Transportation Demand Management Policy Study

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Thank you!

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I. Executive Summary

The City of Minnetonka initiated this Transportation Demand Management Policy Study as part of the 2012-2013 University of Minnesota Resilient Communities Project (RCP). In an effort to update the City's existing Transportation Demand Management (TDM) requirements and advance the City's goals to reduce PM peak hour trip generation, as addressed in Chapter VIII of the City's 2030 Comprehensive Guide Plan, the City of Minnetonka requested this study. In addition to seeking innovative strategies that are pragmatic and appropriate for the City's existing land use patterns and business context, the project team was asked to seek effective enforcement mechanisms. This report describes an innovative set of recommended TDM strategies that will be effective, business-friendly, and sensitive to Minnetonka's suburban context and development environment if they are integrated as an ordinance within the City's Municipal Code.

To develop these recommendations, the project team conducted a review of existing literature on transportation demand management, identified and evaluated relevant case studies from the Twin Cities metropolitan area and across the country, and conducted interviews of local stakeholders. Considering existing policy, transportation, and employment conditions in Minnetonka, the project team proposed four primary recommendations to develop a comprehensive TDM policy for Minnetonka.

TDM Recommendations

i. Use a two-stage TDM policy framework

Effective TDM strategies fall into two fundamental categories. Some TDM actions take place during site design and construction, such as the creation of new facilities or design choices that accommodate a variety of transportation modes. Others take place during site use and operation, including a wide variety of approaches to influencing commuter behavior on a day-to-day basis. Because these two categories of TDM strategies take place during different phases of a site's life cycle, it is not optimal or efficient to apply the same requirements, regulations, and enforcement policies to both.

This report recommends that separate TDM plans be required for each of these phases. Prior to beginning construction, a developer would submit a Development TDM Plan as part of the development agreement process. Development TDM Plans focus on facilities and design decisions that facilitate alternatives to single-occupancy vehicle commuting. Issuance of a building permit would be contingent on the city's approval of a Development TDM Plan, and full execution of the Development TDM Plan would be a condition of the development agreement, site plan approval, or other zoning approval.

Before a new development or redeveloped property can be occupied, a property owner would submit an Operational TDM Plan. Operational TDM Plans focus on encouraging the use of alternative commute modes and times through actions, incentives, outreach, and education. Issuance of a certificate of occupancy would be contingent on the city's approval of an Operational TDM Plan.
ii. Establish TDM Focus Areas to guide the selection of TDM strategies

The availability of specific types of transportation services is a key factor in determining the success of TDM strategies. For example, employers that offer subsidized transit passes see far greater trip reduction outcomes if the work site is well-served by transit. Similarly, bicycle storage facilities are of little use as a TDM strategy if the work site does not have comfortable existing or planned connections to bicycle lanes or trails. TDM investments are most effective when they are compatible with the local existing and planned transportation context.

This report calls for the designation of TDM Focus Areas that reflect local transportation infrastructure and identify TDM strategies that are compatible with it. It provides definitions and maps of TDM Focus Areas where existing transit or non-motorized transportation infrastructure have the potential to reinforce specific TDM strategies. These areas complement the Village Areas identified in Minnetonka’s 2030 Comprehensive Guide Plan.

iii. Integrate TDM policy and requirement into the existing development review process

It is important that TDM policy not be overly burdensome on either the City or on developers and employers.

This report recommends a framework for applying TDM policy that leverages existing City processes wherever possible. Existing development review procedures provide opportunities for plans to be reviewed by City staff as well as for discussions and negotiations between developers and the City, and the recommended TDM policies can take advantage of these same procedures. Additionally, integration with established City procedures allows the introduction of more robust TDM policy without generating confusion for developers or discouraging development activity.

iv. Implement annual reporting and evaluation

Effective TDM strategies require continued attention. Several case studies demonstrate the importance of property owners and employers maintaining a long-term commitment to successfully implementing TDM strategies. It is equally important that this commitment be guided by an evaluation of how well the chosen TDM strategies are meeting the goal of limiting peak-period vehicle trips.

This report recommends an annual reporting requirement associated with Operational TDM Plans. Property owners (or a designated manager) would be required to submit a report describing actions taken over the previous year to implement the approved Operational TDM Plan, and to update the plan when employment or use at the property changes significantly. These annual reports will provide an opportunity for the City to evaluate the effectiveness of the TDM strategies implemented by property owners and managers.
II. Introduction to the Minnetonka TDM Policy Study

A. Project Purpose and Need

The City of Minnetonka initiated this Transportation Demand Management Policy Study as part of the 2012-2013 University of Minnesota Resilient Communities Project (RCP) in an effort to update the City’s existing Transportation Demand Management (TDM) requirements and advance the City’s goals to reduce PM peak hour trip generation, as addressed in Chapter VIII of the City’s 2030 Comprehensive Guide Plan.¹

The University of Minnesota project team was asked to develop Transportation Demand Management (TDM) ordinance recommendations for the City, which has seen significant land use, employment, population, and infrastructure changes since core components of the City’s existing TDM policy were developed in 1988. In addition to seeking innovative strategies that are pragmatic and appropriate for the City’s existing land use patterns and business context, the project team was specifically asked to seek effective TDM enforcement mechanisms.

In response to this scope of work, the project team has developed an innovative TDM policy and related strategies which will be effective, business-friendly, and sensitive to Minnetonka’s suburban context and development environment if they are integrated as an ordinance within the City’s Municipal Code.

Opportunities to Collaborate with Current and Future Ordinance Updates

The timing of this policy study provides opportunities for the City to incorporate TDM recommendations into the update of the I-394 Overlay District ordinance, which is currently the only overlay district in the City which defines developments that require a TDM plan.

Furthermore, Chapter IV of the City’s 2030 Comprehensive Guide Plan notes that a detailed land use plan will likely be required for the Opus Station Area, which is to be developed closer to the planned 2018 opening of the Green Line LRT Extension. TDM recommendations from this study can be incorporated into the land use planning and zoning updates for the Opus and Shady Oak station areas.

B. Study Process

The study process prioritized outreach to stakeholder groups that would be impacted by a new TDM ordinance. In addition to City of Minnetonka staff, the project team met with employers, property managers, and transportation management organizations that conduct employee education and outreach efforts. We also spoke with planners in neighboring jurisdictions with robust TDM policies, reviewed national case studies, and conducted a literature review of effective TDM strategies. Proposed TDM Focus Areas were sited within the City and incorporated into the TDM recommendations. Proposed recommendations were reviewed by City of Minnetonka staff and their comments have been incorporated into the final report.
C. **TDM Recommendations**

1. **Use a two-stage TDM policy framework**

   Effective TDM strategies fall into two fundamental categories. Some TDM actions take place during site design and construction, such as the creation of new facilities or design choices that accommodate a variety of transportation modes. Others take place during site use and operation, including a wide variety of approaches to influencing commuter behavior on a day-to-day basis. Because these two categories of TDM strategies take place during different phases of a site’s life cycle, it is not optimal or efficient to apply the same requirements, regulations, and enforcement policies to both. A key feature of these recommendations is the separation of TDM policy into two stages, each addressing one of these fundamental categories.

   *Development TDM Plans* seek to create a built environment that enables the use of alternate modes and times for commute trips. These policies focus on aspects of successful TDM strategies that take place during site development, redevelopment, and expansion. These include decisions relating to site and infrastructure design, facility features, and construction of facilities and infrastructure.

   *Operational TDM Plans* seek to encourage the use of alternative commute modes and times that are made available through Development TDM plans. They focus on education, outreach, and incentive techniques that encourage commuter behaviors that reduce peak-period single occupancy vehicle (SOV) use.

2. **Establish TDM Focus Areas to guide the selection of TDM strategies**

   The availability of specific types of transportation services is a key factor in determining the success of TDM strategies. For example, employers that offer subsidized transit passes see far greater trip reduction outcomes if the work site is well-served by transit. Similarly, bicycle storage facilities are of little use as a TDM strategy if the work site does not have comfortable existing or planned connections to bicycle lanes or trails. TDM investments are most effective when they are compatible with the local existing and planned transportation context.

   *TDM Focus Areas* will ensure that submitted TDM plans are sensitive to the existing built environment, transportation infrastructure, and public transit service. City approval of TDM plans will depend upon the developer’s ability to implement its prescribed efforts to reduce single occupancy vehicle trips.

3. **Integrate TDM policy and requirement into the existing development review process**

   It is important that TDM policy not be overly burdensome on either the City or on developers and employers. This report recommends a framework for applying TDM policy that leverages existing City processes wherever possible. Existing development review procedures provide opportunities for plans to be reviewed by City staff as well as for discussions and negotiations between developers and the City, and the recommended TDM policies can take advantage of these same procedures. Additionally, integration with established City procedures allows the
introduction of more robust TDM policy without generating confusion for developers or
discouraging development activity.

4. **Implement annual reporting and evaluation**

One of the largest stumbling blocks to an effective TDM policy or ordinance is a lack of effective enforcement of TDM plans. To address this challenge, our recommendations create meaningful opportunities for enforcement at each stage of development. Development stage TDM plans require approval by the City in order for the developer to receive a building permit. Every year, property managers must submit an updated Operational TDM plan to the city that lists current tenants. Failure to submit an updated annual report will render the property owner in violation of its development agreement with the City of Minnetonka and subject to penalties under the City’s civil court process.
III. Existing Conditions

A. TDM Background

Transportation Demand Management policies began to be broadly implemented throughout U.S. states and metropolitan areas in the late 1980s and early 1990s. The implementation of these policies to reduce Vehicle Miles Traveled (VMT), among many other goals, was largely in response to the 1963 and 1970 Clean Air Acts, and the subsequent 1990 Clean Air Act Amendments (1990 CAAA) and concerns regarding worsening air quality in major metropolitan areas.

California was the leader in these efforts with its adoption of Regulation XV in 1987. This action legally required employers in the Los Angeles region with 100 or more employees to introduce measures to discourage driving and to reduce employee vehicle trips by 15 percent. This state initiative foreshadowed a similar national initiative written into the aforementioned 1990 CAAA which required metropolitan areas in “severe” non-attainment of National Ambient Air Quality Standards (NAAQS) for ozone to implement similarly-structured Employee Commute Options (ECO) programs.²

B. TDM Implementation in Minnetonka

I-394 Overlay District

Anticipating the planned expansion and upgrade of US Highway 12 to the newest interstate in the Twin Cities (I-394) in the late 1980s, the City of Minnetonka established the Planned I-394 Overlay District (Figure 1) in 1988. The District, which extends along the I-394 corridor from commercial development adjacent to Carlson Parkway (immediately west of the I-494 interchange) to commercial parcels on the City’s eastern border of Shelard Parkway/Ford Road, was the first TDM requirement implemented in Minnetonka. The District’s ordinance requires any new commercial developments exceeding 25,000 gross square feet¹ and redevelopments that will surpass 25,000 gross square feet to submit and implement a TDM plan.

TDM Requirements throughout Minnetonka

Outside of the I-394 Overlay District, the City can use its discretion to require a traffic analysis to be prepared for new development or redevelopment projects.³ to the traffic analysis will be used to assess potential traffic impacts on local streets and highways. If impacts on service levels of roadways and intersections are anticipated, the project will be approved by the City contingent upon a traffic management plan (TMP) which adequately mitigates those impacts. The TMP may include TDM strategies or “other appropriate measures” to reduce traffic generation, and necessary improvements to road systems.⁴ The developer shall have the responsibility to install all necessary road system improvements.

¹ The I-394 Overlay District does not require commercial developments which existed prior to the implementation of the ordinance in 1989 to submit and implement a TDM plan.
Opus Overlay District

The City established the 640 acre Opus Overlay District in 2009 (Figure 1), as a result of the City’s search for alternative funding mechanisms to finance a $20 million bridge replacement and capacity expansion of the Bren Road and US 169 interchange in 2009. The District is bisected by the Locally Preferred Alternative (LPA) of the planned 2018 Green Line Light Rail Transit (LRT) Extension and Opus station and formally covers the area bounded by Trunk Highway (TH) 62 on the south, US 169 on the east, Smetana Road on the north, and Shady Oak Road/County State Aid Highway (CSAH) 61 on the west.

While the Opus Overlay District includes a trip-generation based cost-allocation model for the funding of future transportation improvements, the District does not have specific TDM plan requirements. Although the ordinance does not currently allow it, future amendments to the District could allow businesses to implement TDM plans in order to reduce trips associated to each parcel and effectively reduce the property owner’s share of financial responsibility for transportation improvements. A current study is also underway to apply this cost-allocation model to parcels within the I-394 Overlay District.

Figure 1: Transportation Systems, Land Uses, and TDM Overlay Districts in Minnetonka

![Minnetonka Transportation and Land Use Map](image)
Current TDM Plans in Minnetonka

The City of Minnetonka has four employers with active TDM plans (see Figure 1), including:

1. Syngenta Seeds (I-394 District)
2. Digital River (Opus District)
3. United Health Group (Opus District)
4. Welsh and Colliers, International

The active TDM plans were written with the assistance of private planning and real estate management consultants or 494 Commuter Services. TDM measures incorporated into the plans range from telecommuting and flexible work arrangements, subsidized transit passes, and ridesharing facilitation, to employee education and outreach via on site commuter fairs.

In addition to submitting a TDM plan to the City of Minnetonka, employers are also required to provide an annual progress report to the City for the first two years of TDM plan implementation. However, no formally documented enforcement mechanisms are currently included in the City’s TDM process. (On one occasion, the City did require an employer to submit a letter of credit for the duration of the two year provisional period, but this process has not been implemented for any other TDM plans.)

C. Minnetonka Transportation Infrastructure and Commute Patterns

Current Commuting Patterns

The Metropolitan Council’s Minnetonka Transit Study, published in 2012, includes a comprehensive look at the spatial patterns of commuting in Minnetonka. Overall, it indicates that only a small share of commute trips originating or ending in Minnetonka are internal — most Minnetonka residents work outside of the city, and most Minnetonka workers live outside of the city. This underscores the fact that local TDM policies are also important in a regional context, since commute trips which are influenced by Minnetonka’s TDM policies may traverse roads in several other jurisdictions.6

Minnetonka Residents

Minnetonka residents work throughout the Twin Cities metropolitan area, and work locations are particularly clustered in downtown Minneapolis and along major highways in the southwest metro area. An estimated 4,767 residents, or 20 percent of Minnetonka’s worker population, work in Minneapolis, while 14.8 percent work in Minnetonka (Figure 2).
Figure 2: Where Minnetonka Residents Work (2009)
Minnetonka Workers

People who work in Minnetonka live throughout the Twin Cities metropolitan area. Of an estimated 47,380 workers (as of 2009), only 7.5 percent (3,533) live in Minnetonka (Figure 3).

Figure 3: Where Minnetonka Workers Live (2009)
Major Employment Centers

Employment within the city of Minnetonka is highly clustered. The most dense employment centers are along the I-394 corridor (and at the Ridgedale Mall, in particular), in the Opus area, and in and around the Minnetonka Corporate Center area. Secondary clusters exist along TH 7 and along Minnetonka Boulevard. Most of the remaining areas of Minnetonka host a small number of jobs (Figure 4). Of these areas, only businesses along the I-394 corridor, the Opus area, and adjacent to Baker Road are currently governed by existing TDM policies.

Figure 4: Employment Density in Minnetonka (2005)
Traffic Growth and Congestion
Minnetonka’s 2030 Comprehensive Plan provides a review of the current state of congestion on roadways in Minnetonka as well as a projection of how the situation will change by 2030. The results highlight the need for solutions that can help reduce the projected increases in traffic congestion. Currently, the most severely congested roads in Minnetonka (as estimated using annual daily traffic data from 2010) are largely confined to the borders and outlying areas of the city (Figure 5).

Figure 5: Road Congestion in Minnetonka (2010)
By 2030, congestion is expected to increase in the central parts of Minnetonka as several existing highways and arterial roads reach or approach capacity. Segments of I-494, CSAH 61, CSAH 5, CSAH 7, and CSAH 3 are projected to be particularly affected by increasing congestion. These roads and highways provide important links between various areas within Minnetonka (Figure 6).

Figure 6: Road Congestion in Minnetonka (2030, Projected)

Transit Service

Existing transit service in Minnetonka is dominated by express routes, which connect Minnetonka to downtown Minneapolis and the University of Minnesota. These routes focus on commute trips and therefore operate primarily on weekdays and during peak morning and afternoon commute periods. Complementing the express bus routes are several park-and-ride facilities located along the I-394 corridor, and two along CSAH 5 (Minnetonka Blvd). Additionally, two local routes serve small areas of northeastern and southeastern Minnetonka, connecting them to Hopkins, St. Louis Park, and various parts of Minneapolis (Figure 6).

While the existing express transit service and park-and-ride facilities provide good transit access to employment in the central cities, Minnetonka’s major employment centers have minimal reverse-commute service from population centers, including relatively weak transit connections to other parts of Minnetonka. The Opus area is connected almost exclusively to the neighboring cities of Hopkins and Edina. The I-394 corridor is connected to the central and southern parts of the city by a single express route. In general, transit service in Minnetonka has been designed with the goal of helping Minnetonka
residents reach jobs in Minneapolis and other central Twin Cities areas. These limitations of the existing transit system will be important to consider when evaluating potential approaches to TDM. However, the next year will bring an important change to transit service in Minnetonka. In November 2012, Metro Transit and the City of Minnetonka concluded a study of transit demand and service in Minnetonka. This study recommends the creation of a new local route within the City that will connect the Ridgedale area with southwest Minnetonka. This route is the subject of active planning and is expected to begin service in August of 2013. The proposed new route is highlighted in Figure 7.

Figure 7: Fixed-Route Transit Service in Minnetonka

The proposed new route is highlighted in Figure 7.

Green Line LRT Extension

The Southwest LRT/Green Line Extension Project is currently under development by the Metropolitan Council. This light-rail transit (LRT) line will run for 15.8 miles between Eden Prairie and downtown Minneapolis, and will include two stations serving portions of Minnetonka. Construction is expected to begin in 2015.

Two planned LRT stations will serve Minnetonka: the Opus Station, located in the Opus II Business Park area, and the Shady Oak Station, located near the shared border of Minnetonka and Hopkins (Figure 8). LRT service at these stations will provide high-quality, frequent transit connections to other parts of the metro area, but will provide only a small level of connectivity within the City of Minnetonka. Similar to the realignment study completed prior to the 2014 opening of the Green Line, Metro Transit will
undergo a bus realignment study along the Green Line Extension in 2015 to optimize existing routes for optimal connections and timing to best serve the LRT corridor. Although the extent of future transit connections throughout Minnetonka is unknown at this point, policies which encourage the use of LRT to reach jobs near the station areas may be effective at reducing the traffic demand generated by workers commuting to Minnetonka.

Figure 8: Green Line LRT Extension Locally Preferred Alternative (2011)
D. 494 Commuter Services

494 Commuter Services, one of four local Transportation Management Organizations (TMO) in the Twin Cities metropolitan area, is an important stakeholder within the TDM conversation for both the City of Minnetonka and its employers. An outreach and education branch of the 494 Corridor Commission, 494 Commuter Services exists primarily to increase awareness and use of alternative transportation options to major employment centers along the Interstate 494 corridor southwest of Minneapolis and St. Paul. In addition to the City of Minnetonka, the TMO’s service area includes the I-494 corridor through the suburban communities of Bloomington, Eden Prairie, Edina, and Richfield. The traffic concerns along this corridor are significant enough that it threatens future growth and development in these cities. In response to these concerns and future growth challenges, the cities support the work of 494 Commuter Services and their efforts to manage demand.

Current Efforts

494 Commuter Services is very successful in their employer outreach efforts, and provides a wide variety of services mainly focused on building relationships with commuters. Specific efforts include:

- Outreach activities through commuter fairs, bicycle clinics, and seminars on pre-tax transportation benefits.
- Personalized trip planning, brokering transit passes, and helping travelers find carpool matches
- Implementation of employer-based Individualized marketing programs with full evaluation of personalized trip planning assistance and its impact on travel behavior
- Assisting companies with TDM plan development and initiating telework programs
- Promoting and enrolling participants in regional events like the Commuter Challenge
- Installing outdoor bike parking and assisting companies develop preferential parking programs

Through these efforts, the organization focuses on promoting carpooling, vanpooling, bicycling, telework, and transit. Given the dispersed nature of the land uses and relatively low density throughout their service area, the largest mode share (outside of the personal automobile) for commuters in the 494 Commuter Services member cities is ridesharing, followed by transit, telework, and bicycling.17
IV. Existing Research and Applications

Fundamentally, there are four ways that peak-period auto traffic can be reduced. Trips can be eliminated, trips can be shifted to other routes, trips can be shifted to other times, and trips can be shifted to other modes. A key part of development of this policy study included a thorough literature review regarding the measurable efficacy, as well as significant qualitative benefits, of various TDM strategies that are commonly used to eliminate or shift peak hour trips.

The following discussion includes the highlights from four TDM strategy types (Transit, Bicycle, Ridesharing/Parking, and Alternative Work Arrangements) and is primarily included in this study to identify potential applications to the City of Minnetonka. Further detail can be found in the four literature reviews located in Appendix A.

A. Transit Strategies

Research indicates that the best way to shift trips is to make single-occupancy vehicle (SOV) trips less attractive, but this is often politically infeasible, especially in a U.S. suburban setting dominated by an auto-oriented development pattern. Instead, considerable attention can be focused on making non-SOV trips via public transportation relatively more attractive. Four transit-related programs and strategies can help to make this mode more attractive:

- Employer-subsidized transit fares
- Guaranteed Ride Home programs
- Marketing and information programs
- Proximity and connections to transit

Selected Findings on the Efficacy of Transit Strategies

Studies of transit fare subsidy programs have identified interesting effects related to who pays, and how much. There is evidence that a program in which the employer directly pays some share of the fare will be more successful in shifting commuter behavior than one where the savings are due to a tax benefit to the employees, even if the actual fare level is the same. Evidence also suggests that the actual amount of the benefit paid by the employer has only a marginal effect on shifting commuter behavior, as long as it is greater than zero.

Furthermore, employee transportation coordinators (ETCs) can be an effective supporting tool for any type of TDM program, but the National Center for Transit Research found an important link between ETCs and transit commuting in particular. In areas with high levels of transit service, the presence of an ETC made little or no difference in the effectiveness of efforts to encourage transit commuting. But in areas with low transit service, the presence of an ETC was critical for the success of transit-focused TDM strategies.
Considerations for Minnetonka

- **Transit Subsidies:** Employers that do have access to fixed-route transit service can get extensive fare subsidies through Metro Transit. As noted, benefits paid by employers (as long as they are greater than $0) will likely have a noticeable impact on employee adoption of the mode, as opposed to programs that provide direct tax savings to employees. Because few employers currently have access to frequent, fixed-route service, careful consideration of this application must be made for employers located in proximity to planned future transit service.

- **Last Mile Connections:** Employers need to identify and implement opportunities to create last mile connections to transit service throughout the city. This may be done through privately provisioned shuttle service or other approaches, such as improving trail infrastructure, improving wayfinding, or providing company-owned bicycles for employee use.

- **Employee Transportation Coordinators:** ETCs are critical to the successful encouragement and implementation of transit-related TDM strategies. While it may be difficult to require businesses to staff this position, the City may find it useful to strongly recommend that building tenants dedicate staff hours to this role.

- **Plan (Now) for the Green Line LRT Extension Opening Day:** It is important to plan now for future Southwest LRT service, including encouraging employers to be transparent about availability of future transit passes, for example. In order to encourage changes in behavior, marketing should begin now.

B. Non-Motorized (Bicycle) Measures

In this discussion, non-motorized transportation refers primarily to bicycle treatments that can influence demand for SOV trips during the peak hour.

*Point of Destination Facilities*

Point-of-destination facilities include amenities that are located at the workplace and that enable and encourage bicycling, such as shower facilities, bicycle parking, and bicycle storage.

*Bicycle Network Improvements*

Bicycle network improvements include all improvements to the actual route a cyclist takes to his or her destination. These improvements refer both to improving the safety and convenience of existing routes, and to the addition of new routes to increase the connectivity of the network.

*Selected Findings on the Efficacy of Non-Motorized Strategies*

Facilities that aid in the ease of bicycle commuting are critical starting points if mode shift is going to be achieved. This is especially true with bicycle storage facilities and showers (though due to their cost and scale, showers are less widely implemented, making it more difficult to determine their effect). A 2012 poll conducted by *Bicycling Magazine* identified showers and storage as facilities that would encourage 17 percent of all adults and 44 percent of active riders to commute by bicycle.\(^{21}\)

The research on the quantitative impacts of such facilities is limited, and often based on stated-preference surveys rather than revealed-preferences. That these facilities have a positive impact on
bicycle mode share is nearly universally accepted, but identifying the degree of that positive impact has been more elusive. Furthermore, the literature is unclear on the direction of the causal arrow between bicycle mode share and bicycle storage or shower facilities.

Financial incentives for biking to work, similar to the program implemented at the South San Francisco employer Genentech\textsuperscript{22}, may improve mode shift by nearly five percent. Results of an incentive program that at a Bloomington, MN employer, Quality Bicycle Products (QBP), showed even higher results during the company’s peak production periods, where up to 50 percent of the company’s 270 employees bike to work on monthly bike-to-work days. QBP’s program includes increased wages, alongside indoor bicycle storage, repair facilities, showers, lockers, and catered lunch multiple times per week to reduce the need for travel.\textsuperscript{23}

**Considerations for Minnetonka**

- **Coupled Provision of Alternative Transportation Facilities:** Shower/bike-parking facilities must fit the surrounding context, and should be provided together, whenever possible.
- **Mode-Specific and Financial Incentives:** Provide financial and/or mode-specific incentives/rewards for biking and walking (e.g., shoes, helmets, other gear).
- **Small Improvements:** Small changes to improve convenience of the use of alternative commuting modes can have a surprisingly large impact, such as the location of a bike rack. The walk from a bike rack at the back of a low density suburban office building to the front door can frequently be a large enough inconvenience to influence some bike riders to abandon the mode. A lack of bike rack placement in an area with pedestrian traffic also diminishes the sense of security for the commuters storing their bicycle on the rack.
- **Weather Impacts:** Unsurprisingly, inclement weather is found to negatively impact ridership in cold climates, which is a factor entirely out of the control of the employer or City.

**C. Parking and Ridesharing Strategies**

**Parking Cash-out**

The excess supply of parking is one of the core issues of the suburban built environment, but too often, the supply of parking in the suburbs is even not considered part of the built environment. The problem of parking oversupply in the suburban landscape cannot easily be remedied by dynamic pricing schemes, a popular solution for urban locations with higher land values. However, this oversupply presents an opportunity for employers to create incentives to reduce demand for employee parking since supply of parking in the built environment is not an issue.

Parking cash-out programs provide this type of incentive by reimbursing employees for non-SOV trips. Under a parking cash-out program, employees receive a subsidy for not driving to work each day. In California, employers who provide free parking must also offer a “cash-out” subsidy for employees who choose not to drive to work.\textsuperscript{24} This application is ideal in a suburban context that is over supplied with parking and in which moving away from free parking is politically unacceptable.
**Carpool/Vanpool**

Employer-provided incentives or financial subsidies to support ridesharing (via carpool or vanpool) is another alternative to decrease SOV trips to a site. Further incentive measures may include parking priority programs that allow ridesharing vehicles to conveniently park on site.

**Employee Transportation Coordinators**

The designation of an Employee Transportation Coordinator is critical. A 2005 study found that, “management support and an effective [employee transportation coordinator] are necessary for a successful work site trip reduction program if the work site is not located in an area with access to high-quality public transportation.”

**Considerations for Minnetonka**

- **Free Parking Abundance:** The City is keenly aware of the surplus and ubiquity of free parking throughout the City, as are its employees and employers. Removal of free parking options for employees is politically infeasible at this point in time, but parking cash-out programs provide an alternative for suburban employers, especially in cases where an employer is considering an expansion of parking to meet real or perceived demand.

- **Preferential Parking Provision is Easy:** Relatively speaking, the process of designating a number of spaces for carpool/vanpool parking should be straightforward and inexpensive to implement. The share of designated spots should be an appropriate fit to the average number of vehicles participating in a carpool or vanpool program.

- **Overcoming Challenges with Trip Chaining:** A common concern for employees if they were to participate in a carpool or vanpool arrangement is the ability to complete tasks off-site throughout the day, such as medical appointments, errands, or other tasks. Locating amenities on-site or nearby (e.g. food, dry cleaning, an ATM, etc.) is a potential solution to these types of issues. More feasible, however, is providing a vehicle for occasional employee use throughout the day, whether it is a shuttle service to a high-density area, a short-term car check out program, or shared bicycles.

- **Employee Transportation Coordinators:** As with transit-related TDM strategies, the ETC is critical for the successful implementation of carpool/vanpool programs, as well as other employer-facilitated programs.

**D. Alternative Work Arrangements (AWA)**

Alternative work arrangements are most commonly grouped into four strategy types:

- Flexible Work Hours
- Staggered Work Hours
- Compressed Work Weeks
- Telecommuting/Telework programs
Telework arrangements are the most frequently practiced alternative work arrangement (AWA), and have been implemented fairly widely in the Twin Cities region through the assistance of the 2010 eWorkPlace initiative.

**Selected Findings on the Efficacy of Alternative Work Arrangements**

Telecommute/flexible work environments are more likely to be adopted by and applicable to certain industry types, including IT, engineering, and insurance companies, among others. Despite the prevalence of these industries in the Twin Cities, management norms and personalities remain a significant barrier to implementation or expansion of existing AWA policies.

Similar to findings related to other TDM measures, a mix of strategies for the employee is crucial. Specific to telework policies, the addition of other convenient TDM strategies to an employee’s set of options will help to counter the tendency for teleworkers to make SOV trips on non-telecommute days that could otherwise be completed via a carpool or transit.

**Considerations for Minnetonka**

- **Telework Industry Share:** There is a relatively high share of employers within Minnetonka that are telecommute-compatible industries (i.e., engineering/planning/architecture, healthcare administration, IT, insurance). The City should consider actively encouraging employers to participate in future phases of the eWorkPlace program.

- **Recognition of Family-Oriented Employers:** Minnetonka is currently seeking to attract young families to the City. AWA provides an opportunity for many companies to improve the work/life balance of employees, and the City should capitalize on these family-friendly benefits when encouraging employers to adopt various TDM strategies.

**E. Summary of Considerations for Minnetonka**

In the context of suburban land use patterns and existing transportation infrastructure in Minnetonka, a multiple-strategy TDM policy approach that provides complementary alternatives is most relevant and potentially effective for employees and employers. For various reasons, including issues such as limited transit service, single-strategy TDM approaches are likely to be ineffective. However, when TDM strategies are combined, the choices and flexibility with users’ lifestyles can lead to an increased likelihood of travel behavior changes by employees.

Section VII, Evidence Based Recommendations, is focused on City discretion regarding the initial approval of TDM plans, as well as determinations of good faith efforts to implement the strategies incorporated into the TDM plan. City staff should use the considerations outlined in this section to inform their TDM plan approval processes.
V. Case Studies: Local Government Policies

Before making recommendations to Minnetonka, we reviewed the policies of other cities and counties that had implemented TDM ordinances. Our case studies focused on suburban cities in a metropolitan region. Whenever possible, we tried to identify cities that have similar population size, employment density, and transit access as Minnetonka. However, for the purpose of gaining information on TDM best practices, we also reviewed TDM ordinances of municipalities that may have a larger population, serve a greater number of commuters, or have a more robust transportation network than Minnetonka.

For regional comparisons, we reviewed Bloomington's required TDM ordinance and Eden Prairie's suggested TDM framework. Both cities are considered leaders in TDM policy in the 494 corridor. Nationally, we looked to cities that had TDM ordinances that had elements that could be tailored to Minnetonka's needs. Pasadena, California, was used by Bloomington as a model of a successful TDM ordinance when Bloomington was developing its own ordinance.

Arlington County, Virginia, and King County, Washington, are large counties that serve a broad range of employees with a well-developed transit network. Both Arlington and King Counties are national leaders in TDM and have received recognition from the Federal Highway Administration for their excellence in TDM administration.

Lastly, North Brunswick, New Jersey, is a small suburban township outside of New York City, that has a broad approach to TDM that encompasses many of its local businesses. The variety of municipalities we reviewed provided a rich study about the strengths and weaknesses of different approaches to TDM implementation that helped refine our recommendations.

A. City of Bloomington, Minnesota – Municipal Policy and Internal TDM Plan

Background

Prior to 2009, the City of Bloomington did not have a consistent TDM policy or ordinance. TDM policies were applied in several contexts, but a unifying citywide policy did not exist. The City's zoning code had provisions for TDM as a condition of a parking flexibility ordinance. TDM had also been required as a condition of approval by the City Council for some major developments on a case by case basis. Examples of such developments include Mall of America Phase II, Bloomington Central Station and United Properties 8200 Tower, among others.26 These policies often had different terminologies and requirements.

The inconsistent application of TDM policies and their dispersed locations in the City Code led to confusion. Developers were unsure of what would trigger TDM requirements and what those requirements would be if needed. City staff members were unsure about who should be administering the policies and when they would be required. As development continued in Bloomington, it became clear that a more consistent approach was needed and in 2006 staff began work to establish consistent TDM standards and a process to apply them citywide.27
TDM Plan

The City of Bloomington’s plan consolidated all TDM policies into a single section of the City Code. The ordinance divides developments into two tiers based on land use type, size of the development and parking requirements. The two tiers have different TDM requirements reflecting both the differences in trip generation and resources available to different development sizes. The Bloomington TDM ordinance is included in this report as Appendix B.

Tier 1

Tier 1 is targeted at large developments generating a high number of trips. All new development and redevelopment is subject to TDM review. New development requiring more than 350 parking spaces or seeking flexibility from the parking requirements and redevelopment resulting in a 25 percent increase in parking spaces and more than 350 total spaces are subject to Tier 1 TDM requirements. A Tier 1 TDM plan requires a developer to:

- Fund a study analyzing the projected transportation and parking impacts of the development
- Prepare a TDM plan describing trip reduction goals, TDM measures to be implemented, evaluation measures, and a three-year budget for TDM implementation
- File a TDM agreement including the details of the approved TDM with the City Attorney’s office
- Provide a Financial Guarantee to the City in an amount determined by the number of required parking spaces
- File an annual TDM status report with the City

The TDM plan prepared by a Tier 1 developer must be approved by the City before the building permit is issued and construction is allowed to move forward. The City does not require specific TDM measures. The City identifies on-site transit facilities, preferential location of car and van pool parking, telecommuting, on-site bicycle and pedestrian facilities and employer subsidized transit passes as TDM measures that could potentially be included in a Tier 1 TDM plan. Ultimate approval of the TDM plan is left up to the Public Works Director’s designee.

