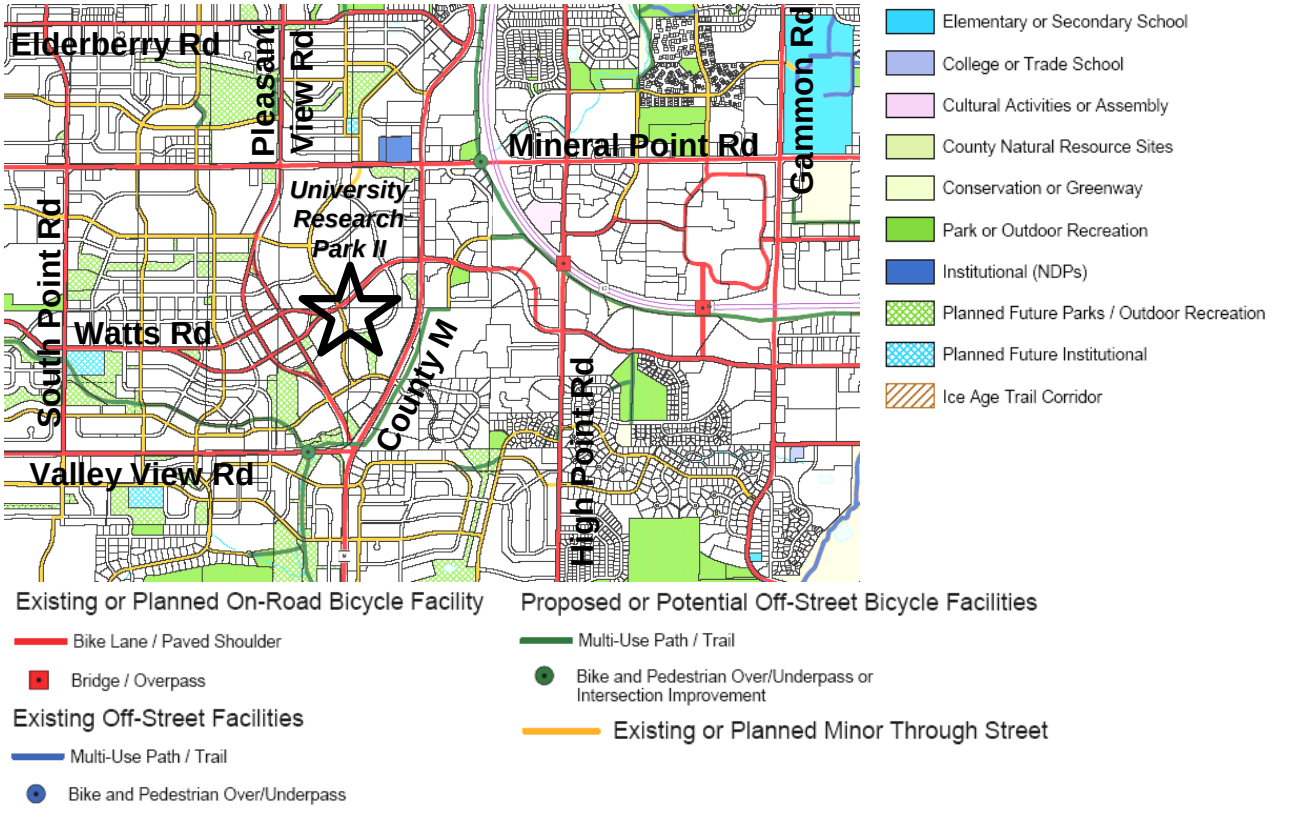


Figure 4.03-5 Five-Mile Radius from URP II

Figure 4.03-6 shows existing, planned, and proposed/potential bicycling facilities near the URP II site. While there are not currently any dedicated bicycle paths leading to the site from the central Madison area, there are many existing and planned bike lanes to and through the site. These lanes will continue to be developed as the streets are constructed and upgraded. Watts Road is a good east-west corridor, while Junction Road and High Point Road serve as the north-south corridor.



Source: Madison Area MPO, revised 1/20/2006

Figure 4.03-6 Westside Madison Area Bicycle Plan

E. Walking

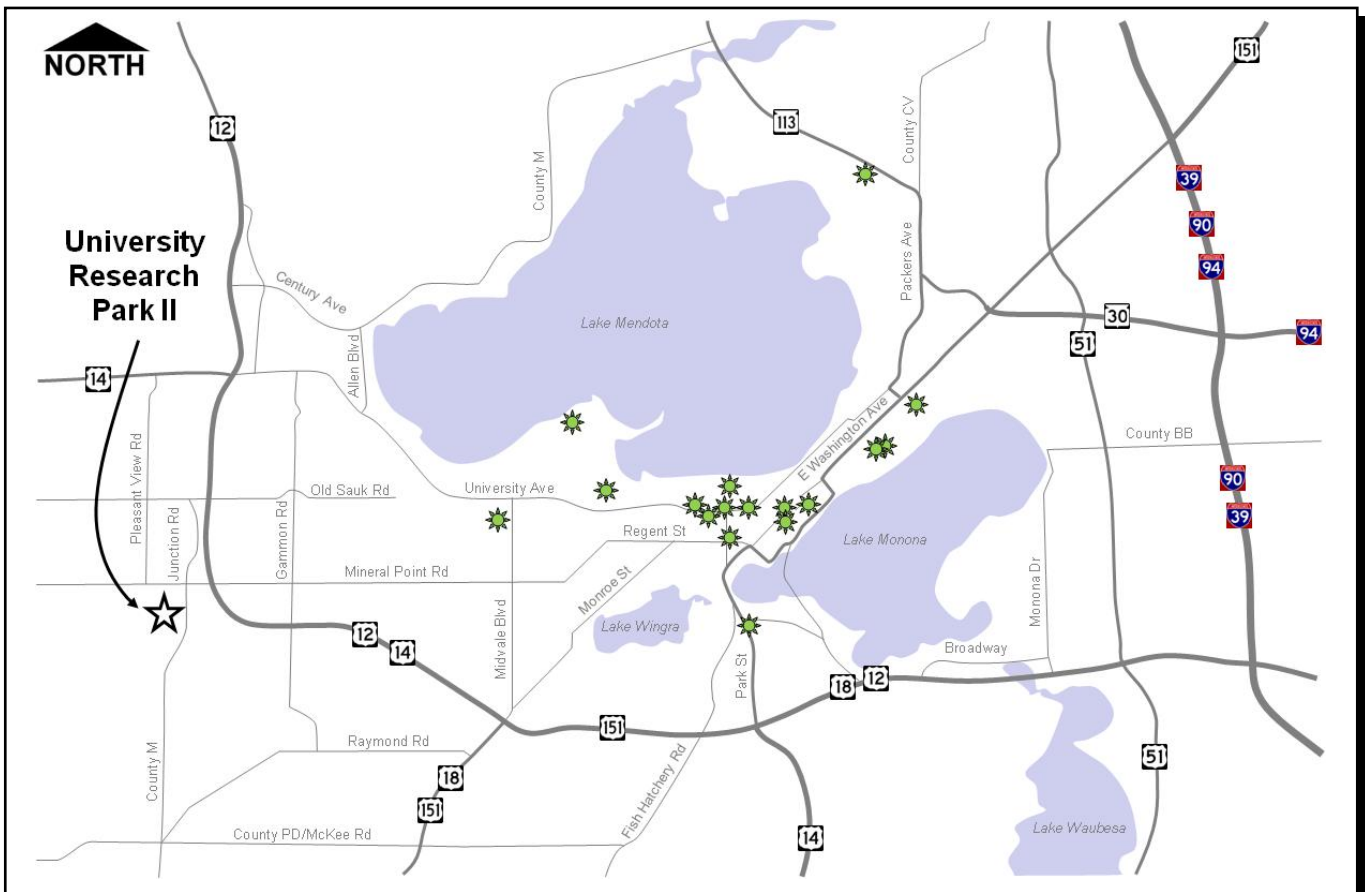
Because of this site's location at the periphery of town, currently there are not many pedestrian facilities that extend to the URP II. High-speed traffic and a lack of sidewalks are deterrents to walking as a means of travel. However, both the Pioneer Neighborhood Development Plan and the site design for the URP II place great emphasis on developing this area to be very pedestrian-friendly. Additionally, pedestrian facilities will be constructed as adjacent lands are developed/redeveloped. This will be discussed in more detail in Section 5.

F. Car-Sharing

Community Car is a Madison-based car-sharing venture that provides an alternative to car ownership. Instead of buying and maintaining a car or a second car, members share a fleet of conveniently located vehicles. This approach has several benefits:

1. Since they only pay for how much they drive, carsharers save money by driving less.
2. Community Car invests in and maintains hybrids and other high-efficiency vehicles.
3. Businesses can partner with Community Car instead of maintaining their own fleet.
4. Access to a vehicle enables employees who use alternate transportation to run errands or attend meetings.

Figure 4.03-7 shows the locations of the eighteen Community Car vehicles currently stationed in Madison. While none are currently located near URP II, Community Car is collaborating with the UW's Transportation Services and is seeking other partnership opportunities.



Source: Madison Community Car

Figure 4.03-7 Current Community Car Locations

SECTION 5
PROPOSED PROGRAM

5.01 OVERVIEW

This chapter first reviews potential organizational structures for the TDM program such as a TMA or some other type of oversight body. Section 5.02 describes the proposed framework for the development of TDM plans for URP II as a whole as well as for individual businesses/buildings within the park. Then, Section 5.03 describes the potential TDM measures that may be implemented. It is important to note that these TDM measures are being proposed in the absence of customer-oriented data and is intended to be refined once employees are working at the site and their needs and motivators can be better defined. Section 5.04 describes the range of projected mode splits from implementing mandatory measures only to all mandatory and optional TDM measures described in Section 5.03. Costs and benefits are estimated and summarized in Section 5.05 for minimum and maximum implementation of the TDM measures. Finally, implementation and evaluation of program measures are described in Section 5.06.

5.02 PROGRAM FRAMEWORK

A TDM Program is the general term for the institutional framework that implements TDM. According to the Victoria Transport Policy Institute (VTPI), "such a program has stated goals, objectives, a budget, staff, and a clear relationship with stakeholders."[1] Common responsibilities of a TDM Program include coordinating TDM planning, evaluation and data collection, implementing marketing programs, responding to problems and complaints, providing ridematching, promoting bicycling and walking, managing parking supply and pricing, and coordinating activities with other organizations. TDM Programs ensure that specific strategies are complementary and coordinated, for maximum effectiveness.

The framework for the URP II TDM Program will include several key elements that are discussed in the following paragraphs:

A. TDM Coordinator

A TDM coordinator for the research park will be appointed and funded by URP II. This person will serve as the key staff in charge of monitoring and implementing TDM measures in the park. Responsibilities will include preparing transportation information packets for new businesses, conducting marketing and Public Relations, administering TDM services, reviewing and approving individual TDM plans for businesses, and conducting yearly surveys, annual reports, and program evaluation. It is anticipated that these TDM coordinator duties will require only a portion of one staff person's time; however, URP may consider contracting a portion of the TDM coordination services out. This person may also provide visitor information and plan events and contests for URP II employees to increase awareness of alternative modes of transportation.

[1] http://www.vtpi.org/tdm/tdm42.htm

B. Design Review Board (DRB)

The DRB at the existing research park will expand to review site and building plans for URP II to ensure the developers implement the design guidelines as well as the infrastructure measures established in the TDM plan, including parking design guidelines. The board will review such items as:

1. Bicycle parking and location.
2. Pedestrian connectivity to adjacent land uses.
3. Parking layout and preferential parking.
4. Parking/employee ratios.
5. Building infrastructure (locker rooms and showers).

C. Transportation Management Association (TMA)

The TMA will be established by URP II by the time the park is 30 percent occupied, or by 2012, whichever is sooner. Membership in the TMA will be automatic for every business that locates in URP II regardless of size. Phasing will be established so that as the occupancy of the Research Park grows, so does the TMA and the requirements of each business. The TMA will have the authority to assess TDM fees to all park members. This authority to assess these fees will be established in the Covenants, Conditions, and Restrictions (CCRs) of URP II. The TMA board will have fair representation of the park residents and may include nonvoting members that will act as advisors such as a representative from the University of Wisconsin-Madison's Facilities Planning and Management Department. This may be used by companies who join URP II to attract employees and be proactive about the transportation issues within the Research Park. A goal of the TMA may be to be recognized as a Best Workplace for Commuters (see Appendix B for more information). There are several recently formed TMAs in southeastern Wisconsin from whom the URP II TMA may be able to draw information.

D. Individual Building-Based TDM Plans

In accordance with City of Madison requirements as part of the development approval process, the district (URP II) needs a plan consistent with the district plan. Each new building owner/developer in the park will be required to prepare its own individual TDM plan, as well as any company occupying more than 50 percent of the initial building on the site (see Appendix A for proposed TDM checklist). URP will streamline this process by preparing a menu of TDM measures in checklist format. Many of the measures will be infrastructure-related, and businesses will generally achieve these measures automatically because of the existing infrastructure at the park. Other TDM measures will be employer-initiated. Implementing more measures will be actively encouraged by the URP TDM coordinator. As part of the individual TDM plans, employee transportation coordinators (ETCs) will also be required for each business.

5.03 TDM MEASURES

A. Infrastructure Measures–URP Implemented

The measures described in this section are building- and roadway-specific and encourage modal shifts. The URP DRB will have jurisdiction over these measures, ensuring each site complies with these objectives.

1. Pedestrian Accommodations

Accommodating pedestrians is one of the major goals of the transportation portion of the Pioneer Neighborhood Development Plan and accordingly, URP II. A network of sidewalks and trails will promote pedestrian mobility and connections between different areas of the development. Pedestrian-oriented design will be incorporated into the Research Park overall site design. This includes sidewalks on both sides of the street and between large parcels. Street trees and street furniture will be included in the construction, creating a sense of street enclosure, and encouraging pedestrian activity.

2. Bicycle Accommodations

Several accommodations are planned for bicycles and bicyclists in URP II. On-street bike lanes (Figure 5.03-1) will connect different areas of the neighborhood as well as the existing bikeway system of the City of Madison. Mixed-use paths are also proposed that would connect to a regional system stretching from Middleton in the west to the Ice Age Trail and Elver Park in the east. A north-south path is also proposed on the western edge of the neighborhood. Secure and protected bike parking areas with sufficient rack space will be required as part of the development plans for each building. Locker rooms with showers will also be required in office buildings and other workspaces.

Source: Pioneer Neighborhood Plan

Figure 5.03-1 On-Street Bike Lanes

3. Preferential Parking

Preferential parking spaces closer to work locations will be offered at each new building to encourage van- and carpooling among employees living in the same region.

4. Parking Management

There are several strategies available for parking management at URP II. The City of Madison could reduce minimum parking requirements if developers implement additional TDM measures. The minimum parking requirements could also be reduced in zoning codes and development policies and in more accessible locations (near transit stations or in areas with good walking facilities).

As the project progresses, the URP II through the TMA may consider in-lieu fees used to fund shared parking instead of each building having its own off-street parking. The TMA may also consider parking brokerage services so that facilities with excess parking capacity can sell, lease, or trade it to others. This would allow all building owners to benefit from flexible parking requirements, not just developers of new facilities.

The URP II will also establish the maximum amount of parking that can be built either at individual sites or by establishing a cap on total parking in an area.

5. Transit Accommodations

The Madison Metro bus system currently serves only the northeast corner and the eastern edge of the neighborhood. These routes are within 0.25-mile walking distance of URP II. Additional higher-density residential development will also encourage Madison Metro to create a route serving the research park, the urban mix district, and residential areas.

Provisions are also planned to accommodate future high-capacity transit. The City of Madison is currently examining the options for high-capacity transit throughout the city. These options are described in more detail in Section 4.03. Depending on the alternative selected, the City would be encouraged to purchase the amount of right-of-way sufficient to maximize flexibility for high-capacity transit.

B. Program Measures–Tenant/Employer Implemented

The measures described in this section are ones that are employer-specific and encourage the use of alternate modes of transportation by employees and visitors.

At the beginning phases of park development, employers will only be required to prepare a TDM plan using the checklist shown in Appendix B. All employer measures will be voluntary.

In later phases of park development, the URP TMA may require higher levels of TDM measures from tenant and employers. These levels will likely be similar to the credit system described in Appendixes A, B, and D. The following paragraphs describe TDM measures employers will be encouraged to implement.

1. Subsidized Bus Passes

Employers may offer subsidized bus passes to their employees. Madison Metro has a program called Commuter Choice, a pretax transit benefit program, which shares the cost of Metro ride-cards between the employer and the employee. Employers may choose to subsidize part or all of the bus pass cost. Full subsidization (currently $55/month) will be strongly encouraged.

2. Parking Cash-Out

Parking cash-out is similar to a travel allowance where employers provide financial incentives for using alternative modes of travel. Commuters who are offered subsidized

parking by employers are also offered the cash equivalent if they use alternative travel modes, thus freeing up parking space.

3. Car-Sharing

Car-sharing is a vehicle rental service intended to substitute for private vehicle ownership. In order for car-sharing to work well, it must be accessible, affordable, convenient, and reliable. One option for car-sharing is to host a Community Car on-site. Section 4.03 describes the Community Car car-sharing venture in depth. Community Car is a Madison-based car-sharing venture that provides an alternative to car ownership. Instead of buying and maintaining a car or a second car, members share a fleet of conveniently located vehicles. Community Car would need to recover approximately $20,000 each year on its shared-use vehicle through memberships and user fees. URP II will guarantee a portion of this revenue for one vehicle and then encourage tenants/employers to join.

4. Carpool and Vanpool Accommodations

Rideshare, Etc. will serve the Pioneer Neighborhoods' demand for carpool and vanpool matching. Rideshare, Etc. is a comprehensive transportation alternatives program sponsored by the City of Madison in partnership with the MPO, Metro Transit, the State Vanpool Program, and area employers. Rideshare, Etc. works with employers to develop, promote, and sustain a targeted commuter information and assistance program. Employers will be encouraged to have a rideshare match performed for every new employee.

5. Nontraditional Employee Schedules

There are several options to reduce the number of trips during the peak hours that generally occur before and after a business's operating hours. Employers will be encouraged to allow employees flexibility in working outside of the employer's established location such as telecommuting. Another option is to permit employees to adjust work hours outside of the established start/stop time of the employer and peak hours. Compressed work weeks have also been found to be effective. With compressed work weeks, an employee would work a typical 40-hour week in four 10-hour days, or they would be permitted to reduce their number of work days by at least one in two weeks.

6. Guaranteed Ride Home Program

A common objection to alternative modes of transportation is the need to go somewhere in an emergency or an unexpected event. Guaranteed Ride Home programs provide an occasional subsidized ride to commuters who use alternative modes, for example, if a bus rider must return home in an emergency, or a carpooler must stay at work later than expected. Rideshare, Etc. offers this program as an incentive. Members are eligible for up to six vouchers a year that cover taxi fares less than $75 to return home. The Research Park encourages this service for employers separate from Rideshare, Etc.

C. Individual Building TDM Program Development

Each employer with more than 30 employees will be required to develop and maintain its own trip reduction program, as discussed in Appendix A, though participation by individual employees would be voluntary. The TDM requirements of each building would be based upon the number of employees and types of trip reduction measures selected by each business/building. A checklist has been developed that will aid in the development of the TDM program. The checklist follows and is also included as Appendix B. This checklist includes the TDM measures that were previously described in this section. It is divided into two parts–building requirements reviewed by the UPR DRB and optional TDM initiated by tenants/employers. The optional measures are categorized into Infrastructure Measures (URP) and Program Measures (employers). A number of the Infrastructure Measures will be automatically checked off by developers or building owners as many of these measures are required in the development plan. The Program Measures are optional measures that building owners/employers can implement to encourage different levels of modal shifts. In the future, point values could be assigned to different measures in a TDM framework similar to that required by the Tahoe Regional Planning Agency (see Appendix B and Appendix D).

University Research Park II

Building-Based Transportation Demand Management (TDM) Plan Framework

The City of Madison requires that all building owners within the University Research Park II development must establish and implement a transportation demand management (TDM) plan consistent with the research park's plan. This checklist form is intended to simplify the plan-creation process for employers and provide the flexibility for each building owner to select TDM measures that best meet its needs and the needs of its tenants and employees. Questions are welcome and should be directed to {name of URP TDM Coordinator} at {608.XXX.XXXX}.

Instructions: All building owners are asked to complete all portions of this checklist. Part I identifies the main methods of communication to be used for transportation-related issues. In Part II, the building owner is provided the opportunity to identify which, if any, TDM measures will be established for the employees in that building. University Research Park encourages and expects its buildings and businesses to implement quality TDM programs that supports alternative modes of transportation and are consistent with URP II's TDM plan.

CONTACT INFORMATION

Name and Type of Organization:	
Building Address:	
Phone Number:	Fax Number:
Website Address:	

PART I

1. All building owners shall encourage ridesharing and commuting by alternative modes by making the following information available either by posting in a common area or distributing to all employees:
(a) Information on Madison Metro routes, schedules, fares, and research park discounts,
(b) Up-to-date bicycle route maps, and
(c) Posters or flyers encouraging the use of carpools and vanpools and referrals to sources of information concerning ridesharing such as the Rideshare application.

Please describe where you will post this information in your building:

2. All building owners shall appoint one person to serve as the Employee Transportation Coordinator (ETC) for the tenant(s). This person will serve as the liaison for all transportation matters. This person will assist the University Research Park II TDM Coordinator in surveying employees as necessary for annual reporting and program evaluation.

Please fill in the contact information for the ETC for employees in your building:

ETC Name and Title:
ETC E-mail Address:
ETC Phone Number (if different than above):
ETC Mailing Address (if different than above):

University Research Park II

Building-Based Transportation Demand Management (TDM) Plan Framework

PART II

All building owners should indicate which TDM measures that will be implemented for the tenants in their building.	Y/N
Infrastructure Measures	
1. Our building is located on a site with sidewalks that connect to all adjacent sites.	
2. Our building is located on a street with street trees.	
3. Our building is located on a street with street furniture.	
4. Our building can be directly accessed via a designated bicycle route (either a path or painted lane).	
5. Our building is located on a site with bicycle parking facilities.	
6. Our building has locker rooms and showers.	
7. The parking facilities for our building include preferential parking spaces for carpools and vanpools.	
8. The parking facilities for our building are shared with other buildings.	
9. The parking facilities for our building are structured.	
10. There is a Madison Metro transit stop within one-quarter mile of our building.	
11. There are commercial amenities (restaurants, banks, dry cleaners, post office, etc.) within one-quarter mile of our building.	
12. There are residential housing options within one-quarter mile of our building.	
Program Measures	
13. Subsidized bus passes are provided to all employees in our building upon their request.	
14. A parking cash-out incentive is provided for employees in our building who use alternative modes of transportation.	
15. Employees in our building have access to company vehicles or a Community Car located within the research park for travel during the work day.	
16. Our ETC attends at least one TDM-related educational seminar per year.	
17. We organize or participate in a University Research Park-based carpool and vanpool matching service.	
18. Employees in our building are permitted to telecommute at least once a week.	
19. Employees in our building are permitted to have flexible work hours to avoid morning and afternoon peak travel hours.	
20. Employees in our building are permitted to have compressed work weeks.	
21. We provide a Guaranteed Ride Home program that supplements the Madison area's Rideshare Etc. program.	
22. We provide or participate in a shuttle bus/buspool program that transports workers to and from their residences, a park-and-ride lot, or other staging area, from the workplace.	
23. Other trip reduction measures not described above.	

5.04 PROJECTED MODE SPLITS

The study used the EPA's COMMUTER version 2.0 to estimate the mode splits that would occur with various TDM implementation levels. Mode splits were projected for a range of TDM options, with initial mode splits taken from 2000 Census data for Dane County. At one end are development-only requirements (referred to in this section as minimum TDM) such as sidewalks, bike lanes, and bike racks. At the other end of the scale is the implementation of all the TDM measures included in the checklist (referred to in this section as maximum TDM). These measures include subsidized bus passes, car-sharing, and parking cash-out.