The value of the Financial Guarantee is determined by the number of code-required parking spaces in the proposed development. The rate is currently set at $50 per code-required parking space. The minimum value of the Financial Guarantee would be $17,500 for a development meeting the required 350 parking space threshold. The Financial Guarantee is held by the City for a minimum of two years. If at that point the property owner has demonstrated a good faith effort to meet the trip reduction goals and implement the TDM measures included in the agreed-upon plan the Financial Guarantee will be returned. If the property owner has not demonstrated a good faith effort the City will hold the Financial Guarantee for up to an additional year. If no improvement has been made at that point, the City will either donate the funds to 494 Commuter Services or use the funds to implement TDM measures around the site.

Tier 2

Tier 2 is targeted at moderately-sized developments that generate fewer trips than large scale developments but still enough to have an impact on peak-period congestion. All new developments and
additions over 1,000 square feet are subject to a Tier 2 TDM plan. The requirements of a Tier 2 TDM plan are less stringent than the Tier 1 TDM plan, requiring developers to select potential TDM measures from a check-list. Developers are asked to commit to the selected measures and a completed check-list is a requirement of the development package. The purpose of a Tier 2 TDM plan is primarily to increase education and awareness of TDM measures and transportation alternatives among developers, employers and employees.

Developing the TDM Plan

**Complexity**
Complexity was a major consideration for staff during development. City staff wanted to create a plan that captured many development types while at the same time was simple and easy to understand. The initial plan included three tiers based on projected parking and transportation impacts (as determined by code-required parking spaces). After working with internal and external stakeholders including City Council Members, Planning Commissioners, city staff, developers and others, staff determined that a three-tied TDM plan would be too complex and burdensome. Developers were concerned that the classifications and requirements would be unclear and planning staff were concerned that the approach would be overly complex and difficult to administer. Based on that feedback, the City redrafted the proposed TDM plan to include only two tiers.

**Benefits and Costs**
City staff wanted to ensure that the TDM plan did not overburden developers or city staff. The City initially proposed a significantly higher rate per code-required parking space required for a Tier 1 TDM plan. However it was determined through discussions with developers that the fee would be too high. Developers felt that the additional upfront cost of the Financial Guarantee would begin to discourage development in the City. The City settled on the rate $50 per required space to ensure the Financial Guarantee acted as an incentive to developers not a deterrent to development.

The City was also conscious of imposing a large burden on smaller developments where the Financial Guarantee and TDM measures would constitute a larger portion of the overall cost of the project. They aimed to set thresholds that would target the largest developments in the City for the Tier 1 TDM plan while allowing smaller developments to commit to a less stringent Tier 2 TDM plan.

Parking was used as the primary threshold dividing Tier 1 and Tier 2 developments because the parking requirements are based on projected trip generation rates. The City of Bloomington uses the ITE Trip Generation models based on land use type and development size to determine parking requirements. Thus they are seen as an effective proxy for actual trip generation rates. The City engaged in an iterative process to set the thresholds established in the plan. They started with an initial value for the threshold and calibrated that number based on existing parking requirements for developments with high trip generation rates in the City.

**Measurement and Enforcement**
The Financial Guarantee and Annual Report required in the Tier 1 TDM plan are the primary means of measurement and enforcement. The Annual Report must be filed by the property owner and include employee surveys assessing self-reported commute modes and awareness of TDM measures in place. It must also include documentation of annual expenditures on TDM measures by the property owner.
Both the Annual Report and the Financial Guarantee are only required for two years as long as the developer is found to be making a “good faith effort” to achieve the trip reduction goals and enact the TDM measures in the agreed-upon plan. This makes long-term enforcement of on-going TDM measures difficult.

Tier 2 TDM plans do not have an enforcement or measurement mechanism.

**Internal TDM Policy for City Employees**

In addition to the 2009 TDM policy, the City of Bloomington enacted an internal TDM plan for its employees in 2011. The plan (included in Appendix B) includes common strategies to increase non-SOV trips to the City’s campus on Old Shakopee Road, including a “try-it” goal of 25 percent and a trip-reduction goal of five percent. In order to fund incentives for the first year of implementation, the City successfully applied for the Minnesota Department of Health’s State Health Improvement Program (SHIP) grant.

**Applications to Minnetonka**

- **Engage Business**: The City of Minnetonka should engage with developers and existing property owners while implementing the TDM plan. The City of Bloomington benefited from engaging with developers early and often to hear what their concerns with the plan were and to understand where the City should be making changes. Engaging developers to be a part of the process early can turn potential opponents of the plan into supporters.

- **Long-term Enforcement of TDM Measures is a Concern**: The City of Bloomington only keeps the Financial Guarantee for two-years, at which point the business is no longer required to continue any TDM measures or to provide the City with an annual report. The City of Minnetonka should explore alternative enforcement and incentive techniques to address this problem. Further, if a business fails to demonstrate a good faith effort, the City must use the Financial Guarantee, which itself can be costly administrative burden and is often not enough to fund any meaningful capital project aimed at reducing peak-hour trips.

- **Incorporate TDM Phases**: Related to the previous point, the City of Bloomington does not distinguish between on-going programmatic TDM measures (e.g., employer transit subsidies or vanpooling programs) and constructed TDM measures that are a part of the facility (e.g., bicycle shower facilities, trail connections, or a building footprint oriented towards the street). On-going programs can be ended when the incentive stops, while constructed TDM measures will exist for the life of the structure. Because of this, they have different sets of incentives and are potentially performed by different actors. The City of Minnetonka should be conscious of this distinction and incorporate it into the TDM plan.

- **Simplicity is Important**: The plan must be easily understood by developers and city staff to be effective. Ideally the TDM plan should be incorporated into the existing development process.

- **Show dedication through internal TDM plan**: The City of Bloomington used its internal TDM plan as a tool to influence travel behavior of its employees and to show the City’s dedication to the 2009 TDM policy.
B. City of Eden Prairie, Minnesota – Municipal TDM Policy

Eden Prairie, Minnesota

Like the City of Minnetonka, Eden Prairie is a suburban community in the Twin Cities Metropolitan Region located 11 miles southwest of Minneapolis. It has a population of 60,797 and a median family income of $105,177. As of 2011, there were approximately 49,288 employees working in the City of Eden Prairie.\(^{33}\)

Policy

Eden Prairie’s TDM policy served as the template for the City of Bloomington’s TDM policy. The policy requires qualifying developments to submit a two-year TDM plan to the City. The submitted TDM plan must include a quantifiable goal for reducing the number of SOV trips to the site based on an initial baseline survey of employers (see Appendix C).\(^{34}\)

The City’s TDM policy also requires the developer to submit which TDM strategies they will apply to the site and which party (developer, property manager, or tenant) will be responsible for each part of the submitted plan. The City provides a list of suggested TDM strategies a developer can select from, in addition to any excluded from the list, pending City approval. As a part of the plan, the developer must propose a two year TDM budget that it plans to spend on administration and implementation of TDM strategies.\(^{35}\)

The City requires a financial guarantee in the amount equal to the proposed two year TDM budget to be held by the City. Unlike Bloomington, Eden Prairie does not have a mechanism in place to spend the money if a developer does not make a good faith effort to reduce SOV trips. The financial guarantee is returned to the developer after two years pending the receipt of a summary of the TDM evaluation.

The City requires evaluation at three points; an initial employee commute behavior survey to set the TDM goal baseline, a midpoint review after one year, and a final review with an end of plan employee survey to evaluate the effectiveness of the TDM plan.\(^{36}\)

Applications to Minnetonka

- **Set Quantifiable Goals:** Eden Prairie requires developers to set a quantifiable SOV trip reduction goal. These goals are based on an initial employee survey and followed up with a mid-plan evaluation and a final evaluation at the end of the two years. This allows employers and the City to gain a better understanding of what strategies work and apply that information to new TDM plans.

- **Primary Goal is to Educate:** Eden Prairie’s TDM requirements only last for two years from the point of occupancy. There is no enforcement other than the financial guarantee, however this is returned after two years regardless of SOV reduction. The primary long-term mechanism for reducing SOV appears to be the education of employees about alternative modes and the hope to set individual commute behaviors that continue past the two year TDM plan.
C. City of Pasadena, California – Municipal TDM Policy

Located 10 miles east of Los Angeles, California, Pasadena is a city of more than 100,000 residents in the San Gabriel Valley. More than 80,000 people commute into Pasadena for work each day.

The Pasadena Area Rapid Transit System (ARTS) provides limited express bus service to sites throughout the City. Additionally, Pasadena has five stops on LA Metro’s Gold Line light rail corridor, which connects this first-ring suburb to Union Station in downtown Los Angeles.

In discussions about the creation of Bloomington’s TDM policy with city staff, the planners we spoke with emphasized the influence of Pasadena’s TDM policy in Bloomington’s initial attempts to develop a TDM policy. Though Pasadena and Bloomington are different communities in many ways, we wanted to study the aspects of Pasadena’s policy that influenced another corridor community’s TDM ordinance (see Appendix D for the City’s policy).

Policy

Pasadena’s efforts to implement TDM measures are integrated within two areas within the City’s Municipal Code:

1. Zoning Code – Site Plans and General Development Chapter
2. Transportation Management Program Chapter

Within the Site Plans and General Development chapter of the Municipal Code, two TDM plan tiers are outlined, and include:

1. Developments or additions exceeding 25,000 gross square feet
2. Developments or additions exceeding 75,000 gross square feet

Unique Property Owner Requirements

Property Covenant

Developments falling under the larger compliance tier are required to attach the TDM plan as a covenant to the property as a condition of development. As part of the covenant, the property owner must notify the Pasadena Department of Transportation of any changes in property ownership. Property owners must also inform any potential future owner of the associated TDM requirements.

Property Owner Guarantee

TDM plans for projects greater than 75,000 gross square feet must include a personal commitment from the Chief Executive Officer of the owner of the property to uphold the TDM plan’s obligations. The plan must outline measures to reduce average vehicle ridership (AVR) to 1.5 within one year of opening, or to 1.75 within three years of opening (projects located in Transit Oriented Development Areas).

Plan Approval, Monitoring, and Enforcement

In order for initial TDM plan approval, all site plans for a development exceeding 25,000 gross square feet must include carpool/vanpool preferential parking for 10 percent of employee parking, bicycle...
parking facilities, and space for a transportation information display board. Without approval, the City will not issue a building permit for the development. Failure to submit or properly amend a TDM plan is grounds for the city to deny a project’s building permits, certificate of occupancy, or other forms of approval required (permits, licenses) for the project to proceed. The city can also issue a stop work order or assess a financial administrative penalty.

Property Owners are required to submit a TDM “Annual Status Report” to the Pasadena Department of Transportation. TDM Status Reports must include commuter surveys to document progress meeting AVR goals. If AVR goals are not met, the property owner must submit a revised TDM plan. The revised plan must include new plans to reach the established TDM goals.

Applications to Minnetonka

- **Tiers of TDM**: Small and large developments have different levels of requirements for successful compliance with the city’s TDM ordinance.

- **TDM Plans Require Notification in Change of Ownership**: In order for cities to enforce TDM compliance, they must know the scope and intensity of uses on existing developments. Requiring developments to inform the city of changes in property ownership ensures that future owners are aware of the city’s TDM requirements during the purchase process.

- **Strict Enforcement**: Failure to comply with any part of the TDM process is grounds for not approving critical building permits, certificates of occupancy, and other required licenses that can delay the construction or leasing of new developments.

- **Zoning Code + Ordinance**: Locating TDM policy in both the city’s ordinance and zoning code incorporates TDM policy into every step of the development process and creates a mechanism for enforcement after the development process is complete.

- **Higher TDM Goals for TOD Projects**: Recognizing the effect of transit service on employee commute decisions, the city established higher trip reduction goals for projects located in TOD areas.

- **Applicable Model to Local Context**: The Pasadena TDM Ordinance was a template which helped shape the City of Bloomington’s recent TDM ordinance update.

D. Arlington County, Virginia - County/Municipal TDM Policy

A first-ring suburb of Washington, DC, Arlington County is home to a population of over 220,000. Over 110,000 travel from outside the county to Arlington County for work each day.

Arlington County has a high level of transit service. The County is served by 11 Washington Metropolitan Area Transit Authority (WMATA) Metro train stations, multiple WMATA bus lines serving the DC-VA-MD metropolitan area, and several local bus routes and connector services, as well as the region's Capital Bikeshare system. I-66 and I-395, as well as multiple state highway corridors, directly serve the County.
While the employment density, compact development patterns, and level of transit service in Arlington County, VA are not reflective of the suburban conditions in Minnetonka, Arlington County has been recognized as a national leader in TDM policy by the Federal Highway Administration (FHWA) as a TDM Best Practice. Numerous components of Arlington’s successful TDM strategy can be incorporated into Minnetonka’s TDM ordinance.

Policy

Similar to the City of Minnetonka, the County first adopted a TDM ordinance in 1990 (see Appendix E). The development matrix created by this ordinance ties TDM plans to the intensity of the proposed site development, as well as land use consistency. Projects that do not require a zoning variance and are not forecasted to negatively impact congestion and traffic operations are treated with the least scrutiny; corresponding TDM plans for low intensity developments focus on education and outreach of employees. Alternatively, the TDM plans for high intensity developments, especially those which require a zoning variance, may require the construction of transportation infrastructure or financial performance guarantees to ensure efforts to mitigate traffic congestion.

Arlington County Commuter Services (ACCS) is the agency within the county’s Department of Environmental Services that is tasked with developing the County’s TDM Policy.

Plan Approval, Monitoring, and Enforcement

Administration of TDM plans is within the scope of the County’s Department of Community Planning, Housing, and Development. Approval of a developer’s TDM plan, including completion of necessary infrastructure improvements, is required in order for the property to receive a certificate of occupancy. TDM plans are required of all new developments in Arlington County, regardless of development size, occupancy, or parking requirements.

All property owners are required to contribute to the County’s TDM enforcement and monitoring efforts. Required monetary contributions to the County’s TDM efforts are based on the gross area of the development, as divided into three tiers:

1. Less than 100,000 gross square feet
2. 100,000 to 200,000 gross square feet
3. Greater than 200,000 gross square feet

In addition to required contributions to the County’s TDM efforts, a monetary “performance guarantee” is required of the largest developments to insure good faith compliance with the agreed upon TDM plan. After 3 years, the County can either dissolve or renew the performance guarantee based on the employer’s performance implementing its TDM policy.

The County’s TDM Ordinance requires continuous participation in the TDM plan by the property’s developers and future owners. Akin to a protective covenant on a historic property, this language passes on the current TDM to future property owners in perpetuity. Specifically, the ordinance states that “the term developer also includes the owner, the applicant and all successors and assigns [.]”
ACCS requires property owners to submit annual TDM Plan updates. TDM plans, including a list of current tenants, can be updated online through the County's online reporting system. Arlington Transportation Partners, the local TMO, uses the data from the annual reports to reach out to tenants and identified TDM Coordinators to provide TDM education and outreach services.

Applications to Minnetonka

- **Long-term Enforcement**: In addition to annual employer reporting of compliance and implementation, Arlington County attaches TDM requirements to every new development in perpetuity. This policy ensures continuity of participation regardless of changes in property ownership or tenancy.

- **Outreach to Tenants**: One of the hardest parts of successfully implementing a TDM policy is ensuring that office tenants are engaged in the property owner’s TDM goals. By sharing the updated list of tenants with Arlington Transportation Partners, the County ensures that as turnover in occupancy occurs, there is still consistency in efforts to implement TDM strategies.

- **Land Use**: Using conformity with the general land use plan as criteria for the level of TDM requirements ensures that TDM strategies are context-specific and remedies proposed in context to the built environment.

E. **Town of North Brunswick, New Jersey – Municipal TDM Policy**

North Brunswick is a township of 40,000 residents located 40 miles southwest of New York City in Middlesex County, New Jersey. Over 20,000 commuters travel into North Brunswick for work each day.

The Township is served by limited bus shuttle service within Middlesex County. New Jersey Transit Rail Operations (NJT) operates out of one commuter rail station in North Brunswick, which serves peak hour trips to and from Penn Station in Midtown Manhattan. In early 2013, NJT announced plans to build an additional commuter rail station in the Town by 2018. The station’s construction and opening is planned to coincide with an adjacent planned transit oriented development.

North Brunswick is a small town with a big TDM policy (see Appendix F). Demonstrating that TDM has a place in communities of all sizes and settings, suburban North Brunswick adopted a TDM ordinance that requires businesses of 50 employees or more to participate in its TDM ordinance. Minnetonka, a suburban city in a bustling metropolitan region, can also find a TDM ordinance that is the right size for its business community.

**Policy**

TDM policy requirements apply to all existing businesses with 50 employees or more, proposed commercial developments of 15,000 gross square feet or larger, and all planned unit developments (PUDs). A TDM plan is also required for businesses which have more than 60 percent of employees that regularly commute during peak period or more than 40 percent of employees that are required to arrive or leave work in the same 15-minute time period.
The goal of the TDM plans implemented in North Brunswick is to reduce peak trips to 70 percent of the projected number of peak trips for that site.

**Plan Approval, Monitoring, and Enforcement**

TDM plan approval is required by the North Brunswick Planning Board as part of the site plan approval process.

An annual employee commuter survey of at least 75 percent of employees must be conducted and results must be reported to the Town’s Office of Traffic Management (OTM); all affected businesses must identify a Traffic Coordinator as a point person to submit TDM materials to the OTM. Additionally, report results must be certified by the businesses’ human resources director or equivalent staff person. Developers are also required to ensure that tenants participate in the implementation of the agreed upon TDM Plan.

If a business fails to make a “good faith” effort to implement its traffic reduction plan, it will be subject to fines of $500 month until the property is in compliance. Businesses that fail to achieve goals set in their traffic reduction plan, but act in good faith, are not in danger of being penalized.

**Applications to Minnetonka**

- **“Good Faith Effort”:** North Brunswick is one of many local governments to use the “good faith effort” threshold to determine compliance with a city’s TDM ordinance. While trip reduction goals may not be achieved, employers acting in good faith are not penalized for trying to reach their TDM goals.

- **Site Plan Approval:** The requirement to have an approved TDM plan in order to receive site plan approval demonstrates the Town’s commitment to TDM as an effective land use and transportation strategy. Requiring developers to think critically about their responsibility to reduce single-occupancy trips before the building is constructed allows the local government to negotiate for amenities and infrastructure that can further enable wider adoption of alternative forms of transportation.

- **Suburban Solutions:** A suburban commuter community like Minnetonka, North Brunswick’s thorough TDM policy demonstrates that TDM has a place in suburban communities.

**F. King County, Washington – Various Efforts**

King County, Washington, is home to 1.9 million residents. Major employment centers include Seattle, Bellevue, and Redmond. Major employers include Boeing, Microsoft, T-Mobile, and Expedia. Nearly 700,000 residents commute to jobs within King County every day. Additionally, almost 350,000 commuters from outside the county commute to their employers in King County. The County is well served by several bus lines, commuter trains, and light rail transit corridors.

Washington State’s Commute Trip Reduction (CTR) legislation (1991) mandates every city to create a TDM ordinance. This ordinance must require employers with more than 100 employees to submit a TDM plan that meets the state’s goal to reduce single occupancy vehicle trips during peak periods. In
addition to this requirement, cities have conducted extensive outreach programs to incentivize commuters to carpool, take transit, or other alternatives to their daily commute.

For our case study, we reviewed the range of TDM approaches in King County. King County is home to both major employment hubs and smaller suburban communities. The County has an integrated approach to TDM, which allows cities to develop their own TDM plans so long as they all meet the state standards for trip reduction. The case studies in King County represent this broad range of approaches. The County and the City of Redmond have engaged in social marketing programs to incentivize employees to reduce single occupancy vehicle trips. The suburban community of Shoreline, Washington has adopted a TDM ordinance that fits the needs of its smaller setting. Just as Minnetonka has its own needs in the context of the 494 corridor and the metropolitan region, King County serves as an example of integrating different approaches to TDM within the same region.

**City of Redmond R-TRIP Incentive Program**

The Redmond Trip Resource and Incentive Program (R-TRIP) is a voluntary program for Redmond residents and commuters. In 2012, it was recognized by the Federal Highway Administration as a best practice in TDM policy implementation of TDM policy into transportation planning.

The R-TRIP program encourages residents and commuters to log their daily commute mode and travel time in exchange for prizes such as $50 Amazon gift cards, free bus passes for new transit riders, and vanpool subsidy and referral bonuses. The R-TRIP website also provides help for employers who are interesting in creating trip reduction programs. The website provides links to information on applying for grants to implement a new trip reduction program and guides to starting new programs that can be effective from the start.

This voluntary data collection enables the City to provide quantitative data on five indicators of effectiveness:

1. Recorded Commutes
2. CO₂ reduced (lbs)
3. Gasoline saved (gallons)
4. Trips eliminated
5. Money saved

Since the program began approximately 10 years ago, 16,000+ employees from 260 different Redmond businesses have participated in the R-TRIP program, and nearly five million commute trips have been registered on R-TRIP, primarily funded through the City of Redmond's Business Tax/Transportation Improvements and grant funding from King County.

**King County In-Motion Marketing Program**

King County transportation planners found that 75 percent of trips in the county were not work-related. As a result, the County conceived a plan to reduce single occupancy vehicle trips for both
personal and commute trips. By conducting outreach to residents at the neighborhood level, the County hoped to generate positive “peer pressure” to encourage residents to take less single occupancy trips.

The marketing campaign found that the biggest motivator to encourage residents to walk, bike, or take transit was around themes of improving personal health. Messaging also tried to lessen concerns of personal safety, which was cited as the main barrier to using transit or alternative transportation modes.

The campaign tried to create a community interest by inviting schools and businesses to participate in the campaign. Campaign volunteers posted positive messages throughout the community such as “Hop on the bus, Russ!” and “Cycle on, Juan!” Messages were tailored to the interests and diversity of each neighborhood.

Results of the social campaign were effective. In a post-campaign telephone survey, one-third of residents said they were aware of the marketing campaign. Twenty-four to 50 percent of program participants (in four different neighborhoods) decreased the number of single-occupancy trips. Bus ridership in one neighborhood participating in the campaign increased by nine percent in the same time period from last year, compared to a 2.5 percent increase overall in the area. Results were most effective in neighborhoods that already had infrastructure to support biking, walking, and transit alternatives to driving alone.

**Shoreline, Washington - Municipal TDM Ordinance**

Shoreline is a suburban Pacific coast community in King County and a first-ring suburb of Seattle, Washington, with a population of approximately 50,000 residents. While the majority of residents commute to other cities in King County for work, 13,000 commuters arrive in the city each day for work from other cities. Shoreline is served by the Seattle area Metro Transit, Community Transit, and Sound Transit bus and rail services.

Like other municipalities in King County, Shoreline adopted a TDM ordinance in 2008 in order to comply with the state’s CTR legislation; the City also adopted the standard 100 employee or more threshold to determine the employers required to implement a TDM plan (see Appendix G).

**Plan Approval, Monitoring, and Enforcement**

Shoreline requires all impacted employers to submit a TDM plan to the City for approval. New employers that would qualify for TDM enforcement measures must identify themselves to the City before opening. Failure to notify the City is considered a violation of the trip reduction ordinance.

New employers are required to submit a baseline study of their current commute patterns which will be used by the city to measure the success of the company’s TDM plan implementation. Employers are also required to identify an Employee Transportation Coordinator (ETC) at all of their work sites that qualify for the TDM Plan. The identified ETCs are also required to complete the King County TDM training within six months. This ensures that a capable and informed ETC at every site is included the TDM plan.

Annual reports are required to be submitted to the City, and must also be shared with the employees at the respective company.
Applications to Minnetonka

- **Outreach to Residents**: King County is a national leader in outreach to residents at the individual and neighborhood level. Businesses can receive support in achieving their TDM Plan goals by having a workforce informed about alternative transportation options. Incentive programs have been shown to increase employee awareness and participation in taking transit, carpooling, or participating in alternative work schedules.

- **Support of Sustainable Living Goals in Comprehensive Plan**: The King County InMotion Social Marketing Campaign pairs TDM policy with the County’s approved comprehensive plan to create more opportunities for sustainable living in the County. Opportunities to pair TDM policy with other municipal policies (e.g., environmental, public health, community development, etc.) have a greater chance of success than when TDM is viewed as only a development regulation.

- **Employee Involvement**: In addition to increased employee awareness of alternative commute options, the City of Shoreline includes employees in the reporting process. Sharing employer’s efforts and accomplishments regarding TDM can increase employees’ awareness that TDM is a priority for their employers.

- **TDM Coordinator Training**: In addition to the requirement that each work site have an identified TDM coordinator, the City of Shoreline requires that the coordinator also receive training from the County on effective outreach and education strategies. Too often, a company’s TDM Coordinator does not receive proper training and cannot be an effective TDM advocate on site. Providing TDM Coordinators with adequate training.

### G. Summary of Applications to Minnetonka

While the range of case studies ranges from small suburban communities to large metropolitan areas, all of these case studies can inform the selection of a TDM policy that fits Minnetonka’s needs. The cities reviewed offer lessons on effective TDM policies and highlight the challenges that remain to be overcome. Several common themes emerged including making TDM part of the site approval process, requiring TDM covenants or agreements to attach to properties, and innovative outreach strategies to employees. Table 1 provides a simple summary of the requirements, goals, monitoring, and enforcement mechanisms of the case studies we reviewed.
<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>TDM Requirement Basis</th>
<th>TDM Redevelopment Requirement</th>
<th>TDM Goal</th>
<th>Monitoring</th>
<th>Enforcement</th>
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<tbody>
<tr>
<td>Bloomington, Minnesota</td>
<td>Land Use</td>
<td>Existing development parking space increase of 25% or more</td>
<td>Reduce Peak Hour Commute Trips</td>
<td>Mandated annual reporting including employer self-surveys and TDM expenditures</td>
<td>Financial Guarantee of $50/code-required parking space Requires a “good faith effort”</td>
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<td>Code-required parking spaces</td>
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<td>Environmental Quality</td>
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<td></td>
<td>Gross Square Feet</td>
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<tr>
<td>Eden Prairie, Minnesota</td>
<td>Land Use</td>
<td>N/A</td>
<td>Reduce Peak Hour Commute Trips</td>
<td>Baseline survey, midpoint check and final survey over two-year period.</td>
<td>Financial Guarantee in the amount of the two-year TDM budget. Returned after two years.</td>
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<td>Square Footage</td>
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<tr>
<td>Pasadena, California</td>
<td>Gross Square Feet (25,000+ GSF; 75,000+ GSF)</td>
<td>Existing development GSF increase of 25%, or more</td>
<td>Average Vehicle Ridership (AVR) = 1.5</td>
<td>Employer self-reported annual surveys</td>
<td>Civil penalty of $250/day Denial of building permit</td>
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<tr>
<td>Arlington County, Virginia</td>
<td>Land Use</td>
<td>N/A</td>
<td>Reduce peak hour commute trips</td>
<td>Property owner must update TDM plans annually</td>
<td>TDM Plan necessary to receive Certificate of Occupancy and building permit</td>
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<td></td>
<td>Traffic Impact</td>
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<td>“Performance Guarantee” required of projects requiring intense traffic mitigation for 3 years</td>
<td>“Performance Guarantee” expires if TDM implementation is executed; can be renewed if plans are not executed</td>
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<td>North Brunswick, New Jersey</td>
<td>Employers with 50+ employees or 15,000 Gross Square Feet</td>
<td>N/A</td>
<td>Reduce peak SOV to 60% of employees</td>
<td>Requires an employer designate a TDM Coordinator and submit annual survey and report</td>
<td>Plan necessary to receive site plan approval Failure to submit annual survey, annual report, or trip reduction plan =$500 civil fines/month</td>
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<td>Shoreline, Washington</td>
<td>Employers with 100+ employees (must self-identify to the City)</td>
<td>N/A</td>
<td>Mitigate air pollution and traffic congestion</td>
<td>Employers must perform baseline study and submit Commute Trip Reduction Plan</td>
<td>Civil penalty of $250/day</td>
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<td></td>
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<td></td>
<td>Reduce SOV trips and VMT</td>
<td>Every 2 years, must conduct employee survey with 70% participation</td>
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</table>
VI. Agency and Business Perspectives

A. Transportation Management Organizations

Transportation Management Organizations (TMOs) can be important resources for both property owners and municipalities implementing TDM measures. As the local expert on TDM strategies, plans, and implementation, TMOs can supplement TDM resources for municipal staffs, developers, and employers.

i. 494 Commuter Services

494 Commuter Services serves the City of Minnetonka, as well as the cities of Bloomington, Eden Prairie, Edina, and Richfield. In 2012, they assisted in the development and implementation of 12 TDM plans for employers in the region. They have also worked with Bloomington and Eden Prairie to establish city-wide TDM ordinances.49

From interviews with staff at the City of Bloomington and a TDM program manager at a local employer, it is clear that 494 Commuter Services is an extremely valuable resource for these organizations.50 Their staff has the time, resources, and expertise to develop and implement TDM measures where city and business staff does not. The organization is trusted by the business community and the city staff. Much of the work the organization does is at the interpersonal level, rather than in a formalized process.52 This is particularly true of the many commuter fairs and meetings held with company management to promote commute options. The nature of those arrangements makes relationships and trust extremely important to the efficacy of the organization.

In addition to being part of the organization’s mission, 494 Commuter Services has an interest in engaging with the municipalities and businesses in its service area because these actions are included in its annual reporting the Metropolitan Council, and ultimately the FHWA. 494 Commuter Services is funded in large part by the federal Congestion Mitigation and Air Quality (CMAQ) program. The organization’s funding from this program is determined in part by the number and effectiveness of the TDM programs it has in place. The remaining 20 percent match is obtained from the five cities within its service area.53

ii. Anoka County Transportation Management Organization

Anoka County TMO is unique in the region because it provides service to all of Anoka County and is a department within the county itself rather than an independent non-profit organization.54 The organization shares the same goals and offers many of the same services as 494 Commuter Services.

The importance of building relationships with employers was echoed in an interview with an employee of Anoka County TMO. The organization has prioritized engaging businesses and found that working with the Chamber of Commerce is a good way to create close connections.55

In general most businesses do not find TDM plans to be particularly burdensome. Many have already decided to build in a city prior to considering TDM plans and the Anoka County TMO employee has not found that TDM requirements are a major determining factor.56 From the organization’s perspective there seems to be significant room to grow TDM requirements before they become burdensome to the
point of limiting development. Policymaker’s perception of placing a burden on development seems to be the limiting factor for many TDM measures. For businesses that are concerned with the costs of a TDM measure, the organization makes a point to make the business case for the measure highlighting benefits from avoiding construction in the area or mitigating congestion.57

B. Employers and Developers

Employers and developers can provide an important business take on TDM. In a series of interviews with local employers currently practicing some form of TDM policy some common themes emerged about the business perspective of TDM.

The perception among the TMOs that businesses do not see TDM measures as a significant cost or a barrier to development was confirmed in these cases. One manager said that the cost of a MetroPass subsidy (approximately $200,000) is “so small compared to the value it provides for the employees who need it.”58 Like with the Anoka County TMO, the importance of making the business case for the policy was identified. Another manager shared that much of the company’s TDM plan was developed to earn points towards a LEED certification in order to gain the financial benefits associated with that program.59 Many TDM measures are seen as providing direct benefits to employees and used as a talent recruitment and retention strategy.

One common TDM measure applied by employers is teleworking. Teleworking has been growing in recent years and is very popular among employees, as it provides the flexibility to work from home or another location. One company spent considerable resources to implement their program. The company organized a five-person team to train employees and managers and help them understand the benefits of the program.60 The other company implementing telework found that it only worked well for some departments. For example it was very successful in the accounting department as the employees there are able to do their work from any location, however the departments requiring face-to-face interaction or physical activities could not implement the policy.61

C. Applications to Minnetonka

Agency and business roles and perspectives on TDM measures have a direct impact on how the City of Minnetonka should be planning and implementing TDM.

- **Maintain a strong relationship with 494 Commuter Services:** TMOs are an important resource, providing staff time, expertise and existing business relationships that can make implementing a TDM policy easier and more effective. 494 Commuter Services is well-respected by other cities in the region, as well as the businesses they consult with in their service area. Additionally, 494 Commuter Services benefits from the relationship because of the annual reporting requirements for their funding.

- **Businesses see the benefit of TDM:** Many companies see the benefit in TDM measures and are actively developing or administering them on their own, without being required to by a city. The costs of construction-phase TDM measures like bicycle shower facilities are a small portion of the overall cost of a development and are not generally a major factor in the decision to locate in a given city.
• **Make the business case for TDM:** The City of Minnetonka should be conscious of the business case for a given TDM measure when engaging with developers and businesses. Many TDM measures are highly valued by the employees who use them and they can be used in recruitment and retention strategies. The City should also look for other programs with financial incentives that might be used to bolster the business case for TDM measures, such as LEED certification.

• **The effectiveness of a given TDM measure depends on the context.** Teleworking is highly valued by employees whose job does not require them to be onsite and is a very effective way to reduce peak-hour trips. However, for employees who need to be onsite all or most of the time, telework is less useful. The same is true for a number of other TDM measures. Employer subsidized transit is only effective when transit is available and convenient.
VII. Important Takeaways:

Based on the analysis of the TDM literature, local and national case studies and interviews with local employers and agencies we have identified five major takeaways. These takeaways directly inform the TDM policy framework recommended in this report.

**Simplicity over Complexity:**

A clear TDM policy is essential. Developers and employers should be able to easily determine the TDM requirements that apply to them. In Bloomington, MN, this was identified as a major concern of developers and business during the TDM plan development process. They were wary of complicating an already potentially daunting development review process and of being surprised with requirements they did not know they had to meet.

Redmond, WA and Arlington, VA both have online reporting systems that walk developers and employers through the requirements and attempt to make the annual TDM reporting process as hassle-free as possible. King County, WA has made a larger investment. The County provides training for all TDM coordinators in the county. This ensures that regardless of employer size, there is an informed TDM manager available as a resource to developers and employers.

Many municipalities reduce complexity by integrating the TDM requirements into the existing development review process. This reduces the layers of regulation developers are subject to and minimizes the number of touch-points a developer needs to navigate. In Pasadena, CA failure to comply with TDM requirements are grounds for denying building permits, certificates of occupancy and other licenses required for development. Other cities, including North Brunswick, NJ and Bloomington take a similar approach.

Simplicity is also important from an administrative perspective. A complex TDM plan would tend to be more difficult to administer than a simple TDM plan, requiring more resources on the part of the municipality or TMO. For example, City staff at Bloomington expressed some concern about administering the financial guarantee, particularly if the developer does not meet the TDM requirements and the City needs to decide how to dedicate the money.

**Continued Involvement:**

Many TDM plans include ongoing, programmatic strategies like transit pass subsidies or carpool programs. These types of strategy require long-term involvement from the employer. Enforcement of long-term strategies is a problem faced by every City with a TDM plan and they have dealt with it in a variety of ways. Bloomington and Eden Prairie, as well as some other cities nationally, use their requirement for developers to provide a financial guarantee as an enforcement mechanism for long-term TDM strategies. However, financial guarantees have some administrative complications and are typically set to expire after two-years, at which point cities lose their enforcement leverage.