The results of the commuter model indicate that the implementation of minimum TDM would reduce SOV travel by 2.2 percent. In other words, 220 of the projected 10,000 total URP II employees would take alternate modes of transportation. The changes to the individual modes can be seen in the graph in Figure 5.04-1.

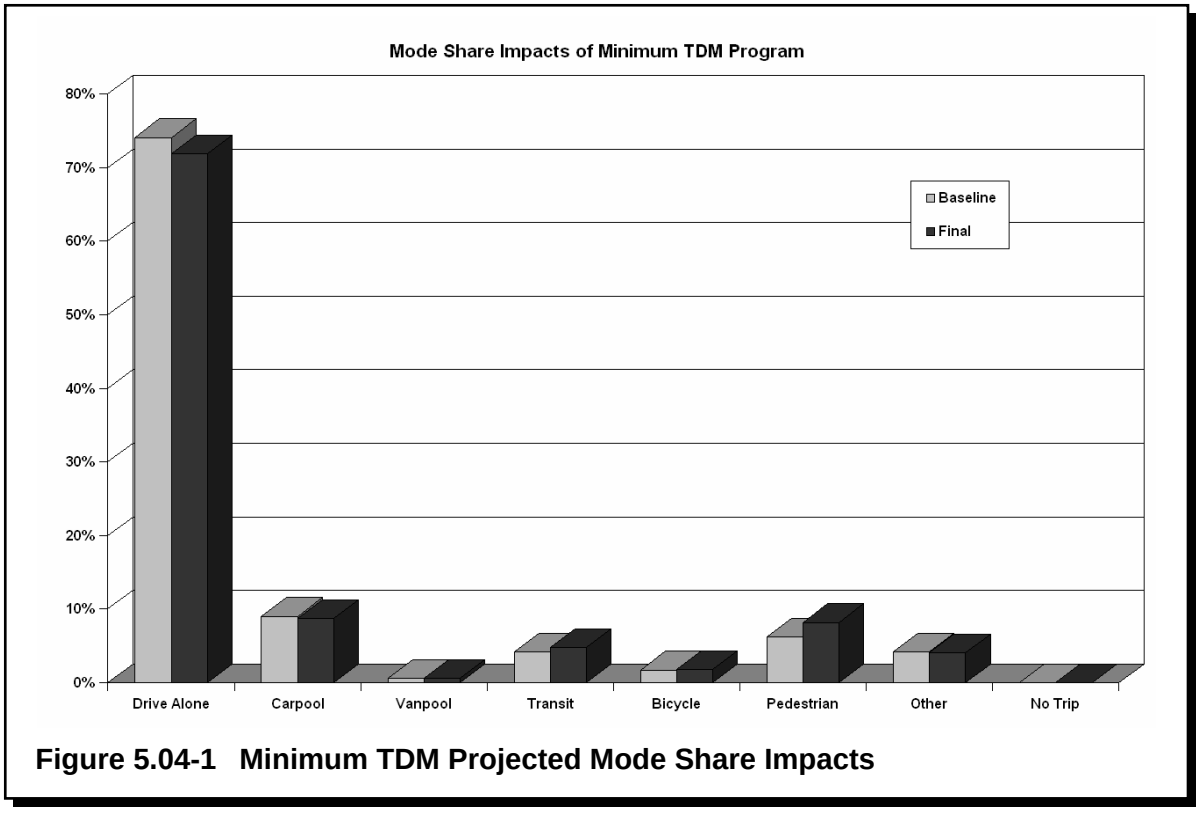


Figure 5.04-1 Minimum TDM Projected Mode Share Impacts

A moderate TDM package, with the mandatory measures and optional measures such as car-sharing, carpool/vanpool matching, and a guaranteed ride home program, would be expected to induce a 6.5 percent increase in non-SOV trips. The changes to each of the modes from these measures can be seen in Figure 5.04-2.

On the other end of the scale, applying all possible TDM measures in the checklist to their maximum extent would be expected to reduce SOV trips by 44.6 percent. The changes to each of the modes from these measures can be seen in Figure 5.04-3.

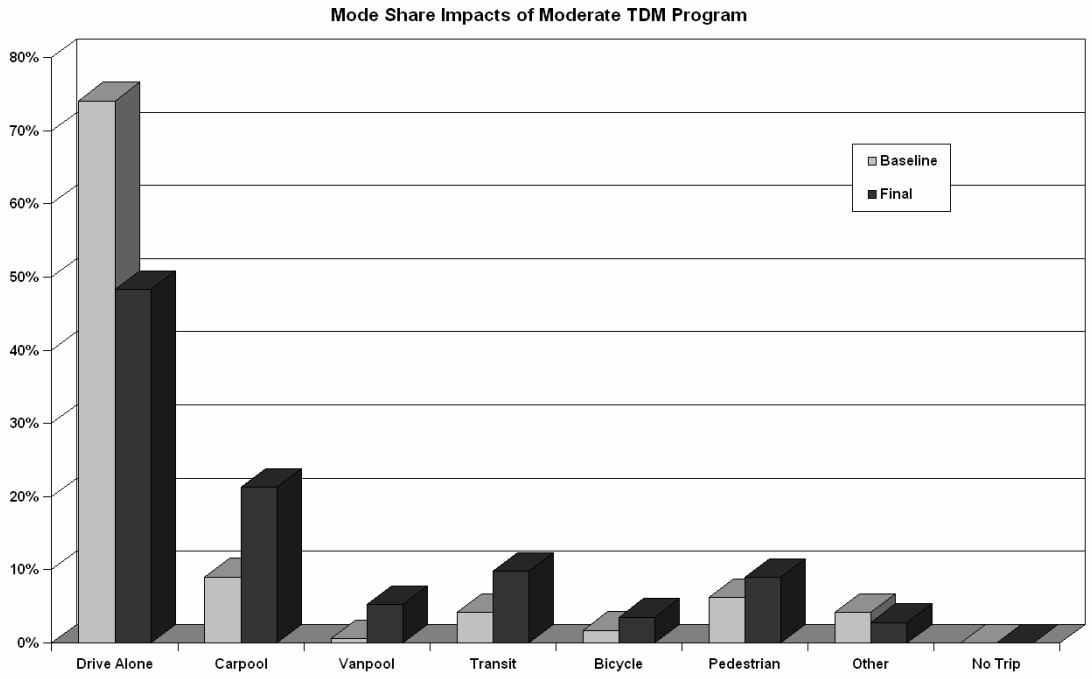


Figure 5.04-2 Moderate TDM Projected Mode Share Impacts

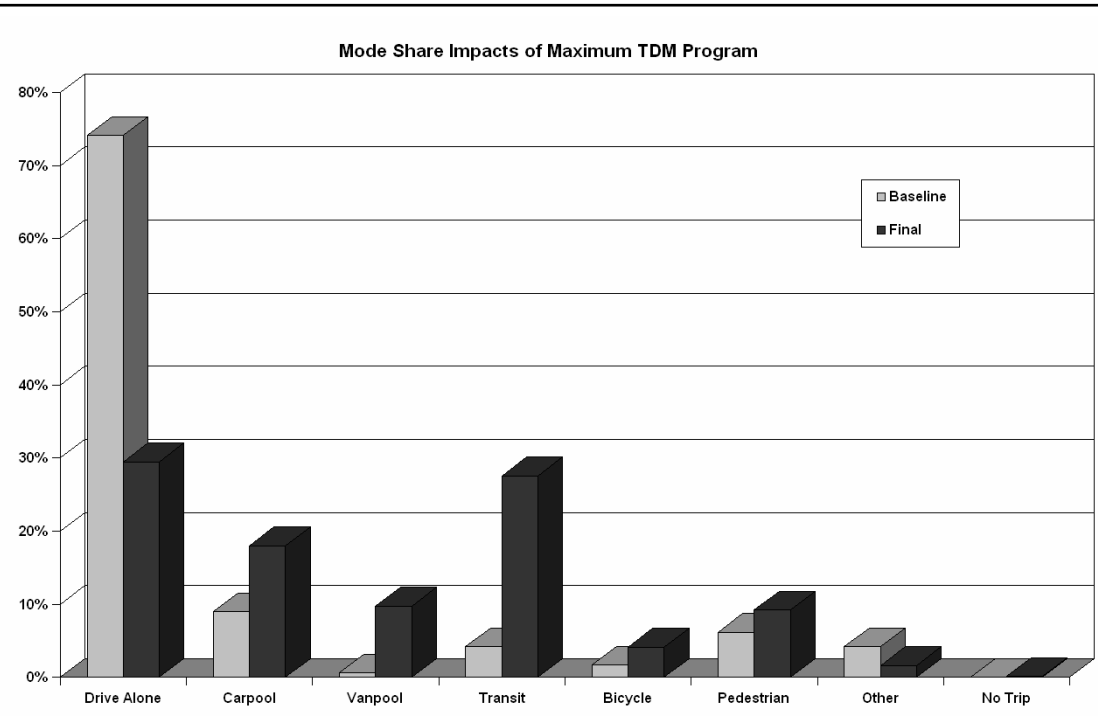


Figure 5.04-3 Maximum TDM Projected Mode Share Impacts

5.05 COSTS AND BENEFITS

There are costs and benefits associated with each of the transportation management plans previously described. These costs and benefits were calculated for the planned full build-out, with 10,000 Research Park employees. The Best Workplaces for Commuters (BWC) Community Benefits calculator was utilized in estimating the costs and benefits for the Research Park and employees, when available. Similar to what was examined in the projected mode splits section (see 5.04), costs and benefits were calculated for a range of program measures. With only mandatory building and URP II measures implemented, the costs to URP II/developers are estimated to be $310,000 for start-up and $6,600 annually. With these mandatory measures, URP II/developers are projected to save 40 parking spaces and $14,000 annually at $350/parking space. Participating employees would also benefit from these measures with each saving $1,650 annually by not paying for gas, insurance, and vehicle maintenance.

With a selection of the optional TDM measures implemented, such as a parking cash-out valued at $30/month, bus pass subsidies ranging from $30 to $55/month, car-sharing, carpool/vanpool matching, and a guaranteed ride home program, in addition to the mandatory measures, the costs to URP II/developers are estimated to be $475,000 in start-up and $607,450 to $878,750 annually. With these TDM measures, URP II/developers are projected to save between 1,490 and 2,390 parking spaces and $688,500 to $1,003,500 annually, with costs saved from parking spaces and employee turnover. Participating employees would also benefit from these measures with each saving between $1,960 and $2,250 annually by not paying for gas, insurance, and vehicle maintenance.

With all proposed TDM measures implemented, the costs to URP II/developers are estimated to be $3,275,000 in start-up and $1,764,700 to $2,325,700 annually. With these measures, URP II/developers are projected to save 2,190 to 3,090 parking spaces and $4,302,500 to $4,616,500 annually, with costs saved from parking spaces and employee turnover and office space reduction. Participating employees would also benefit from these measures with each saving $1,880 to $2,150 annually by not paying for gas, insurance, and vehicle maintenance, as well as receiving TDM incentives annually. More information for costs and benefits for the range of TDM are given in Tables 5.05-1, 5.05-2, and 5.05-3.

TABLE 5.05-1

MINIMUM TDM COSTS AND BENEFITS

	Costs [a]		Benefits [a]	
	URP II/Developers	**Employees**	**URP II/Developers**	**Employees**
INFRASTRUCTURE MEASURES [b]				
Bike Rack Space (100 percent typical rack) [c]	$60,000 start-up + $6,600 annually (BWC)	None	Reduction of 40 parking spaces (estimated to total $14,000/yr) (BWC) [e]	$1,650/yr per participating employee ($66,000 total) (BWC) [f]
Locker Rooms with Showers [d]	$250,000 start-up cost (TDM research)	None		
TOTALS	$310,000 start up + $6,600 annually		$14,000 annually	$66,000 annually

[a] Costs and benefits derived from the Business Savings Calculator available at the Best Workplaces for Commuters Web site and also in-house estimates from past TDM plans.
[b] Sidewalks, trails, street trees, street furniture, bike lanes and trails, and high-capacity transit right-of-way already included in Neighborhood and Development plans.
[c] Number of required bike rack spaces (approximately 600) determined from Madison General Ordinance 28.11.
[d] Number of required showers (20) based on example ordinance from Vancouver (http://www.vtpi.org/tdm/tdm85.htm). From past TDM research, 10 lockers should be provided for each shower.
[e] Reduced parking spaces save URP II/Developers $350/space/year.
[f] Employee benefits, estimated at $1,650/employee/year, include not paying for gas, insurance, vehicle, and maintenance.

TABLE 5.05-2

MODERATE TDM COSTS AND BENEFITS

	Costs [a]		Benefits [a]	
	URP II/Developers	**Employees**	**URP II/Developers**	**Employees**
INFRASTRUCTURE MEASURES [b]				
Bike Rack Space (100 percent typical rack) [c]	$60,000 start-up + $6,600 annually (BWC)	None	Reduction of 90 parking spaces (estimated to total $31,500/yr) (BWC) [e]	$1,650/yr per participating employee ($148,500 total) (BWC) [f]
Locker Rooms with Showers [d]	$250,000 start-up cost (TDM research)	None		
Preferential Parking	None	None		
Transit Shelter	$15,000 start-up (TDM research)	None		
PROGRAM MEASURES				
Subsidized Bus Passes and Parking Cash-Out [g]	$256,700-$828,000 annually (BWC)	$0-$153,000 annually [i]	Reduction of 1,400-2,300 parking spaces (estimated to total $490,000-$805,000/year). [e] Reduction in employee turnover rate of 1 percent (estimated recruitment/ training cost savings of $167,000/year). (BWC)	$1,960-$2,275/yr per participating employee ($2,743,000-$5,229,000 total) (BWC) [j]
Car-Sharing/Company or Research Park Car Fleet [h]	varies ($150,000 start-up + $20,000 annually)	None		
Carpool/Vanpool Matching Service	None	None		
Guaranteed Ride Home Program	$24,150 annually	None		
Rideshare, Etc.	None	None		
TOTALS	$475,000 start up + $307,450-$878,750 annually	$0-$153,000 annually	$688,500-$1,003,500 annually	$2,891,500-$5,377,500 annually

[a] Costs and benefits derived from the Business Savings Calculator available at the Best Workplaces for Commuters Web site and also in-house estimates from past TDM plans.
[b] Sidewalks, trails, street trees, street furniture, bike lanes and trails, and high-capacity transit right-of-way already included in Neighborhood and Development plans
[c] Number of required bike rack spaces (approximately 600) determined from Madison General Ordinance 28.11.
[d] Number of required showers (20) based on example ordinance from Vancouver (http://www.vtpi.org/tdm/tdm85.htm). From past TDM research, 10 lockers should be provided for each shower.
[e] Reduced parking spaces save URP II/Developers $350/space/year.
[f] Employee benefits, estimated at $1,650/employee/year, include not paying for gas, insurance, vehicle, and maintenance.
[g] This element represents a subsidized transit pass range from $30 to $55 and a monthly employee parking cash-out option of $30.
[h] Assume fleet of 5 cars.
[i] Assumes 510 participants at an average personal cost of $300 annually with subsidy (Madison Metro Transit).
[j] Monetary benefits include the value of the incentives to the employees as well as cost savings in reduced gas usage, insurance, and maintenance.

TABLE 5.05-3

MAXIMUM TDM COSTS AND BENEFITS

	Costs [a]		Benefits [a]	
	URP II/Developers	**Employees**	**URP II/Developers**	**Employees**
INFRASTRUCTURE MEASURES [b]				
Bike Rack Space (100 percent typical rack) [c]	$60,000 start-up + $6,600 annually (BWC)	None	Reduction of 90 parking spaces (estimated to total $31,500/yr) (BWC) [f]	$1,650/yr per participating employee ($148,500 total) (BWC) [g]
Locker Rooms with Showers [d]	$250,000 start-up cost (TDM research)	None		
Preferential Parking	None	None		
Subsidized Bus Route [e]	$285,000 annually	None		
Transit Shelter	$15,000 start-up (TDM research)	None		
PROGRAM MEASURES				
Subsidized Bus Passes/Parking Cash-Out/Incentive [h]	$337,800-$898,800 annually (BWC)	$0-$153,000 annually [k]	Reduction of 2,100-3,000 parking spaces (estimated to total $736,000-$1,050,000/year). [f] Reduction in employee turnover rate of 4 percent (estimated recruitment/training cost savings of $667,000/year). Reduction in Office Space (estimated at $2,868,000/year) (BWC)	$1,890-$2,150/yr per participating employee ($3,967,000-$6,442,000 total) (BWC) [l]
Car-Sharing/Company or Research Park Car Fleet [i]	varies ($150,000 start-up + $20,000 annually)	None		
Carpool/Vanpool Matching Service	None	None		
Flexible Work Hours and Locations [j]	$2,800,000 start up + $1,067,000 annually (BWC)	None		
Guaranteed Ride Home Program	$24,150 annually	None		
Rideshare, Etc.	None	None		
Shuttle Bus	$24,150 annually	None		
TOTALS	$3,275,000 start up + $1,764,700-$2,325,700 annually	$0-$153,000 annually	$4,302,500-$4,616,500 annually	$4,115,500-$6,590,500 annually

[a] Costs and benefits derived from the Business Savings Calculator available at the Best Workplaces for Commuters Web site and also in-house estimates from past TDM plans.
[b] Sidewalks, trails, street trees, street furniture, bike lanes and trails, and high-capacity transit right-of-way already included in Neighborhood and Development plans.
[c] Number of required bike rack spaces (approx. 600) determined from Madison General Ordinance 28.11.
[d] Number of required showers (20) based on example ordinance from Vancouver (http://www.vtpi.org/tdm/tdm85.htm). From past TDM research, 10 lockers should be provided for each shower.
[e] Cost of bus route based on Madison Metro Cost Estimate (February 2004) for "Case D" (6 trips each peak period, hourly trips between peaks).
[f] Reduced parking spaces save URP II/Developers $350/space/year.
[g] Employee benefits, estimated at $1,650/employee/year, include not paying for gas, insurance, vehicle, and maintenance.
[h] This element represents a subsidized transit pass range from $30 to $55, a monthly employee parking cash-out option of $30 and a monthly bike/walk incentive of $30.
[i] Assume fleet of 5 cars.
[j] Includes allowing 5 percent each of full- and part-time employees to participate in telecommuting, flexible work hours, and compressed work weeks.
[k] Assumes 510 participants at an average personal cost of $300 annually with subsidy (Madison Metro Transit).
[l] Monetary benefits include the value of the incentives to the employees as well as cost savings in reduced gas usage, insurance, and maintenance.

5.06 IMPLEMENTATION AND EVALUATION

The implementation of the TDM program will likely occur in several stages. The TDM plan described in this report is a starting point. It will be tailored to suit URP II as more businesses and developments locate there. At that time, this TDM plan will need to be reviewed and updated. URP II will perform a start-up survey aimed at determining what each of the developments want for TDM and what they are willing to do. After start-up, an employee and employer survey will occur on a regular (e.g., every three years) basis that will keep the plan current and keep the TDM program current.

As part of the update procedure, employee transportation surveys will be conducted. This information may be used to determine the intensity level of specific TDM strategies and refining the cost and benefit calculations. Employee surveys will include a transportation log, wherein employees are asked to provide daily commute information, which will be used to calculate the average vehicle occupancy. Establishing a baseline of employee mode choice allows for the evaluation of TDM strategies in future years. The survey also asks for employee feedback about a listing of proposed incentives to gauge interest. As part of offering the incentives, draft eligibility criteria can be established through a verification process for receiving the incentives as part of the duties of the TDM coordinator.

City of Madison traffic engineer involvement in evaluating and selecting TDM program measures for URP II will additionally strengthen the choices made by the TMA. A report including the status of each of the businesses/buildings in the Research Park as well as URP II as a whole will be sent for review by a City of Madison traffic engineer.

The developers and TMA participants will establish the Convenants, Conditions, and Restrictions as soon as it is feasible to do so. The covenants will be developed with language similar to the summarized example taken from the Covenants, Conditions, and Restrictions for Hacienda Business Park in California.

A. Transportation Demand Management

1. Requirement of a TDM Program

Each owner acknowledges and agrees that it is to the benefit of Declarant and to each and every Owner, that each Owner, lessee or other occupant of a Parcel or portion thereof use its Parcel or portion thereof in a manner which will control, regulate or otherwise minimize the number of automobile trips to and from such Parcel, particularly trips at peak commute hours. To minimize the number of automobile trips generated, each Owner, lessee, or other occupant of a parcel or portion thereof shall, at its own expense, participate in any Transportation Demand Management Program (“TDM Program”) which may be required by the TMA.

2. Enforcement

If an Owner, lessee, or other occupant of a Parcel or any portion thereof fails to participate in any TDM Program as required above, the Association shall have the right (but not the obligation) to do so, on behalf and at the expense of such Owner, lessee or other occupant. The Association may also bring an action at law or in equity to enforce the requirements of the previous section, either in its own name or on behalf of all Owners. In any such action, the relief granted by the court may include damages, penalties, specific performance, or an order to cease the use of all or part of a Parcel not in compliance with the requirements of this section, or any combination thereof.

B. Association Powers

The Association shall have the power to establish a Transportation Demand Management Program ("TDM Program") for the Park. The TDM Program may include dissemination of information on public transit, dissemination of information on and the establishment of carpooling, vanpooling, and related programs and of subscription bus services. The TDM Program may include the projection of traffic levels likely to be generated by the use of Parcels or within the Park in the Association's sole judgment and the assignment to each Owner, lessee, or other occupant of a Parcel, of a target traffic generation reduction to be achieved through such programs. Each target traffic generation reduction shall be made on such basis as the Association reasonably deems appropriate.

APPENDIX A
STATE OF THE PRACTICE

A.01 OVERVIEW

The study of TDM is a rapidly emerging field. With the increasing reliance upon and prominence of the automobile, urban areas are experiencing increasing levels of congestion and air pollution. These problems have caused many governmental bodies to pass TDM ordinances that seek to reduce the number of SOV trips made in the jurisdiction. Whether or not there is a TDM ordinance in place, many large employment centers have begun to implement TDM measures as a way to help mitigate congestion and air pollution, minimize parking costs, and provide valuable benefits to business tenants and employees.

A brief literature review was conducted as part of the development of this TDM plan to learn about the current state of the practice for TDM programs at large employment centers with particular attention paid to the organizational structure of the programs. The following section summarizes TDM programs for several employment centers, a shopping center, and a university, as well as one regional ordinance, and a TDM consulting firm. Many of these businesses or businesses within the Transportation Management Associations (TMAs) have won Best Workplaces for Commuters (BWC) awards. More information about BWC is given in Appendix C.

A.02 CASE STUDIES

The study team utilized the TDM Listserv hosted by the National Center for Transit Research (NCTR) National TDM and Telework Clearinghouse is located at the Center for Urban Transportation Research (CUTR) at the University of South Florida (available at: http://www.nctr.usf.edu/clearinghouse/). A request was made to the Listserv members for information about the organizational structure (TMA or other) of other suburban employment centers that have initiated TDM programs. The following paragraphs describe the results of this review.