As a means of staying involved and promoting ongoing TDM strategies among employers, most cities incorporate some form of annual reporting requirement. Many cities also engage outside support to stay involved with employers over time. Municipalities and employers have limited resources available to
dedicate to a TDM plan, TMOs can provide staff time and expertise to support TDM planning and monitoring. In addition to consulting on TDM plans, TMOs like 494 Commuter Services organize periodic commuter fairs, bicycle tune-up days and other ways to stay in touch with employers and commuters.

Context-Sensitive Solutions:

As has been noted, cities and businesses have limited resources available to dedicate to TDM strategies. If the goal is to maximize the reduction of peak-hour SOV trips it makes sense to allocate TDM resources where they will have the largest impact. Many TDM strategies are dependent on the spatial context of a given development. This is particularly true of transit and bicycle/pedestrian commuting.

Most North American transit planning assumes a ¼ mile walking distance to local and express bus transit. Some individuals may be willing to walk farther, others not willing to walk even that far, but on average ¼ mile is used for most planning purposes. The state of the pedestrian environment on the route from the transit stop to the destination plays a large part in determining the real-world distance commuters are willing to walk. A comfortable pedestrian environment with sidewalks, shade trees and easy crossings at intersections will increase the distance people are willing to walk, while the reverse is true for an uncomfortable pedestrian environment.

This same pattern holds true for bicycle commuting. All else equal, cyclists prefer bicycle infrastructure that is separated from autos and has a greater level of real and perceived safety. Areas with more developed bicycle infrastructure tend to see higher bicycle mode shares.

TDM decisions should be made with the spatial context of a development in mind. For example, employer-subsidized transit passes are unlikely to be successful in areas without convenient access to useful transit.

Scale to Development Size:

Many cities distinguish between different sizes of development in their TDM plans. This is usually done through tiers or thresholds based on parking requirements, use, or square footage. Different sized developments are subject to different TDM requirements based on intensity; larger developments generating more trips are generally required to implement stricter TDM strategies. For example, Bloomington, MN has two distinct tiers of developments based on parking requirements with different TDM plans for each. Only the Tier 1 developments are subject to the strictest TDM requirements. Pasadena, CA makes a similar distinction based on square footage. North Brunswick, NJ includes the number of employees in addition to square footage.

The thresholds applied in each case depend heavily on the local context. There does not appear to be a natural break point between developments of different sizes that applies universally. The City of Bloomington, MN took a highly iterative approach to calibrate their parking requirement thresholds to the local environment. They worked with city staff of various departments, developers, employers and other stakeholders to work from an initial threshold to final number.

The thresholds exist to reflect the varying impacts different sized developments have on peak-hour congestion. Larger developments with more employees will tend to have a greater impact on congestion.
than smaller employers and are thus subject to stricter TDM requirements. In most cases, this also reflects the ability of larger developments to implement more resource-intensive TDM strategies. Installing a bicycle storage and shower facility in a $200 million development is a significantly smaller percentage of the overall project than a $10 million development. Thresholds also allow city staff to reduce their administrative burden by focusing on the developments that have the greatest impact on traffic congestion.

**Distinct TDM Categories:**

Reviewing the local and national case studies as well as the literature shows that there are two major categories of TDM strategy currently in-use at the employer level: those based on physical infrastructure improvements and ongoing, programmatic strategies. Strategies based on physical infrastructure improvements include things like indoor bicycle storage facilities, showers, orienting the site to be closer to the street and adding sidewalks and bicycle trail connections, among others. Ongoing, programmatic strategies include things like transit pass subsidies, commuter fairs, carpool programs and others.

The two categories of TDM strategy are distinguished by different actors, incentives, and enforcement mechanisms and they are implemented at different phases of the development lifecycle. Infrastructure improvements take place during the site design and construction phase of a development while programmatic strategies take place throughout the duration of the use of the property and are typically implemented by the employer or property manager rather than the developer.
VIII. Evidence-Based Recommendations

Recommendation Framework

Approaches to transportation demand management effectively fall into two fundamental categories. Some TDM actions take place during site design and construction, such as the creation of new facilities or design choices that accommodate a variety of transportation modes. Others take place during site use and operation, including a wide variety of approaches to influencing commuter behavior on a day-to-day basis. Because these two categories of TDM strategies take place during different phases of a site’s life cycle, it is not optimal or efficient to apply the same requirements, regulations, and enforcement policies to both.

A key feature of these recommendations is the separation of TDM policy into two stages, each addressing one of these fundamental categories. By applying separate incentives, penalties, and procedures to each stage, this approach helps to match the goals of each stage with the tools used to achieve them. This is in contrast to many existing approaches to TDM policy, which require a letter of credit from the developer at a designated stage of occupancy, but effectively ignore any meaningful enforcement and exclude a follow-up process regarding the actual implementation of the TDM plan beyond the initial one or two year stage.

These recommendations outline policies to address TDM goals in two stages:

1. Policies requiring Development TDM Plans seek to create a built environment that enables the use of alternate modes and times for commute trips. These policies focus on aspects of successful TDM strategies that take place during site development, redevelopment, and expansion. These include decisions relating to site and infrastructure design, facility features, and construction of facilities and infrastructure.

2. Policies requiring Operational TDM Plans seek to encourage the use of alternative commute modes and times that are made available through Development TDM plans. They focus on education, outreach, and incentive techniques that encourage commuter behaviors that reduce peak-period single occupancy vehicle (SOV) use.

Both TDM policy stages rely on the establishment of TDM Focus Areas, which guide the selection of TDM strategies for a site based on the local transportation infrastructure and service context. Across numerous case studies, the availability of specific types of transportation services is a key factor in determining the success of TDM strategies. For example, employers that offer subsidized transit passes see far greater trip reduction outcomes if the work site is well served by transit. Similarly, bicycle storage facilities are of little use as a TDM strategy if the work site does not have comfortable existing or planned connections to bicycle lanes or trails. By directing TDM investments toward strategies that are compatible with the local existing and planned transportation context, TDM Focus Areas promote effective, efficient TDM strategies.

A basic decision tree outlining the process of TDM plan submission and approval to the City of Minnetonka can be found in Appendix H.
A. Development TDM Plan Requirements

Any development meeting one or more of the following proposed qualifications must submit for review and implement an approved Development TDM Plan:

1. New commercial, industrial, or institutional developments that require 300 or more total parking spaces, as determined by Minnetonka City Code. Qualifying development uses include commercial, industrial, and institutional uses designated as peak-hour traffic generators.

2. Redevelopment of currently-occupied commercial, industrial, or institutional use generating peak-period traffic with 250 or more existing parking spaces, resulting in a 20 percent or greater increase in parking spaces (300 or more total spaces).

3. Redevelopment or rehabilitation requiring a building permit of currently unused (vacant) property for the purpose of returning it to commercial, industrial or institutional use, when the resulting use would require 300 or more total parking spaces, as determined by Minnetonka City Code.

Establish Thresholds Based on Detailed Evaluation

The thresholds proposed above are based on a review of case studies, and do not necessarily reflect the optimal levels for Minnetonka. When setting TDM requirement thresholds in any city, it is necessary to balance the impacts on developers and property owners, the benefits achievable through TDM strategies, and the city staff resources available for implementation and enforcement. The City should undertake an evaluation of these effects in order to choose thresholds suitable for Minnetonka.

i. Review and Approval

All Development TDM Plans will be reviewed by an appropriate city authority. This review process will focus on confirming that the proposed TDM strategies are compatible with the local context (TDM Focus Area), as addressed on page 49.

ii. Real-Time Enforcement

Property owners who fail to submit a Development TDM Plan, or whose Development TDM Plan is not approved, will be denied a building permit and unable to commence construction until a Development TDM Plan is approved by the City of Minnetonka.

B. Operational TDM Plan Requirements

Any development which requires a Development TDM Plan also requires an Operational TDM Plan, which must be submitted along with the Development TDM Plan. Additionally, the property manager must submit on a yearly basis a report describing the implementation and results of the Operational TDM Plan, and must update the Operational TDM Plan when necessary as described below.

i. Initial Submission

Review and Approval

All Operational TDM Plans will be reviewed by an appropriate city authority, or by a third party selected by the city. This review will determine:
1. Whether the Operational TDM Plan is compatible with the local context, as outlined below in TDM Focus Areas, and
2. Whether the Operational TDM Plan represents a good-faith effort towards reducing peak-period vehicle trips.

Enforcement

Property owners who fail to submit an Operational TDM Plan, or whose Operational TDM Plan is not approved, will be denied a certificate of occupancy until an Operational TDM Plan is approved by the City of Minnetonka.

ii. Annual Operational TDM Plan Report

Each year, property managers will be required to submit a report to the City describing what actions have been taken over the prior year to implement the Operational TDM Plan, and the results that can be attributed to those actions.

Review and Approval

All Operational TDM Plan annual reports will be reviewed by an appropriate city authority, or by a third party selected by the City. The annual report must demonstrate a good-faith effort by the property management and tenants for implementation and trip reduction, and must ultimately be approved by the City of Minnetonka. Additionally, this annual report will require measurement of education and marketing efforts and effectiveness of the TDM plan(s).

Enforcement

If the review of an annual report determines that a property owner has not made a good-faith effort to implement an approved Operational TDM Plan, the property owner may be found in breach of the original development agreement, site approval, or zoning change.

iii. Annual Operational TDM Plan Updates

Each year, property managers will be required to submit either:

1. An updated Operational TDM Plan which reflects changes to the number and/or type of workers employed at the property; or
2. A statement that no such update is required.

An updated Operational TDM Plan is required when:

1. The total number of employees working at the property has changed by 10 percent or more relative to the total number of employees working at the property when an Operational TDM Plan was last approved; or
2. 20 percent or more of the finished property area has undergone a change in primary use or user since the time when an Operational TDM Plan was last approved.

Address Changes to Local Infrastructure

Operational TDM Plan updates must address any changes to local transportation infrastructure or service (e.g., expansion or enhancement of local transit service) which have taken place since the
previous Operational TDM Plan was approved. Additionally, property managers are encouraged to submit an updated TDM plan when changes in local transportation infrastructure or service create new opportunities for applying TDM strategies.

**Review and Approval**

All Operational TDM Plan updates will be reviewed by an appropriate city authority, or by a third party selected by the city.

**Enforcement**

If a property owner fails to submit a required Operational TDM Plan Update, or fails to accurately document that no update is necessary, the property owner may be found in breach of the original development agreement, site approval, or zoning change.

**C. TDM Focus Areas: Compatibility with the Local Context**

The City will designate Focus Areas, used as a guide for developers and property managers/employers to develop required plans, as well as by city staff to determine compatibility of proposed Development and Operational TDM Plans. Districts may overlap; sites that have access to transit service and appropriate bicycle/pedestrian facilities would require adherence to the requirements of both districts.

**i. Fundamental TDM Areas**

Fundamental TDM Areas are applicable to all parts of the city, including those not contained within a Transit TDM Focus Area, a Non-Motorized TDM Focus Area, or a Village Area.

**Compatible Development TDM Strategies:**

- Designation of carpool/vanpool parking spaces through striping and distinctive signage
- Provide outdoor and indoor seating areas for tenant breaks and meals
- Locate food service and access to other services (e.g., access to dry-cleaning service, fitness center, banking, etc.) on site

**Compatible Operational TDM Strategies:**

- Quarterly facilitation of carpool/vanpool matching; follow-up with existing arranged carpool/vanpool groups
- Financial incentives or rewards to employees who commute using carpool, vanpool, or other shared-vehicle modes
- Pricing of employee automobile parking
- Employee parking cash-out options
- Flexible work schedule programs that allow and encourage some employees to avoid commuting during peak periods at least one day per week

**ii. Transit TDM Focus Areas**

Transit TDM Focus Areas are defined as areas within a five-minute walk of an existing or programmed transit stop or station. The five-minute walking distance is measured along sidewalks and other pedestrian infrastructure and using an assumed walking speed of three miles per hour. Figure 9 identifies
the current Transit TDM Focus Areas. The City should update this definition as transit service and infrastructure change over time.

**Figure 9: Transit TDM Focus Areas**

Areas within a five-minute walk of planned LRT stations — specifically, the Opus and Shady Oak stations — are of particular importance for transit-focused TDM strategies. The frequent and high-quality transit service provided by LRT serves as a strong base for transit-focused TDM strategies. Developers and managers of property within these areas are strongly encouraged to incorporate transit-focused TDM strategies into their TDM plans.

**Compatible Development TDM Strategies:**
- Placement of a primary building entrance near an existing or programmed transit stop or station
- Creation of a sidewalk or other pedestrian facility that directly connects the main building entrance to an existing or programmed transit stop or station
- Creation of shelter, seating, and/or heated facilities to serve as a waiting area for an adjacent existing or programmed transit stop or station where no shelter, seating, or waiting area exists.
- All Development TDM strategies identified as compatible for Fundamental TDM Areas
Compatible Operational TDM Strategies:

- Subsidy of employee transit fares (direct purchase or MetroPass enrollment)
- Provision or coordination of flexible transportation services available on-site for employee use during the day. This may include car-sharing programs and shuttle/circulator services.
- All Operational TDM strategies identified as compatible for Fundamental TDM Areas

Matching TDM Strategies to Transit Service

It is important that TDM strategies be compatible not just with the existence of transit service, but also with the level of service provided. For example, a location near a bus stop that is served by only a few trips per day would benefit only marginally, if at all, from transit-focused TDM strategies. When reviewing TDM plans that include transit-focused strategies, the City should carefully consider the existing and planned levels of transit service at nearby stops and stations.

iii. Non-Motorized TDM Focus Areas

Non-Motorized TDM Focus Areas are defined as parcels intersecting a 50-meter buffer around dedicated non-motorized transportation facilities such as trails and bike lanes. Entire parcels are selected, even if only a small area of a parcel is within the 50-meter buffer. Figure 10 identifies the current Non-Motorized TDM Focus Areas. The City should update this definition as transit service and infrastructure change over time. The City should update this definition as additional trails and, lanes, and sidewalks are planned and constructed.
Compatible Development TDM Strategies:

- Placement of a primary building entrance near an existing or programmed non-motorized trail or bicycle facility
- Creation of a paved sidewalk or trail that directly connects the main building entrance to an existing or programmed non-motorized trail or bicycle facility
- Creation of secured and sheltered bicycle storage facilities for employee and/or customer use located in close proximity to main building entrance or non-motorized facility
- Creation of storage lockers and showers available for daily employee use
- All Development TDM strategies identified as compatible for Fundamental TDM Areas

Compatible Operational TDM Strategies:

- Financial incentives or rewards to employees who commute using a non-motorized mode
- Provision and use of services or equipment to maintain local non-motorized trails or bicycle facilities
- Provision or coordination of flexible transportation services available on-site for employee use during the day. This may include car-sharing programs and shuttle/circulator services.
- All Operational TDM strategies identified as compatible for Fundamental TDM Areas
iv. Village Areas

As noted in the 2030 Comprehensive Guide Plan, Village Areas are designed to grow into “tightly organized, multi-purpose center[s] of activities.”64 A significant planning goal in the comprehensive plan identifies that Village Areas “will incorporate both internal pedestrian connections, such as sidewalks and trails, and also accessibility to various transportation alternatives.”65 Therefore, Village Areas are compatible with a wide range of TDM strategies. To fully support TDM goals, the City should refine Village Area-related policies to specifically pursue non-motorized and transit connections between Village Areas.

Minnetonka’s current comprehensive plan identifies three tiers of village areas: Community Village Centers, Neighborhood Village Centers, and “Special Purpose” Village Areas. Of these, both Community and Neighborhood Village Centers are supportive of TDM strategies. “Special Purpose” Village Areas are more local in nature, and therefore are less critical in a TDM context. Village areas are defined and described in Chapter IV, Section C of the 2030 Minnetonka Comprehensive Guide Plan.66

The following TDM strategies are compatible with Community Village Centers and Neighborhood Village Centers:

**Compatible Development TDM Strategies:**
- All Development TDM strategies identified as compatible for Fundamental TDM Areas, Transit TDM Focus Areas, or Non-Motorized TDM Focus Areas

**Compatible Operational TDM Strategies:**
- All Management TDM strategies identified as compatible for Fundamental TDM Areas, Transit TDM Focus Areas, or Non-Motorized TDM Focus Areas

D. Small Business TDM Handbook

Many smaller development sites and employers within Minnetonka will not be required to submit full TDM plans based on the thresholds described above. However, small businesses can still play a role in the City’s TDM efforts. To help small businesses identify TDM strategies that may be beneficial, the City should work with 494 Commuter Services, and potentially with other municipalities in the region, to develop a Small Business TDM Handbook that will outline the costs and benefits of a variety of TDM strategies that are achievable in a small business context.

When executing a development agreement or approving a site plan for a development that does not meet the threshold for full TDM plan submission, the city will:

1. Provide to the developer or property manager a copy of the Small Business TDM Handbook
2. Arrange a meeting between the developer and City staff and/or 494 Commuter Services to discuss how TDM strategies might be incorporated into the development.
E. Recommendations for City-Facilitated TDM Actions

In addition to the aforementioned recommendations for developments within the City of Minnetonka, we also encourage the City of Minnetonka to explore the implementation of three additional TDM strategies at the city level, as addressed in Section V, including:

1. **City-wide Social Marketing Campaign**

   Similar to the King County, Washington social marketing campaign, the City should pursue marketing efforts at the community-group or neighborhood-based level (where applicable) in order to encourage residents to re-think their travel habits and personal health.

2. **City Participant Incentive Program**

   Similar to the Redmond, Washington program, implementation of an incentive program for “try-it” residents (and commuters) will help to influence travel habits and perceptions, in coordination with the aforementioned social marketing campaign.

3. **TDM Policy for the City of Minnetonka’s employees**

   Similar to the City of Bloomington’s internal TDM policy implemented in 2011, the implementation of TDM program for the City of Minnetonka’s employees will be an effective tool to display the City’s commitment to TDM measures. Ideas such as the “try-it” goal will help the policy feel realistic to City employees.

These three policy ideas will collectively work to achieve many of the goals addressed in the discussion of Travel Demand Management in the City’s Comprehensive Guide Plan, and will help initiate change in attitudes toward travel behavior for the city’s employees and residents through tangible rewards, positive examples, and neighborhood-based efforts.
IX. Conclusion

Transportation demand is most effective when it is incorporated into other city approval and enforcement mechanisms. The goal of TDM is not to be burdensome to developers, tenants, or employees. Instead, a municipality’s thoughtful approach to TDM can benefit the entire community by mitigating traffic congestion, reducing air pollution, and generating demand for alternative transportation. These benefits can contribute to an improved quality of life in Minnetonka for all of its residents and commuters.

Our project team’s recommendations emphasize the need to design a TDM ordinance that is respectful of the needs of stakeholders and contributes to the City’s goals, as outlined in its 2030 Comprehensive Guide Plan. Our four main recommendations are to:

i. Use a two-stage TDM policy framework
ii. Establish TDM Focus Areas to guide the selection of TDM strategies and evaluation of TDM plans
iii. Integrate TDM policy and requirements into the existing development review process
iv. Implement annual reporting and evaluation

Limitations

Our research was limited by our inability to meet with many employees and businesses who would be most impacted by TDM requirements. Due to time limitations, we were unable to conduct the full extent of outreach needed for the City to pursue this update to its TDM requirements. We recommend that the City of Minnetonka pursue a plan to engage with more stakeholders should they decide to move forward with our recommendations. Feedback from developers, property managers, employers, and the workforce can only strengthen the value of these recommendations.

In addition, we do not attempt to investigate sources of additional funding of staff time or administrative resources to make a robust TDM policy a reality. City of Minnetonka staff should conduct further review to identify areas of potential funding to implement these recommendations.

Final Conclusions

In conclusion, the TDM Ordinance recommendations outlined in this report create a path for Minnetonka to invest in transportation and land use policy that can work within the city’s suburban environment. By working with developers and employers, the City can create opportunities to reduce peak-hour and drive alone car trips which can lead to long-term benefits for Minnetonka’s quality of life.

By streamlining the development approval process to incorporate TDM, maintaining TDM obligations throughout a building’s tenancy, creating TDM Focus Districts to create opportunities for successful implementation, and sustaining meaningful monitoring and enforcement, these recommendations set the groundwork for the city to have an effective and sustainable Transportation Demand Management policy.
Endnotes

4 Ibid.
7 Ibid.
8 Ibid.
10 Ibid.
11 Ibid.
13 Ibid.
14 Ibid.
15 http://metrocouncil.org/Transportation/Projects/Current-Projects/Southwest-LRT.aspx
16 Ibid.
28 City of Bloomington. TDM Policy Summary
29 Desrude, Jen. City of Bloomington. TDM Policy Presentation. February 2013
30 Ibid.
32 Ibid.
34 City of Eden Prairie. Developer Handbook
35 Ibid.
36 City of Eden Prairie. Sample TDM Agreement


http://ecode360.com/NO0467, Accessed 5/12/13


Ibid.


Ibid.

Ibid.


Ibid.


Ibid.

Ibid.
Appendix A:

Literature Reviews of TDM Strategies
  Transit
  Non-Motorized
  Carpool/Vanpool and Parking
  Alternative Work Arrangements
Workplace-Focused Strategies to Promote Transit for Commute Trips

Gärling and Schuitema [2] suggest that the TDM measures which are most effective at reducing single-occupancy vehicle (SOV) commuting are those which directly make SOV trips less attractive. Common techniques include parking fees and reduced parking supplies. However, they also note that these techniques are generally quite unpopular both publicly and politically, especially in a North American context. Rather of decreasing the attractiveness of SOV commuting, it may be effective to increase the relative attractiveness of other modes. Strategies discussed in this report focus on making transit commuting more attractive relative to SOV commuting, and include subsidy of transit fares, the Guaranteed Ride Home programs, marketing and information programs, and the proximity and connections to transit.

Subsidy of Transit Fares

Employer transit fare subsidies are conceptually very simple: by paying some of the costs incurred by transit commuters, an employer can reduce the cost of using transit, making it a more attractive option relative to other commute modes.

Transit fare subsidies can be implemented with any payment medium (cash, vouchers, single-fare tickets, reusable fare cards, etc.). Each payment medium involves its own benefits and drawbacks. For example, cash payments tend to increase passenger loading times, slowing down transit service for all passengers (CITE). Reusable fare cards, on the other hand, offer greater convenience for passengers and are also easier to incorporate into a subsidized fare benefit program. [3] Currently, the majority of fare subsidy programs in large metropolitan areas are implemented using reusable fare cards [7].

Employer subsidy of transit fares is encouraged through federal tax law, which since the 1970s has provided a tax deduction for employers who subsidize transit fares for employees. As of 2013, the current benefit allows a deduction of up to $245 per employee per month [6]. However, this value has varied in recent years, falling as low as $120 per employee per month in 2011.

Transit fare subsidy programs, in comparison with some other TDM strategies, generally have costs which can easily be justified through association with benefits. Because of the need for integration with local transit fare systems, transit providers often administer subsidized fare programs, relieving employers of significant overhead. Additionally, there are few or no fixed costs associated with subsidized transit fare programs; the cost depends directly on the number of participants, so employers have some assurance that their efforts are achieving TDM goals.

Transit fare subsidy programs which are based on universal pass systems offer particular benefits in a TDM context. Universal passes are reusable fare cards that are valid for any number of transit trips in a defined period — Metro Transit’s MetroPass and the University of Minnesota’s U-Pass are examples. The valid period is at least one month, and typically 3, 6, or 12. By eliminating the need for transit commuters to pay a fare for each trip, universal passes remove a psychological barrier to transit use: effectively, the next trip
is always free. Because universal passes can also be used for non-commute trips, they can have TDM benefits outside of the commute context. A worker who receives a subsidized universal transit pass through his employer might also use the pass for shopping, recreation, or other trip purposes, further reducing private vehicle use.

Impacts

The willingness of commuters to switch to transit in response to reduced fares is known as the fare elasticity of demand. From a theoretical standpoint, it is reasonable to expect that as fares are decreased through subsidy, transit should become a more attractive commute option, relative to others. An often-cited study by Taylor et al. [13] reports transit fare elasticities of demand in the range of -0.43 to -0.51, indicating that a one percent decrease in transit fares would correspond to a 0.5 percent increase in transit demand. However, these results were derived for all transit travel, and there are strong indications that commute trips are much less responsive to fare changes: Litman et al. [8] estimates elasticity of approximately -0.18 for peak-hour commute trips. Studies of transit fare subsidy programs have noticed interesting effects related to who pays, and how much. There is evidence that at the same actual fare level, a program in which the employer pays some share will be more successful in shifting commuter behavior than one where the savings are due to a tax benefit to the employee [14]. However, evidence also suggests that the actual amount of the benefit paid by the employer has only a marginal effect, as long as it is greater than zero [5].

Local Context

Metro Transit currently administers MetroPass, an employer-subsidized fare card program [12]. MetroPass is a universal pass program which can be used for any number of trips, and for any trip purpose. Employers purchase passes for $76 that are valid for one month, and are free to offer them to employees at any price (80% of participating employers subsidize some percentage of the cost). Even without subsidy, the $76 purchase price is a discount for frequent transit users: assuming $3 rush hour fares on express buses, a MetroPass pays for itself after just 6 commute trips per week.

To be eligible for MetroPasses, an employer must buy a minimum of 10 passes per month, which may be unrealistic for smaller companies. Fare-based (rather than monthly) passes are also available for purchase by employers, but they receive no discount relative to normal fares. Commuter Services, the outreach program of the I-494 Corridor Commission, reports some success in working with multi-tenant developments to provide MetroPasses for employees even when individual firms are unable to meet the 10-employee minimum.

This simplicity of providing and administering MetroPass-based transit benefits makes it a very attractive way for employers to subsidize employee transit fares. However, it is important to consider that employer subsidy of transit fares is only effective as a TDM strategy when transit is a viable commute mode for at least some employees. In areas with low transit service or where transit service does not serve employees’ commute trips, both empirical evidence and common sense suggest that transit fare subsidies will have little effect on transit commuting rates [5, 7].
Guaranteed Ride Home programs

Guaranteed ride home (GRH) programs focus on eliminating a particular barrier to transit use: the need for travel plan flexibility. Even if a commute by transit is able to match the cost and travel time of a commute by car, transit commuters are still constrained by transit schedules. Compared to a car commuter, a worker who commutes by transit is less able to adjust their work departure time to accommodate unexpected personal, family, or workplace situations. Instances such as a meeting running late or a child sick at school can be a stressful situation for a transit commuter.

GRH programs aim to relax these constraints by providing flexibility when it is needed. Typically, users enroll in a program that provides either vouchers or reimbursement for taxi fares or similar expenses. Employers place a wide variety of restrictions on these programs. Some limit the amount and frequency of benefits that can be claimed; some require a certain amount of commuting by non-SOV modes to qualify for the program. Almost all programs allow the use of taxis; some allow rental cars and one (in San Francisco) allows the use of car-sharing services. Across the 47 GRH programs surveyed by Menczer [9], the average annual cost per participant was just $1.69.

The potential benefits of GRH programs do not apply only to transit commuters. The on-demand flexibility they provide can be a benefit to commuters who use any mode that involves shared vehicles, including carpool and vanpool. Non-motorized commuters can also benefit from the ability to travel quickly in response to an emergency situation. [7]

Impacts

A survey of GRH programs by Kuzmyak et al. [7] suggests that they have a small but consistent impact on lowering SOV commuting rates. In general, employers who saw an increase in transit commuting after implementing a GRH program also employed other strategies to encourage transit use. [5] suggest that the impact of GRH programs may be greatest at work locations where transit service is infrequent or operates only during peak commuting hours.

The effectiveness of GRH programs may also very based on employee demographics, though this is not examined in existing analyses. Because the benefits of GRH programs are greater for an employee with a greater need for travel flexibility, effectiveness may vary with employee family structure: employees with larger families, and especially those with young children, may derive a greater benefit from GRH programs than single employees.

Local Context

Metro Transit currently administers a guaranteed ride home program for the Twin Cities metropolitan area. Participants are required to register in advance, and are then able to submit request for reimbursement of taxi fares. Participation is limited to commuters who use transit, carpool, vanpool, bike, or walk to work at least three times per week. [11]

Employees can register for the program directly with Metro Transit. No employer involvement is required, making this a very low-cost strategy for encouraging transit use. However, the most effective GRH programs include some level of involvement by employers, even if it is simply educating employees about
the option and encouraging registration. [7] ETCs can be an effective supporting tool for any type of TDM program, but the National Center for Transit Research found an important link between ETCs and transit commuting in particular. In areas with high levels of transit service, the presence of an ETC made little or no difference in the effectiveness of efforts to encourage transit commuting. But in areas with low transit service, the presence of an ETC was critical for the success of transit-focused TDM strategies [4].

This highlights the importance of the educational role of ETCs and of information programs in general: in places where transit services have low visibility, employers will do well to educate employees not just about their own programs, but also about local transit services in general.

Eriksson et al. [1] suggest that TDM strategies are more effective when commuters perceive them as increasing their freedom to choose their travel mode. This suggests an opportunity for effective encouragement of transit commuting in areas where transit services have low visibility but still offer viable commute options for some employees. By educating employees about local transit services and potential commute trips, employers can expand employees’ commute options and their ability to choose their travel mode.

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Marketing and Information Programs

Marketing and education programs focus on raising awareness of transit as a commuting option and educating employees about the use and benefits of transit. Kuzmyak et al. [7] identify three critical features of marketing and information programs. They must:

1. Convince commuters that there is value in changing their behavior,
2. Provide both awareness and detailed information about options, and
3. Motivate commuters to try new commuting options.

Specific implementations of marketing and information programs can vary widely, but successful programs consistently target these three goals. To help achieve these goals, some firms create a designated staff...
position: the employee transportation coordinator (ETC). This individual’s (or team’s) job is to market a company’s TDM program to its employees. For smaller firms, funding an ETC position is often not feasible.

**Impacts**

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**Local Context**

Transit service in Minnetonka is limited to a few local routes with medium frequencies, and park-and-ride facilities oriented around express peak-period service. Additionally, the home locations of employees currently working in Minnetonka are widely distributed throughout the Twin Cities metropolitan area. [10] It is reasonable to expect that for most workers, transit is not a very visible part of daily life, and that many have never considered or investigated the possibility of commuting by transit. However, given the wide distribution of home locations it is likely that at least some commute trips to Minnetonka jobs could be satisfied by transit.

This presents an opportunity for local employers to increase the attractiveness of transit commuting through commuter education. Providing transit schedules, maps, and access to online trip planners are all low-cost techniques for raising employee awareness of local transit service. Since employers have access to employee home addresses, there is also the potential to provide custom transit trip planning (using free online tools) to illustrate how individual employees’ commute trips might be achieved by transit.

Smaller employers may not have the expertise and resources for significant transit education efforts, let alone the creation of a dedicated ETC staff position. It is important that employer size not be a barrier to the implementation of transit education efforts, since employees of any size firm may be candidates for transit commuting. TMOs and outreach organizations like Commuter Services are critical in filling this gap, but effective TDM implementation requires that employers not simply outsource education efforts. Both Kuzmyak et al. [7] and ICF Consulting [5] emphasize the importance of employers demonstrating commitment to TDM strategies.
Proximity and Connections to Transit

Efforts to encourage commuting by transit rely on one significant factor that is often outside of an employer’s control: the availability of transit service. If there is no viable transit route that connects an employee’s home to her workplace, no amount of incentives or education can persuade her to commute by transit.

Even in cases where transit services are available near a work location, transit commuters sometimes face discouraging conditions at the transit stop or while walking between the stop and their work location. Environmental factors can have a large impact on how comfortable transit users feel during this part of their commute: lack of shelter, exposure to high-traffic roads, circuitous walking paths, and poor sidewalk maintenance can all make transit use less attractive.

Some of these factors are most feasible to address during site development. Infrastructure decisions, such as direct sidewalk connections to transit stops, can be made once and have a long-lasting impact on the attractiveness of transit use to and from a site. Others, like sidewalk maintenance, are a more ongoing concern, and provide an opportunity for employers to signal that they value and support transit commuting.

Impacts

A constant theme in the analyses of TDM strategies by [7] and [9] is the importance of employer commitment to transit commuting. The effects are difficult to quantify because “commitment” is a somewhat nebulous concept, but TDM strategies that require some amount of effort by employers, however minor, are generally more successful than strategies with low employer involvement. The construction of transit-focused facilities and good maintenance of facilities used by transit commuters are ways that employers can demonstrate commitment to transit commuting.

Local Context

Minnetonka generally follows traditional suburban development patterns, which has implications for both transit service and employer site design. Transit service is generally routed along major arterial roads, which are designed primarily for car traffic and offer a poor pedestrian experience. Workplace site designs are similarly car-oriented, with entrances typically separated from local roads by parking lots. Combined, these often result in an unpleasant experience for transit commuters when arriving at work and when departing for home.

The most important opportunity to make improvements in this area is during site design. Constructing buildings with entrances closer to transit stops, and providing (even very simple) landscaping to make the site more welcoming to transit users can reduce barriers to initial transit use as well as make transit commuting more pleasant for frequent users. This site design actions are often not regarded as TDM strategies because they do not directly encourage or discourage particular forms of travel, but because they make up an important part of the transit commuting experience they should not be overlooked.

Amenities at transit stops, such as shelters, heating, and information, are in most cases controlled exclusively by transit operators. For example, Metro Transit has standard guidelines, based on average
daily ridership, which determine the provisioning of shelters at bus stops. Employers could play a greater role in these decisions. By sponsoring the installation and/or maintenance of transit stop amenities, and employer could both demonstrate a commitment to transit commuting and improve the daily travel experience of transit commuters, making transit more attractive relative to other modes.
References


Non-Motorized Transportation as a 
Transportation Demand Management Measure

This literature review focuses on non-motorized transportation strategies and how they fit into a TDM program. Non-motorized transportation in this review refers primarily to bicycle treatments that can influence demand for SOV trips during the peak hour. Non-motorized transportation treatments are usually incorporated into a TDM plan as a means of increasing the attractiveness of cycling and shifting mode share away from auto use (Meyer, 1999). Occasionally the literature also includes other modes like in-line skating, skateboarding, or personal-transport vehicles like Segways. Because these modes are not typically used for work commutes these modes are ignored in the context of this review.

This review will explore potential non-motorized transportation improvements in two broad categories: 1) Point-of-destination bicycle facilities and 2) bicycle network improvements. Point-of-destination facilities include amenities which are located at the workplace that enable and encourage bicycling. This includes treatments like shower facilities and bicycle parking and storage. Bicycle network improvements include all improvements to the actual route a cyclist takes to his or her destination. In this case improvements refer both to improving the safety and convenience of existing routes or adding new routes to increase the connectivity of the network.

### Point-of-Destination Bicycle Facilities

Bicycling to work introduces some special challenges that auto commuters do not need to consider. The questions of where to store the bicycle, how to address arriving to work sweaty from the commute, and what to do if the need to run an errand in the middle of the day arises are not trivial. Point-of-destination bicycle facilities are intended to address these challenges and increase the overall convenience of commuting to work by bicycle. The literature regards many of these types of facilities as essential starting points if a bicycle mode share of any impact is to be achieved. This is especially true with bicycle storage facilities and showers (though due to their cost and scale, showers are less widely implemented, making it more difficult to determine their effect). A poll conducted by Bicycling Magazine identified showers and storage as facilities that would encourage 17 percent of all adults and 44 percent of active riders to commute by bicycle (Pratt, Levinson, Turner, Jeng, & Nabors, 2012).

The research on the quantitative impacts of such facilities is limited, and often based on stated-preference surveys rather than revealed-preferences. That these facilities have a positive impact on bicycle mode share is nearly universally accepted, but identifying the degree of that positive impact has been more elusive. Furthermore, the literature is unclear on causal arrow of bicycle mode share and bicycle storage or shower facilities. It is difficult to show whether bicycling increases due to improved facilities or facilities are built in response to increased bicycling (Pucher, Dill, & Handy, Infrastructure, programs, and policies to increase bicycling: An international review, 2010). It is highly likely that both relationships exist.

### Bicycle Storage

One study that attempted to quantify the impact of bicycle improvements on cycling mode share found that bicycle convenience overall has a strong positive relationship with mode share. Convenience overall has a 3.208 elasticity of probability of bicycling, while safe bicycle parking was found to make up a significant portion of this aggregation with an elasticity of probability of cycling of 0.838 (Noland & Kunreuther, 1995).
In Chapter 16 of TCRP Report 95, the authors point to a case study in Riverside, California of a suburban company with approximately 650 employees increased their bicycle mode share to approximately 10 percent. The company implemented a range of bicycle improvements so it is difficult to determine the individual effects of each element, but parking improvements and facilities were a large part of the program (Pratt, Levinson, Turner, Jeng, & Nabors, 2012). In a stated preference survey done in Edmonton, Ontario secured bicycle parking was found to have a large positive effect on cycling. The results showed secured parking had an equivalent impact on likelihood of bicycling to work as a 26.5 minute cycle trip time reduction (Hunt & Abraham, 2007).

Predictably, the more secure a bicycle parking facility is, the greater impact it has on rates of bicycle commuting. In a combined revealed preference and stated preference study in the United Kingdom, Wardman et al. find that adding basic bicycle parking increases the proportion of cycling to a specific destination by 0.5 percentage points over the base mode share and by 0.8 percentage points with indoor parking (Wardman, Tight, & Page, 2007).

Changing/Shower Facilities

Changing and shower facilities are not as common as bicycle storage facilities, and thus the specific effects associated with these facilities are more difficult to measure. In the same study cited above, Hunt and Abraham find that the provision of shower facilities at work has less of an effect than bicycle storage facilities, equivalent to a 3.6 minute reduction in bicycle trip travel time (Hunt & Abraham, 2007). Wardman et al. find results that suggest a stronger impact associated with shower facilities than Hunt and Abraham’s study. They show a 1.3 percentage point increase over the base cycling mode share where showers and indoor parking are provided and a 0.5 percentage point increase over indoor parking alone (Wardman, Tight, & Page, 2007). In TCRP Report 95 Chapter 19 the authors find that showers and locker facilities are positively correlated with bicycling to work. Their model finds a coefficient of 0.4086 significant at an 80 percent confidence level associated with shower facilities (Kuzmyak, Evans, & Pratt, 2010).

Financial Incentives for Cycle Commuting

Another form of point-of-destination improvements is providing financial incentives in the form of direct payments for those who bicycle to work. These types of financial incentives have generally been found to be successful, often more effective than other physical improvements. In their forecast model, Wardman, et al. find that a £2 per day payment to cycle increases the cycle mode share from 5.8 percent to 10.9 percent (Wardman, Tight, & Page, 2007). This policy has the largest effect on mode share.

Bicycle Network Improvements

Network improvements can occur in at least two ways: 1) increasing the safety of cycling (real and/or perceived) and 2) increasing the accessibility and connectivity of the cycling network by adding new connections, thereby reducing travel times. Safety and the perception of the risk associated with cycling is a major determinant in the decision to cycle. In fact, most improvements to the bicycle network are seen as such because they increase the safety, and importantly, the perception of safety of a given route. Those who perceive cycling as dangerous are less likely to bicycle to work. In their 1995 survey about the perceived risk of alternative modes of travel, Noland and Kunreuther find that those who drive to work rate the danger of an accident higher than those who bicycle (Noland & Kunreuther, 1995). Different network treatments have different effects on perceived safety and bicycle mode share, the following section is a discussion of the literature examining the various treatments and their impacts.
The literature finds that in general and with all else held equal more complete investments in bicycle infrastructure lead to greater rates of commuting by bicycle. Typically shared-use or off-road bicycle paths are held up as the ideal improvement for cyclists. These facilities are completely separated from auto traffic and are generally seen as the safest improvement (Kuzmyak, Evans, & Pratt, 2010). In an adaptive stated preference survey, Tilahun et. al. finds that people are willing to pay the highest price in terms of travel time for designated bike lanes, followed by lanes without parking and off-road facilities (Tilahun, Levinson, & Krizek, 2007). This suggests that there is a hierarchy within bicycle routes and planners can use this information to build the improvements that will have the greatest impact on mode share.

While it is generally understood that off-street facilities are the preferred form of bicycle infrastructure, the literature is not clear on the marginal improvement in mode share associated with these facilities. Dill and Carr find that one of the strongest predictors of bicycle mode share is the number of type 2 lanes, bicycle lanes which are on street but marked as separate from auto traffic, per square mile. Their model found a statistically significant and positive correlation of 0.992 between miles of type 2 lanes per square mile and mode share (Dill & Carr, 2003). Pucher et. al. find that off-road facilities do not always lead to increased bicycle commuting. These facilities are often located in old railroad right-of-ways or along rivers or lake shores. These locations are not generally convenient for commute trips and tend to be used more for recreational bicycling (Pucher, Komanoff, & Schimek, 1999). Often found to be more important than the specific type of bicycle improvement is the directness of available routes and links. This is found to be especially important for utilitarian bicycle trips such as commuting to work.

**Generation vs. Distribution Effects:**

There is some question as to what proportion of the users of a bicycle route improvement represent new bicyclists (generation effects) versus the proportion that merely shift from another route to the improved route (distribution effects). A study in Portland, OR which used GPS to track the routes used by bicycle commuters showed that the average cyclist will go 31 percent out of their way to use a bike lane rather than ride in a mixed-traffic lane with moderate traffic (Kuzmyak, Evans, & Pratt, 2010). The strong willingness to divert a route to use an improved bicycle facility underscores their importance to cyclists but also complicates measuring their real impact. In order to quantify the impact of cycle improvements aggregate mode shares should be used, rather than simply the change over the previous condition.

Aggregate studies do suggest that bicycle route improvements generate new bicyclists and increase overall mode share. A bicycle count study done in Minneapolis-St. Paul found that the average bicycle mode share increased 64 percent with the introduction of bike lanes and a similar study found a 91 percent increase in Chicago (Kuzmyak, Evans, & Pratt, 2010). A comprehensive national study looking at 2006-2008 journey-to-work data for 90 metro areas found a bike lane elasticity of bicycle mode share of .25 and .26 for off-street bike paths (Kuzmyak, Evans, & Pratt, 2010).

**Contextual & Environmental Factors Impacting Bicycle Commuting**

Obviously, the individual decision to bicycle and the overall mode share of cycling is dependent on a number of factors not directly related to the provision of bicycle infrastructure. Some of these things, like topography and weather are essentially fully outside the control of policymakers. Others, like land use, the built environment and the convenience of auto use are the direct result of policy decisions. Others still, such as bicycle culture and how whether cyclists are viewed positively or negatively, are more ambiguous. Rain and winter weather are unsurprisingly found to negatively impact bicycle mode share.
In Minneapolis and St. Paul, cities that are generally found near the top of most bicycle commute rankings, a winter dummy variable is found to have a statistically significant negative correlation (-0.582) with likelihood of commuting by bicycle (Tilahun, Levinson, & Krizek, 2007). However, some studies find that seasonal effects do not play a major role in cycling mode share. These places tend to enjoy moderate weather throughout the year. Locations that experience more dramatic shifts in weather across seasons tend to experience a similarly dramatic shift in cycle mode share (Pratt, Levinson, Turner, Jeng, & Nabors, 2012). Bicycle use also declines in areas with rolling topography. Cyclists tend to avoid routes with steep grade changes and a study done in San Francisco finds that topography was the most important factor in determining routes for work and work-based trips (Pratt, Levinson, Turner, Jeng, & Nabors, 2012).

Density and the surrounding land use and built environment are also found to have a significant impact on the bicycle mode share for commutes. Low density regions with curvilinear street grids are typically found to discourage bicycle commuting. A number of studies find increased density to positively correlate with bicycle mode share. Nationwide, at densities of 2,000-5,000 persons per square mile 7 percent of trips are found to be made by bicycling or walking compared to 28 percent at 10,000 to 49,000 persons per square mile and 46 percent at over 50,000 persons per square mile (Pratt, Levinson, Turner, Jeng, & Nabors, 2012). Buehler finds that the bicycle share for all trips in Montgomery County, MD and Prince George's County, MD, with persons per square mile of 2,000 and 1,700 respectively, are found to have a 1.4 percent and 0.6 percent bicycle share of commutes (Buehler, 2012). Related to density and land use, large parking lots and free car parking are found to be significantly negatively correlated with bicycle mode share (Buehler, 2012). This topic is covered in more detail elsewhere.

Accessibility and connectivity of the underlying network are found to have a high impact on bicycle commute mode share. The ratio of links to nodes within a network and the ratio of street intersections divided by the sum of street intersections and dead ends are used to measure connectivity and found to be correlated with bicycle use (Litman, 2012).

**Application of Non-Motorized Transportation to Minnetonka:**

The review of the existing literature suggests that in order for bicycle mode share to increase vis-à-vis auto mode share the convenience of cycling needs to increase relative to the convenience of auto use. This is accomplished by either making bicycling more convenient and attractive through some of the means discussed above or by reducing the convenience of auto use through means primarily discussed elsewhere.

The City of Minnetonka is a low density suburban community with a curvilinear street pattern and few existing on-street bicycle facilities. Its built environment is designed with preference given to the automobile. Because of that design, the costs associated with auto use are very low, both in terms of real monetary costs and in convenience. It seems likely that non-motorized transportation improvements will need to be a part of a broader package of TDM policies in order to have a notable impact on peak-hour auto commute trips.

With that caveat in mind, there are some improvements that the City of Minnetonka could easily make that could potentially make way for more improvements at a later time. First, adding protected bicycle parking to destinations appears to be a low hanging fruit. The literature finds that in general, there is a high return on investment for the cost associated with these improvements. They also appear to be almost requirements for there to be any major gains in bicycle mode share, regardless of the built environment or other treatments implemented. Second, the City of Minnetonka has a reasonably extensive network of off-road trails. These are likely currently utilized primarily by recreational users, and this is likely to remain
true, but requiring developers to connect to these trails appears to be another relatively cheap way to at least enable bicycle commuting, if not directly promoting it. Third, engaging employers to offer payments to cycle commuters is an effective way to actively encourage cycling. The case could be made to employers that such active commuting may save money in the long run by promoting good health and greater productivity in their employees.
References


Carpool, Vanpool, and Parking
TDM Strategies

In policy discussions regarding the reduction of single occupancy vehicles, cars are often seen as part of the problem. However, in many suburban environments where transit linkages or alternatives are weak, cars are often integral to the reduction of single occupancy trips. Through carpooling, vanpooling, and restricted parking, cars can be an integral part of reducing vehicle miles traveled and the number of single occupancy vehicles on congested roadways. When transit or other modal alternatives are limited, employer-based strategies that make it easier for employees to carpool or vanpool or provide disincentives for parking on site are integral to reducing single occupancy vehicle trips in suburban workplaces. In presenting employees with alternatives to driving alone, employers must employ options that, “significantly change the relative cost or convenience of travel choice alternatives,” (Guiliano 1992:333). In addition to focusing on transportation demand strategies, new research on the demographics of ride share users and employees affected by restricted parking reveals new insights that may help employers target different transportation demand strategies depending on the demographics of their employees. Additional research on how the built environment affects car-based transportation demand management (TDM) strategies can also help employers and municipalities identify TDM strategies that fit the existing region. Future research on car-based transportation demand strategies should continue to explore how differences in demographics, land use, and TDM incentives can result in better performing TDM strategies.

Ride Sharing

Carpooling and vanpooling are two alternatives to driving alone that share many of the same benefits and challenges to adoption by employees. In carpooling, one employee uses their own personal vehicle to pick up coworkers from their homes en route to the office. In vanpooling, employees use a van leased by their employer or by a group of ridesharers (with the administrative support of their company) to pick up coworkers from their homes en route to the office. While employees opting to ride share lose access to their personal vehicle during the work day, they can make up efficiencies in time. Guiliano (1992) points out that while carpooling can take more time than driving to pick up passengers from multiple destinations, “HOV lands attempt to offset these time penalties by offering travel time savings on the line haul portion of the trip,” (330).

With vanpooling, the largest obstacles to adoption are often the logistical components of finding rideshare partners. Employers can overcome this barrier by pairing commuters or hosting commuter fares that allow employees interested in vanpooling to find other employees who live near them. The Transit Cooperative Research Program (TCRP) found that, “strong vanpool performers... are all marked by solid corporate/institutional backing of the vanpool program,” (2010:19-36). Metropolitan transportation agencies or transit demand coordinators can plan an additional role in supporting regional vanpooling efforts. In the Twin Cities, Metro Transit pays for 50% of the insurance costs of each vanpool within the Metropolitan Council’s service area (Kate Meredith, 494 Commuter Services).
Institutional support for vanpooling has been shown to be crucial to the successful implementation of vanpooling programs. TCRP (2010) reports that in a sample of 82 studies from across the country on transportation demand related topics, of 12 employers who provided an employee subsidy for vanpooling, the 6 employers who also provided a vanpool service saw an average vehicle travel reduction of 20.9 percent. Those companies that only provided a vanpool subsidy saw an average reduction in travel of 9.8 percent. Interestingly, in a separate study of 16 employers who only offered a vanpool transportation service – without also providing a subsidy – saw almost as much of a reduction in trips (19.8%), than those who offered both a subsidy and a managed transportation service. As a result, these studies give support for the idea, “that vanpool service provision may be much more important than a separate subsidy,” (19-42). Of interest to our work in Minnetonka, this finding underscores that easing logistics may be more effective than providing a cash subsidy to incentivize workers to begin to vanpool.

Parking

A critical component in discouraging the use of single occupancy vehicles is the pricing of parking. Two key factors affecting employee’s decisions to drive to work are the ease of parking (eg. Limiting the number of parking stalls, charging parking fees) and the availability of “cash out” options that may deter employees from driving alone to work. Watters (2006) points out that, “Limiting the number of spaces or charging for the use of car parking spaces is widely recognized as an effective tool in any travel demand management strategy,” (504). Donald Shoup’s recent book “The High Cost of Free Parking,” (2011) highlighted the role that charging dynamic pricing can play in effectively regulating parking turnover and value on busy urban corridors. In a similar vein, suburban offices that pass on the price of parking to their employees can discourage employees from parking on site every day. Wilson argues that, “Employer paid parking significantly increases the probability that an employee will drive alone to work,” (1992:133). A 2000 study of San Francisco Bay area residents, “found that while 77 percent of commuters drive alone when free parking is available, only 29 percent drive alone when they have to park,” (Hill 2002). By making it easy to park, employees face no additional barriers to parking on site. While this may be considered an employee amenity, it only encourages employees to park onsite.

Employers who wish to reduce the number of single occupancy vehicle trips should consider no longer providing free or subsidizing on-site parking. While Wilson admits that parking price has limited impact on employees earning high incomes, overall she found, “a linear relationship between parking price and mode choice,” (Wilson 1992: 133). Bianco adds to the conversation that parking price in combination with reliable transit access “had the greatest impact on transit share,” (2007:47). Suburban environments like Minnetonka without access to reliable transportation options, parking price alone may not be enough to deter employees from driving alone. TCRP (2010) found that, “the combination of parking fees and employer transportation services produces a particularly strong synergistic effect,” (19-14). Employer provided transportation services (eg. vanpools and shuttles) may be a more suitable incentive in concert with higher parking fees than raising parking fees alone in suburban environments with limited alternative transportation options.

While many current parking debates focus on dynamic pricing on urban streets (Shoup 2011), suburban office environments face different challenges that to justify limiting access to parking that is not limited by high land values. While Shoup’s research may appear persuasive, it is important to consider the
context of the workplace before implementing TDM policies based on Shoup’s popular research alone. Shoup’s research on street parking in urban areas is impressive, but may not be relevant to the suburban office parks in Minnetonka. Indeed, “it is difficult to institute pricing without fearing a competitive disadvantage and loss of employees,” in suburban office environments, (TCRP 2010: 19-52). While pricing parking may shift employees to other modes such as carpool, vanpool, or biking, absent transit options in the immediate future, employees may choose to work at other companies rather than have to compete for limited or highly priced parking stalls at their suburban employer.

Parking Cash-Out

In addition to raising the price of parking, parking “cash-out” provides a subsidy to employees for not parking on site. In a study of eight firms in Los Angeles, Shoup (1997) found that, “the number of solo drivers to work fell by 17 percent after cashing out,” (201). Shoup's study occurred after California passed legislation requiring employers to provide a cash-out benefit if they also provided free or greatly reduced parking (Shoup 1997). “Cash-out” policies may also be successful in attaching a dollar value to parking that had previously assumed to be free. Wilson (1995) notes that, “When parking supply exceeds demand, it tends to be treated like a costless good,” (34). Free parking can have the same effect of inducing demand for cars that many urban planners associate readily with the dangers of highway expansion. In both urban and suburban environments, cash-out parking policies have had some success. When the Twentieth Century Insurance Company, a suburban firm, changed its parking policy from free to charging a $30 monthly fee, single occupancy vehicle commuters, “declined by 49 percent, to a mode split of 45 percent solo driving, 52 percent carpool/vanpool, and 2 percent transit,” (Wilson 1995:36). Future research on cash-out parking payments should focus on how effective cashing out has been in suburban locations where transportation alternatives are severely limited, compared with dense urban neighborhoods where parking is already priced at a premium.

Demographic Considerations

In addition to differences in urban and suburban land uses and the design of incentive programs, demographics of employees may also play a role in who is likely to accept cash-out incentives. In a study of 411 commuters in Dublin, Ireland, Watters (2006) found that age, gender, income and car availability were statistically significant variables that affected whether employees would be likely to accept cash out incentives. Those with higher incomes, with access to a car, and women were more likely to accept cash-out incentives. Older workers were less likely to forgo their cars and accept cash-out incentives. While many studies of transportation demand management strategies have focused on how strategies work on employees in the aggregate, continued demographic analysis may provide better methods to target the types of employees most likely to take companies up on offers to “cash out” parking or accept monetary subsidies to incentivize ride sharing.

Belz and Lee (2012) offer another perspective on demographic analysis, stating that, “there must first be a better understanding of who is in the vehicle, not just how many,” (1). Using data from the 2009 National Household Travel Survey Vermont add-on sample, Belz and Lee analyzed the demographics of Vermont residents engaged in carpooling activities. They found that, “higher vehicle availability in the household, age, sex (male) and a longer time spent per [commute],” correlated negatively with
Belz and Lee found that women are more likely to carpool and that employees over 40 are less likely to carpool.

Aside from personal characteristics of employees, the size of the company is also important to consider. TCRP’s study further reports that, “P.L. Porter (230 employees), Bonneville Power (100 employees), and Rockbestos (400 employees) are examples of modest size employers,” that have successfully launched vanpool programs, as well as larger employers like Sears and Pacific Bell. The size of the company, in addition to individual demographic factors, the built environment, company involvement, and successful incentives to rideshare or discourage on-site parking are all variable factors that influence the success of car-based approaches to travel demand management.

**Built Environment**

The built environment may also play a role in how likely employees are to participate in a ride share program. Belz and Lee (2012) found in a study of Vermont commuters that while ridesharing was more evident in urban areas that regardless of density, “ridesharing is more likely as distance to work increases,” (7). Their research found that when deciding on rideshare partners, employees make decisions based more “about sharing proximal work locations than proximal housing locations,” (7). Though areas with greater housing and employment densities were also found to have had an impact on decisions to ride share, neither relationship was found to be particularly strong. Future research should continue to study the link between the built environment and density’s effect on ride share and other transportation demand strategies.

The built environment plays an extremely important role in suburban office parks like those that are found in Minnetonka. Wilson (1995) argues that, “parking typically was oversupplied and provided at no direct cost to tenants or their employees,” in a study of suburban office parks in Southern California (29).

The built environment, demographics, and available transportation alternatives also may play a role in how effective company transportation coordinators are able to be. Hendricks (2005) found that, “management support and an effective [employee transportation coordinator] are necessary for a successful work site trip reduction program if the work site is not located in an area with access to high-quality public transportation,” (207). In addition, Hendricks found that in companies located near public transportation or employing lower-income transit dependent populations, employee transportation coordinators were not as effective. As home to many suburban office parks with many white-collar managerial jobs, this point is especially critical to Minnetonka’s transportation demand management planning. As an area with limited public transportation options, effective transportation coordinators, in addition to overall company support of ride sharing programs, will be critical to a successful transportation demand management program in their suburban community. Future research for the suburban environment should compare the effectiveness of in-house transportation coordinators compared with the services offered by regional planning entities like 494 Commuter Services in the Twin Cities metropolitan region.

A key part of an effective transportation coordinator’s role is relieving employees of the administrative burdens of participating in ridesharing programs. Effectively managing these programs as a transportation coordinator can provide successful vanpool programs, regardless of the built environment. In its national
study of 82 transportation demand management programs, TCRP found successful vanpooling programs in both exurban areas and urban areas with transit linkages. Despite differences in transportation options and the built environment, these vanpools succeeded by, “relieving employees of major logistical burdens,” (19-34) by having employers managing the vanpool program for their employers. In fact, in the cases of Sears in the Chicago area and Pacific Bell in Northern California, “the vanpool program was an important element facilitating relocation… to a remote exurban area,” (19-36). Providing employees with reliable transportation services such as carpool and vanpool programs can be successful regardless of setting, if the employer is able and willing to take on the additional responsibility of managing a ridesharing program.

The supply of parking in the suburbs is often not considered part of the built environment. Wilson (1995) noted that the suburban office developments often built 4 per spaces per 1,000 square feet as the industry standard, but only used between 2 and 3 spaces per square feet in reality. In short, “There is a lot of unused parking in the suburbs,” (Wilson 1995: 30). Contrary to Shoup’s emphasis on using demand-pricing (and implicitly the high cost of urban land) to regulate the demand for pricing, the suburban landscape provides a problem of oversupply for parking that cannot easily be remedied by dynamic pricing schemes. In fact, suburban office parking oversupply is often not considered a problem as there are few people complaining about it (Wilson 1995). This oversupply again presents an opportunity for transportation demand management to create incentives to reduce demand for employee parking since supply of parking in the built environment is not an issue.

**Conclusion**

As suburban communities like Minnetonka wrestle with efforts to reduce the number of single occupancy vehicle trips taken by commuters, they should consider cars as part of the solution. By shifting travel modes from personal automobiles to ride share programs, employees can reduce the number of individual trips taken during the work day. Employer managed vanpool services, increased parking fees, and cash out parking subsidies can incentivize employees to shift their transportation mode.

Critical to each of these strategies is employer support for TDM strategies. Companies that implement explicit TDM strategies – either through incentives or disincentives- are most successful when the company does more than just provide options for employees to mode shift. By having a transportation management coordinator on site, managing the logistical concerns of ridesharing, or providing cash-out parking subsidies to employees, companies can alleviate many of the barriers to mode shift that may currently intimidate employees from transitioning toward ride-sharing on their own.

New research on how employee demographics can also help employers target TDM strategies based on the number of employees, the age, sex, and income of their employees, and an individual’s car availability in order to create successful implementation of TDM strategies that are tailored to a company’s employees. Continued research on these strategies effectiveness in urban and suburban environments can further help suburban communities like Minnetonka identify car-based TDM strategies that will be most effective for the needs of their employees and companies.
References


Alternative Work Arrangement TDM Strategies

One type of TDM measure implemented by employers, alternative work arrangements (AWA), is addressed in detail in this report. However, prior to addressing AWA as a group of TDM strategies, numerous issues related to data quality cannot be avoided in the assessment of TDM strategies. In particular, the availability of public data in recent years related to AWA strategies is nearly nonexistent (USDOT, 2010).

Unfortunately, large data sets collected by state and regional planning organizations in response to trip reduction programs in the late 1980s and early 1990s do not aid a quantitative analysis of the impacts of AWA strategies. This is partly due to the processed nature of the data that did not leave analysts with the ability to track individuals. Rather, aggregated trip measures with no indication of CWW or telecommuting participation were the only metrics available to analyze entire TDM programs. Trip origin and destinations, demographics, socioeconomic indicators, nor the availability, quality, or change in travel alternatives over time can be derived from these massive databases. Furthermore, details on program strategies, the length of implementation, nor any information regarding how well a program was run are almost universally excluded from TDM reporting data (USDOT, 2010).

Recent studies of the implementation, perceptions, and lessons learned in regard to these TDM measures addressed below (not inclusive of AWAs), and especially those involving public transportation, carpool/vanpool subsidies, HOV parking incentives, and on-site bike parking and shower facilities, are fairly prevalent. Because research is much less prevalent and comprehensive for the AWA strategies, the aforementioned analytical challenges can be a significant impediment in the assessment of AWAs, which is also addressed in later in this report.

Alternative Work Arrangements (AWA)

As previously noted, the lack of reliable data sources for analysis of AWA impacts on peak-hour travel creates a significant challenge in terms of quantitatively addressing the benefits of the AWA strategies. The datasets from the state and regional planning organizations in the late 1980s and early 1990s provide an aggregated picture that is not attributable to CWW or telework participation. Other smaller studies (82) captured in the 2010 TCRP report, which is nearly comprehensive in terms of publicly available data, do not focus on AWA strategies, and many can only offer statistically insignificant results, at best. The authors of the TCRP report, in an effort to give some attention to the topic of AWA measurement, use three smaller experimental studies completed in 1993 and 1994. All three studies were located in major west-coast U.S. cities, and the dated nature of the results can only provide us context clues about how the most important context to consider at a local level. These context specific takeaways are addressed below, as applicable.

Flexible Work Hours

Flexible work hour policies allow employees and employers to choose start and stop times which are optimal for avoiding peak period traffic and additional delays. However, the consistency of the use of flexible hours, largely due to family commitments and other lifestyle choices, is one of the biggest variables in the effectiveness of these types of policies. Impacts of flexible work hour studies completed in the early 1990s nearly neutral, and mainly suffer from data quality issues. However, preference data from the small number of studies which recorded specific information about flexible work hours does show that these policies are most preferred by employees in management roles (USDOT, 2010).
**Staggered Work Hours**

Staggered work hour policies are similar to flexible work hours, and suffer similar measurement and impact challenges. While flexible work hour policies can vary day to day and are often paired with ridesharing or other alternative mode use, staggered work hours often incorporate planned arrivals and departures that are spread out before, (often) through, and after peak-periods to lessen the impact on congestion. An important distinction to make with staggered work hour policies is that they differ from day/afternoon/evening/overnight shift changes, and are usually coordinating the arrival and departure of only one “shift” of workers (USDOT, 2010).

Contextually, a staggered work hour program timed for specific arrivals and release times is likely not going to benefit Minnetonka employers because of the significant freight volumes and unreliability of congestion on the surrounding I-494 corridor as it stretches between the Minnesota River and Minneapolis – St. Paul International Airport terminals and shifts to the northbound/southbound segment of the beltway in Eden Prairie (Minnesota Department of Transportation, 2005), (Texas Transportation Institute, 2011).

**Compressed Work Weeks (CWW)**

Compressed work week policies, similar to the previous AWA strategies, can take on many different shapes. However, the most common CWW formats include compressing 80-hours into a 9-day period (8.9 hour workdays), 40 hours into a 4-day period (10 hour workdays), or 36-hours into a 3-day period (12-hour days). Regardless of the format, the impact on commute trips per week is measurable. However, research shows uncertainty about this trip savings balancing out with new non-work trips incurred on the employee’s weekdays outside of the office. Although this is studied much less closely through traditional TDM policy tracking, it is likely that individuals may choose to reduce their trip-chaining habits following a long workday. Trip-chaining, however, saves approximately half of one (or more) round-trip(s), reductions in vehicle miles traveled may be neutralized.

Results of a 2008 study of CWW study participants under the Washington State Commute Trip Reduction (CTR) show that the compressed schedule is most attractive for employees who face a long, multi-modal (e.g., drive to transit) commute for employers who have management and a work culture deemed “highly supportive” (reference TCRP page 19-82). Similarly, those who regularly participated in ridesharing or had a shorter, single mode commute were less likely (and willing) to participate in a CWW schedule (USDOT, 2010).

In terms of industry types, participation in CWW in this study was most positively associated with manufacturing, health care, engineering/architecture/planning, and public-sector positions. IT service, software, and positions involving management and administrative positions were most negatively correlated with participation in the program (Zhou, 2008).

**Telework/Telecommuting**

Telework or telecommuting policies enable employees to transfer the location of their work to their individual homes, or to a secure, off-site location. In addition to completing work in a reduced-distraction environment and increasing productivity, employees benefit from increased time savings, lower stress, and lower automobile operation and maintenance costs (USDOT, 2010).

While reducing the average number of work-based trips by 20 – 30 percent each week, analysis reporting negative impacts of telework policies on congestion and vehicle trips point to an increased aversion for use of alternative modes on regular work days for an employee (USDOT, 2010). Poor data issues aside, this
aversion to the inconvenience of ridesharing or transit use is a critical example of how important it is for TDM strategies to be context specific in order to appeal to the employees and site-specific issues. An expanded discussion of a local application of a telework pilot is addressed in the following section.

**eWorkPlace MN Pilot – 2009 to 2011**

**Background**

Funded by the US Department of Transportation’s $113 million Urban Partnership Agreement (UPA) grant awarded to MnDOT, eWorkPlace was a large-scale pilot telecommuting program and research study conducted by researchers and professionals at the Humphrey School of Public Affairs and SRF Consulting Group, Inc. The project advisory team and additional funding required for the study and extended IT support and consulting came through a continued partnership with MnDOT (Humphrey School of Public Affairs, 2011).

From the initial project launch in 2009 through the project completion celebration in June 2011, the congestion reduction telecommuting program recruited 47 companies and over 4,200 employees to participate in a 12-18 month pilot program. As of the project completion, 46 of the companies were willing or prepared to extend the telework pilot for a semi to permanent period of time (Humphrey School of Public Affairs, 2011).

Current efforts to extend the financial support for new eWorkPlace pilot sites are on-going, and could be beneficial to employers within Minnetonka seeking to implement a telework program in coordination with other planned TDM efforts to comply with the city’s future ordinance. As noted by Julie Wischnack, the city’s Community Development Director, businesses are concerned about their own bottom-line, and do not share the same intrinsic value for stewardship of transportation systems as planning professionals (Wischnack & Thomson, 2013). Therefore, as a result of this bottom-line perspective, which is undoubtedly realistic in any public-private agreement, future policies and TDM strategies offered to Minnetonka employers must be marketed by the appeal to the company’s bottom-line.

**Employer, Individual, Community, and Transportation System Benefits**

The results of the eWorkPlace study are promising, and can easily be a valuable tool for Minnetonka to market to its employers in the future. In addition to an annual return on investment (ROI) of over 2.0, benefits of the program include those listed below:

- Reduction in employee absenteeism – average sick time usage dropped by an average of 25 hours after the first two months of implementation
- Increase in productivity – over 75% of participating employers felt productivity had increased
- Average 2 days/week telecommute & over $2,000 in individual annual travel time savings
- Annual regional reduction of 7.6 million pounds of CO₂
- 66.4 million fewer Vehicle Miles Traveled (VMT) traveled per year
- Enhanced quality of life and improved work/life balance

**Barriers to Implementation**

In terms of barriers to implementation of the eWorkPlace pilot, the program was well equipped with the resources of local consulting professionals who were experienced selecting hardware and setting up...
secure, remote-access systems for telework sites. An October 2011 interview with administration at Ecolab, Inc., a major chemical products research company located in St. Paul, reaffirmed the significant ease of the company’s now-permanent telework program due to the assistance with setup, implementation, and ongoing resources provided through eWorkPlace and the St. Paul Smart Trips Transportation Management Organization (TMO) (Minnesota Business Magazine, 2011).

As referenced throughout multiple studies, including the relevant studies of the 82 analyzed in the 2010 TCRP report, the remaining significant barrier to implementation is related to employer and management perceptions of a “traditional” workplace. The aversion to changes in management styles and work culture, which requires a shift from evaluating work based on time-spent instead of results produced, will likely be the major barrier faced by future attempts at implementation at Minnetonka employers, too (Humphrey School of Public Affairs, 2011). However, results-only work environments (ROWE), similar to policies implemented at Best Buy Headquarters in Richfield, are gaining visibility in the Twin Cities and throughout the country. This ongoing research and work toward cultural change in the workplace will hopefully be a beneficial for workplace cultural barriers at potential future telework employers in Minnetonka (Ressler & Thompson, 2008).

Lessons Learned

The Lessons Learned of the eWorkPlace pilot provides additional tips for implementation. First, the soft benefits of telework programs that can aid in future recruitment, retention, and productivity (among others) must be effectively marketed to administrative and HR decision makers in order to increase the number of telework programs in Minnetonka. Secondly, the presence of a strong internal champion for the adoption and future success of the program within a company is critical. Participants also noted that setting clear goals and expectations for teleworking aided in productivity, and helped reverse some internal negativity toward teleworking held by management.

Additional Considerations for Minnetonka

Finally, while structuring future TDM ordinance language and/or policy guidance, the City of Minnetonka should be advised to take a leadership role in creating data that will aid in the calculation of performance measures by the 494 Commuter Services TMO and the Metropolitan Council. New federal requirements included in the MAP-21 transportation authorization will require the reporting of performance measures in order to apply for competitive Congestion Mitigation Air Quality (CMAQ) funding beyond FY 2014 (Minnesota Department of Transportation, 2013).

Updates to the City’s ordinance and TDM policy enforcement tools are an ideal time to integrate the annual or bi-annual requirements of reporting identified data points to aid in the ability to qualify for and receive critical federal funding (over $3 million in FY 2013). Without performance measures in place (and high performing policies to report), CMAQ funds, which are the central funding sources for Twin Cities TMO services and operations, may be awarded to other regions or transportation projects altogether (Minnesota Department of Transportation, 2013).
References


Humphrey School of Public Affairs. (2011, June). eWorkPlace - Telework in Action. eWorkPlace MN. Minneapolis, Minnesota: Minnesota Department of Transportation.


Humphrey School of Public Affairs. (2011, June). eWorkPlace Survey Results. eWorkPlace. Minneapolis, Minnesota: Minnesota Department of Transportation.