A. Bishop Ranch Transportation Center, San Ramon, California

Bishop Ranch is a 585-acre office park in the San Francisco Bay area, as shown in Figure A.02-1. The park is privately owned with a development company owning about 30 buildings, a large oil company owning about 15 buildings, and a telecommunications building owning one building. The property owners pay dues that fund the Bishop Ranch Transportation Center (BRTC) which is an organization run as a TMA. There are about 450 companies who lease space

Source: Google Earth

Figure A.02-1 Bishop Ranch Business Park

in the office park and who do not pay TMA dues. However, the TDM incentives are offered to all business tenants and 23,000 employees are therefore directly supported. The director of BRTC works with a representative from each business, their employee transportation coordinator (ETC), to promote TDM programs. The director prioritized the most important elements of the TDM program:

1. Free express bus service from two BART stations (issued with 6-month passes).
2. Guaranteed Ride Home Program (partnership with countywide program).
3. Carpool Incentive ($60 in free gas for new carpool or new members).
4. Transit Incentive (1 free week on transit) (partnership with the air district).
5. Vanpool Incentive (50 percent rebate on vanpool for 3 months of fares ~ $200/month value).
6. Incentive for train from central valleys (first month free for new riders)/ACT train is half off.

B. FlatIron Shopping District, Broomfield, Colorado

The FlatIron Shopping District, shown in Figure A.02-2, is comprised of three retail malls in Broomfield, Colorado, which include 65 employers and 6,000 employees. The three mall developers worked with the City to provide employees and customers with access to transit, a free shuttle between stores, and miles of bike paths for community connectivity. For 2006, FlatIron predicted $131 in direct commuter benefits per employee. The District's commuter benefits program includes, among other incentives, employee shuttle connecting to regional and local bus lines, 50 percent transit subsidy for employees within the FlatIron District, monthly drawings for free bus passes for employees, and three shopper promotions throughout the year to encourage shuttle use.

Source: Google Earth

Figure A.02-2 FlatIron Shopping District

C. Hacienda Business Park, Pleasanton, California

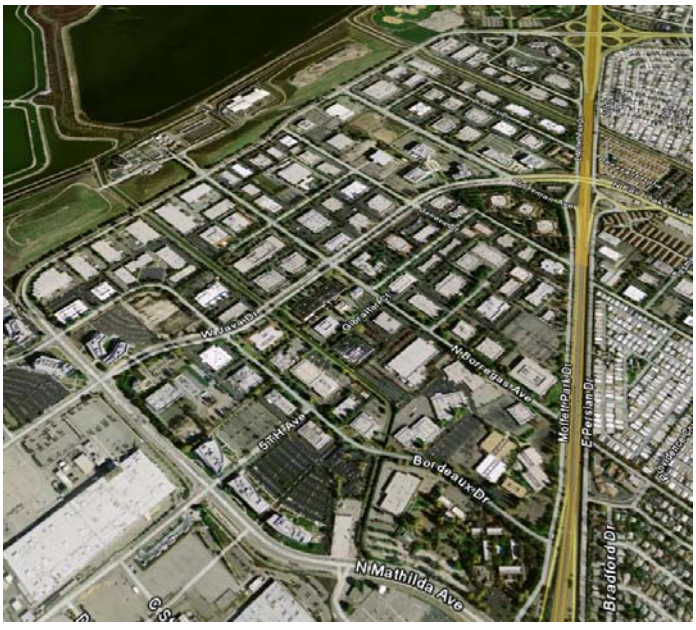
Hacienda Business Park (HBP) is almost a square mile of development in the San Francisco Bay area and includes a mix of uses including residential, as shown in Figure A.02-3. It was developed around 1980 and the TDM aspect was created around 1985. The latter was spurred by the City of Pleasanton's creation of a TDM ordinance. The City of Pleasanton was the first city in the country to enact such an ordinance. One TDM challenge is the multitude of free parking in the area. Generally, employers provide free parking to employees at rates of 3.3 to 4 spaces per 1,000 square feet. In order to compete with this, HBP offers low-cost or free transit service. HBP has found that it is effective in reducing SOV trips. A unique benefit that HBP offers to its members is that increasing development potential is directly tied to the strength and effect of the mitigation they undertake. If members meet certain benchmarks, they are allowed to expand. The HBP Owner's Association is a TMA, but it also addresses other business issues. This allows a wider range of services to be provided and best uses the administrative infrastructure.

Source: Google Earth

Figure A.02-3 Hacienda Business Park

D. Moffett Business Park, Sunnyvale, California

Moffett Business Park is a 1,100-acre office park located on the San Francisco Bay (see Figure A.02-4). The TDM component of the park was formed because the Park and City of Sunnyvale were experiencing issues with transit service expansions. Sunnyvale began to require that "large employers" (e.g., with approximately 1,000 employees) have a TDM program, meet certain SOV trip reduction requirements (varies between 15 to 20 percent, decided during Sunnyvale development approval process), and annually report their findings. At Moffett Park, each of the



Source: Google Earth

Figure A.02-4 Moffett Business Park

companies designated a representative and formed the Moffett Park Business & Transportation Association (MPBTA) to prevent duplication of efforts if it was undertaken by individual companies. Currently there is a 10-member board + 2 members who are nonvoting (the Chamber of Commerce and the transit agency). MPBTA coordinates with the City and the transit agencies. It also acts as an advocate for the member businesses and deals with other business issues besides transportation, which it sees as helping to add value to the services it provides. One of the larger services the MPBTA provides is preparing the individual reporting documents for each of the member companies. MPBTA will prepare the survey instrument and collect information. Member benefits for joining MPBTA include emergency rides home, free transportation consultations identifying feasible alternative modes for employees, and annual surveys to gather employee input and strengthen the TDM program. MPBTA also coordinates promotions such as events for “spare the air” days and “bike to work day.”

E. Rockefeller Group Corporate Park: Florham Park, New Jersey

The Rockefeller Group Corporate Park, shown in Figure A.02-5, is a 140-acre site located in New Jersey, about 20 miles west of New York City. The TDM plan for this research park was prepared by TransOptions. TransOptions is a private nonprofit company founded in 1986 as a TMA. Its mission is to assist in implementing measures that may reduce traffic congestion, improve air quality, and provide commuters with options in and around the northwestern New Jersey employment area. Based on the site analysis and projected employee commute characteristics, the strategies listed below were implemented in an attempt to meet the objectives of the developer at the Rockefeller Group Corporate Park.

Source: http://www.rockgroupdevelopment.com/rgcp/index1.html

Figure A.02-5 Rockefeller Group Corporate Park

1. Preferential Parking Designated parking spaces and drop-off areas reserved for carpoolers and vanpoolers. The purpose of providing preferential parking (closer to elevators, walkways, and offices) is to offer car- and vanpoolers a qualitative advantage over solo drivers and a guaranteed parking spot.

2. Drop-off areas that provide both safety and convenience for carpoolers and vanpoolers who ride with people who work in other buildings.

3. A commuter transportation club.

4. Tenant transportation surveys.

5. Formation of a transportation management committee.

6. Discounted NJTRANSIT passes, parking management.
7. All tenants as partners of TransOptions.
8. A mid- or upper-management employee as participant in the Transportation Management Committee at the site.
9. A Facilities Manager trained in TDM strategies.
10. On-site commute options promotions, prize drawings, special events.
11. On-site sale of transit passes.
12. Emergency Ride Home program.

F. Stanford University, Santa Clara County, California

The Santa Clara Board of Supervisors placed a general use permit (GUP) on Stanford University (shown in Figure A.02-6) in December 2000. From the Frequently Asked Questions on Stanford's GUP Requirements, this GUP placed many conditions on the land use, growth, and development by Stanford University. One of the conditions is that Stanford must not exceed the 2001 measured number of vehicles entering and exiting the university during peak periods over the life of the GUP. Stanford agreed to comply with the conditions of the GUP to gain the needed approval to further develop Stanford land. Cordon counts of all university traffic crossing the cordon during peak periods are taken twice a year (spring and early fall). TDM measures or parking restrictions would be needed if the counts exceeded those taken in 2001. However, that had not occurred through June 26, 2006.

Source: aerialarchives.com

Figure A.02-6 Stanford University

Stanford University also has an Alternative Transportation/TDM program with several options for increasing non-SOV trips. The Commute Club is for individuals who agree not to drive alone to work. Members can earn financial incentives of up to $216 (2006-2007 rate) and take advantage of carpool matching, guaranteed rides home, and pretax deductions for transit costs, among other benefits. There is also a free campus shuttle system that is open to the public, free bus and light rail available to Stanford employees, and a vehicle rental service on campus for faculty, staff, and student use.

G. Tahoe Regional Planning Agency, Tahoe, Nevada

The Tahoe Regional Planning Agency (TRPA) requires each business in the Lake Tahoe area (see Figure A-02-7) to develop and maintain its own trip reduction program. The TDM requirements of each business are different and based upon the number of employees. A small business (less than 100 employees) is required to encourage ridesharing and the use of alternative modes of transportation, and post related materials in a conspicuous location. Larger businesses are required to develop a transportation plan. The transportation plan includes the proposed development, existing alternative modes of transportation available to employees, required and optional transportation control measures, and an implementation schedule. The required transportation control measures include designating an employee transportation coordinator, post ridesharing and information regarding other alternative mode materials, and provide bicycle parking facilities and preferential carpool/vanpool parking. The larger businesses also have to implement at least 15 credits' worth of optional transportation control measures, depending on the business size. The employers have a choice of TDM measures that best fit their business model. The number of credits is dependent on the measure. Examples of credits include the following: joining a TMA is worth 15 credits; providing a guaranteed ride home is 2 credits; providing a transit shelter, employee shower facilities, and lockers is 3 credits, 2 credits, and 2 credits, respectively.

Source: www.fretlessconsulting.com

Figure A.02-7 Tahoe, NV

A.03 SUMMARY

In general, TDMs are very specific to the types of businesses and the surrounding areas. Strategies that may work in one area of the country may not be feasible in another. However, there are SOV-reducing strategies that have been used in multiple TDMs across the country with success. Many of these strategies are included in the development of URP II's TDM plan and are described in further detail in the next section.

APPENDIX B
BUILDING-BASED TRANSPORTATION DEMAND MANAGEMENT PLAN

University Research Park II

Building-Based Transportation Demand Management (TDM) Plan Framework

The City of Madison requires that all building owners within the University Research Park II development must establish and implement a transportation demand management (TDM) plan consistent with the research park's plan. This checklist form is intended to simplify the plan-creation process for employers and provide the flexibility for each building owner to select TDM measures that best meet its needs and the needs of its tenants and employees. Questions are welcome and should be directed to {name of URP TDM Coordinator} at {608.XXX.XXXX}.

Instructions: All building owners are asked to complete all portions of this checklist. Part I identifies the main methods of communication to be used for transportation-related issues. In Part II, the building owner is provided the opportunity to identify which, if any, TDM measures will be established for the employees in that building. University Research Park encourages and expects its buildings and businesses to implement quality TDM programs that supports alternative modes of transportation and are consistent with URP II's TDM plan.

CONTACT INFORMATION

Name and Type of Organization:	
Building Address:	
Phone Number:	Fax Number:
Website Address:	

PART I

1. All building owners shall encourage ridesharing and commuting by alternative modes by making the following information available either by posting in a common area or distributing to all employees:
(a) Information on Madison Metro routes, schedules, fares, and research park discounts,
(b) Up-to-date bicycle route maps, and
(c) Posters or flyers encouraging the use of carpools and vanpools and referrals to sources of information concerning ridesharing such as the Rideshare application.

Please describe where you will post this information in your building:

2. All building owners shall appoint one person to serve as the Employee Transportation Coordinator (ETC) for the tenant(s). This person will serve as the liaison for all transportation matters. This person will assist the University Research Park II TDM Coordinator in surveying employees as necessary for annual reporting and program evaluation.