Appendix B:

City of Bloomington, Minnesota
TDM Ordinance
Internal TDM Policy for City Employees
ORDINANCE NO. 2009-

AN ORDINANCE ESTABLISHING TRANSPORTATION DEMAND MANAGEMENT (TDM) REQUIREMENTS AND PROCEDURES AND MODIFYING EXISTING TEXT PERTAINING TO TDM; THEREBY AMENDING CHAPTERS 19 AND 21 OF THE CITY CODE

The City Council of the City of Bloomington, Minnesota ordains:

Section 1. That Chapter 19 of the City Code is hereby amended by deleting those words that are contained in brackets [] and adding those words that are underlined, to read as follows:

CHAPTER 19

***

ARTICLE III. ZONING DISTRICT MAP, ZONING DISTRICTS AND DISTRICT USES

***

SEC. 19.29. HIGH INTENSITY MIXED USE WITH RESIDENTIAL (HX-R) DISTRICT.

***

(n) **Reserved. [Travel Demand and Parking Management.**

(1) Final development plans for office uses within the HX-R zoning district must include a travel demand management (TDM) plan prepared by an independent TDM professional under the supervision of the City and paid for by the applicant. The plan must document TDM measures to be implemented, and performance criteria and compliance enforcement measures.

***

ARTICLE III.A. ADDITIONAL ZONING DISTRICTS

***

SEC. 19.40.07. COMMERCIAL SERVICE DISTRICTS CS-0.5 AND CS-1.

***

(i) **Special Provisions.**

***

(2) The maximum floor area ratio in the CS-1 District may be increased to 1.5 square feet of floor area and in the CS-0.5 District to 0.75 square feet of floor area for each one square foot of lot area and maximum building coverage may be increased to 40 percent of lot area provided that peak period project trip generation is equal or less than trip generation from the same type of use with a 1.0 floor area ratio in the CS-1 District and 0.5 floor area ratio in the CS-0.5 District. A [trip reduction plan] Tier I TDM Program in accordance with the requirements of City Code Section 21.301.09 and a development agreement is required for all uses exceeding the maximum floor area ratio in (f) above.

***
SEC. 19.40.08. COMMERCIAL OFFICE DISTRICTS CO-0.5 AND CO-1.

***

(i) Special Provisions.

***

(3) The maximum floor area ratio in the CO-1 district may be increased to 1.5 square feet of floor area and in the CO-0.5 district to 0.75 square feet of floor area for each one square foot of lot area and maximum building coverage may be increased to 40 percent of lot area provided that peak period project trip generation is equal or less than trip generation from the same type of use with a 1.0 floor area ratio in the CO-1 district and 0.5 floor area ratio in the CO-0.5 district. A [trip reduction plan] Tier I TDM Program in accordance with the requirements of City Code Section 21.301.09 and a development agreement is required for all uses exceeding the maximum floor area ratio in (f) above.

***

Section 2. That Chapter 21 of the City Code is hereby amended by deleting those words that are contained in brackets [ ] and adding those words that are underlined, to read as follows:

CHAPTER 21

***

ARTICLE III. DEVELOPMENT STANDARDS

Division A. General Standards

***

SEC. 21.301.06. PARKING AND LOADING.

***

(e) Parking reduction flexibility measures.

***

(3) [Travel] Transportation Demand Management plan (TDM).

(A) Off-street parking [requirements] otherwise required by this ordinance may be reduced by up to 10 percent subject to approval by the City Council of a Tier I TDM Plan consistent with the requirements of City Code Section 21.301.09 [, where a TDM plan is submitted and approved by the City Issuing Authority that addresses the transportation impacts of the development and proposed TDM mitigating measures. The TDM measures may include but are not limited to on-site transit facilities, preferential location of car and van pool parking, telecommuting, on-site bicycle and pedestrian facilities and employer subsidies to employees for transit passes. Where a TDM plan is approved by the City Council, the exact terms of the TDM must be memorialized by the applicant in a properly drawn legal instrument, executed by the parties concerned, and filed with the records for that property in the Registrar of Titles’ or Recorder’s Office of Hennepin County with proof thereof presented to the Issuing Authority.]

(B) TDM plan content. The TDM must at a minimum contain the following:

(i) A description of the TDM goals;
(ii) A description of the transportation impacts of the development based on full development, forecasts of trips generated and anticipated parking demand;

(iii) A parking and transportation study demonstrating that peak parking demand would be reduced by the mitigating measures proposed. The parking and transportation study must be conducted in accordance with accepted methodology approved by the City Issuing Authority, prepared by an independent traffic engineering professional under the supervision of the City and paid for by the applicant; and

(iv) Implementation measures.

(C) Revocation. Failure to comply with the provisions of the approved TDM plan constitutes a violation of this Code. A TDM plan may be revoked only if off-street parking is provided as otherwise set forth in Section 21.301.06 of this Code, or if an alternative TDM plan is approved by the City Issuing Authority.

SEC. 21.301.09 TRANSPORTATION DEMAND MANAGEMENT (TDM).

(a) Purpose and intent. The purpose of Transportation Demand Management (TDM) is to promote more efficient utilization of existing transportation facilities, reduce traffic congestion and mobile source pollution, and to ensure that new developments are designed in ways to maximize the potential for alternative transportation usage. TDM is a combination of services, incentives, facilities and actions that reduce single occupancy vehicle (SOV) trips to help relieve traffic congestion, allow parking flexibility, and reduce air pollution.

(b) Applicability. Recognizing that development size and land use type directly affect traffic generation, the City has established two levels of TDM program applicability:

(1) A Tier 1 TDM program is required for all new development and/or redevelopment consisting of:

(A) New developments where the City Code requires the provision of more than 350 parking spaces attributable to office, institutional, industrial, and warehouse uses;

(B) New non-residential developments seeking flexibility from the standard parking requirements in accordance with City Code Section 21.301.06 (e) (3);

(C) Redevelopment and/or additions to existing non-residential development that result in a 25 percent or greater increase in parking spaces attributable to office, institution, industrial, and warehouse uses, and the total amount of required parking attributable to office, institution, industrial, and warehouse uses is 350 or more spaces; or

(D) Other development as required by City Council condition.

(2) A Tier 2 TDM program is required for new non-residential development, non-residential redevelopment, and/or additions to existing development over 1,000 square feet in floor area, provided a Tier 1 TDM program is not required.

(3) The following uses shall be exempt from Tier 1 TDM program requirements:

(A) Places of assembly;

(B) Schools (K-12);

(C) Parks and recreational facilities; and

(D) Other institutional uses that are not customarily in operation between the peak weekday traffic period (6:30-9:00 AM and 3:00-6:00 PM)

(c) TDM Plan Requirements. Mandatory TDM Plan requirements for the two levels include:

(1) Tier 1 TDM Program.

(A) A TDM study prepared by a qualified traffic consultant that includes:

(i) A description of the projected transportation and parking impacts of the development at full site development, forecasts of SOV trips generated and the likely timing of those trips, and anticipated parking demand. The TDM study must be conducted in accordance with accepted methodology approved by the Director of Public Works or the Director’s designee. If determined to be a Special Study subject to the requirements of City Code Section 19.14 (b) (5), the traffic study must be prepared by an independent traffic engineering professional under the supervision of the Director of Public Works or the Director’s designee, and paid for by the applicant.

(B) A TDM plan prepared by the property owner that includes:

(i) A description of the TDM goals, including peak hour SOV trip reduction goals;
(ii) Description of TDM strategies and implementation measures and the anticipated SOV trip reduction associated with each strategy. The TDM measures may include, but are not limited to: on-site transit facilities, preferential location of car and van pool parking, telecommuting, on-site bicycle and pedestrian facilities and employer subsidized transit passes;

(iii) Description of the evaluation measures and process that will be used to determine the effectiveness of the TDM strategies used and progress toward achieving the SOV trip reduction goals; and

(iv) Proposed total expenditures to implement the TDM strategies for at least three years following the issuance of the Certificate of Occupancy.

(C) A TDM agreement prepared by the City Attorney’s office, executed by the property owner and the City, and filed by the property owner with the records for that property in the Registrar of Titles’ or Recorder’s Office of Hennepin County with proof thereof presented to the Issuing Authority prior to issuance of a building permit;

(D) A financial guarantee in the amount established by the TDM program schedule set forth in the TDM Policies and Procedures Document maintained by the Director of Public Works; and

(E) An annual status update report in the format specified in the TDM Policies and Procedures Document maintained by the Director of Public Works, or otherwise approved by the Director or the Director’s designee, hereinafter referred to as the “Annual Status Report”.

(2) Tier 2 TDM Program.

(A) A basic Tier 2 TDM Plan describing the TDM strategies the property owner agrees to implement to reduce peak SOV trip generation that is prepared in the format specified in the TDM Policies and Procedures Document maintained by the Director of Public Works or otherwise approved by the Director or the Director’s designee.

(d) Financial Guarantee. The property owner must provide a financial guarantee prior to the issuance of the Certificate of Occupancy to ensure implementation of TDM strategies and progress towards meeting the approved TDM Plan goals when a Tier 1 TDM plan is required. The financial guarantee rate is established by the TDM program schedule set forth in the TDM Policies and Procedures Document maintained by the Director of Public Works. The financial guarantee may be provided in the form of cash, bond or a letter of credit at the discretion of the property owner.

The City will retain the cash payment, bond or letter of credit for two years from the date the property owner verifies that occupancy of the leasable area of the development has reached 30 percent. This date shall hereinafter be referred to as the “Initial TDM Plan Implementation Date”.

(e) Administration. The Director of Public Works or the Director’s designee will administer Tier 1 and Tier 2 TDM plans, including, but not limited to:

(1) Review and approval of TDM plans;

(2) Maintenance of files for approved TDM plans;

(3) Monitoring progress toward implementation of TDM strategies and evaluating success of efforts to achieve TDM plan goals;

(4) Holding and releasing TDM financial guarantees; and

(5) Determining compliance in implementing TDM strategies as that relates to the release or forfeiture of TDM financial guarantees.

(f) Compliance. A property owner or its successors and assigns must demonstrate a good faith effort to implement strategies described in an approved Tier 1 TDM Plan by submitting an Annual Status Report within 30 days of the one year and two year anniversary dates of the Initial TDM Plan Implementation Date. The Director of Public Works or the Director’s designee will review the Annual Status Reports, within 30 days of receipt, to determine if a good faith effort has been made to implement the strategies described in an approved Tier 1 TDM Plan or otherwise achieve the approved TDM Plan goals. The Annual Status Report must include at least the following:

(1) Results of the survey questions included in the TDM Annual Status Report model specified in the TDM Policies and Procedures Document maintained by the Director of Public Works, compiled using the model format or a format otherwise approved by the Director of Public Works or the Director’s designee, to determine the effectiveness and participation in TDM strategies;

(2) Documentation of annual expenditures made to implement TDM strategies; and

(3) Documentation of the implementation of TDM strategies listed in the approved Tier 1 TDM Plan and an evaluation of the success of each strategy based on the survey results, as well as, at the option of the property owner, any other verifiable method of measurement such as a follow-up traffic study.

(g) Release of the TDM Financial Guarantee. If the property owner or its successors and assigns demonstrates a good faith effort to implement the strategies set forth in the approved Tier 1 TDM Plan as
demonstrated by the data contained in the consecutive Annual Status Reports, the TDM financial
guarantee will be released to the property owner within seven working days of that determination by the
Director of Public Works or the Director’s designee.

(h) **Forfeiture of the TDM Financial Guarantee.** Failure to comply with the provisions of an approved Tier 1
TDM plan constitutes a violation of this Section of the City Code.

1. If the property owner or its successors or assigns fails to submit timely Annual Status Report that
document a good faith effort to implement the strategies set forth in their approved Tier 1 TDM Plan, the
Director of Public Works or the Director’s designee may direct that the TDM financial guarantee
continue to be held for a period of up to another 12-months at the end of which an additional Annual
Status Report must be submitted. The TDM financial guarantee at the end of the additional period
will be either released or forfeited based upon the Director of Public Works or the Director’s
designee’s determination of whether or not the property owner has demonstrated a good faith effort
to implement the TDM strategies set forth in the approved TDM Plan or otherwise achieve the TDM
Plan goals.

2. If the Director of Public Works or the Director’s designee determines on the basis of the Annual
Status Reports that the failure to implement the strategies set forth in the Tier I TDM Plan or
otherwise achieve the TDM Plan goals is attributable to inexcusable neglect on the part of the
property owner or its successors and assigns, the financial guarantee will be immediately forfeited to
the City.

(i) **Appeals.** The property owner or its successors or assigns may appeal the forfeiture or continued holding
of the TDM financial guarantee or imposed sanctions to the City Council within 30 days following the
mailing of the notice of forfeiture, continued holding or sanctions. The City will provide the appellant with at
least ten days notice of the time and place of the hearing before the City Council.

Passed and adopted this __________ day of _______________ , 2009.

________________________
Mayor

ATTEST:

________________________
Secretary to the Council

APPROVED:

________________________
City Attorney
INTRODUCTION

In 2009, the Bloomington City Council adopted a Transportation Demand Management (TDM) ordinance. The ordinance pertains to new development or redevelopment only and it is expected that for current businesses in Bloomington will maintain their existing business model. However, the City of Bloomington sees the value and importance of TDM plans, so although not required by ordinance, this TDM plan has been prepared and will be implemented by the City of Bloomington to show our commitment to TDM and to act as an early model for others to follow.

As of June 2010, the City of Bloomington has approximately 526 full-time employees and approximately 400 part-time and seasonal employees. In addition to the responsibility of being a medium-sized employer, the City is committed to the concept of “Sustainable Bloomington.” Encouraging employees to try an alternative form of commuting is a responsible and sustainable objective. The sustainable benefits include: reduced need for roadway improvements, health and wellness of employees; potential time and money savings; less congestion; and environmental.

Since the City of Bloomington is not a for-profit business and most of the funding to run the City comes from taxpayer dollars, it is important that the plan is fiscally responsible with the taxpayers money. Therefore, this plan will focus on promoting alternative transportation using minimal funding resources.

I. GOALS & OBJECTIVES

The City of Bloomington campus is located near the center of the City at 1800 West Old Shakopee Road and includes City Hall, Police, Center for the Arts, Public Works, Public Health, Motor Vehicle, the Animal Shelter and Creekside Community Center. Although transit exists to the site, from many locations it is not very convenient. Most transit commuters would need to transfer at least one time to get to work, increasing time and inconvenience. Given service levels, the City’s plan recognizes that transit is not likely to be the mode of choice for most employees and therefore focuses on transportation alternatives other than transit, such as biking, walking and ridesharing.

For the purpose of this plan, the City has two goals:

<table>
<thead>
<tr>
<th>Goal</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Alternative Commuter Goal</td>
<td>5% of City Employees</td>
</tr>
<tr>
<td>Try It Goal</td>
<td>25% of City Employees</td>
</tr>
</tbody>
</table>

A Regular Alternative Commuter is an employee who commutes to work via a method other than driving alone an average of at least once per week. It is anticipated that some of the employees who try an alternative commuting method will realize the benefits and become Regular Alternative Commuters. Benefits include:

- Health and Wellness: Employees choosing to bike or walk to work contribute to their overall health and wellness by adding activity to their day. Carpoolers may notice less stress as they can utilize carpool lanes and on ramps.
- Potential Time and Money Savings: Carpoolers should save time by being able to utilize car pool lanes and ramps. Bikers and walkers can reduce time that may otherwise be
devoted to exercise. Money could be saved by any alternative commuter by paying less for gas.

- Less Traffic Congestion: Bloomington roads and State Highways within Bloomington will have less congestion if more people choose an alternative commuting method. More time can be spent exercising or with friends and family, rather than in traffic. Reducing traffic levels also reduces the need for expensive roadway expansions, thereby saving taxpayer dollars.
- Environmental Benefits: Fewer cars on the road will lead to fewer greenhouse gas emissions, equaling a better environment.

II. TDM STRATEGIES

As stated above, the City of Bloomington wants to promote to its employees alternatives to driving alone, but also wants to be sensible with the taxpayers money. The following strategies will be implemented in 2011 and 2012:

1. Designate an Employee TDM Coordinator

The Engineering Development Coordinator currently serves as the TDM Coordinator to work with developers who are required to complete a TDM plan per the City Code. The Engineering Development Coordinator will also serve as the TDM Coordinator for City employees. The TDM Coordinator will be the primary contact to work with Commuter Services to obtain the most up-to-date resources pertaining to commuting. In addition, the TDM Coordinator will facilitate the City of Bloomington’s TDM Plan.

2. Support the Employee Commuter Group

The TDM Coordinator has formed an informal group of Alternative Commuters to get feedback on the City’s TDM plan. The Commuter Group also acts as a liaison with other City Departments. Members of the Commuter Group have volunteered at City employee events to promote alternative forms of commuting to work.

3. Work with Human Resources

Valuable employee demographic information can be obtained through the City’s Human Resources Department, such as the number of full and part time employees and the number of employees who live in Bloomington. The TDM Coordinator will work with Human Resources to obtain demographic data, while at the same time honoring employees’ privacy and personal information. In addition, the TDM Coordinator can work with Human Resources to provide beneficial commuting resources to new hires.

4. Implement Communication and Education Strategies

Many of the strategies in this plan can be implemented using existing City Employee communications, facilitated through the TDM Coordinator. The primary source of information for employees is on the City employee intranet site, CityBiz, and in the monthly employee
newsletter, “The Insider.” In addition, the City has an Employee Advisory Committee (EAC). The EAC hosts various employee events, in which commuter education can be coordinated.

The City’s Communications Division has created a section on CityBiz related to commuting. Included on the Commuter Café page are:

a. Links to commuting websites such as:
   • www.494corridor.org
   • www.metrotransit.org
   • www.511mn.org
   • www.cyclopath.org

b. A list of upcoming commuter events such as:
   • Commuter Challenge
   • Bike to Work Week
   • Bike to Work Day
   • Rideshare Month

c. A list of employee resources including the TDM Coordinator and Commuter Group

A copy of the approved City of Bloomington TDM Plan will be placed on the Commuter Café site as soon as it has been approved.

The City has upgraded the CityBiz website using the Sharepoint 2007 platform. The upgrade allows employee interaction on the website and can be used to gather data about the commuting habits of City employees, as well as distribute information about alternative commuting. The TDM Coordinator will update the Commuter Café regularly and will train the Commuter Group to contribute to the website.

The City’s Communications Division will assist the TDM Coordinator to publish periodic articles for the Insider. Some potential articles include:

a. The newly adopted TDM ordinance and staff efforts to write a plan for Bloomington employees

b. Featuring an alternative commuter

c. Featuring a type of alternative commuting with resources about how to become more informed

d. Spotlight upcoming commuter events such as:
   • Commuter Challenge
   • Bike to Work Week
   • Bike to Work Day
   • Rideshare Month
The EAC hosts many employee events throughout the year, including an ice cream social in June, Dog Days of Summer in July and the Employee Picnic in September. The TDM Coordinator will work with the EAC to organize alternative commuting promotions in conjunction with EAC events. Some potential events include:

a. Having a Commuter Fair which would include a table with resources set up by Commuter Services

b. Including free bike tune ups

c. Inviting Metro Transit to show employees how to use the bike racks on the bus and LRT

d. Requesting a zip code party hosted by Commuter Services

Commuter posters will be posted on employee bulletin boards and two brochure racks supplied by Commuter Services will be set up and maintained; one in the Public Works lunch room and one in Bloomington Civic Plaza by the front reception desk.

5. **Promote Bicycle Commuting and Walking to Work**

The City of Bloomington facilities already offer bike racks for bicycle commuters and shower facilities for walkers and bicycle commuters. An inventory of the current location and number of bicycle parking stalls on the City of Bloomington Campus has been completed as part of the Statewide Health Improvement Program (SHIP). Additional bike racks are planned to be located at Civic Plaza. The TDM Coordinator will work with the City’s Facilities group to find proper locations for these bike racks based on feedback from the Commuter Group.

Members of the Commuter Group have volunteered to make themselves available to help potential bike commuters by assisting them to design a safe biking route or even biking with a potential bike commuter who needs encouragement. This effort will be publicized via CityBiz and the Insider.

The City of Bloomington campus is centrally located within the City which makes it a reasonable bike/walk commute distance. Maps will be posted on the CityBiz site to show employees that live within particular distances (1, 2 or 3 mile radius) that walking and biking to work is doable.

Using CityBiz, the Insider and employee bulletin boards, Bike to Work Week and Bike to Work Day will be promoted. Bike tune ups will be incorporated into an EAC event.

6. **Promote Ridesharing**

The TDM Coordinator will work with Commuter Services to host a Zip Code Party. Employees can meet other employees that live in their area and potentially carpool. Also, an area of the Commuter Café site will be devoted to Ridesharing opportunities. Employees will be able to seek carpooling opportunities, as well as sign up to be matched with another carpooler. The
TDM Coordinator has received employee zip code information from the Human Resources Division and has received a zip code map from Commuter Services for the Commuter Café and other commuter events.

7. **Explore Pool Vehicles**

Many employees need to leave the Civic Plaza campus during the work day for work-related meetings or site visits. This may make those employees hesitant to try an alternative form of commuting. The TDM Coordinator will explore the possibility of making City Pool Vehicles available for those that need to leave the campus during the work day for work-related reasons.

8. **Commuter Survey/TDM Evaluation**

The TDM Coordinator will setup an online survey. The initial survey will get baseline information about how City employees are currently commuting to work. The survey will also let employees know about some of the new resources available to them through the CityBiz website.

Annually after the adoption of the City of Bloomington TDM Plan, a survey will be conducted with City employees to evaluate if any habits have changed and to see if there has been any advancement towards the goals of this plan. The TDM Coordinator will also fill out the same Annual Status Form that is required of developers. Periodic progress updates will be published on CityBiz to communicate what aspects of the TDM program are successful and which are not.

9. **Find Additional Resources**

In 2011, the TDM Coordinator will utilize SHIP grant funding to sponsor a Commuter Challenge. The Commuter Challenge is open to all employees over ten weeks in the summer of 2011. Employees are allowed to enter for a weekly prize for every day the employee commuted using alternative means. Due to SHIP grant funding requirements, the maximum prize any one employee can win is worth $50.

SHIP grant funding is only guaranteed through 2011, therefore, the TDM Coordinator will look for other resources to hold similar Commuter Challenges for employees in the future.
Appendix C:

City of Eden Prairie, Minnesota
TDM Ordinance
Guarantee Release Form
4. Wetland buffer strip area and vegetation evaluation.
5. Hydroperiod and bounce calculations.
6. Wetland erosion control plan.
7. Wetland buffer strip restoration landscape plan (including plant list and seed mix) and monument locations.
8. Minnesota Routine Assessment Methodology (MnRam) (Version 1.0 or newer) Wetland Evaluation for wetlands not in the City inventory.

U. TRAFFIC IMPACT STUDY

1. All development projects require documentation of the expected traffic impacts of the development. The extent of the traffic analysis is dependent on several factors including size, type, and location of the development.

2. The City Traffic Engineer (Randy Newton 952-949-8339) should be contacted early in the project to determine the expected scope of study and to determine if a Traffic Impact Study is required. If sufficient time is not given to complete the traffic impact study and incorporate recommendations, the project may be delayed.

3. If a traffic impact study is required, the City will hire a traffic consultant to perform the work. In these situations, the developer will incur all costs associated with the study. Prior to authorization of the traffic impact study, the developer? Owner will be required to supply the City with a separate check for the estimated amount of the traffic impact study. Any unused portion of this amount will be refunded.

4. Document the size and type of development and the corresponding Daily, AM and PM traffic generation.

V. TRANSPORTATION DEMAND MANAGEMENT PLAN

1. All office and industrial developments will be required to submit a TDM Plan. Contact Randy Newton at (952) 949-8339 for specific details and requirements.

2. Project description including location, size, type and expected traffic generation.

3. TDM objective and quantifiable goal.

4. TDM Plan/program description.

5. Two year plan budget. A Letter of Credit equal to the two year budget will required prior to release of a building permit.

6. TDM objective and quantifiable goal.
City of Eden Prairie - Required Information for Release / Reduction of TDM Guarantee

Prior to the release or reduction of a Transportation Demand Management (TDM) Guarantee the City of Eden Prairie requires a short memorandum requesting the reduction and providing the information listed below. The memorandum should be sent to Randy Newton, Eden Prairie Traffic Engineer (952 949-8339) at:

Eden Prairie City Center
8080 Mitchell Road
Eden Prairie, MN 55344

Required Information:

1) Reference Information
   a) Development name
   b) Building location
   c) Guarantee reference number (if applicable)
   d) Date of building occupancy (if applicable)
   e) Date of TDM plan implementation

2) Expenditures
   a) Itemized list of expenses and/or
      Indication of how monetary value of reduction was derived.
   b) Supporting documentation for expenditures
      • Receipts
      • Copies of promotion materials
      • Copies of newsletters
      • List of subsidies / financial incentives offered

3) Summary of TDM Evaluation – Follow-up Commuter Survey
   (Required if requesting complete release of letter of credit)

4) Processing Information
   a) Name and address of financial institution that release letter should be sent.
   b) Information that should be included in release letter.
Appendix D:

City of Pasadena, California
TDM Ordinance
Chapter 10.64 - TRANSPORTATION MANAGEMENT PROGRAM

Sections:

10.64.005 - Purpose.

It is the purpose of this Chapter 10.64 to implement the requirements of the Los Angeles County Metropolitan Transportation Authority's ("Metro") Congestion Management Program in accordance with California Government Code Sections 65089 and 65089.3, and consistent with the provisions of Metro's model trip reduction ordinance; and to be a leader in environmental compliance and sustainability efforts.

(Ord. No. 7157, § 8, 11-24- 2008)

10.64.010 - Transportation plan for smaller projects.

Nonresidential projects, and the nonresidential portion of mixed-use projects, which are between 25,000 square feet and 75,000 square feet of gross floor area, shall provide employee transportation information services and a transportation plan which conforms to the program requirements approved by the City Department of Transportation. This transportation plan shall be reviewed and approved by the Director of Transportation prior to the issuance of a building permit. Thereafter, these projects shall submit for review an annual update on the implementation of the pre-existing transportation plan. The plan requirements include, but are not limited to, the following:

A. Project description;

B. Carpool and vanpool preferential parking designation;

C. Bicycle parking designation;

D. Commuter matching services, to be provided for all employees on an annual basis, and for all new employees upon hiring;

E. Transportation information displays, to be provided on site, situated so as to be seen by the greatest number of employees. Information displayed shall include, without limitation, current maps, routes, and schedules for public transit routes serving the development; the telephone number and web sites of referrals for transportation information including the numbers and web sites for the regional ridesharing agency and local transit operators; ridesharing promotional materials; bicycle routes and facility information; and a listing of facilities available for bicyclist, carpoolers, pedestrian, transit riders, and vanpoolers at the development; and
F. Contact information for responsible party at the site.

(Ord. 6573 § 6 (part), 1993)

(Ord. No. 7157, § 9, 11-24-2008)

10.64.020 - Transportation demand management program plan.

A. Transportation Demand Management Program Plan. TDM Program Plans will be required by the following projects:

1. Multi-family residential developments that are 100 or more units;

2. Mixed-use developments with 50 more residential units; or 50,000 square feet or more of non-residential development; or

3. Nonresidential projects which exceed 75,000 square feet.

B. Transportation Demand Management Program Plan requirements. TDM Program Plans shall conform to the program requirements approved by the City Department of Transportation. The TDM Program Plans shall be reviewed and approved by the Director of Transportation prior to the issuance of a building permit and thereafter shall be reviewed and approved annually. Program requirements will include, but not be limited to, the following:

1. Project description;

2. Site conditions that affect commute travel;

3. TDM Program Plan measures;

4. Evaluation criteria for reviewing TDM Program Plans; and

5. Duties, responsibilities and qualifications of a certified Employee Transportation Coordinator.

C. Average vehicle ridership requirements. Nonresidential development projects, and the nonresidential portion of mixed-use development projects, shall strive to achieve a minimum average vehicle ridership ("AVR") between 6:00 a.m. and 9:00 a.m., Monday through Friday, as follows:

1. All projects shall strive to meet an AVR of 1.5 starting 1 year from the effective date of this ordinance.

2. All projects that are located within a "Transit Oriented Development" area (as defined in Title 17, Article 8) shall strive to meet a 1.75 AVR starting 3 years from the effective date of this ordinance.
3. The TDM Program Plan shall include a statement of the property owner's Chief Executive Officer confirming the owner's commitment to strive to meet the AVR requirements.

D. **Transportation Demand Management Program statement of commitment.** The property owner's Chief Executive Officer shall make the following commitments to the program:

1. Commitment to conduct annual surveys in conformance with South Coast Air Quality Management District's guidelines to determine commute travel behavior including collection of data on employee means of travel, arrival time, and interest in information on ridesharing opportunities.

2. Commitment to monitor the TDM Program Activities; and

3. Commitment to report on the TDM Program annually in a manner required by the City (e.g., TDM Status Report).

E. **Annual Transportation Demand Management Status Report.**

1. Property owners shall submit an annual "TDM Status Report" to the City beginning with the first annual reporting date assigned by the City. The City shall provide the property owner with written notification indicating whether the TDM Status Report is approved or is deemed unacceptable within 3 months of its receipt. Alternatively, the City may notify the owner in writing of an extension of this deadline of no more than 30 days.

2. Annual reports will be reviewed by the City to determine if the property owner has implemented and/or maintained the TDM Program.

3. City staff will determine if a property has met the applicable AVR as measured by responses from the annual commuter survey.

4. City staff may request auditable documentation to determine compliance.

5. If the performance objective has not been achieved, City staff will determine if progress has been made toward meeting the AVR. This will be determined by, among other things, any change in the reported AVR from the prior year.

6. If the AVR requirement has not been met and a property owner has not made progress toward the requirement, the City shall work collaboratively with the owner to identify modifications to the TDM Program and shall direct the owner to revise its program within 60 days to incorporate the modifications. In response to the recommended modifications, the owner shall submit a revised TDM Program Plan, including the requested modifications or equivalent measures, within 60 days of receiving written notice to revise its program. The City shall review the revisions and notify the owner of
acceptance or rejection of the revised program. If a revised program is not accepted, the City will send written notice to that effect to the owner within 60 days.

F. Commitment to Maintain Transportation demand management compliance for the life of a project.

1. Property owners subject to trip reduction requirements shall record a Covenant and Agreement to a property's codes, Covenants and Restrictions (i.e., CC&Rs) that make the TDM Program a condition of property ownership. The CC&Rs shall include provisions to:

   a. Guarantee adherence to the TDM objectives and perpetual operations of the TDM Program Plan for all legal parcels within the site regardless of property ownership.

   b. Inform all subsequent property owners of requirements of the TDM Program Plan.

   c. Inform the City Department of Transportation of any change in property ownership.

   d. Identify consequences of non-performance.

2. Space use agreements (i.e., lease documents) shall include provisions to inform and commit tenants to and participate in measures of the property's TDM Program, including:

   a. Encouraging employees to participate in campaigns that promote use of carpools, vanpools, transit, walking and bicycling; and

   b. Posting transportation information in employee common areas; and

   c. Participating in the annual employee commute survey; and

   d. Promoting the availability of preferential car/vanpool parking spaces to employees.

G. Enforcement.

1. Property owners shall submit an annual TDM Status Report and relevant data/reports to document compliance with this Chapter. The City shall monitor such compliance in a manner it deems appropriate and reasonable. Monitoring mechanisms may include, but not be limited to, the following:

   a. Printed documentation of site features (e.g., location of carpool parking spaces);
b. Photographs of TDM Program facilities (e.g., carpool parking spaces);

c. Field-site inspections by City staff; or

d. Other building site reports/surveys which the City may deem appropriate.

2. Non-compliance includes failure to:

   a. Submit a Transportation Demand Management Program Plan;

   b. Implement strategies contained in an approved TDM Program Plan;

   c. Submit annual TDM Status Reports; or

   d. Substantially achieve the established AVR requirement.

3. The City shall issue a written notice of non-compliance to owner of properties that are out of compliance with this Chapter. The notice shall indicate the cause for non-compliance (e.g., failure to: submit an approved TDM Program Plan, submit an annual TDM Status Report, substantially achieve the established AVR requirement) and identify actions necessary to attain compliance. Property owners shall be given 30 days to provide documentation of compliance. Each day that a property owner violates the provisions of this Chapter or the terms and conditions of any approved TDM Program Plan shall constitute a separate violation of this Chapter.

4. Non-compliance will result in 1 or more of the following:

   a. Require the addition of elements to the property owner's TDM Program Plan.

   b. Institute proceedings to revoke any approval of a TDM Program Plan.

   c. Impose an administrative penalty as provided for in Title 1 (General Provisions) of the Municipal Code.

   d. Withhold the issuance of building permits, certificates of use and occupancy, and/or other City issued permits or licenses

   e. Issue a stop work order.

   f. Request that the City Attorney take appropriate enforcement action. Referral to the City Attorney is not a condition precedent to any enforcement action by the City Attorney.

(Ord. 6573 § 6 (part), 1993)

(Ord. No. 7157, § 10, 11-24-2008)
Appendix E:

Arlington County, Virginia
TDM Ordinance
Transportation Demand Management (TDM) is the establishment of measures to influence travel behavior by mode, frequency, time, route, or trip length in order to achieve a maximally efficient use of transportation facilities.

Arlington’s TDM policy focuses on workplace commuter travel and looks to reduce peak hour work travel by achieving a reduction of single occupant vehicle trips. It seeks this goal by encouraging (or, if necessary, requiring) the use of transit, ridesharing, biking, walking or travel outside of peak hours by individuals going to or from workplace centers. The County pursues land use and zoning policies which reduce vehicle trips by promoting proximity of housing and employment.

TDM in Arlington is planned and carried out as a cooperative endeavor of transportation system users, employers, developers, builders, building complex management’s, residents and county government. Its objectives are consistent with and help support those of the County’s Master Transportation Plan, including achievement of major street and intersection level of service goals.

The key elements in TDM in Arlington include:

- A TDM plan for each development site plan consistent with the TDM Matrix.
- A standard site plan condition to implement the TDM Matrix.
- In-building parking provisions that extend preference to vanpools, carpools and bicycles.
- The encouragement by employers of employee travel to and from the work place by modes of travel other than single occupant automobile through various educational and incentive measures.
- Coordination and cooperation on such measures among employers, building owners and management companies of an employment area through transportation management associations TMAs or districts.
- Arlington County encouragement to TDM planning in its roles as developer of public buildings and as employer.

The County also works through its planning and zoning activities with developers and neighborhoods to achieve the Arlington 2000 goal of workplaces and living places built in close “urban village” proximity to each other.
Major components of carrying out a TDM program for Arlington include (1) ridesharing promotion, (2) parking management, (3) transit promotion, (4) on-site construction measures, (5) mutually agreed off-site provisions or contributions, (6) lease agreements, and (7) monitoring and compliance. The demand management program distinguishes the intensity of the strategies and the impact of the development on the transportation system. The greater the impact, the more intense the mitigation measures to be sought. The categories and density thresholds are described in the following matrix.

The Arlington TDM program seeks to achieve the following results, which may be employed as evaluators of the success of the program. The results sought in Arlington’s program are:

1. Maintain peak hour level of service at major intersections at or preferably above Level of Service D.
2. Limit single occupancy vehicle trips generated by development.
3. Reduce vehicle-generated air pollution.
4. Maximize transportation alternatives while minimizing single occupancy travel.
5. Utilize transportation facilities efficiently.
6. Encourage efficient, cost effective modes of transportation that focus on moving people, not vehicles.
7. Improve transit information and dissemination so people will be able to make the most efficient and friendly use of the system.
8. Utilize public transportation effectively and efficiently, through improved system information, frequencies, routing, connections, transfers; innovative technologies are encouraged.
9. Configure mass transportation to provide access to, through, and around employment centers.
10. Encourage innovative technologies that move people between home and work the most efficient and effective way.
11. Maximize convenience of intermodal transfers between the commuter rail system and feeder/distributor systems.
12. Encourage group riding and shared parking arrangements through parking management plans.
13. Minimize or eliminate barriers to group riding.
14. Review transportation management plans during the site development process.

**1990 MATRIX TRANSPORTATION DEMAND MANAGEMENT PROGRAM (2008 dollars*)**

Standard County policy is set forth in the TDM matrix. However, upon showing of clear and convincing evidence that particular elements of the TDM matrix may be inappropriate for a particular project, the developer may propose substitution of other elements which provide equivalent value.

<table>
<thead>
<tr>
<th>STRATEGIES</th>
<th>LAND USE CATEGORY</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Ridesharing Marketing</td>
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<tr>
<td>a. information dissemination</td>
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<tr>
<td>- distribute/display brochures, posters</td>
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<td>x</td>
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<tr>
<td>- conduct employee transportation surveys</td>
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<td>b. operate a vanpool program</td>
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<td>c. subsidize vanpool program</td>
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<td>- match State subsidy program</td>
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<td>- double State subsidy program</td>
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<td>- backup, reserve maintenance vehicle</td>
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<td>d. employee transportation coordinator</td>
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<td>- designate a part-time ETC</td>
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<td>- designate a full-time ETC</td>
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<td>- on-site ride matching</td>
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<td>e. contribute to a transit store or TMA</td>
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<td>- $5,000 ($8,369) per year</td>
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<td>- $10,000 ($16,739) per year</td>
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<td>- $15,000 ($25,108) per year</td>
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<td>f. locate/operate a transit store</td>
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<td>- on-site ride matching</td>
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<td>g. emergency ride home (taxi, bus)</td>
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<td>II. Preferential Parking Management</td>
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<td>a. unlimited reserved rideshare parking</td>
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<td>b. market rates for single occupant vehicles</td>
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<td>c. lease agreements reserved parking space</td>
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<td>d. deserved vanpool parking space</td>
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<td>- one-half market rate</td>
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<td>- free, no cost</td>
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<td>e. variable rate parking for carpools (2+ employees)</td>
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<td>- market rate</td>
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<td>- one-half market rate</td>
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<td>- free, no cost</td>
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<td>III. Transit Programs</td>
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<tr>
<td>a. contribute to operation of an employer shuttle bus</td>
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<td>- $5,000 ($8,369) per year</td>
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<td>- $10,000 ($16,739) per year</td>
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<tr>
<td>b. operate an employer shuttle bus service</td>
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<td>c. fare media subsidy (100 percent is $100/month)</td>
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<td>- 25 - 50 percent</td>
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<td>- 50 - 75 percent</td>
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<td>- 75% percent</td>
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</tbody>
</table>
IV. On-Site Construction
a. bike lockers, racks ......................... x x x x
b. shower facilities .......................... x x x x
c. van accessible garage ...................... x x x x
d. off-street delivery loading facility ....... x x x x
e. roadway improvements adjacent to site ....... x x x x

V. Off-Site Construction
a. pedestrian systems (SKYWALK).............. x x x x
b. direct connections to Metro
   - existing knockout panels to stations ...... x x x x
   - new connections
     (elevator, escalator, tunnels) ............. x x
c. intersection improvements (i.e. turn lane) ... x x
d. new facility construction .................... x
 e. new Metrorail Station ........................ x

VI. Lease Agreements: Progressive Employee Policies
a. flex time, variable work hours ............. x x x x
b. telecommuting ................................ x x x x
c. trip generation restrictions ................ x x
 d. transportation management organization ...... x x x x

VII. Monitoring and Compliance
a. Monitoring Contribution
   - $ 1,000 ($1,673) / Year ..................... 2 1 1 1
   - $ 5,000 ($8,369) / Year ..................... 3 2 2 2
   - $10,000 ($16,739) / Year .................... 3 3 3
 b. Performance Guarantees .................... x
 c. Zoning Compliance Fines ..................... x x x x
 d. Contingent Phasing .......................... x x

Land Use Category Code
A. GLUP consistent, no forecast traffic problem
B. GLUP consistent, forecast traffic problem
C. GLUP amendment requested, no forecast traffic problem
D. GLUP amendment requested, forecast traffic problem

Footnotes
1. Less than 100,000 sq. ft. gross floor area
2. 100,000 - 200,000 sq. ft. gross floor area
3. More than 200,000 sq. ft. gross floor area

http://www.bls.gov/cpi/home.htm
Category A includes development proposals which are consistent with the General Land Use Plan in terms of both land use type and density (i.e., office, mixed use, 3.0 floor area ratio (F.A.R.) and is located in an area not forecast to have a traffic congestion problem. Mitigation strategies are tied to the size of the development and include strategies that are basic to promoting group riding.

Category B includes development which is consistent with the General Land Use Plan and is located in an area that is forecast to have a traffic congestion problem. The intensity or range of required mitigation strategies would be related to the degree of the traffic problem. For example, if a proposed improvement which is scheduled for construction would improve the situation, the strategy might be required until the time that the improvement is completed.

Category C includes development which is inconsistent with the General Land Use Plan in terms of either land use or density (or both) and is located in an area not forecast to have a traffic congestion problem. Like Category B strategies, the intensity of the strategies would be related to the degree of the development’s inconsistency. The inconsistency would be measured in terms of a comparison of the trip generation factors, for by-right, planned, and proposed development.

Category D includes development which is inconsistent with the General Land Use Plan in terms of either land use or density (or both) and is located in an area forecast to have a traffic congestion problem. Like Categories B and C, the intensity of the strategies would be related to the degree of inconsistency. Being both inconsistent and located in a traffic congestion area, a comprehensive program coordinating a combination of several strategies at the highest level of participation would be required.

A second and third level of stratification are included in the categorical program to incorporate the density of the development and its location with respect to transportation facilities, such as proximity to a Metrorail Station or other public transport system or high occupancy vehicle facility with the cost of implementing specific mitigation strategies. The additional levels of stratification reflect economies of scale and program effectiveness with respect to size and location. Three density thresholds are used for grouping developments by size. The thresholds are detailed below.

Footnotes
1. Less than 100,000 sq. ft. gross floor area
2. 100,000 - 200,000 sq. ft. gross floor area
3. More than 200,000 sq. ft. gross floor area

F.A.R. - The ratio of floor area is an expression of density allowed on a specific parcel of land. A 3.0 FAR on a 10,000 square-foot site would allow 30,000 square feet of gross floor area of development.
Following is a brief description of various strategies of transportation demand management.

**Strategies**

I. **Ridesharing Marketing**

a. Basic to the success of any TDM program are employee education and information dissemination. At a minimum, developments are required to work with the County Ridesharing Program in promoting group riding to persons employed within the development. Strategies include transportation fairs, distribution of ridesharing marketing material to tenants and employees, displaying information material, such as posters, brochures, etc., in common areas, including hallways, elevators, restrooms, water fountains, building management offices.

In order to set objectives and monitor performance, employee transportation surveys should be conducted on an annual basis. Surveys are useful in determining commuting patterns, mode split, average commute distance and travel times, employee attitudes, needs, and willingness to switch modes. The data is useful in developing successful transportation programs, such as transit subsidies, and car and vanpool programs.

b. The results of the employee transportation survey may indicate the applicability of operating a vanpool program. Depending upon site location, the program may entail a shuttle bus system operating between the site and a Metrorail Station or company vans which provide transportation from the suburbs to the site. The uniqueness of the program is commensurate with the need to reduce vehicle trips to the site.

c. Vanpools generally need to operate at full occupancy (14 riders) to cover their operating expenses. To assist new or potential operators a number of state and local governments provide startup seed money to vanpool drivers. The programs include interest free loans for a specified period of time and passenger subsidies. Developer assistance includes additional loan programs, outright purchase, matching or doubling passenger subsidy programs and backup vehicles.

d. The success of an employer TDM program is greatly assisted if implemented through an Employee Transportation Coordinator (ETC). An ETC is an employee of the building management team and is responsible for implementing the developer’s TDM program. The ETC tailors the TDM program in response to employee transportation survey results. The ETC can be either a part time or full time employee, depending upon the number of employees on-site and the complexity of the TDM program (which may be a function of the degree of impact associated with the development). ETC duties include: TDM program implementation; conducting transportation surveys; managing a preferential parking and transit subsidy programs; and promoting group riding to development tenant employees.
e. Transportation information stores (referred to as “transit stores”) and transportation management associations (referred to as “TMAs”) are proposed to be located throughout the Metrorail development corridors. The transit stores and TMAs provide in one convenient location a resource of employee commuter information. Transportation information, such as Metrorail and Metrobus route, schedule and fare information, commuter bus operations, rideshare matching applications, vanpool subsidy programs, is provided to the public on a walk-in basis. Depending upon the category of development, a contribution to a Metrorail Station area transit store may be required if one presently exists or is planned for the area in the future. Three levels of participation are identified—$5,000, $10,000, and $15,000 per year. The term of participation may range from 10 years to as long as the operation exists and should include provisions for adjusting the contributions annually by the Consumer Price Index (CPI) to account for inflation.

f. In Metrorail Station areas where a transit store has yet to open or in areas not conveniently served by an existing transit store, proposed developments may be required to dedicate commercial area to a new transit store operation. The transit store may be required to be dedicated for as long as the development exists on the site or until a more central and convenient location is dedicated in a future site plan. Transit store contribution obligations provided for in i.e. above go towards operation of the transit store on a collective basis to cover lease costs, staffing and program development.

g. A reason often cited to not participate in ridesharing arrangements is the need to have a personal vehicle at hand for emergency situations. A number of innovative programs have been developed which provide emergency transportation to one’s home or child’s school, daycare, etc. Programs include a limited taxi/bus fare subsidy, relaxed company vehicle policies.

II. Preferential Parking Management

a. Preferential parking programs involve reserving conveniently located parking spaces for car and vanpools. Within multi-story parking garages convenient location is defined as near the elevators and close to the entry/exit points to reduce travel time and distance in the parking garage. The spaces are to be clearly marked “Reserved for car and vanpools.” The number of spaces set aside shall be unlimited. At a minimum, 10 percent of the parking supply shall be accessible to vans by providing a vertical clearance of 86 inches.

b. To encourage group riding, the preferential parking program shall include a parking rate agreement charging market rates for single occupant vehicles. Annual parking surveys shall be conducted to determine local area price structures for determining “market rates” to be charged.
c. To ensure that parking rates will reflect true market conditions in a competitive environment, lease agreements with parking garage operators are encouraged. Although a set number of spaces may be reserved for a tenant, the cost of an individual parking space is not controlled by the tenant and subsidies are prevented from being passed along to specific persons.

d. Parallel to charging full market parking rates, subsidies are encouraged to promote group riding by both car and vanpools. Depending upon the category of development and the need to reduce single occupant vehicle trips to the site, parking rates for car and vanpools may range from market rate, half-market rate, to no cost (full subsidy).

III. Transit Program

a. To improve access between Metrorail Stations, office, residential developments, and commercial businesses, many developers have proposed to operate local area shuttle buses. As a larger number of developments in the Metrorail Station areas are constructed and occupied the density required to sustain such transportation operations increases, improving the likelihood of the service being successful. Depending upon the category of development contributions to support the operation of local area shuttle buses may be required, such as the Arlington Trolley. Three levels of participation are identified - $5,000, $10,000 and $15,000 per year. The TMP should also include provisions for adjusting the contributions annually by the CPI to account for inflation.

b. Depending upon the category of development, a development may be required to operate an employer shuttle bus service. The shuttle bus system would provide improved pedestrian connections between a Metrorail Station and the site. The route and fare structure may be modified over time to include other development sites whose financial participation is obligated by III.a. above.

c. In addition to increasing the cost of commuting to work in a single occupant vehicle (through charging market based parking rates), subsidizing an employees transit costs can often make the monetary difference required to cause a mode shift in an employees commuting habits. Transit subsidy programs may include the regional Metrorail/Metrobus system, state commuter rail and commuter bus systems. Depending upon the category of development various transit program subsidies may be required. Three levels of subsidy are provided - 25-50 percent, 50-75 percent, and 75+ percent.
IV. On-Site Construction

All developments may be required to dedicate on-site easements to the County and to construct associated roadway improvements adjacent to the site, such as additional travel and turn lanes. “On-site” shall be deemed to include the site itself and all adjacent areas related to the site, consistent with established practice in the County.

a. All site plan development is required to provide secure bicycle storage facilities in a location convenient to office, commercial or residential development areas. The facilities shall be highly visible to the intended users and protected from precipitation. Additional requirements cover the minimum number to be provided by type (Class I, II, III) and location.

b. Depending upon the category of development, shower facilities may be required to be provided within the development as an amenity promoting bicycle or walking commuting by employees to the site.

c. All developments shall be required to provide parking facilities designed in such a way as to ensure access by vanpools. At a minimum, 10 percent of the parking capacity shall be accessible to vans by providing a minimum vertical clearance of 86 inches from the street to the parking areas and to the garage exit onto the street.

d. Site plans should incorporate into the design adequate short term off-street parking space for delivery vehicles.

V. Off-Site Construction

Whereas the previously discussed strategies may be associated with typical site plan review approval and would be included in part in virtually all site plan reviews, strategies which deal with off-site construction must be viewed as unique and must be addressed on a case-by-case basis. There will be instances where it will be mutually beneficial for the community and the developer to pursue off-site construction. The following strategies are put forth as guidelines which may be discussed as a part of the site plan negotiations dependent upon the scale of development and its relationship to the adopted General Land Use plan.

a. To improve pedestrian access between the site, Metrorail and other development, proposed developments may find it desirable to enhance the pedestrian system by widening Metrorail corridor sidewalks or providing connections or extensions of a elevated pedestrian skywalk system.

b. Pedestrian enhancements, such as direct tunnel connections, new station entrances and elevators to the Metrorail System to improve passenger access, protect passengers from inclement weather, and reduce overall travel time by transit, making transit commuting more enjoyable.
Some Metrorail Stations were designed with knock-out panels to facilitate tunnel connections between the system and high density development. Where applicable, all development is encouraged to utilize the knock-out panels which have been incorporated into the Metrorail Station areas. Depending upon the category of development and where appropriate, other system access improvements may be considered.

c. Local area circulation patterns and intersection levels of service are affected by new development as local traffic enters and exits the street network and merges with through traffic. In addition to constructing improvements adjacent to the site, other desirable improvements may be proposed by the developer depending upon the category of development, including, median closures or openings, signal system upgrading, and intersection geometric alignments.

d. Depending upon the category of development, substantial new facility construction may be desirable and could be proposed to increase arterial capacity in conjunction with unplanned trip growth. Improvements which could be negotiated as a part of the site plan revision process may include interchange reconstruction, improved entrance/exit ramp designs, and new grade separated intersections.

e. Depending upon the category of development new Metrorail Station(s) may be proposed by the developer to provide the necessary transit system enhancements to ensure an acceptable level of service to the adjacent street network.

VI. Lease Agreements: Progressive Employee Policies

a. Alternative work schedules, such as flex time, variable work hours and the compressed work week have been successful in spreading peak hour traffic volumes over the peak period and to reduce traffic volumes two days of the week. Flex time includes staggered and flexible work hours which allows employees to arrive or leave before or after the normal congested commuting period. The flexible working arrangements increases the opportunity of prospective rideshare employees having similar core period working hours. The compressed work week includes working four 10-hour days (4/10), or nine days over the two week period (5/4/9). Generally, with the 5/4/9 plan, employees are off every other Friday or Monday. Depending upon the category of development, developers might require tenants to support innovative work scheduling which limits peak period vehicle travel.

b. Recent advances in electronics and the vision of the future portrays a substantial growth in telecommuting, decreasing the number of employees who must commute to the site on a daily basis. The “smart” office building of the future will be constructed to facilitate telecommuting by development tenants.

c. Depending upon the category of development, trip generation restrictions may be incorporated into the development’s
approval as site plan conditions. Trip generation restrictions limit the number of vehicle trips allowed to enter or exit the development during a specified period of time, such as during the morning and evening peak hour of the adjacent street. Vehicle trips are monitored on an as needed basis to monitor conformance and a set of fines may be imposed for repeated violations.

d. A number of business development areas are formulating plans to develop transportation management associations (TMAs). TMAs are partnerships between businesses and local government, created to help solve transportation problems. TMAs provide a unified voice and forum for discussing local transportation issues and priorities, and enable developers and employers to pool resources and address problems on a joint basis. All developments are encouraged to become an active member of an area TMA should one be developed. It is the County’s goal to promote the development of transpiration management associations, representing the following areas: Crystal City, Columbia Pike, Pentagon City/Pentagon areas, National Airport, Shirlington/Four Mile Run areas, Rosslyn/Courthouse areas and the Clarendon-Virginia Square-Ballston areas.

VII. Monitoring and Compliance

a. Staff needs to monitor the transportation management plans to insure compliance. Without staff capability, the County will be unable to determine compliance with its requirements for transportation actions. The amounts listed represent private sector contributions to supervising the implementation and operation of the plans.

b. The county must be able to assure that transportation management plans are actually carried out. For Category D projects, developers will provide a performance guarantee to assure continuing performance. The performance guarantee will be determined by the County Board at the time of site plan approval. The performance guarantee will be in force for at least three years. At that time, if the County certifies compliance with the strategies, the County will not require that the performance guarantee be renewed.

c. Compliance will also be enforced through the Zoning Ordinance.

d. Contingent Phasing ties compliance to building permit approvals relating to the phasing of construction for the entire project. Subsequent phases of the project will not be approved unless compliance with the traffic mitigation program is demonstrated.
Appendix F:

North Brunswick, New Jersey
TDM Ordinance
Township of North Brunswick, NJ

Chapter 316. TRAFFIC MANAGEMENT

[HISTORY: Adopted by the Mayor and Council of the Township of North Brunswick 10-5-1987; amended in its entirety 9-5-1989. Subsequent amendments noted where applicable.]

§ 316-1. Applicability.

A. General.
All existing businesses and proposed new developments which meet the criteria established in Subsection B or C herein shall be subject to the requirements of this chapter, with the exception of the following specific uses:

(1) Eating and drinking establishments.

(2) Retail businesses.

(3) Grocery stores.

(4) Furniture and appliance stores.

(5) Shopping centers.

(6) Hotels.

(7) Security services.

(8) Other similar uses where it can be demonstrated that the nature of the business is such that workers do not regularly report to or depart from work during morning and afternoon rush hours.

B. Existing businesses. All existing businesses which are not exempted uses in accordance with Subsection A and which meet both of the criteria established herein shall comply with the requirements of this chapter:

(1) The business is located in the Township of North Brunswick.

(2) Fifty or more employees either report to work regularly or are assigned primarily to a facility located in the Township of North Brunswick.

C. Proposed new developments.
All proposed new developments which are not exempted uses in accordance with Subsection A and which meet the criteria established herein shall comply with the requirements of this chapter:

(a) Residential developments. Residential developments of 20 or more units which have not received preliminary subdivision or site plan approval prior to the effective date of this chapter.

(b) Nonresidential developments. Nonresidential buildings of 15,000 square feet or more of gross building area and all complexes as defined herein which have not received preliminary site plan approval prior to the effective date of this chapter.

(c) Planned developments. Planned developments, as defined in the Municipal Land Use Law, Chapter 291, Laws of New Jersey 1975, Editor's Note: See N.J.S.A. 40:55D-1 et seq. which have not received preliminary site plan approval for the entire tract which comprises the planned development prior to the effective date of this chapter.

For purposes of calculating traffic reduction goals applicable to remaining sections of a planned development which have not yet received site plan approval, the number of dwelling units and square footage of nonresidential space located in sections which have received prior site plan approval shall be considered.

Traffic reduction measures necessary to meet the resulting traffic reduction goals can either be incorporated in plans submitted for the proposed sections alone or can be addressed through a combination of modifications to previously approved plans and proposed plans for the new section. Modifications which are designed to meet traffic reduction goals in a section of a planned development which has received prior site plan approval shall not in and of themselves be deemed to be a substantial amendment to the plan which would require an amended application for approval and subsequent hearing.

The submission of modifications to a previously approved plan in order to meet traffic reduction goals shall in no way deprive a developer of any rights which may have vested pursuant to prior approvals.

§ 316-2. Definitions.

As used in this chapter, the following terms shall have the meanings indicated:

ALTERNATIVE WORK HOURS PROGRAM

Any system for shifting the workday of an employee so that the workday starts and/or ends outside of the peak periods. Such programs include, but are not limited to:

A. Compressed work weeks.

B. Staggered work hours involving a shift in the set work hours of employees at the workplace.

C. Flexible work hours within guidelines established by the employer

COMPLEX

Any industrial park or office park which is served by a common circulation and access system, where buildings in the aggregate exceed 15,000 square feet, and which can be identified by any of the following characteristics:
A. It is known by a common name given to the project by its developer.
B. It is governed by a common set of covenants, conditions and restrictions.
C. It was approved or is to be approved as a single entity.
D. It is covered by a single conceptual, preliminary or final site plan.

**EMPLOYEE**

Any salaried or hourly worker, including both full-time and part-time workers, whether they report to work regularly or are assigned primarily to a facility in North Brunswick Township.

**NEW NONRESIDENTIAL DEVELOPMENT**

Any nonresidential development of 15,000 square feet or more which has not received preliminary site plan approval prior to the adoption of this chapter.

**NEW RESIDENTIAL DEVELOPMENT**

Any residential development of 20 or more units which has not received preliminary subdivision or site plan approval prior to the effective date of this chapter.

**OFFICE OF TRAFFIC MANAGEMENT (OTM)**

The municipal department, agency or official appointed by the Mayor to implement the requirements of this chapter.

**PEAK HOURS**

The sixty-minute periods within the a.m. and p.m. peak periods in which the largest number of hourly vehicle trips are generated to and from the site.

**PEAK PERIODS**

7:20 to 9:10 a.m. and 3:50 to 5:40 p.m.

**SINGLE-OCCUPANCY VEHICLE**

A motor vehicle occupied by one employee for commute purposes.

§ 316-3. Traffic coordinators.

Every existing business and new development which is subject to the requirements of this chapter shall designate a Traffic Coordinator to act as a liaison to the OTM. All notices and information regarding surveys, reports and traffic reduction plans required pursuant to this chapter shall be directed to said Coordinator. Notices communicated to the Coordinator shall be deemed effective as to the business or development when received in writing by the Coordinator.

§ 316-4. Requirements for existing businesses.

A. Annual survey.
   (1) All nonexempt businesses with 50 or more employees shall survey their work force annually to gather data on places of residence, working hours and commutation modes. In order to be deemed in compliance with this section, a minimum completed survey response rate of 75% shall be required on employee surveys.

   (2) The OTM shall distribute the employee survey form annually and shall provide a minimum of 60 days between distribution of the annual survey forms and the deadline for its submission.

B. Annual report.
(1) The results of the annual survey shall be compiled and tabulated into an annual report. The OTM shall determine annually whether said tabulation shall be done by the OTM or by the affected businesses. The annual report shall contain information as required by the OTM.

(2) The Director of Human Resources or, in the absence of such title, the highest ranking employee with personnel responsibilities shall be required to certify as to the authenticity of the annual survey and report.

C. Traffic reduction plan.

(1) In addition to requirements for an annual survey and annual report, any existing business with 50 or more employees which meets either of the following criteria shall be required to formulate a traffic reduction plan:
   (a) The number of automobile trips generated by employees scheduled to begin or end work regularly during the morning or afternoon peak periods exceeds 60% of the total workforce.
   (b) In excess of 40% of the total workforce is scheduled to begin or end work regularly during any specific fifteen-minute time slot in the morning or afternoon peak periods.

(2) The traffic reduction plan shall be designed to reduce the total peak period vehicle trips to an amount which does not exceed 60% of the total number of employees and to reduce the concentration of vehicle trips in any fifteen-minute time slot to 40% or less. Automobile trip reduction goals shall be measured against existing data available to the OTM unless the business can substantiate more accurate employment survey data. For purposes of establishing traffic reduction goals, employers shall assume the same percent distribution revealed in the survey data for the entire workforce.

(3) The traffic reduction plan shall be formulated and submitted to the OTM in accordance with the time schedule provided by the OTM.

(4) The prescribed format for a traffic reduction plan for existing businesses shall be provided by the OTM, and all traffic reduction plans shall comply as far as is practicable with the prescribed format.

(5) The traffic reduction plan can incorporate any combination of the following traffic mitigation initiatives:
   (a) Facilitating utilization of mass transit.
   (b) Facilitating ride sharing and vanpooling.
   (c) Establishing an alternative work hours program.
   (d) Encouraging nonvehicular work trips.

(6) While businesses have the option of selecting traffic reduction measures which are most appropriate to the nature of their business, traffic reduction measures shall be designed as far as is practicable to meet traffic reduction goals.
(7) The OTM shall review and approve traffic reduction plans within 60 days of submission unless the OTM determines that said plan as designed cannot achieve required traffic reduction goals. If such a determination is made, the business shall have 45 days from receipt of a written rejection to revise and submit an acceptable traffic reduction plan, unless extended for good cause shown. Upon acceptance of a traffic reduction plan, the plan shall be implemented by the business, and such implementation shall be fully in effect within six months of acceptance.

§ 316-5. Requirements for new residential developments.

A. Requirements applicable to developments of 20 or more units.

(1) Survey requirements.
   (a) In every new residential development, the developer shall be required to gather applicable demographic data requested on the workplace/commutation survey provided by the OTM. Said survey shall require such data as workplace location, normal work hours, the frequency of overtime, whether hours are flexible by up to 15 minutes, prospects for continuing employment at the present location for the next 24 months and the number of children by age. In addition, the survey shall ascertain interest in the following:
      [3] Shuttle bus service to and from the train station or park and ride locations.

   (2) Provisions which request prospective purchasers to complete the questionnaire shall be contained in all contracts of sale.

   (3) In any development which is subject to the requirements of the Planned Real Estate Full Disclosure Act, Editor's Note: See N.J.S.A. 45:22A-21 et seq. the sponsor shall be required to include a copy of the workplace/commutation survey in the public offering statement. Said survey shall be completed by the purchaser and tendered to the developer on or before the time of closing. It shall be the sponsor's obligation to collect said survey and submit the same to the OTM.

B. Additional requirements for developments of 50 to 350 units.

(1) Provision of vanpool parking areas.
   (a) In addition to the requirements for completion of workplace/commutation surveys, it shall be a condition of preliminary subdivision or site plan approval that all new residential developments of 50 to 350 units shall be required to construct parking spaces to accommodate vanpool participants, based upon the need generated by the particular development, in accordance with the following schedule:
      [1] Developments of 50 to 200 units shall provide a fifteen-car vanpool parking lot.
      [2] Developments of 201 to 350 units shall provide a thirty-car vanpool parking lot.

   (b) Vanpool parking areas can either be dedicated to the Township of North Brunswick or maintained by the developer. If said area is not proposed for dedication to the township, the developer shall be required to provide assurances for continued and perpetual maintenance of the parking facility in a manner acceptable to the Planning Board. If
maintained by the developer, the developer shall be entitled to reserve use of the vanpool parking area for development residents.

(c) Certificates of occupancy shall not be issued for more than 50% of the units in the development until such vanpool parking area is fully improved.

C. Additional requirements for developments which exceed 350 units.

(1) Provision of park and ride facilities.
   (a) Developers of new residential developments which exceed 350 units shall be required
to construct park and ride facilities based upon the need generated by the particular
development at a ratio of one parking space for each 10 units in the development.
   (b) The park and ride shall be located with direct access off of a designated collector road
in the development and shall be located as close as is practicable to highway jughandles
and overpasses.
   (c) The park and ride shall be designed to accommodate buses which can accommodate
49 passengers and shall contain adequate bus shelters to protect riders from the elements.
   (d) Park and ride areas can either be dedicated to the Township of North Brunswick or
maintained by the developer. If said area is not proposed for dedication to the township,
the developer shall be required to provide assurances for continued and perpetual
maintenance of the park and ride facility in a manner acceptable to the Planning Board. If
maintained by the developer, the developer shall be entitled to reserve use of the park and
ride area for development residents.
   (e) If dedicated to the township, the township shall reserve 50% of the improved parking
spaces for occupants of the development. Two months after occupancy of the last unit, if
all of the spaces reserved for development residents are not being utilized, then said
spaces shall become available to the general public in accordance with township priorities
for operation of park and ride facilities.
   (f) Certificates of occupancy shall not be issued for more than 50% of the units until such
time as the park and ride lot is fully improved.

§ 316-6. Requirements for nonresidential developments.

A. Traffic reduction plan.
   (1) Every new nonresidential development of 15,000 square feet or more not exempted herein,
and all complexes as defined herein, shall be required to submit a traffic reduction plan to the
Planning Board at the time of submission for site plan approval. Said traffic reduction plan shall
be required to be submitted before an application for site plan approval can be determined
complete.

   (2) Said traffic reduction plan shall be forwarded by the Planning Board to the OTM for a
nonbinding recommendation as to whether the plan meets the traffic reduction goals of this
chapter. Submission of a traffic reduction plan acceptable to the Planning Board shall be a
requirement for site plan approval.

   (3) The traffic reduction plan shall be designed, for each year after the complex becomes
occupied, to reduce that year's anticipated peak hour automobile trips to 70% of the projected
peak hour vehicle trips, based on professionally provided trip projections as presented in the traffic reduction plan approved at the time of site plan approval. These maximum vehicle usage goals shall be maintained after building occupancy commences, regardless of the variation between projected trip generation and the actual trip generation. Subsequent annual vehicle reduction targets shall be calculated as the difference between the initial vehicle reduction goal and the actual vehicle trips generated by the site employment as revealed in the annual report.

(4) The prescribed format for a traffic reduction plan for new nonresidential developments shall be provided by the OTM, and all traffic reduction plans shall comply as far as is practicable with the prescribed format.

(5) The traffic reduction plan can incorporate any combination of the following traffic mitigation measures deemed to be appropriate by the developer, based upon both the nature of the development and the traffic reduction goal to be achieved:
   (a) Designation of preferred parking for ridesharing and vanpooling participants.
   (b) Construction of shelters to facilitate traffic mitigation measures.
   (c) Establishment of shuttle bus service to and from the train station in the morning and afternoon.
   (d) Establishing an in-house or third party ridesharing or vanpooling program.
   (e) Establishing an information center to coordinate ridesharing and vanpooling among smaller businesses in a complex.

(6) The OTM shall review and recommend the traffic reduction plan for approval within 45 days of submission unless the OTM determines that said plan as designed cannot achieve required traffic reduction goals. If such a determination is made, the OTM shall recommend that the Planning Board not accept the plan and require that said plan be revised.

B. Continued existence of traffic coordinator. Any nonresidential development which exceeds 100,000 square feet shall continue to provide a traffic coordinator on a permanent basis.

C. Annual survey and report requirements.

(1) It shall be a condition of approval that all nonresidential developments which exceed 100,000 square feet must provide ongoing traffic management services and provide annual surveys to the OTM of all businesses occupying the premises.

(2) An annual report on the effectiveness of the plan, as updated, shall be submitted to the OTM. Failure to achieve the intended levels of trip reduction will be grounds for review and revision of any previously approved plans or other remedies as allowed under § 316-8.

(3) It shall be a condition of site plan approval that all new businesses which occupy 15,000 square feet or more of gross building area be notified that they are individually required to comply with the survey requirements of § 316-4A of this chapter within five months of occupancy. Subsequent occupants of 15,000 square feet or more shall be required to submit annual reports in accordance with the requirements of § 316-4B, unless a waiver is granted by the OTM for good cause shown. Developers or subsequent owners shall be required to submit
the names of all businesses leasing 15,000 square feet or more in a building or complex to the OTM.

D. Transition from new development to existing business. If, upon submission of its first required annual report, a new business owning or leasing 15,000 square feet or more can document that it employs fewer than 50 employees in the Township of North Brunswick, said business shall be exempted from the requirements of this chapter. Said business shall thereafter reapply for exemption each year by March 15.

E. Maintenance of traffic reduction measures in complexes. Developers or subsequent owners of complexes, as defined in this chapter, shall be responsible for assuring ongoing impact on traffic reduction goals from the facilities, services, incentives and/or activities included in the traffic reduction plan incorporated in the site plan approval. This requirement will not preclude the developer from providing alternate but commensurate traffic reduction facilities, services, incentives or activities found or expected to be more successful in meeting the vehicle reduction requirement. Revisions to the selected facilities, services, incentives or activities should be made via the annual report to the OTM. Approval for the revision of the traffic reduction plan shall not be unreasonably withheld by the OTM.

F. Special information requirements for warehousing and distribution developments. All existing and proposed warehousing and distribution facilities in excess of 20,000 square feet shall be required to provide an annual report to the OTM indicating the average number of trucks entering and leaving the site daily and during the morning and afternoon periods of 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.

§ 316-7. Waiver for exceptional difficulties.

Where, by reason of the nature of a particular business or operation or the location, nature or circumstances affecting a particular proposed new development, measures required to achieve the traffic reduction goals specified herein would entail exceptional practical difficulties to an existing business or developer, the OTM may grant, upon submission of a traffic reduction plan and accompanying application for relief hereunder, a waiver from the traffic reduction goals required herein. In granting such a waiver, the OTM shall require a traffic reduction plan which furthers the intent and purpose of this chapter as much as is practicable, given the circumstances.

§ 316-8. Enforcement.

A. Monitoring of program progress. Annual reports shall be submitted to determine whether businesses and new developments are making progress in achieving traffic reduction goals. If progress is found by the OTM to be inadequate, the business or developer shall be required to amend said traffic reduction plan. Businesses and developers directed to revise traffic reduction plans shall have 45 days to revise and resubmit an acceptable plan unless a waiver is granted by the OTM for good cause shown.
B. Enforcement agent. The Code Enforcement Officer shall be empowered to issue fines and summonses pursuant to this chapter upon certification from the OTM that businesses or developers have failed to comply with the submission requirements established herein.

C. Failure to implement, in demonstrated good faith fashion, the required traffic reduction plan will also constitute a violation. If evidence of good faith intent is clearly apparent, businesses or developers shall not be considered in violation of this chapter if the intended goals are not achieved.