Please fill in the contact information for the ETC for employees in your building:

ETC Name and Title:
ETC E-mail Address:
ETC Phone Number (if different than above):
ETC Mailing Address (if different than above):

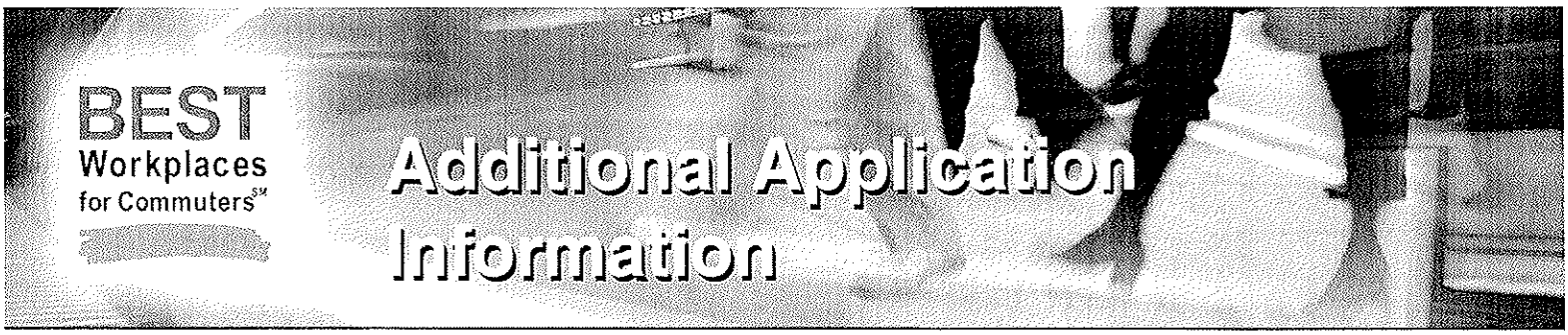
University Research Park II

Building-Based Transportation Demand Management (TDM) Plan Framework

PART II

All building owners should indicate which TDM measures that will be implemented for the tenants in their building.	Y/N
Infrastructure Measures	
1. Our building is located on a site with sidewalks that connect to all adjacent sites.	
2. Our building is located on a street with street trees.	
3. Our building is located on a street with street furniture.	
4. Our building can be directly accessed via a designated bicycle route (either a path or painted lane).	
5. Our building is located on a site with bicycle parking facilities.	
6. Our building has locker rooms and showers.	
7. The parking facilities for our building include preferential parking spaces for carpools and vanpools.	
8. The parking facilities for our building are shared with other buildings.	
9. The parking facilities for our building are structured.	
10. There is a Madison Metro transit stop within one-quarter mile of our building.	
11. There are commercial amenities (restaurants, banks, dry cleaners, post office, etc.) within one-quarter mile of our building.	
12. There are residential housing options within one-quarter mile of our building.	
Program Measures	
13. Subsidized bus passes are provided to all employees in our building upon their request.	
14. A parking cash-out incentive is provided for employees in our building who use alternative modes of transportation.	
15. Employees in our building have access to company vehicles or a Community Car located within the research park for travel during the work day.	
16. Our ETC attends at least one TDM-related educational seminar per year.	
17. We organize or participate in a University Research Park-based carpool and vanpool matching service.	
18. Employees in our building are permitted to telecommute at least once a week.	
19. Employees in our building are permitted to have flexible work hours to avoid morning and afternoon peak travel hours.	
20. Employees in our building are permitted to have compressed work weeks.	
21. We provide a Guaranteed Ride Home program that supplements the Madison area's Rideshare Etc. program.	
22. We provide or participate in a shuttle bus/buspool program that transports workers to and from their residences, a park-and-ride lot, or other staging area, from the workplace.	
23. Other trip reduction measures not described above.	

APPENDIX C
BEST WORKPLACES FOR COMMUTERS INFORMATION



BEST Workplaces for Commuters℠

Additional Application Information

This document provides explanatory information to help you complete the Best Workplaces for Commuters℠ application.

1. Tax-free transit benefits

Under this option, you agree to provide at least $30 per month toward commuting via public transit to each employee whose actual transit cost is $30 or more (we encourage you to provide up to the IRS limit of $105 per month). If your employee's transit commuting cost is less than $30 per month, then you must cover the full amount.

You may also provide vouchers that employees exchange for transit passes. Transit passes include unlimited ride passes, tokens, farecards or tickets.

2. Tax-free vanpool benefits

Under this option, you agree to provide at least $30 per month toward commuting via vanpool to each employee whose actual vanpool cost is $30 or more (we encourage you to provide up to the IRS limit of $105 per month). If your employee's vanpool commuting cost is less than $30 per month, then you must cover the full amount.

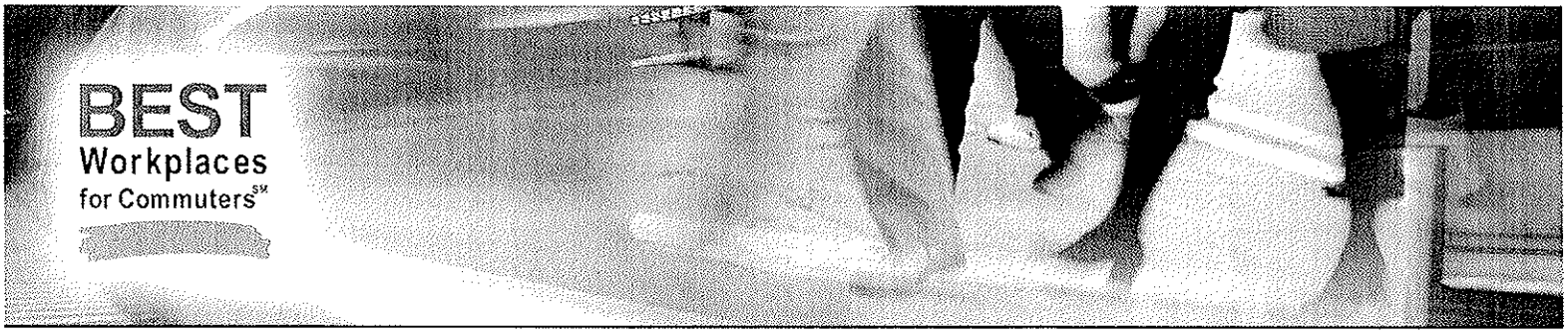
You may also provide vouchers that employees exchange for vanpool services. A vanpool is any highway vehicle carrying at least seven adults (including the driver) primarily between their residences or common pick-up locations and the workplace. You can run your own vanpools or hire an outside contractor to provide vanpool service

3. Telework

Allowing and encouraging your employees to work from home benefits both your company and your employees while reducing traffic and air pollution. The benefits of teleworking include reduced office space requirements, increased employee productivity and decreased use of sick leave.

Under this option, you agree to offer a telework program that reduces the number of commute trips by at least 6 percent. This means that for every 100 possible commute trips, six or more are avoided by teleworking.

For example, in a 20-day month, a 100-person firm has 2,000 possible commute trips (20 days x 100 people = 2,000 possible commute trips). To achieve a 6 percent reduction, employees would work from home to avoid at least 120 of those commute trips (2,000 possible commute trips x 6 percent = 120 commute trips avoided).



4. Cash in lieu of employer-provided parking (Parking cashout)

When you provide this benefit, your employees may choose to "cash out" the value of employer-provided or employer-subsidized parking. In exchange for the parking spot, you provide your employee a taxable cash payment, or a tax-free transit or eligible vanpool benefit up to $105 per month, or a combination of tax-free transit/vanpool benefits and taxable cash. You agree to provide your employee at least 75 percent of the actual saved parking costs, even if it is greater than $30 per month.

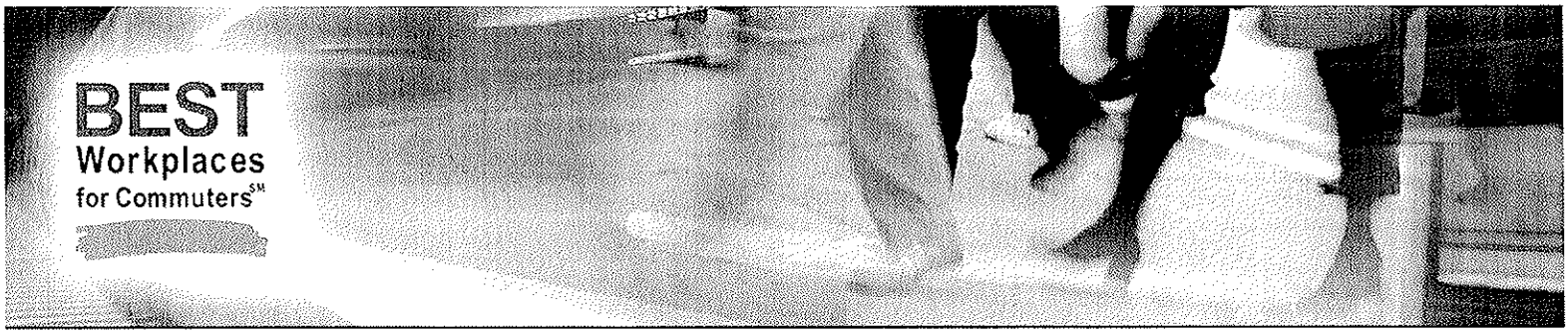
Although any employer that pays for or subsidizes parking can offer parking cashout, this strategy works best in locations where parking costs are expensive (e.g., urban central business districts), when the parking is leased, and when eliminating a parking space can significantly reduce costs to you and provide a significant payout to your employees. Where parking is very inexpensive, this option may not be effective.

5. Proposal for Alternative Primary Benefit

Recognizing that different strategies may work better in different locations, you may propose an alternative option or benefits package. Working in conjunction with the Best Workplaces for Commuters Team, you must demonstrate that this option 1) reduces the rate at which your employees drive to work alone at least as successfully as the other primary benefits, and 2) is viewed by your employees as a significant workplace benefit. Options may include things like comprehensive shuttle services and very aggressive and successful ridesharing.

6. Supporting Benefits

- Active membership in a Transportation Management Association (TMA) or participation in a voluntary regional air quality program (e.g., Spare the Air, Air Awareness, SEQL, Clean Air Coalition) or another employer-based commuter program
- Active membership in a local ozone awareness program, in which you agree to notify employees of expected poor air quality and suggest ways that they might minimize polluting behaviors
- Ridesharing or carpool matching, either in-house or through an outside organization
- Pre-tax transit subsidy deducted from employee paycheck
- Pre-tax vanpool subsidy deducted from employee paycheck
- Transit benefits of less than $30 per month (or less than the full cost if less than $30)
- Vanpool benefits of less than $30 per month (or less than the full cost if less than $30)
- Cash in lieu of an employer-provided parking spot in an amount less than $30 per month (or less than 75 percent of the actual parking benefit)
- Shuttles from transit stations, either employer-provided or through a local TMA or similar service provider
- Parking at park-and-ride lots or vanpool staging areas
- Provision of real-time (i.e., intelligent) commuting information
- Preferred parking for carpools and vanpools



- Reduced parking costs for carpools and vanpools
- Employer-run vanpools or subscription bus programs
- Employer-assisted vanpools
- Employer-provided membership in a car sharing program (visit www.carsharing.net to learn more)
- Secure bicycle parking, showers, and lockers
- Electric bicycle recharging stations
- Employee commuting awards programs
- Discounts and coupons for bicycles for bicyclists or shoes for walkers
- Compressed work schedules
- Telework that reduces commute trips by less than 6 percent
- Lunchtime shuttle
- Proximate commute (where employees work at locations closer to their homes)
- Incentives to encourage employees to live closer to work
- Incentives to encourage employees to use alternative transportation (e.g., additional vacation time)
- On-site amenities (e.g., convenience mart, dry cleaning, etc.)
- Concierge services
- Other options that you may propose

7. Emergency Ride Home (ERH)

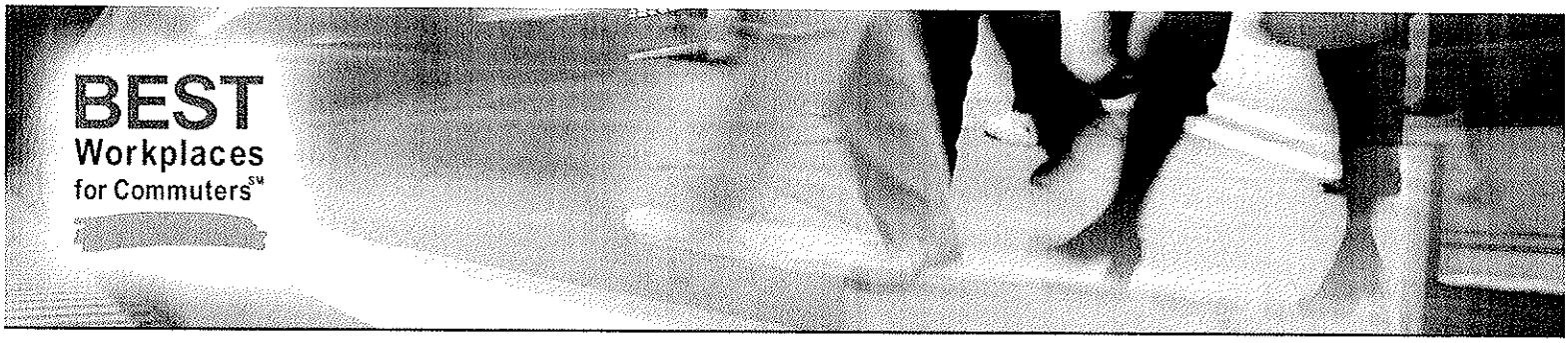
Providing an emergency ride home (ERH), such as a taxi ride, is a cost-effective way to help your employees choose to leave their cars at home. An ERH program provides employees who commute via transit, carpool, or vanpool with transportation home in the event of a personal emergency or unscheduled overtime. Although some run their own programs, others participate in programs administered by rideshare organizations, transportation management associations, or transit agencies.