D. Failure to comply with ordinance requirements. Failure to submit required annual surveys, annual reports, traffic reduction plans or revisions to traffic reduction plans shall constitute a violation of this chapter. After 30 days' written notice to remedy said infraction, violators shall be subject to a fine of $500 per month until such time as said violation of this chapter is abated by complying with the submission requirements established herein.
Appendix G:

King County, Washington – TDM Ordinance
City of Shoreline – TDM Ordinance
Proposed No. 2012-0047.1

AN ORDINANCE authorizing the King County executive
to enter into an interlocal agreement with the Washington
state Department of Transportation to provide
transportation demand management services on an as-
requested basis.

STATEMENT OF FACTS:

1. The Washington state Department of Transportation ("WSDOT") has
adopted a plan for addressing congestion, Moving Washington, that
includes a strategy for managing demand to decrease the need for
additional road capacity and maximize the efficiency of the transportation
system.

2. WSDOT recognizes that King County's department of transportation,
metro transit division ("Metro Transit"), has considerable expertise in
formulating and implementing transportation demand management
strategies and has contracted with Metro Transit in the past to design and
implement such programs.

3. The proposed agreement would allow WSDOT to enter into task order
contracts with Metro Transit to provide transportation demand
management services on an as-requested basis. The agreement sets forth
the terms and conditions by which Metro Transit would provide such
services, including the terms by which WSDOT would compensate Metro
Transit for such work.

4. Allowing Metro Transit to provide transportation demand management
services for WSDOT via periodic task order contracts as provided for in
the agreement, and to be compensated for such work, will allow the parties
to achieve cost savings and benefits that are in the public interest.

6. Chapter 39.34 RCW authorizes the state and the county to enter into an
interlocal cooperation agreement such as that set forth in Attachment A to
this ordinance.

BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

SECTION 1. The King County executive is hereby authorized to execute an
interlocal agreement with the Washington state Department of Transportation,
substantially in the form of Attachment A to this ordinance, to provide transportation
demand management services on an as-requested basis.

Ordinance 17301 was introduced on 1/30/2012 and passed by the Metropolitan King
County Council on 4/9/2012, by the following vote:

Yes: 7 - Mr. Phillips, Mr. von Reichbauer, Mr. Gossett, Ms. Patterson,
Ms. Lambert, Mr. Ferguson and Mr. Dunn
No: 0
Excused: 2 - Ms. Hague and Mr. McDermott

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON

Larry Gossett, Chair

ATTEST:

Anne Noris, Clerk of the Council

APPROVED this 13 day of April, 2012.

Ann B. Damph, Secretary

Attachments: A. Master Agreement for Transportation Demand Management Work by King County
# Master Agreement for Transportation Demand Management Work by King County

<table>
<thead>
<tr>
<th>Washington State Department of Transportation Public Transportation Division 401 - 2nd Avenue South Suite 300 Seattle, WA 98104</th>
<th>Work Performed By: King County Department of Transportation 201 South Jackson Street KSC-TR-0815 Seattle, WA 98104-3856</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Person: Robert Kutrich (206) 464-1231</td>
<td>Federal ID #: 91-6001327</td>
</tr>
<tr>
<td>Agreement Number: GCA 6141</td>
<td>Contact Person: Carol Cooper (206) 684-1623</td>
</tr>
</tbody>
</table>

THIS Master Transportation Demand Management ("TMD") Agreement (hereinafter “Agreement") is made and entered into between the STATE OF WASHINGTON, by and through the Washington State Department of Transportation, hereinafter the "STATE," and King County, a home rule charter county of the State of Washington, by and through the King County Department of Transportation (DOT), hereinafter the "COUNTY." Either entity may be referred to hereinafter individually as "Party" or collectively as the "Parties."

WHEREAS, the Legislature recognizes the STATE's leadership role in establishing and implementing effective commute trip reduction programs (RCW 70.94.547); and

WHEREAS, the Legislature finds that implementing commute trip reduction is an effective way to reduce traffic congestion (RCW 70.94.521); and

WHEREAS, RCW 47.08.050 requires that when planning capacity and operational improvements the STATE's first priority is to assess strategies to enhance the operational efficiency of the existing system; and

WHEREAS, RCW 47.01.078 directs the STATE to develop strategies to reduce the per capita vehicle miles traveled, to consider efficiency tools including commute trip reduction and other demand management tools, and to promote the integration of multimodal planning in support of the transportation system policy goals described in RCW 47.04.260; and

WHEREAS, RCW 47.06.050 states that strategies to enhance the operational efficiencies include, but are not limited to, access management, transportation system management, and demand management (Strategies); and

WHEREAS, the Legislature has directed the STATE to increase the integration of public transportation and the highway system, to facilitate coordination of transit services and planning, and to maximize opportunities to use public transportation to improve the efficiency of transportation corridors (RCW 47.01.330); and
WHEREAS, RCW 47.80.010 encourages the State and local jurisdictions to identify opportunities for cooperation to achieve statewide and local transportation goals; and

WHEREAS, the STATE is planning, developing, and constructing a number of projects, including but not limited to projects to improve sections of State Route 99, State Route 520, State Route 405, and other state routes (Projects); and

WHEREAS, it is anticipated that at least some of the Projects will cause substantial traffic congestion during construction; and

WHEREAS, it is anticipated that some of the work under this Agreement will mitigate the effects of traffic congestion caused by the Projects; and

WHEREAS, the COUNTY has experience and expertise in developing and implementing Strategies that reduce the number of single occupancy vehicle trips and improve the efficiency of state and local transportation systems; and

WHEREAS, the STATE will work cooperatively with the COUNTY to develop and implement integrated Strategies as directed in the STATE’s Moving Washington plan; and

WHEREAS, the STATE has determined that it is in the public interest for the COUNTY to perform certain elements of work to implement said Strategies; and

WHEREAS, this Agreement is intended to serve as a framework for a number of individual Task Orders that the STATE and COUNTY will subsequently enter into as part of this cooperative effort; and

WHEREAS, the actual work to be performed under this Agreement will be identified by executed Task Orders, which will specify the specific funding source for the work to be performed for each Task Order; and

WHEREAS, any state funding for work under this Agreement is authorized in the state biennial Transportation Budget(s) and any supplemental budget(s) thereto for the state program(s) specified in the Task Order; and

WHEREAS, some of the individual tasks may be funded by federal grants pursuant to the authority vested in the STATE through RCW 47.04.170; and

WHEREAS, any federal funding for work under this Agreement is authorized in the state biennial Transportation Budget(s) and any supplemental budget(s) thereto and pursuant to the federal authorities and program(s) specified in the Task Order; and

NOW THEREFORE, pursuant to RCW 47.28.140, RCW 47.52.090, and chapter 39.34 RCW, and in consideration of the terms, conditions, and performances contained herein, and the attached Exhibits which are incorporated and made a part hereof, the Parties mutually agree as follows:

GCA 6141 Master Agreement for TDM Work by King County Page 2 of 10
1. PURPOSE AND SCOPE

1.1 The provisions of this Agreement shall govern the individual Task Orders to be executed between the STATE and COUNTY for work to be performed by the COUNTY at the STATE's request, and for the STATE's reimbursement to the COUNTY for said work.

1.2 The general scope of work under this Agreement includes TDM work or services (Work) consistent with STATE transportation strategies to improve transportation system efficiency. Elements of Work consistent with this scope include:
   
   (a) Performing or developing studies and reports;
   (b) Performing planning activities;
   (c) Developing, implementing, and enhancing TDM Strategies and programs; and
   (d) Improving existing transportation facilities with appurtenances such as signs, bicycle lockers, wheelchair ramps, transit shelters, and transit signal priority system components (Project Equipment).

2. TASK ORDERS

2.1 Each Task Order shall be prepared by the STATE and approved by the COUNTY for Work requested under this Agreement. Task Orders shall be in the format shown and contain the provisions as set forth in the Task Order Format, Exhibit 1, attached hereto and by this reference made part of this Agreement. The Task Orders will be numbered sequentially and shall include the following:

   (a) a start and end date for performing the Work;
   (b) a detailed scope of work with deliverables and scheduled milestones, which shall define the roles and responsibilities of the COUNTY and the STATE;
   (c) the funding source(s) for the Work;
   (d) a maximum reimbursable cost to establish a maximum funding level for the Work, provided, however, that the County shall have no further obligation to perform work under any Task Order once the maximum reimbursable cost has been reached; and
   (e) language stating that the provisions of this Agreement are incorporated by reference into the Task Order.

2.2 The Task Order may, if applicable, include Federal Transit Administration Provisions, attached hereto as Exhibit A to Exhibit 1, or Project Equipment Provisions, attached hereto as Exhibit B to Exhibit 1. Exhibit A to Exhibit 1 and Exhibit B to Exhibit 1 are by the aforementioned references incorporated herein and made part of the Agreement; provided, however, that any proposed Task Order that involves project equipment will identify and specify with particularity the nature of the project equipment involved.

2.3 Notwithstanding any other provision of this Agreement the COUNTY expressly reserves the right to decline to enter into any Task Order to perform the Work proposed by the STATE.

3. PAYMENT AND BILLING

3.1 Payment. The STATE will reimburse the COUNTY for the full actual direct salary and related direct non-salary costs associated with the COUNTY'S performance of specific Task
Order Work undertaken pursuant to this Agreement. Related direct non-salary costs include all other related Work items excluding overhead and direct salary costs.

3.2 Maximum Funding. This Agreement does not authorize funding for any Work and contains no guarantees for any minimum or maximum amount of Work or funding. The Parties shall agree to a maximum amount of funding under each Task Order for all eligible costs associated with the Work, which shall be specified in each Task Order. The STATE shall not be obligated for any expenditure in excess of the maximum funding amount for each Task Order unless prior written authorization is received from the STATE and an amendment to the Task Order is executed; provided, however, that the County shall have no further obligation to perform Work pursuant to a Task Order once the maximum funding amount is reached. The COUNTY must perform Work in advance of reimbursement.

3.3 Invoices and Billing. Partial payments to the COUNTY shall be made by the STATE throughout the term of each Task Order, subject to the STATE's receipt and subsequent approval of detailed billing invoices from the COUNTY for the Work outlined in the Task Order and any amendments thereto. The COUNTY shall submit invoices for actual direct salary and related direct non-salary costs incurred within the timeframe of the executed Task Order. The COUNTY may submit invoices no more than once a month and no less than once per quarter. An invoice must be submitted no later than ninety (90) calendar days after the Work is completed, except as noted below.

3.3.1 For all Work performed up to and including June 30 of each year the COUNTY must submit an invoice to the STATE no later than July 15 of that same year to be eligible for payment. The COUNTY may notify the STATE in writing that the COUNTY requests additional time to provide invoices. Upon the STATE's receipt of such written notification the STATE may choose to accrue funds to allow the COUNTY additional time to provide invoices. The COUNTY must obtain written approval from the STATE by June 15 of each year for any requests for accruals or requests for additional time to submit invoices, which approval shall not be unreasonably withheld or delayed by the STATE. Otherwise, the STATE will not pay invoices received after that date for Work performed up to and including June 30 of each year.

3.3.2 The STATE agrees to make payment for the Work done by the COUNTY within thirty (30) calendar days from receipt of a STATE-approved invoice from the COUNTY.

3.3.3 The COUNTY shall submit a final invoice to the STATE within ninety (90) calendar days or no later than July 15 of the same year after completion of the Work, whichever date comes first, unless previously authorized by the State in accordance with Section 3.3.1, which approval shall not be unreasonably withheld or delayed. Any payment request for funds received after that date will not be eligible for reimbursement. Requests for additional time to submit an invoice shall be in accordance with Section 3.3.1, above.

4. DESIGNATED REPRESENTATIVES

4.1 Notice. Any notice or communication required or permitted to be given pursuant to this Agreement shall be in writing, and shall be sent postage prepaid by United States Postal Service, to the designated representatives identified below unless otherwise indicated in writing by the Parties.
5. **AMENDMENT**

5.1 Amendment. Either Party may request changes to the provisions of this Agreement. Any such changes must be mutually agreed upon and incorporated by written amendment to this Agreement. No variation or alteration of the terms of this Agreement shall be valid unless made in writing and signed by authorized representatives of the Parties hereto prior to beginning any Work to be covered by any amendment.

6. **DISPUTE RESOLUTION**

6.1 Disputes and Remedies. The Parties, through their designated representatives identified in Section 4.1 of this Agreement, shall use their best efforts, through good faith discussion and negotiation, to resolve any disputes pertaining to this Agreement that may arise between the Parties. If these designated representatives are unable, after good faith efforts, to resolve a dispute, the STATE’s Puget Sound Public Transportation Manager and the COUNTY’S Metro Transit General Manager shall review the matter and attempt to resolve it. If they are unable to resolve the dispute, the STATE’s Public Transportation Assistant Director and the COUNTY’S DOT Deputy Director will meet and engage in good faith negotiations to resolve the dispute. In the event they cannot resolve the dispute, the STATE’s Public Transportation Director and the COUNTY’S DOT Director will meet and engage in good faith negotiations to resolve the dispute. The Parties agree to exhaust each of these informal dispute resolution efforts before seeking to resolve disputes in a court of law or any other forum.

7. **ACCOUNTING RECORDS**

7.1 Project Accounts. The COUNTY agrees to establish and maintain for the Task Order Work either a separate set of accounts or separate accounts within the framework of an established accounting system that can be identified with the Work. The COUNTY agrees that all checks, payrolls, invoices, contracts, vouchers, orders, or other accounting documents pertaining in whole or in part to the Work shall be clearly identified, readily accessible and available to the STATE upon its reasonable request, and, to the extent feasible, kept separate from documents not pertaining to the Work.

7.2 Documentation of Project Costs and Program Income. The COUNTY agrees to support all allowable costs charged to the Work, including any approved services contributed by the COUNTY or others, with properly executed payrolls, time records, invoices, contracts, or
vouchers describing in detail the nature and propriety of the charges. The COUNTY also agrees
to maintain accurate records of all program income derived from implementing the Work.

8. RECORDS RETENTION, AUDIT, AND INSPECTION

8.1 Retention of Records. During the progress of an individual Task Order and for a
period not less than six (6) years from the date of final payment by the STATE, the records and
accounts pertaining to the Task Order and accounting therefore are to be kept available by the
Parties for inspection and audit by Washington State, the STATE, King County, the COUNTY,
the Federal Transit Administration, and/or the Federal Highway Administration and copies of all
records, accounts, documents, or other data pertaining to the Task Order will be furnished by
the COUNTY upon reasonable request. If any litigation, claim, or audit is commenced, the
records and accounts along with supporting documentation shall be retained by the COUNTY
until all litigation, claim, or audit finding has been resolved even though such litigation, claim, or
audit continues past the six (6)-year retention period.

8.2 General Audit Requirements. The COUNTY agrees to obtain any other audits as the
STATE shall decide in its sole discretion are reasonably required. Project closeout will not alter
the COUNTY's audit responsibilities.

8.3 Inspection. The COUNTY agrees to permit the STATE, and the State Auditor, or their
authorized representatives, to inspect all Task Order Work materials, payrolls, maintenance
records, and other data, and to audit the books, records, and accounts of the COUNTY and its
subcontractors pertaining to the Work. The COUNTY agrees to require each third party to
permit the STATE, and the State Auditor, or their duly authorized representatives, to inspect all
work, materials, payrolls, maintenance records, and other data and records involving that third
party contract, and to audit the books, records, and accounts involving that third party contract
as it affects the Work.

9. TASK ORDER FUNDING REQUIREMENTS

9.1 In order to preserve the option of utilizing a variety of funding sources to reimburse the
Work covered by this Agreement, the Parties agree to comply with the applicable laws,
regulations, and requirements of each funding source. Each Task Order shall identify the
funding sources for the Work and shall include each fund's relevant provisions, as set forth in
Section 2, TASK ORDERS, above.

10. EFFECTIVENESS AND DURATION

10.1 This Agreement is effective upon execution by both Parties and will remain in effect until
December 31, 2018, unless otherwise amended or terminated.

11. DOCUMENTATION

11.1 The STATE may require the submission of periodic reports and documentation from the
COUNTY to verify that the COUNTY or its subcontractors are meeting funding and
accountability requirements, such as civil rights or disadvantaged business enterprises. Subject
to the terms and conditions described in this Agreement, the Parties shall agree to
documentation requirements for Work as specified in the scope of work for each Task Order.
12. TERMINATION OF AGREEMENT

12.1 Termination for Convenience. Except as otherwise provided in this Agreement, the STATE may terminate this Agreement or any Task Order by giving sixty (60) calendar days written notice to the COUNTY. The COUNTY may also terminate this Agreement or any Task Order by giving sixty (60) calendar days written notice to the STATE. Upon termination of this Agreement, all Task Orders shall automatically terminate. Individual Task Orders may be terminated in the same manner as provided for in this subsection 12.1, unless another manner is provided for in an individual task order, but that termination would not automatically terminate the Master Agreement.

12.2 Termination by the COUNTY for Non-Appropriation or Lack of Funds. The COUNTY may terminate this Agreement or any Task Order in the event that sufficient COUNTY funds are not appropriated, or otherwise become unavailable, to cover performance of any Work undertaken by the COUNTY under this Agreement prior to reimbursement by the STATE. Such termination shall be upon thirty (30) calendar days’ written notice to the STATE or at the close of the COUNTY’S current appropriation year, whichever comes first. The COUNTY’S appropriation year ends on December 31st of each year.

12.3 Termination by the STATE for Non-appropriation or Unavailability of Funds. The STATE may terminate this Agreement or any Task Order at any time in the event that appropriated federal or state funds to cover the Work agreed to under this Agreement are withdrawn by federal or legislative action, or otherwise become unavailable.

12.4 Termination by either Party for Breach. Either Party may terminate the Agreement or any Task Order if either Party materially breaches, or fails to perform any of the requirements of the Agreement or any Task Order provided that the breaching Party has failed to cure the condition(s) causing that breach after fourteen (14) days written notice by the non-breaching Party.

12.5 Should a Task Order or the Agreement be terminated under Section 12.1, 12.2, or 12.3 of the Agreement prior to fulfillment of the terms stated therein (termination date), the COUNTY shall only be reimbursed for actual direct salary and related direct non-salary costs properly incurred by the COUNTY prior to the termination date. The cost of any Project Equipment which has been purchased by the COUNTY prior to the termination date shall be reimbursed if the following two conditions are met and approved in writing by STATE, which approval shall not be unreasonably withheld or delayed: i) the COUNTY endeavors to return the Project Equipment for a refund; and ii) the COUNTY is unable, with reasonable efforts not requiring litigation and with STATE’S concurrence, which concurrence shall not be unreasonably withheld or delayed, to obtain a refund for the Project Equipment from the vendor. The COUNTY agrees to follow STATE’S instructions for disposal of any Project Equipment thus reimbursed.

12.6 If a Task Order or this Agreement is terminated by either Party to this Agreement under Section 12.4 of the Agreement, the non-breaching Party shall not be obligated to continue to perform pursuant to the Agreement and shall retain all rights and remedies arising from the nonperformance of the breaching Party.
13. **INDEMNIFICATION AND LIMITATION OF LIABILITY**

13.1 The COUNTY shall indemnify and hold harmless the STATE, its agents, employees, and officers harmless from and process and defend at its own expense any and all claims, demands, suits at law or equity, actions, penalties, losses, damages, or costs (hereinafter referred to collectively as "claims"), of whatsoever kind or nature brought against the STATE arising out of, in connection with or incident to the execution of this Agreement and/or the COUNTY'S performance or failure to perform any aspect of this Agreement. This indemnity provision applies to all claims against the STATE, its agents, employees and officers arising out of, in connection with or incident to the negligent acts, omissions or claims caused by the negligent acts or omissions of the STATE, its agents, employees and officers. Provided, however, that nothing herein shall require the COUNTY to indemnify and hold harmless or defend the STATE, its agents, employees or officers to the extent that claims are caused by the negligent acts or omissions of the STATE, its agents, employees or officers. The indemnification and hold harmless provision shall survive termination of this Agreement.

13.2 The COUNTY specifically assumes potential liability for actions brought by COUNTY'S employees and/or subcontractors and solely for the purposes of this indemnification and defense, the COUNTY specifically waives any immunity under the State Industrial Insurance Law, Title 51 Revised Code of Washington.

14. **NONDISCRIMINATION**

14.1 The Parties agree to comply with all applicable federal, state, and local laws, rules, and regulations pertaining to nondiscrimination and agree to require the same of all authorized agents and/or subcontractors providing services or performing any Work using funds provided under this Agreement.

15. **GENERAL**

15.1 **No Agency, Partnership, or Third Party Beneficiaries.** It is understood and agreed that this Agreement is solely for the benefit of the Parties hereto and gives no rights to any other person, party or entity. No joint venture, agent-principal relationship, or partnership is formed as a result of this Agreement. No officers, employees or agents of one Party, or any of its contractors or subcontractors, shall be deemed, or represent themselves to be, employees or agents of the other Party.

15.2 **Waiver of Default.** Waiver of any default shall not be deemed to be a waiver of any subsequent default. Waiver of breach of any provision of this Agreement shall not be deemed to be a waiver of any other or subsequent breach and shall not be construed to be a modification of the terms of this Agreement unless so stated to be such in writing, signed by authorized representatives of the Parties, and attached to the original Agreement.

15.3 **Entire Agreement.** This Agreement embodies the Parties' entire understanding and agreement on the issues covered by it, except as may be modified by written amendment to this Agreement, and supersedes any prior negotiations, representations or draft agreements on this matter, either written or oral.

15.4 **Master Agreement.** The provisions of this Master Agreement and individual Task Orders issued by the STATE are intended to be mutually complementary. In case of any discrepancy between the provisions, the Master Agreement shall prevail over the Task Order.
15.5 Governing Law and Venue. This Agreement shall be interpreted in accordance with the laws of the State of Washington. Any legal action arising out of this Agreement shall be brought in the Thurston County Superior Court situated in Olympia, Washington.

15.6 Force Majeure. Either Party to this Agreement shall be excused from performance of any responsibilities and obligations under this Agreement, and shall not be liable for damages due to failure to perform, during the time and to the extent that it is prevented from performing by a cause directly or indirectly beyond its control, including, but not limited to: late delivery or nonperformance by vendors of materials or supplies; any incidence of fire, flood, snow, earthquake, or acts of nature; strikes or labor actions; accidents, riots, insurrection, terrorism, or acts of war; order of any court of competent jurisdiction or authorized civil authority commandeering material, products, or facilities by the federal, state or local government; or national fuel shortage; when satisfactory evidence of such cause is presented to the other Party to this Agreement, and provided that such non-performance is beyond the control and is not due to the fault or negligence of the Party not performing. In no event should this provision eliminate the STATE's obligation to make payment for invoices submitted for Work performed by the COUNTY pursuant to this Agreement.

15.7 Severability. If any provision of this Agreement is held invalid by a court of competent jurisdiction, the remainder of the Agreement shall not be affected thereby if such remainder would then continue to serve the purposes and objectives originally contemplated by the Parties.

15.8 Attorneys' Fees. In the event of litigation or other action brought to enforce the terms contained in this Agreement, each Party agrees to bear its own attorneys' fees, witness fees, and other costs.

15.9 Survival. The provisions of this Section 15 (General) shall survive any termination or expiration of this Agreement.

15.10 Order of Precedence. In the event of any conflicts, resolution shall be resolved in the following order of precedence:

A. Applicable federal and state law and regulations;
B. Terms and conditions of the Agreement including its exhibits; and
C. The applicable Task Order.

16.0 Authority to Sign. The undersigned acknowledge that they are authorized to execute this Agreement and bind their respective entities to the obligations set forth herein.
IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the Party's date signed last below.

KING COUNTY
DEPARTMENT OF TRANSPORTATION

By: Harold S. Taniguchi
Director, King County DOT

Date

WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION

By: Brian Lagerberg
Director, Public Transportation Division

Date

APPROVED AS TO FORM:

By
Deputy Prosecuting Attorney

Date

10/5/11

APPROVED AS TO FORM:

By
Assistant Attorney General

Date

July 1, 2001

GCA 6141
Master Agreement for TDM Work by King County
Page 10 of 10
GCA 6141

Master Agreement for Transportation Demand Management Work
by King County

Exhibit 1

Task Order Format
### GCA 6141 Task Order

**Transportation Demand Management Work by King County**

<table>
<thead>
<tr>
<th>Washington State Department of Transportation</th>
<th>King County Department of Transportation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task Order Manager: [name]</td>
<td>Task Order Manager: [name]</td>
</tr>
<tr>
<td>[206] [phone]</td>
<td>[206] [phone]</td>
</tr>
<tr>
<td><em>[email]</em></td>
<td><em>[email]</em></td>
</tr>
</tbody>
</table>

**Maximum Reimbursable Cost:** $[insert number]

**Task Order Term:** [start date (Month day, year)] through [end date (Month day, year)].

**Funding Sources:** [select the specific funding sources for this Task Order]

- **Federal Funds**
  - [ ] Job Access and Reverse Commute (JARC) – pursuant to 49 United States Code (USC) §5316.
  - [ ] Congestion Mitigation and Air Quality Improvement Program (CMAQ) – authorized under 49 USC chapter 53 of title 23, the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, continued under the Transportation Equity Act for the 21st Century (TEA-21), and re-authorized by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Pub. L. 109-59, 114 (Aug. 10, 2005) for congestion mitigation and air quality improvement programs under 23 USC §149.
  - [ ] [name of other federal program or funding source]

- **State Highway Funds**
  - [ ] Alaskan Way Viaduct and Seawall Replacement Program
  - [ ] Interstate 405 Corridor Program
  - [ ] SR 520 Bridge Replacement and HOV Program
  - [ ] [name of other highway program or funding source]

- **Other State Funds**
  - [ ] Commute Trip Reduction (CTR) Program
  - [ ] Vanpool Investment Program (VIP)
  - [ ] [name of other state program or funding source]

- **Local Funds**
  - [ ] [name of local program or funding source]

- **Other**
  - [ ] [name of program or funding source]

**THIS Task Order is made and entered into between the Washington State Department of Transportation, hereinafter the "STATE," and King County, by and through its Department of Transportation, hereinafter the "COUNTY."**
WHEREAS, Agreement GCA 6141, Master Agreement for Transportation Demand Management Work by King County (Agreement), sets forth the terms and conditions applicable to the Parties' obligations regarding the COUNTY's performance of Transportation Demand Management work or services (Work) for the STATE.

WHEREAS, the Parties wish to enter into a Task Order for the COUNTY to perform Work for [insert project title].

NOW, THEREFORE, in consideration of the terms, conditions, and performances contained in the Agreement, this Task Order, and the attached exhibits, the Parties mutually agree as follows:

Exhibits [optional] The following exhibits are attached hereto and incorporated into this Task Order (check all that apply):

☐ Exhibit A, Federal Transit Administration (FTA) Provisions

Where an inconsistency is identified between a provision of GCA 6141 and a provision included in Exhibit A referenced above or in a FTA special provision stated below under Additional Terms and Conditions, the language of the federal provision has precedence.

The COUNTY understands and agrees that Federal laws, regulations, and directives applicable to the Task Order on the date on which the FTA Authorized Official awarded Federal assistance may be modified from time to time. In particular, new Federal laws, regulations, and directives may become effective after the date of execution of this Task Order, and may apply to this Task Order. The COUNTY agrees that the most recent of such Federal laws, regulations, and directives, as may be amended, will apply to the administration of this Task Order at any particular time, except to the extent that FTA determines otherwise in writing.

☐ Exhibit B, Project Equipment Provisions

Scope of Work The COUNTY shall perform the Work described below:

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Scope of Work Deliverables and Schedule The milestone dates listed below are meant to be used as a guideline, and may be changed as necessary once project work begins, as mutually agreed in writing by both Parties.

<table>
<thead>
<tr>
<th>Task</th>
<th>Deliverable</th>
<th>Milestone Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The maximum reimbursable cost for all Work associated with this Task Order will be [insert total dollar amount spelled out] ($[insert number]).

Payment under this Task Order will be made in accordance with Section 3, PAYMENT AND BILLING, of GCA 6141.

Additional Terms and Conditions [optional]

The Parties agree to the following additional terms and conditions for the performance of the Work under this Task Order:

[When applicable, additional items, clauses, conditions, or provisions specific to the Work that are consistent with GCA 6141 shall be inserted here. When applicable, FTA special provisions from the FTA Master Agreement for specific funding programs shall be inserted here. Delete this provision if not needed.]

All other terms and conditions of Master Agreement GCA 6141 shall be incorporated and by this reference made part of this Task Order, as if fully set forth herein.

NOW, THEREFORE, are the Parties hereto have executed this Task Order _____ as of the Party’s date signed last below.

KING COUNTY
DEPARTMENT OF TRANSPORTATION

By
Title
Date

WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION

By
Title
Date

GCA 6141 Task Order _____ [Project Title] Page 3 of 4
GCA 6141
Master Agreement for Transportation Demand Management Work by King County

EXHIBIT A
Federal Transit Administration Provisions

Section 1
General

The COUNTY agrees to include these provisions in each subcontract financed in whole or in part with Federal assistance provided by Federal Transit Administration (FTA) and in all contracts it enters into for the employment of any individuals, procurement of any materials, or the performance of any Work under this Task Order. It is further agreed that these clauses shall not be modified, except to identify the subcontractor or other person or entity that will be subject to its provisions. In addition, the following provision shall be included in any advertisement or invitation to bid for any procurement by the COUNTY under this Task Order:

Statement of Financial Assistance -
This Agreement is subject to a financial assistance contract between the Washington State Department of Transportation and the Federal Transit Administration and the appropriations of the State of Washington.

Section 2
Procurement

The COUNTY shall make purchases of any incidental goods, essential supplies, or Project Equipment pursuant to this Task Order through procurement procedures approved in advance by the STATE and consistent with the following provisions:
A. General Procurement Requirements. The COUNTY shall comply with third party procurement requirements of 49 U.S.C. chapter 53 and other applicable Federal Laws in effect now or as subsequently enacted; with U.S. Department of Transportation (DOT) third party procurement regulations of 49 C.F.R. § 18.36 and other applicable Federal Regulations pertaining to third party procurements and subsequent amendments thereto. The COUNTY shall also comply with the provisions of FTA Circular 4220.1,F, "Third Party Contracting Requirements," November 1, 2008, and any later revision thereto, except to the extent FTA determines otherwise in writing, which by this reference are incorporated herein; and any reference therein to "Grantee" shall mean COUNTY. The COUNTY agrees that it may not use FTA assistance to support its third party procurements unless there is satisfactory compliance with Federal laws and regulations.
B. Full and Open Competition. In accordance with 49 U.S.C. § 5325(a), the COUNTY agrees to conduct all procurement transactions in a manner that provides full and open competition as determined by FTA.
C. Exclusionary or Discriminatory Specifications. Apart from inconsistent requirements imposed by Federal laws or regulations, the COUNTY agrees to comply with the requirements of 49 U.S.C. § 5325(h) by not expending or otherwise using any Federal assistance awarded to support a procurement using exclusionary or discriminatory specifications.
D. Preference for United States Products and Services. To the extent applicable, the COUNTY agrees to comply with the following U.S. preference requirements:
1. **Buy America.** The COUNTY agrees to comply with 49 U.S.C. § 5323(i), with FTA regulations, "Buy America Requirements," 49 C.F.R. Part 661, and any later amendments thereto.


3. **Fly America.** The COUNTY understands and agrees that the Federal Government will not participate in the costs of international air transportation of any persons involved in or property acquired for the Work unless that air transportation is provided by U.S.-flag air carriers to the extent service by U.S.-flag air carriers is available, in accordance with the International Air Transportation Fair Competitive Practices Act of 1974, as amended, 49 U.S.C. § 40118, and with U.S. GSA regulations, "Use of United States Flag Air Carriers," 41 C.F.R. §§ 301-10.131 through 301-10.143.

**E. Geographic Restrictions.** The COUNTY agrees to not use any State or Local geographic preference, except those expressly mandated or encouraged by federal statute or as permitted by FTA.

**F. Preference for Recycled Products.** To the extent applicable, The COUNTY agrees to comply with U.S. Environmental Protection Agency (U.S. EPA), "Comprehensive Procurement Guideline for Products Containing Recovered Materials", 40 C.F.R. Part 247, which implements section 6002 of the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act, as amended, 42 U.S.C. § 6962. Accordingly, the COUNTY agrees to provide a competitive preference for products and services that conserve natural resources, protect the environment, and are energy efficient, except to the extent that the Federal Government determines otherwise in writing.


**H. Government Orders.** In case any lawful government authority shall make any order with respect to the Work or Project Equipment, or any part thereof, or the PARTIES hereto or either PARTY, the COUNTY shall cooperate with the STATE in carrying out such order and will arrange its operation and business so as to enable the STATE to comply with the terms of the order.

---

**Section 3**

**Incorporation of Federal Terms**

**A. Purchasing.** This Task Order's provisions include, in part, certain Standard Terms and Conditions required by FTA, whether or not expressly set forth herein. All contractual provisions as set forth in FTA Circular 4220.1E are hereby incorporated by reference. All FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Task Order. The COUNTY shall not perform any act, fail to perform any act, or refuse to comply with any STATE request, which would cause the STATE to be in violation of any FTA term or condition.

**B. Federal Changes.** The COUNTY shall at all times comply with all applicable FTA regulations, policies, procedures and directives, whether or not they are referenced in this Task Order and agrees to comply with any amendments promulgated by the FTA, during the term of this Task Order. The COUNTY'S failure to so comply shall constitute a material breach of this Task Order.
Section 4
No Obligation by the Federal Government

A. The STATE and the COUNTY acknowledge and agree that, regardless of any concurrence by the Federal Government or approval of the solicitation or award of this Task Order, the Federal Government is not a party to this Task Order and shall not be subject to any obligations or liabilities to the COUNTY, subcontractor, lessee or any other participant at any tier of the Work (whether or not a PARTY to this Task Order) pertaining to any matter resulting from this Task Order.

B. No contract between the COUNTY and its subcontractors, lessees, or any other participant at any tier of the Work shall create any obligation or liability of the STATE with regard to this Task Order without the STATE’s specific written consent, notwithstanding its concurrence in, or approval of, the award of any contract or subcontract or the solicitations thereof. The COUNTY hereby agrees to include this provision in all contracts it enters into for the employment of any individuals, procurement of any materials, or the performance of any Work to be accomplished under this Task Order.

Section 5
Ethics

A. Code of Ethics. The COUNTY agrees to maintain a written code or standards of conduct that shall govern the performance of its officers, employees, board members, or agents engaged in the award and administration of contracts, subagreements, leases, third party contracts, or other arrangements supported by Federal assistance. The code or standards shall provide that the COUNTY’S officers, employees, board members, or agents may neither solicit nor accept gratuities, favors, or anything of monetary value from any present or potential subcontractor, lessee, sub-recipient, or participant at any tier of the Work, or agent thereof. The COUNTY may set de-minimis rules where the financial interest is not substantial, or the gift is an unsolicited item of nominal intrinsic value. These codes or standards shall prohibit the COUNTY’S officers, employees, board members, or agents from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest or personal gain. As permitted by State or Local Law or Regulations, such code or standards shall include penalties, sanctions, or other disciplinary actions for violations by the COUNTY’S officers, employees, board members, or agents, or by subcontractors, lessees or sub-recipients, other participants or their agents. The COUNTY must fully comply with all the requirements and obligations of chapter 42.52 RCW that govern ethics in State and Local Governments.