8. Central point of contact

Your central point of contact should be the person most familiar with the day-to-day operations of your commuter benefits programs. It is the person your employees know to contact for information about the commuter benefits you offer.

9. Centralize information

Making information about your commuter benefits available to your employees is critical to the success of your program. Centralizing this information so your employees know where to go to find information about commuting and commuting options may be done in whatever way that makes the most sense for you and your employees. Examples include a Web-based Intranet site, bulletin board (more appropriate for small firms), an appointed individual who has the information readily available, or any other method that makes it quick and easy for employees to get the information. If you have more than one work site, you may choose to centralize information at each location.



10. Promote benefits

You agree to effectively and regularly promote the availability of your commuter benefits package to your employees. Regularly means two or more times per year and any time your organization makes changes to your program or offerings. More frequent communication is encouraged. You should communicate in ways that are most likely to reach all employees.

11. Use BWC logo

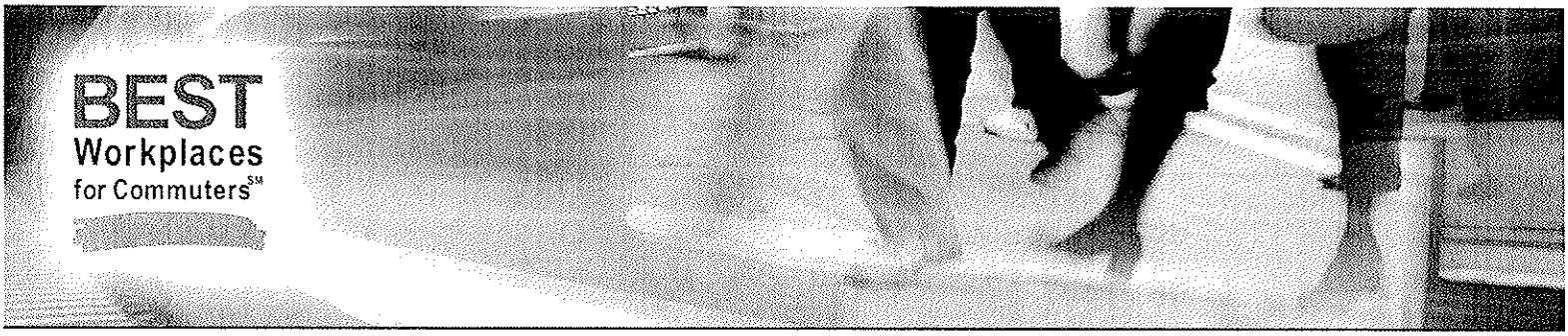
Once you are accepted as one of the Best Workplaces for Commuters, you will receive the program logo. We encourage you to promote your designation, both internally and externally, by using the logo in press releases, job ads, newsletters, annual reports and on your Web site.

12. 14% participation

One of the primary goals of Best Workplaces for Commuters is to recognize organizations that provide their employees an excellent package of commuter benefits. As part of the concept of excellence, qualifying work sites must meet or exceed a minimum level of employee participation. This level is at least 14 percent of employees not driving alone to work. As one of the Best Workplaces for Commuters, you agree to meet or exceed this performance level within 18 months of joining. Fourteen percent is the average non-drive alone rate for all the non-metropolitan areas in the United States. We strongly encourage you to surpass this minimum performance benchmark.

13. Annual update

We ask you to annually confirm your continuing participation in the program by providing us a brief update on your program and your current contact information. This is usually due on the anniversary date of acceptance into the program. You will be sent a reminder.



Information for Employers with Multiple Worksites

Must all of our worksites meet the National Standard of Excellence before we apply for Best Workplaces for Commuters?

No. You can become one of the Best Workplaces for Commuters℠ by applying for any or all of your worksites that meet the *National Standard of Excellence*. We encourage you to apply for all worksites that qualify.

How do I apply for multiple worksites?

You may use the standard online application form, which is set up to accommodate information about the worksites you want to designate as Best Workplaces for Commuters. Once you indicate the number of worksites you are applying for, the form will prompt you for information about each one.

If you are unable to use the online application, you can fill out the PDF format version of the Application with the worksite information. If you need more room, you may use additional sheets.

How do I decide which worksites to combine on a single application?

Each application should include worksites that meet the following criteria:
1) The worksites must meet the National Standard of Excellence AND
2) The worksites must be located in the same metropolitan area AND
3) The worksites offer the same primary commuter benefit AND
4) The worksites have the same primary contact

If you have other worksites that do not meet these conditions, please submit a separate application for them.

Can different worksites offer different commuter benefits?

Yes, an effective commuter benefits package is likely to differ from site to site depending on the location, the commuting options available, and your employees' needs. Please submit separate agreements for worksites with different primary commuter benefits.

How do I add additional worksites later?

You may add additional worksites at any time in a couple of ways. You may submit a new application for these worksites or you may contact us at <bwc@epa.gov> or (888) 856-3131 and we will add the information about the additional worksites to your existing record.

APPENDIX D
TAHOE REGIONAL PLANNING AGENCY
EMPLOYER-BASED TRIP REDUCTION PROGRAM

Chapter 97
EMPLOYER-BASED TRIP REDUCTION PROGRAM

Chapter Contents

97.1 Purpose: This chapter implements the 1992 Regional Transportation Plan - Air Quality Plan, and Goal #4, Policy 2 of the Development and Implementation Priorities Subelement, Implementation Element of the Regional Plan Goals and Policies Plan. The Employer-Based Trip Reduction Program set forth in this chapter is intended to assist in the achievement and maintenance of environmental thresholds for transportation and air and water quality.

97.1.A Local Government Standards: Local governments may adopt equal or superior trip reduction programs. TRPA, upon finding the local program is equal or superior to the TRPA Employer-Based Trip Reduction Program as it may affect attainment and maintenance of the thresholds, may exempt employers subject to such a program from the provisions of this chapter.

97.1.B Definitions: The definitions of terms used in this chapter are set forth in Section 97.8. A reference to an employer also includes, as appropriate, employers within a Common Work Location. In additions, any reference to an Employee Transportation Coordinator (ETC) also includes, as appropriate, reference to the employer performing the ETC duties, and the Property Transportation Coordinators (PTC) for Common Work Locations.

97.2 Program Requirements: The requirements of the Employer-Based Trip Reduction Program are:

97.2.A All Employers (Level 1): Every employer shall encourage ridesharing and use of alternative commute modes by providing the information listed below. Participation in a local Transportation Management Association (TMA) may assist in implementation of these Level 1 requirements.

(1) Posting, in a conspicuous place, informational material to encourage ridesharing, such as:

(a) Current Schedules, rates (including procedures for obtaining transit passes), and routes of mass transit service to the common work location or employment site;

(b) The location of all bicycle routes within at lease a five-mile radius of the employment site; and

(c) Posters or flyers encouraging the use of ridesharing and referrals to sources of information concerning ridesharing.

(2) Distributing rideshare applications to interested employees when a regional service is available.

97.2.B All Employers And Employers Within Common Work Locations, With 100 Or More Employees, At A Single Project Area (Level 2): In addition to the requirements of Subsection 97.2.A, all employers and employers within Common Work Locations, with 100 or more employees, working at a single project area, shall provide additional encouragement for the use of alternative transportation modes through the provision of the incentives and resources listed below. Employers within a common work location with more than 100 employees, may be exempted from the Level 2 requirements if implementation if found to be impractical by TRPA.

(1) Employee Transportation Coordinator (ETC): Every employer shall facilitate its employee's and tenants' use of area-wide ridesharing programs and other trip reduction programs by performing the following responsibilities. An employer may designate an employee as an Employee Transportation Coordinator (ETC) to carry out the employer's responsibilities.

(a) Responsibilities: The employer's responsibilities shall include:

(i) Implementing the requirements of Subsection 97.2.A;

(ii) Communicating employee or tenant transportation needs to TRPA, the Transportation Management Association (TMA) representative, property manager, property owner, and city and county staff, as appropriate;

(iii) Assisting employees and tenants in forming carpools or vanpools;

(iv) Developing, coordinating, and implementing the Employer Transportation Plan, as required under Subparagraph 97.2.B (1);

(v) Performing an annual survey of employees and tenants showing he distribution of employees and tenants by transportation mode;

(vi) Coordinating the Employer Transportation Plan with property owners/managers and other tenants, as applicable; and

(vii) Participating in the development of a ridesharing program through a TMA, if available.

(2) Employer Transportation Plan: Every Level 2 employer shall prepare an Employer Transportation Plan.

(a) Employer Transportation Plan Elements: The Employer Transportation Plan shall include:

(i) Description: A description of the activity and operating characteristics of the proposed or existing project (e.g., business hours and peak hours of travel), including a parking are map or diagram;

(ii) Existing Conditions: A description of the available alternative transportation facilities and program currently in place, such as bike lockers, preferential carpool parking, rideshare information posting, vanpool subsidies;

(iii) Estimate: A description and estimate of the commuting characteristics of the labor force (e.g., travel distance and mode);

(iv) Transportation Control Measures (TCM): Measures designed to reduce the number of single occupant vehicle trips. At a minimum, all required TCMs, as set forth in Subsection 97.3.A, shall be included in the Employer Transportation Plan. Each Employer Transportation Plan of employers with between 100 and 200 employees, and of employers within Common Work Locations, shall include optional TCMs totalling at least 15 credits. Each Employer Transportation Plan of employers with greater than 200 employees shall include optional TCMs totalling at least 22 credits, and

(v) Implementation Schedule: A timeline showing the approximate schedule of implementation of each TCM.

(3) Trip Reduction Credit For Transportation Control Measures: An Employer Transportation Plan shall include and implement the mandatory TCMs set forth in Subsection 97.3.A. The employer shall select optional TCMs from the Transportation Control Measures List that will best serve to reduce commute trips of its employees and tenants.

(4) Seasonal Employment Distinguished: For seasonal work locations, the Employer Transportation Plan shall be in effect only at such times that the employment level reaches 100 or more employees.

97.3 Transportation Control Measures (TCM) Menu: The following is the list of Transportation Control Measures (TCMs). The optional Transportation Control Measures (TCMs) in Subsection 97.3.B are assigned a Trip Reduction Credit. Each Employer Transportation Plan shall include optional measures which, when the credits are added together, meet or exceed the required trip reduction credits in Subparagraph 97.2.B(2)(a)(iv). Mandatory TCMs do not have trip reduction credits assigned to them, since each plan will include them.

97.3.A Required Transportation Control Measures (TCMs): The following TCMs shall be included in an Employer Transportation Plan:

(1) Designation Of An Employee Transportation Coordinator (ETC): The employer shall serve as ETC or designate an employee to perform the duties of the ETC;

(2) Posting Of Ridesharing Information: Posting of ridesharing information, including:

(a) Posters or flyers encouraging the use of ridesharing and referrals to sources of information concerning ridesharing; and

(b) The names and phone numbers of the ETC, and Transportation Management Associations (TMA). where applicable.

(3) Posting Alternative Transportation Mode Information: Posting alternative transportation mode information, including:

(a) Current schedules, rates (including procedures for obtaining transit passes), and routes of mass transit service to the common work location or employment site; and

(b) The location of all bicycle routes within at least a five mile radius.

(4) Bicycle Parking Facilities: Provisions of bicycle parking for the bicycle commuters, as determined by the ETC. The bicycle parking facilities shall be, at a minimum, Class II stationary bike racks.

(5) Preferential Carpool/Vanpool Parking: Unless TRPA finds there are overriding considerations specific to the employment site or common work location, parking spaces for four percent of the employees shall be designated as carpool or vanpool parking and shall be, with the exception of handicapped and customer parking, the spaces with the most convenient access to employee entrances. The employer may issue carpool and vanpools tickers and shall be responsible for monitoring the spaces.

97.3.B Optional Transportation Control Measures (TCMs) Trip Reduction Credit: Each employer, in preparing an Employer Transportation Plan, shall include measures from the following list of optional TCMs to achieve the required number of trip reduction credits. It is at the discretion of the individual employer to choose which measures are best suited to its location, business, employees and tenants.

(1) ETC Education Program (3 credits per seminar): ETC attendance at one educational seminar, workshop, or other approved training program, on an annual basis, subject to TRPA approval of the seminar, workshop or program

(2) In-House Carpool Matching Service (3 credits): A survey of employees to identify persons interested in being in carpools and a match of potential carpoolers by work address and shift. The survey and matching shall be performed on an annual basis for all interested employees.

(3) Additional Preferential Carpool/Vanpool Parking (1-3 credits) Up to 3 credits may be given for additional preferential carpool/vanpool parking provided beyond that required under Subparagraph 97.3.A(5). A credit is earned for each additional two percent of the total number of employee-designated parking for which additional preferential carpool/vanpool parking is provided.

(4) Transportation Management Association (TMA) Membership (15 credits): For an ETC's active participation in a regional TMA. To qualify as active participation, the ETC shall attend membership meetings or send a designated representative, pay all required dues, and be involved in any other programs which the TMA Board administers.

(5) Guaranteed Ride Home Program (2 credits): The provision, by contract or otherwise, a guaranteed ride home for employees who rideshare two days or more a week. The guaranteed ride home shall be provided to the ridesharer if any emergency or illness requires that they or their carpool or vanpool driver must leave work early or late.

(6) Clean Air Fuel Vehicles (1-5 credits): For obtaining and maintaining fleet vehicles that use clean air fuels, such as compressed natural gas, electricity, methanol, and propane. One credit is given for each dedicated alternative fuel vehicle, or flexible fuel (able to use either gasoline or alternative fuel) vehicle, up to an maximum of 5 credits.

(7) Shuttle Bus/Buspool Program (5 credits): The provision of shuttle service to transport workers to and from their residences, a park-and-ride lot, or other staging area, to the workplace. The employer may lease a bus and may work with nearby employers or employment complexes to maximize ridership. Five credits will be given for every five percent of the total number of its employees served.

(8) Carpool Program (4 credits): For obtaining a vehicle and related insurance, which is made available to any group of two or more employees for commute purposes. The employer may recover full or partial operating costs from he carpool participants. Four credits will be given for every five percent of the total number of employees served.

(9) Vanpool Program (5 credit): For obtaining a van and related insurance, which is made available to any group of seven or more employees for commute purposes. The employer may recover full or partial operating costs from the vanpool participants. Five credits will be given for every seven percent of the total number of employees served.

(10) Transit Pass Subsidy (5 credits): For provision, to the employees and tenants, of a monthly transit or rail pass subsidy of 50 percent, or the maximum taxable benefit limit, whichever is greater.

(11) Paid Parking (3-9 credits): For development of an Employee Parking Management Plan, addressing paid parking, subject to approval by TRPA. Three credits will be given for paid parking provided for each ten percent of the total number of employees, up to a maximum of 9 credits.

(12) Transit Shelter (3 credit): For provision of a transit shelter on the designated bus route or posting a bond for future construction when the transit route is extended to the employment site. Credit is given when the transit shelter is constructed in conformance with city/county regulations and when the employment site is on, or adjacent to, an existing or planned bus route.

(13) Secure Bicycle Parking Facilities (2 credits): For provision of bicycle parking for at least five percent of the total number of employees. The bicycle parking facilities shall be of the following types:

(a) A Class I bicycle parking facility with a locking door, typically called a bicycle locker, where a single bicyclist has access to a bicycle storage compartment; or

(b) A fenced or covered area with Class II stationary bike racks and a locked gate.

(14) Showers (2 credits): One shower facility shall be provided by employers of less than 200 persons. For employers of 200 or more persons, four showers shall be provided with an additional two showers for every additional 500 employees.

(15) Lockers (2 credits): Ten lockers shall be provided by employers of less than 200 persons. for employers of 200 or more persons, 20 lockers shall be provided with an additional 10 lockers for each additional 500 employees.

(16) Flexible Work Location (2 credits): Allowance for employee flexibility in working outside of the employer's established location. This may include, but is not limited to, telecommuting from the employee's home, or the creation of satellite neighborhood offices. Credit is given when employees, when feasible, are permitted to telcommute at least one day per week.

(17) Flexible Work Hours (1 credit): for provision of a work hour management strategy allowing the employee to adjust work hours outside of the employer's established start/stop time and peak hours. Variable work hours may include, but are not limited to: 1) staggered work hours shifting the work hours of all employees to outside of peak hours; and 2) flexible work hours with individually determined work hours within guidelines established by the employer. Credit is given when employees, when feasible, are permitted to take advantage of flexible work hours. This TCM should be coordinated with other TCMs, such as van and carpools.

(18) Compressed Work Weeks (3 credits): A management strategy allowing the employee to compress the total number of hours required in week to fewer days. for example, a typical 40-hour work week could be compressed into four 10-hour days. Credit is given when employees, when feasible, are permitted to reduce their number of work days by at least one in two weeks (9-80 schedule). This TCM should be coordinated with other TCMs, such as van and carpools.

(19) On-Site Services (1-5 credits): Provision of necessary services on or near the employment site that eliminate the need for a vehicular trip before, during, or after the work day. Necessary services include, but are not limited to, child care, cafeteria/restaurant, lunchroom, automated teller machine, dry cleaners, or post office. These services may be provided by the employer, through cooperative efforts of employers and service providers, or by other means. The number of credits given by TRPA will depend on which service or combination of services are provided and their proximity to the employment site.

(20) Transit System Support (1-15 credits): For provision of support to a local transit system, such as: system operations, marketing or capital needs such as new buses. Subsidies or grants may be financial or by donation of capital needs. The number of credits given by TRPA will depend on the amount and type of subsidy or grant.

(21) Other (credits to be determined by TRPA): Trip reduction measures that are not included in this menu, or do not specifically fit the TCM descriptions, may also by considered. Innovative measures are strongly encouraged. An example is a high school setting up a ridesharing educational program for their students.

97.4 Plan Review: The Employer Transportation Plan shall be referred to the TRPA TCM Coordinator or the Executive Director of a regional TMA, for review and evaluation of the proposed mitigation measures. The TRPA TCM Coordinator or the Executive Director of a regional TMA, shall make a recommendation to the TRPA Executive Director. The Executive Director may approve, deny, or modify the Plan.

97.5 Annual Reporting Requirements: All ETCs shall meet with the TRPA TCM Coordinator at least once every two years to review progress of their transportation plans and to submit the annual transportation surveys regarding employees' and tenants' use of alternative transportation modes.

97.6 Implementation Schedule: Employers and employers within a common work location, with 100 or more employees, working within a single project area, shall submit an Employer Transportation Plan within 6 months of the effective date of this ordinance, or when the employment level reaches 100 or more employees, whichever is later. Employers and employers within a common work location, with less than 100 employees, shall comply with this ordinance within thirty days of receipt of posting information from TRPA.

97.7 Compliance Monitoring: Employers shall encourage employees to use alternative transportation. TRPA shall conduct random audits to evaluate the effectiveness of the Employer Transportation Plans.

97.8 Definitions: The following terms used in this chapter are defined as follows:

97.8.A Alternative Commute Mode: Alternative commute mode is the method of traveling to and from the worksite other than by using a single occupant vehicle (e.g., transit, carpool, vanpool, bicycle, walking, telecommuting).

97.8.B Average Vehicle Ridership (AVR): Average vehicle ridership (AVR) is the average number of persons occupying each vehicle. AVR is calculated by multiplying the number of person by the standard number of trips in a work week (generally 10), then dividing by the actual number of vehicle trips per work week. For example, if all employees drive alone to work each day, the AVR = 1.0. 10 employees would be expected to take 10 trips each per week for a total of 100 trips. If only 67 vehicle trips are taken, then the AVR is 1.5, which means that, on average, each vehicle is transporting 1.5 people to their destination. The higher the AVR, the more people are using alternative transportation methods.

97.8.C Carpool: A carpool is a motor vehicle occupied by two or more persons traveling to and from work.

97.8.D Common Work Location: A common work location is a single building, building complex, campus, or work sites at common location. A common work location is typified by a common private parking area to be used by employees, tenants, customers, and other visitors to the complex, even though there are parking slot designations, such as specific spaces designated for specific tenants. For the purposes of this chapter, to be considered a common work location, the site must have a central contact point, such as a property manager, property owner or

lessor. This definition will apply for projects lasting longer than three months.

97.8.E Commuter: A commuter is an employee who travels regularly to and from an employment facility three or more days a week.

97.8.F Commuter Matching Service: A commuter matching service is any system for mapping and matching home and work locations of interested commuters to identify prospects for ridesharing.

97.8.G Employer: An employer is a person or business firm, with a business license, that hires one or more persons to work for wages or salary.

97.8.H Employer Transportation Coordinator (ETC): An employee transportation coordinator (ETC) is an employer, an employee, or other individual, designated by the employer or project controller to coordinate and implement TCM activities as required by the Employer Transportation Plan.

97.8.I Employer Transportation Plan: The employer transportation plan is the plan developed by the employer or project controller to reduce single occupant vehicle trips.

97.8.J Peak Period Commuter: A peak period commuter is any employee who travels regularly to and from a work facility three or more days a week and arrives or departs from the facility during the peak period specified by the jurisdiction. This peak period should be linked to the hours that commuter congestion actually occurs.

97.8.K Project Controller: A project controller is an owner, lessor or property manager, of a common work location.

97.8.L Property Transportation Coordinator (PTC): A property transportation coordinator is an owner, lessor or property manager, of a common work location, or its designee, designated to coordinate and implement TCM activities as required by the Employer Transportation Plan.

97.8.M Ridesharer: A ridesharer is any employee who commutes to and from work location by a mode other than single occupancy light or medium duty vehicle, motorcycle, or moped.

97.8.N Shift of Employment: A shift of employment is any group of employees who work at a common work location and who arrive and depart from work in a common time interval not greater than one hour.

97.8.O Single Occupant Vehicle (SOV): A single occupant vehicle (SOV) is a motor vehicle occupied by one employee for commute purposes.

97.8.P Transportation Control Measures (TCMs): Transportation control measures (TCMs) are measures used to maintain or improve the efficient movement of persons and goods while reducing the congestion and air quality impacts associated with motorized vehicles.

97.8.Q Transportation Control Measure (TCM) Coordinator: A transportation control measure coordinator is a TRPA employee, or other individual, designated to manage and enforce employer compliance with the requirements of this chapter.

97.8.R Transportation Management Association (TMA): A transportation management association (TMA) is an association,. usually of employers, developers, property mangers, and public agencies, organized to facilitate, support, and encourage the use of alternative transportation methods for commuters.

97.8.S Trip Reduction Credit: Trip reduction credits are the credits assigned to an Employer Transportation Plan for implementing a specific Transportation Control Measure (TCM) program.

97.8.T Vanpool: A vanpool is a motor vehicle, other than a motor truck or truck tractor, suited for occupancy by more than six, but less than 16 persons including the driver, traveling to and from work.