1. Personal Conflict of Interest. The COUNTY’S code or standards shall prohibit the COUNTY’S employees, officers, board members, or agents from participating in the selection, award, or administration of a contract supported by “Federal Funds" if a real or apparent conflict of interest would be involved. Such a conflict would arise when any of the parties set forth below has a financial or other interest in the firm or entity selected for award:
   a. The employee, officer, board member, or agent;
   b. Any member of his or her immediate family;
   c. His or her partner, or
   d. An organization that employs, or is about to employ, any of the above.

2. Organizational Conflict of Interest. The COUNTY’S code or standard of conduct must include procedures for identifying and preventing real and apparent organizational conflicts of interest. An organizational conflict of interest exists when the nature of the Work to be performed under a proposed third party contract, subagreement, lease, or other arrangement at any tier may, without some restrictions on future activities, result in
an unfair competitive advantage to the third party contractor or impair its objectivity in performing the Work under this Task Order.

B. Debarment and Suspension. The COUNTY agrees to comply and assures the compliance of each sub-recipient, lessee, third party contractor, or other participant at any tier of the Work with the requirements of Executive Orders Numbers 12549 and 12689, "Debarment and Suspension," 31 U.S.C. § 6101 note, and U.S. DOT regulations "Non-procurement Suspension and Debarment" 2 C.F.R. Part 1200, which adopts and supplements the provisions of U.S. Office of Management and Budget (U.S. OMB) "Guidelines to Agencies on Governmentwide Debarment and Suspension (Non-procurement)" 2 C.F.R. Part 180. The COUNTY agrees to and assures that its sub-recipients, lessees, third party contractors, and other participants at any tier of the Work will review the "Excluded Parties Listing System" at http://epls.arnet.gov before entering into any third sub-agreement, lease, third party contract, or other arrangement in connection with the Task Order.

C. Bonus or Commission. The COUNTY affirms that it has not paid, and agrees not to pay, any bonus or commission to obtain approval of its application for Federal financial assistance for this Task Order.

D. Relationships with Employees and Officers of the STATE. The COUNTY shall not extend any loan, gratuity or gift of money in any form whatsoever to any employee or officer of the STATE, nor shall the COUNTY rent or purchase any Equipment and materials from any employee or officer of the STATE.

E. Employment of Former STATE Employees. The COUNTY hereby warrants that it shall not engage on a full, part-time, or other basis during the period of this Task Order, any professional or technical personnel who are, or have been, at any time during the period of this Task Order, in the employ of the STATE without written consent of the STATE.

F. Restrictions on Lobbying. The COUNTY agrees to:

1. Comply with 31 U.S.C. § 1352(a) and will not use Federal assistance to pay the costs of influencing any officer or employee of a Federal agency, Member of Congress, officer of Congress or employee of a member of Congress, in connection with making or extending this Task Order; and

2. Comply, and assure compliance by each subcontractor at any tier, each lessee at any tier and each sub-recipient at any tier, with applicable requirements of U.S. DOT regulations, "New Restriction on Lobbying," 49 C.F.R. Part 20, modified as necessary by 31 U.S.C. §1352; and

3. Comply with Federal statutory provisions to the extent applicable prohibiting the use of Federal assistance Funds for activities designed to influence Congress or a state legislature on legislation or appropriations, except through proper, official channels.

G. Employee Political Activity. To the extent applicable, the COUNTY agrees to comply with the provisions of the "Hatch Act," 5 U.S.C. §§ 1501 through 1508, and §§ 7324 through 7326, and Office of Personnel Management regulations, "Political Activity of State or Local Officers or Employees," 5 C.F.R. Part 151. The "Hatch Act" limits the political activities of state and local agencies and their officers and employees, whose principal employment activities are financed in whole or in part with "Federal Funds" including a loan, grant, or cooperative agreement. Nevertheless, in accordance with 49 U.S.C. § 5307(k)(2)(B) and 23 U.S.C. § 142(g), the "Hatch Act" does not apply to a non-supervisory employee of a transit system (or of any other agency or entity performing related functions) receiving assistance pursuant to the SAFETEA-LU provisions and/or receiving FTA assistance to whom the "Hatch Act" does not otherwise apply.

H. False or Fraudulent Statements or Claims. The COUNTY acknowledges and agrees that:

1. The Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. §§ 3801 et seq., and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. Part 31, apply to its activities in connection with the Task Order. Accordingly, by executing this Task Order, the COUNTY certifies or affirms the truthfulness and accuracy of each
statement it has made, it makes, or it may make in connection with the Work covered by this Task Order. In addition to other penalties that may apply, the COUNTY also acknowledges that if it makes a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986, as amended, on the COUNTY to the extent the Federal Government deems appropriate.

2. Criminal Fraud: If the COUNTY makes a false, fictitious, or fraudulent claim, statement, submission, certification, assurance, or representation to the Federal Government or includes a false, fictitious, or fraudulent statement or representation in any agreement in connection with this Task Order authorized under 49 U.S.C. chapter 53 or any other Federal Law, the Federal Government reserves the right to impose on the COUNTY the penalties of 49 U.S.C. § 5323(l), 18 U.S.C. § 1001 or other applicable Federal Law to the extent the Federal Government deems appropriate.

I. Trafficking in Persons. To the extent applicable, the COUNTY agrees to comply with, and assures the compliance of each subrecipient with, the requirements of the subsection 106(g) of the Trafficking Victims Protection Act of 2000 (TVPA), as amended, 22 U.S.C. § 7104(g), and the provisions of Subsection 3.g of FTA Master Agreement (17) dated October 1, 2010, which by this reference is incorporated herein as if fully set out in this Task Order, and any amendments thereto, and accessible at http://www.fta.dot.gov/documents/17-master.pdf, consistent with U.S. OMB guidance, “Trafficking in Persons: Grants and Cooperative Agreements,” 2 C.F.R. Part 175.

Section 6

Civil Rights

The COUNTY shall comply with all applicable civil rights laws, regulations and directives except to the extent that the Federal Government determines otherwise in writing. These include but are not limited to, the following:

A. Nondiscrimination in Federal Transit Programs. The COUNTY agrees to comply, and assures compliance by each third party contractor, lessee or other participant at any tier, with the provisions of 49 U.S.C. §5332, which prohibits discrimination on the basis of race, color, creed, national origin, sex, or age, and prohibits discrimination in employment or business opportunity;

B. Nondiscrimination-Title VI of the Civil Rights Act. The COUNTY agrees to comply, and assure compliance by each third party contractor at any tier, with all provisions prohibiting discrimination on the basis of race, color, or national origin, of Title VI of the Civil Rights Act of 1964, as amended, 42 U.S.C. §§ 2000d et seq.; and U.S. DOT regulations, "Nondiscrimination in Federally-Assisted Programs of the Department of Transportation -Effectuation of Title VI of the Civil Rights Act," 49 C.F.R. Part 21. Except to the extent FTA determines otherwise in writing, the COUNTY also agrees to follow all applicable provisions of FTA Circular 4702.1A, "Title VI and Title VI-Dependent Guidelines for Federal Transit Assistance Recipients," May 13, 2007, and any other applicable implementing Federal Directives that may be issued;

C. Equal Employment Opportunity. The COUNTY agrees to comply, and assures compliance by each third party contractor, lessee or other participant at any tier of this Work, with all requirements of Title VII of the Civil Rights Act of 1964, as amended, 42 U.S.C. § 2000e et seq., and 49 U.S.C. § 5332 and any implementing Federal Regulations and any subsequent amendments thereto. Except to the extent FTA determines otherwise in writing, the COUNTY also agrees to comply with any applicable Federal equal employment opportunity (EEO) directives that may be issued. Accordingly:

1. The COUNTY agrees that it will not discriminate against any employee or applicant for employment because of race, color, creed, sex, disability, age, or national origin. The COUNTY agrees to take affirmative action to ensure that applicants are employed and
that employees are treated during employment, without regard to their race, color, creed, sex, disability, age, or national origin. Such action shall include, but not be limited to, employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The COUNTY shall also comply with any implementing requirements FTA may issue.

2. If the COUNTY is required to submit and obtain Federal Government approval of its EEO program, that EEO program approved by the Federal Government is incorporated by reference and made part of this Task Order. Failure by the COUNTY to carry out the terms of that EEO program shall be treated as a violation of this Task Order. Upon notification to the COUNTY of its failure to carry out the approved EEO program, the Federal Government may impose such remedies, as it considers appropriate, including termination of Federal financial assistance, or other measures that may affect the COUNTY’s eligibility to obtain future Federal financial assistance for transportation projects.


E. Nondiscrimination on the basis of Age. The COUNTY agrees to comply with applicable requirements of:


F. Disabilities-Employment. In accordance with section 102 of the Americans with Disabilities Act, as amended, 42 U.S.C. § 12112, the COUNTY agrees that it will comply with the requirements of U.S. Equal Employment Opportunity Commission, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 C.F.R. Part 1630, pertaining to employment of persons with disabilities. In addition, the COUNTY agrees to comply with any implementing requirements FTA may issue.

G. Disabilities-Access. The COUNTY agrees to comply with the requirements of 49 U.S.C. § 5301(d) which state the Federal policy that the elderly and persons with disabilities have the same rights as other persons to use mass transportation service and facilities, and that special efforts shall be made in planning and designing those services and facilities to implement said policy. The COUNTY also agrees to comply with all applicable requirements of section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794, which prohibid discrimination on the basis of handicap; with the Americans with Disabilities Act of 1990 (ADA), as amended, 42 U.S.C. §§ 12101 et seq., which requires the provision of accessible facilities and services to be made available to persons with disabilities; and the Architectural Barriers Act of 1968, as amended, 42 U.S.C. §§ 4151 et seq., which requires that buildings and public accommodations be accessible to persons with disabilities; and with other laws and amendments thereto pertaining to access for individuals with disabilities that may be applicable. In addition, the COUNTY agrees to comply with applicable implementing Federal regulations and any later amendments thereto, and agrees to follow applicable Federal directives except to the extent FTA approves otherwise in writing. Among those regulations and directives are the following:


K. Other Nondiscrimination Statutes. The COUNTY agrees to comply with all applicable provisions of other Federal Laws, Regulations, and Directives pertaining to and prohibiting discrimination and other nondiscrimination statute(s) that may apply to the Work including chapter 49.60 RCW.

Section 7
Participation of Disadvantaged Business Enterprises

The COUNTY shall take the following measures to facilitate participation by disadvantaged business enterprises (DBE) in the Work:

A. The COUNTY agrees to comply with section 1101(b) of SAFETEA-LU, 23 U.S.C. § 101 note, and U.S. DOT regulations, "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs," 49 C.F.R. Part 26; and

B. The COUNTY agrees that it shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of any third party contract, or sub-agreement supported with Federal assistance derived from the U.S. DOT or in the administration of its DBE program or the requirements of 49 C.F.R. Part 26. The COUNTY agrees to take all necessary and reasonable steps under 49 C.F.R. Part 26 to ensure nondiscrimination in the award and administration of all third party contracts and sub-agreements supported with Federal assistance derived from the U.S. DOT. The COUNTY'S DBE program, as required by 49 C.F.R. Part 26
and approved by the U.S. DOT, if any, is incorporated by reference and made part of this Task Order. Implementation of the DBE program is a legal obligation, and failure to carry out its terms shall be treated as violation of this Task Order. Upon notification to the COUNTY of its failure to implement its approved DBE program, the U.S. DOT may impose sanctions as provided for under 49 C.F.R. Part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. § 1001, and/or the Program Fraud Civil Remedies Act, 31 U.S.C. §§ 3801 et seq.

Section 8
Energy Conservation and Environmental Requirements

A. Energy Conservation. The COUNTY shall comply with the mandatory standards and policies relating to energy efficiency standards and policies within the Washington State energy conservation plan issued in compliance with the Energy Policy and Conservation Act, 42 U.S.C. §§ 6321 et seq., and any amendments thereto.


Section 9
Accounting Records

A. Project Accounts. The COUNTY agrees to establish and maintain for the Task Order either a separate set of accounts or separate accounts within the framework of an established accounting system that can be identified with the Work, in compliance with applicable Federal laws and regulations. The COUNTY agrees that all checks, payrolls, invoices, contracts, vouchers, orders, or other accounting documents pertaining in whole or in part to the Work shall be clearly identified, readily accessible and available to the STATE and FTA upon request and, to the extent feasible, kept separate from documents not pertaining to the Work.

B. Funds Received or Made Available for the Work. The COUNTY agrees to deposit in a financial institution, all advance Work payments it receives from the Federal Government and record in the Work Account all amounts provided by the Federal Government in support of this Task Order and all other funds provided for, accruing to, or otherwise received on account of the Work (Project funds) in accordance with applicable Federal Regulations and other requirements FTA may impose. Use of financial institutions owned at least 50 percent by minority group members is encouraged.

C. Documentation of Project Costs and Program Income. The COUNTY agrees to support all costs charged to the Work, including any approved services contributed by the COUNTY or others, with properly executed payrolls, time records, invoices, contracts, or vouchers describing in detail the nature and propriety of the charges. The COUNTY also agrees to maintain accurate records of all program income derived from implementing the Work, except certain income determined by FTA to be exempt from Federal program income requirements.
D. Checks, Orders, and Vouchers. The COUNTY agrees to refrain from drawing checks, drafts, or orders for goods or services to be charged against the Work Account until it has received and filed a properly signed voucher describing in proper detail the purpose for the expenditure.

Section 10
Audits, Inspection, and Retention of Records

A. Submission of Proceedings, Agreements, and Other Documents. During the course of the Work and for six (6) years thereafter, the COUNTY agrees to retain intact and to provide any data, documents, reports, records, contracts, and supporting materials relating to the Work as the STATE may require. Reporting and record-keeping requirements are set forth in 49 C.F.R. Part 18. Project closeout does not alter these recording and record-keeping requirements. Should an audit, enforcement, or litigation process be commenced, but not completed, during the aforementioned six-year period then the COUNTY's obligations hereunder shall be extended until the conclusion of that pending audit, enforcement, or litigation process.

B. General Audit Requirements. The COUNTY agrees to perform the financial and compliance audits required by the Single Audit Act Amendments of 1996, 31 U.S.C. §§ 7501 et seq. As provided by 49 C.F.R. § 18.26, these financial and compliance audits must comply with the provisions of OMB Circular A-133, Revised, "Audits of States, Local Governments, and Non-Profit Organizations," the latest OMB A-133 Compliance Supplement for U.S. DOT, and any further revision or supplement thereto. The COUNTY also agrees to obtain any other audits required by the Federal Government. The COUNTY agrees that audits will be carried out in accordance with U.S. General Accounting Office "Government Auditing Standards." The COUNTY agrees to obtain any other audits required by the STATE. Project closeout will not alter the COUNTY's audit responsibilities.

C. Inspection. The COUNTY agrees to permit the STATE, the State Auditor, the United States Department of Transportation, and the Comptroller General of the United States, or their authorized representatives, to inspect all Work materials, payrolls, maintenance records, and other data, and to audit the books, records, and accounts of the COUNTY and its contractors pertaining to the Work, as required by 49 U.S.C. § 5325(g).

Section 11
Labor Provisions


C. Overtime Requirements. No contractor or subcontractor contracting for any part of the Task Order Work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such Work to work in excess of forty (40) hours in such workweek unless such laborer or
mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty (40) hours in such workweek.

D. Payrolls and Basic Records. Payrolls and basic records relating thereto shall be maintained by the COUNTY during the course of the Work and preserved for a period of six (6) years thereafter for all laborers and mechanics working at the site of the Work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the Work). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof) of the types described in section 1(b)(2)(B) of the Davis-Bacon Act, daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 C.F.R. 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the COUNTY shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. COUNTY'S employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

E. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (C) of this Section the COUNTY and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such COUNTY and subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (C) of this Section, in the sum of ten dollars ($10) for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty (40) hours without payment of the overtime wages required by the clause set forth in paragraph (C) of this Section.

F. Withholding for unpaid wages and liquidated damages. The COUNTY shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of Work performed by the COUNTY or subcontractor under any such contract or any other Federal contract with the same prime COUNTY, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime COUNTY, such sums as may be determined to be necessary to satisfy any liabilities of such COUNTY or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (E) of this Section.

G. Public Transportation Employee Protective Agreement. To the extent required by Federal Law, the COUNTY agrees to implement the Work in accordance with the terms and conditions that the U.S. Secretary of Labor has determined to be fair and equitable to protect the interests of any employees affected by the Work and that comply with the requirements of 49 U.S.C. § 5333 (b), in accordance with the U.S. DOL guidelines, "Section 5333(b), Federal Transit Law," 29 C.F.R. Part 215 and any amendments thereto. These terms and conditions are identified in U.S. DOL's certification of public transportation employee protective arrangements to FTA. The COUNTY agrees to implement the Work in accordance with the conditions stated in that U.S. DOL certification, which certification and any documents cited therein are incorporated by reference and made part of this Task Order. The COUNTY also agrees to comply with the terms and conditions of the Special Warranty for the Non-urbanized Area Program that is most current as of the date of execution of this Task Order and any alternative

Section 12
Planning and Private Enterprise

The COUNTY agrees to implement the Task Order in a manner consistent with the plans developed in compliance with the applicable planning and private enterprise provisions of 49 U.S.C. §§ 5303, 5304, 5306, and 5323(a)(1); joint Federal Highway Administration (FHWA)/FTA regulations, "Statewide Transportation Planning: Metropolitan Transportation Planning," 23 C.F.R. Part 450 and 49 C.F.R. Part 613; and any amendments thereto and with FTA regulations, "Major Capital Investment Projects," 49 C.F.R.—Part 611, to the extent that these regulations are consistent with the SAFETEA-LU amendments to the public transportation planning and private enterprise laws, and when promulgated, any subsequent amendments to those regulations. To the extent feasible, the COUNTY agrees to comply with the provisions of 49 U.S.C. § 5323(k), which affords governmental agencies and non-profit organizations that receive Federal assistance for non-emergency transportation from Federal Governmental sources (other than U.S. DOT) an opportunity to be included in the design, coordination, and planning of transportation services. During the implementation of the Task Order, the COUNTY agrees to take into consideration the recommendations of Executive Order No. 12803, "Infrastructure Privatization," 31 U.S.C. § 501 note, and Executive Order No 12893, "Principles for Federal Infrastructure Investments," 31 U.S.C. § 501 note.

Section 13
Substance Abuse

A. Drug and Alcohol Abuse. The COUNTY agrees to establish and implement a drug and alcohol testing program that complies with 49 C.F.R. Part 655, produce any documentation necessary to establish its compliance with Part 655, and permit any authorized representative of the United States Department of Transportation or its operating administrations and the STATE to inspect the facilities and records associated with the implementation of the drug and alcohol testing program as required under 49 C.F.R. Part 655 and review the testing process. The COUNTY agrees further to submit annually the Management Information System (MIS) reports to the STATE by February 28th each year for the useful life of the Project Equipment.

B. Privacy Act. The COUNTY agrees to comply with the confidentiality and other civil rights provisions of the Drug Abuse Office and Treatment Act of 1972, Pub. L. 92-255, March 21, 1972, as amended, 21 U.S.C. §§1101 et seq., the Comprehensive Abuse and Alcoholism Prevention, Treatment, and Rehabilitation Act of 1970, Pub. L. 91-616, December 31, 1970, as amended 42 U.S.C. §§4541 et seq., and the Public Health Service Act of 1912, as amended, 42 U.S.C. §§ 290dd through 290dd-2, including amendments to these acts. The COUNTY understands the requirements of confidentiality concerning persons covered and/or receiving services and/or treatment regarding alcohol and drug abuse, as defined in the aforementioned acts as applicable, including any civil and criminal penalties for not complying with the requirements of confidentiality and that failure to comply with such requirements may result in termination of this Task Order.

Section 14
Federal "$1 Coin" Requirements

To the extent required by the Federal Government, the COUNTY agree to comply with the provisions of section 104 of the Presidential $1 Coin Act of 2005, 31 U.S.C. § 5112(p), so that the COUNTY'S equipment and facilities requiring the use of coins or currency will be fully

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capable of accepting and dispensing $1 coins in the connection with that use. The COUNTY also agrees to display signs and notices denoting the capability of its equipment and facilities on its premises where coins or currency are accepted or dispensed, including on each vending machine.

Section 15
Insurance

In addition to other insurance requirements that may apply, the COUNTY agrees as follows:

Minimum Requirements. At a minimum, the COUNTY agrees to comply with the insurance requirements normally imposed on the COUNTY by its State and local laws, regulations, and ordinances, except to the extent that the Federal Government determines otherwise in writing.

Section 16
Termination

In addition to the Parties’ agreement with regard to termination for convenience as set forth in the Agreement, the Parties shall comply with 49 C.F.R. 18.43 and, if either Party terminates for convenience the Master Agreement or a Task Order, the Parties shall comply with 49 C.F.R. 18.44.

A. STATE’s Termination for Convenience. If the STATE decides, as set forth in the Agreement, to terminate for convenience the Agreement or any Task Order the Parties shall agree upon the termination conditions including the effective date and, in the case of a partial termination of a Task Order, the portion to be terminated.

B. COUNTY’s Termination for Convenience. If the COUNTY decides to terminate for convenience the Agreement or any Task Order the COUNTY shall set forth the reasons for the termination, the effective date, and, in the case of partial termination of a Task Order, the portion to be terminated. If, in the case of partial termination, the STATE determines that the remaining portion of the Task Order will not accomplish the purposes of the Task Order, the STATE may terminate the Task Order in its entirety under either 49 C.F.R. 18.43 or 49 C.F.R. 18.44(a).

C. STATE’s Termination for COUNTY’s Noncompliance. If the COUNTY materially fails to comply with a term of the Agreement or a Task Order as set forth in 49 C.F.R. 18.43 (a) the STATE, in addition to the other remedies set forth in 49 C.F.R. 18.43, may terminate the Agreement and/or such Task Order.
GCA 6141
Master Agreement for Transportation Demand Management Work by King County

EXHIBIT B
Project Equipment Provisions

Section 1
General
The COUNTY agrees to include these provisions in each subcontract and in all contracts it enters into for the employment of any individuals, procurement of any materials, or the performance of any Work under this Task Order. It is further agreed that these clauses shall not be modified, except to identify the subcontractor or other person or entity that will be subject to its provisions. In addition, the following provision shall be included in advertisement or invitation to bid for any procurement by the COUNTY under this Task Order:

Statement of Financial Assistance:
"This Agreement is subject to the appropriations of the State of Washington."

Section 2
Inspection Upon Delivery
The COUNTY shall inspect Project Equipment purchased pursuant to this Task Order at the time of delivery to the COUNTY. Upon receipt and written acceptance of Project Equipment, the COUNTY agrees that it has fully inspected the Project Equipment and accepts it as being in good condition and repair, and is satisfied with the Project Equipment and that the Project Equipment complies with all regulations, rules, and laws.

Section 3
Reports and Use of Project Equipment
A. The COUNTY agrees that the Project Equipment shall be used as set forth in the Task Order. The COUNTY further agrees that it will not use or permit the use of the Project Equipment in a negligent manner or in violation of any law, or so as to avoid any insurance covering the same, or permit the Project Equipment to become subject to any lien, charge, or encumbrance. Should the COUNTY unreasonably delay or fail to use the Project Equipment the COUNTY agrees that it may be required to refund the entire amount of the Federal and/or state-funded share expended on the Task Order. The COUNTY shall immediately notify the STATE when any Project Equipment is withdrawn from use or when Project Equipment is used in a manner substantially different from that identified in the Task Order. If the Project Equipment is permanently removed from service the COUNTY agrees to immediately contact the STATE for instructions regarding the disposal of the Project Equipment.

B. Reports. The COUNTY shall advise the STATE regarding the progress of the Work at such times and in such manner as the STATE and/or FTA may require, including, but not limited to, interim reports. The COUNTY shall keep satisfactory written records with regard to the use of Project Equipment and shall submit the following reports to, and in a form and at such times prescribed by, the STATE:
1. Reports describing the current usage of Project Equipment and other data which the STATE and/or FTA may request.

2. In the event any portion of the Project Equipment sustains disabling damage the COUNTY shall notify the STATE immediately after the occasion of the damage, including the circumstances thereof.

3. The COUNTY shall collect and submit to the STATE, at such time as the STATE may require, such financial statements, data, records, contracts, and other documents related to the Work as may be deemed necessary by the STATE and/or the FTA.

C. Remedies for Misuse or Noncompliance. The COUNTY shall not use any Project Equipment in a manner different from that set forth in the Task Order unless permission to do so is granted in writing by the STATE. If the STATE determines that Project Equipment has been used in a manner different from that set forth in the Task Order, the STATE may direct the COUNTY to dispose of the Project Equipment acquired by the COUNTY. The STATE may also withhold payments should it determine that the COUNTY has failed to comply with any provision of this Task Order. If Federal participation and funding is either reduced or canceled as a result of a breach by the COUNTY, the COUNTY is then liable for all damages from the breach, even though those damages exceed the price payable under this Task Order.

Section 4
Maintenance of Project Equipment

The COUNTY shall make all necessary repairs and reasonably maintain the Project Equipment to assure it remains in good and operational condition. All service, materials, and repairs in connection with the use and operation of the Project Equipment shall be at the COUNTY’S expense. The COUNTY agrees to, at a minimum, service the Project Equipment and replace parts at intervals recommended in the manuals provided by the component manufacturers, or sooner if needed. The COUNTY shall take the Project Equipment to an appropriate service and repair facility for any service and repair under the manufacturer’s warranty. The STATE and/or the FTA shall not be liable for repairs. When federal assistance grants are involved, the COUNTY shall comply with the equipment management requirements identified in 49 C.F.R. Part 18.32(d); and any reference therein to “grantee” shall mean the COUNTY. The COUNTY shall retain records of all maintenance and parts replacement performed on the Project Equipment. The COUNTY shall provide copies of such records to the STATE, upon request.

Section 5
Liens on Equipment

The STATE shall have legal ownership of all Project Equipment the COUNTY acquires or modifies using the Federal and/or state funds identified in the Task Order. The COUNTY accepts the STATE’s legal ownership of Project Equipment and agrees that it shall not use the Project Equipment as collateral, nor shall the COUNTY encumber the Project Equipment in any way. The COUNTY shall follow the terms stated in Section 3, Reports and Use of Project Equipment, regarding the disposition of all Project Equipment.

Section 6
Loss or Damage to Project Equipment

A. The COUNTY, at its own expense, shall cover any loss, theft, damage, or destruction of the Project Equipment using either of the following methods:
1. The COUNTY shall maintain property insurance for non-vehicle equipment adequate to cover the value of the Project Equipment; or

2. The COUNTY shall provide a written certificate of self-insurance to the STATE. The COUNTY will cover from its own resources the costs of repairing or replacing any Project Equipment, if it is stolen, damaged, or destroyed in any manner.

B. If the damage to the Project Equipment does not result in a total loss, payments for damage shall be paid directly to the COUNTY. The COUNTY shall, within thirty (30) days, either:

1. Devote all of the insurance proceeds received to repair the Project Equipment and place it back in service, and the COUNTY shall, at its own expense, pay any portion of the cost of repair which is not covered by insurance; or

2. In the event the COUNTY certified to self-insurance, devote all funds necessary to repair the Project Equipment and place it back into service.

C. If the Project Equipment is a total loss, either by theft or damage, the insurance proceeds or equivalent shall be paid directly to the COUNTY. The COUNTY shall within sixty (60) days of loss, theft, or damage, notify the STATE that it either:

1. Intends to replace the lost Project Equipment; or

2. Does not intend to replace the lost Project Equipment and shall return to the STATE its portion of the insurance proceeds.

D. If the STATE determines that the total loss occurred under circumstances in which the COUNTY fulfilled its obligations under this Task Order then the STATE will either pay or rebate to the COUNTY its proportionate share of such proceeds received.

E. Coverage, if obtained or provided by the COUNTY in compliance with this Section, shall not be deemed as having relieved the COUNTY of any liability in excess of such coverage as required by Section 13, Indemnification and Limitation of Liability, of GCA 6141, or otherwise.
ORDINANCE NO. 516

AN ORDINANCE OF THE CITY OF SHORELINE, WASHINGTON, RELATING TO TRANSPORTATION DEMAND MANAGEMENT, ADOPTING A COMMUTE TRIP REDUCTION ("CTR") PLAN, AND IMPLEMENTING MEASURES AS REQUIRED BY RCW 70.94.527; AND REPEALING SHORELINE MUNICIPAL CODE CHAPTER 14.10

WHEREAS, motor vehicle traffic is a major source of emissions that pollute the air, and air pollution causes significant harm to public health and degrades the quality of the environment; and

WHEREAS, increasing motor vehicle traffic aggravates traffic congestion in the City of Shoreline; and

WHEREAS, traffic congestion imposes significant costs on City businesses, government, and individuals in terms of lost working hours and delays in the delivery of goods and services as well as making the City a less desirable place to live, work, visit and do business; and

WHEREAS, capital and environmental costs of fully accommodating the existing and projected motor vehicle traffic on roads and highways are prohibitive while decreasing the demand for vehicle trips is significantly less costly and is at least as effective in reducing traffic congestion and its impacts as constructing new transportation facilities; and

WHEREAS, the City of Shoreline recognizes the importance of increasing individual citizens’ awareness of air quality, energy consumption and traffic congestion, and the contribution individual actions can make toward addressing these issues;

WHEREAS, employers have significant opportunities to encourage and facilitate the reduction of single-occupant vehicle commuting by employees; and

WHEREAS, State policy, as set forth in RCW 70.94.521-.555, requires the City of Shoreline to develop and implement a plan to reduce single occupant vehicle commute trips; and

WHEREAS, the plan must require affected employers to implement programs to reduce vehicle miles traveled per employee and the number of single-occupant vehicles used for commuting purposes by their employees; and

WHEREAS, adoption of this Ordinance will promote the public health, safety, and general welfare within the City of Shoreline and the region; and

WHEREAS, the Washington State Commute Trip Reduction Board approved the City of Shoreline Draft Commute Trip Reduction Plan on January 25, 2008;
NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SHORELINE, WASHINGTON DO ORDAIN AS FOLLOWS:

Section 1. Repeal; New Section. Shoreline Municipal Code Chapter 14.10 is hereby repealed in its entirety and a new Chapter 14.10 is adopted as set forth in Exhibit A.

Section 2. Severability. If any section, subsection, sentence, clause, phrase, part or portion of this Ordinance is for any reason held to be invalid or unconstitutional by any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance.

Section 3. Effective Date. This Ordinance shall take effect and be in full force five days after publication of a summary consisting of its title in the official newspaper of the City.

PASSED BY THE CITY COUNCIL ON AUGUST 25, 2008

Mayor Cindy Ryu

ATTEST:
Scott Passey
City Clerk

APPROVED AS TO FORM:
Ian Sievers
City Attorney

Date of Publication: August 28, 2008
Effective Date: September 2, 2008
14.10.010 Definitions.

For the purpose of this Ordinance, the following definitions shall apply in the interpretation and enforcement of this Ordinance:

"Affected Employee" means a full-time employee who begins his or her regular work day at a single worksite covered by the Commute Trip Reduction Plan between 6:00 a.m. and 9:00 a.m. (inclusive) on two or more weekdays for at least twelve continuous months who is not an independent contractor. Seasonal agricultural employees, including seasonal employees of processors of agricultural products, are excluded from the count of affected employees.

"Affected Employer" means an employer that employs one hundred (100) or more full-time employees at a single worksite covered by the Commute Trip Reduction Plan who are scheduled to begin their regular work day between 6:00 a.m. and 9:00 a.m. (inclusive) on two or more weekdays for at least twelve continuous months. Construction worksites, when the expected duration of the construction is less than two years, are excluded from this definition. (Also see definition of employer.)

"Alternative Mode" means any means of commute transportation other than that in which the single-occupant motor vehicle is the dominant mode, including telecommuting and compressed work week schedules if they result in reducing commute trips.

"Alternative Work Schedules" mean programs such as compressed work week schedules that eliminate work trips for affected employees.

"Base year" means the twelve-month period which commences when a major employer is determined by the jurisdiction to be participating within the CTR program. The City of Shoreline uses this twelve-month period as the basis upon which it develops commute trip reduction goals.

"Base year survey" or "baseline measurement" means the survey, during the base year, of employees at a major employer worksite to determine the drive-alone rate and vehicle miles traveled per employee at the worksite. The jurisdiction uses this measurement to develop commute trip reduction goals for the major employer. The baseline measurement must be implemented in a manner that meets the requirements specified by the City of Shoreline.

"Carpool" means a motor vehicle, including a motorcycle, occupied by two to six people of at least 16 years of age traveling together for their commute trip, resulting in the reduction of a minimum of one motor vehicle commute trip.

"City" means the City of Shoreline.
"Commute Trips" mean trips made from a worker's home to a worksite (inclusive) on weekdays.

"CTR" is the abbreviation of Commute Trip Reduction.

"CTR Program" means an employer's strategies to reduce employees' drive alone commutes and average VMT per employee.

"Commute trip vehicle miles traveled per employee" means the sum of the individual vehicle commute trip lengths in miles over a set period divided by the number of full-time employees during that period.

"Compressed Work Week" means an alternative work schedule, in accordance with employer policy, that regularly allows a full-time employee to eliminate at least one work day every two weeks by working longer hours during the remaining days, resulting in fewer commute trips by the employee. This definition is primarily intended to include weekly and bi-weekly arrangements, the most typical being four 10-hour days or 80 hours in nine days, but may also include other arrangements.

"Custom Bus/Buspool" means a commuter bus service arranged specifically to transport employees to work.

"Dominant Mode" means the mode of travel used for the greatest distance of a commute trip.

"Drive Alone" means a motor vehicle occupied by one (1) employee for commute purposes, including a motorcycle.

"Drive Alone Trips" means commute trips made by employees in single occupant vehicles.

"Employee Transportation Coordinator (ETC)" means a person who is designated as responsible for the development, implementation and monitoring of an employer's CTR program.

"Employer" means a sole proprietorship, partnership, corporation, unincorporated association, cooperative, joint venture, agency, department, district, or other individual or entity, whether public, non-profit, or private, that employs workers.

"Exemption" means a waiver from any or all CTR program requirements granted to an employer by the City of Shoreline based on unique conditions that apply to the employer or employment site.
"Flex-Time" is an employer policy that provides work schedules allowing individual employees flexibility in choosing the start and end time but not the number of their working hours.

"Full-Time Employee" means a person, other than an independent contractor, whose position is scheduled on a continuous basis for 52 weeks for an average of at least 35 hours per week.

"Good Faith Effort" means that an employer has met the minimum requirements identified in RCW 70.94.531 and this ordinance, and is working collaboratively with the City of Shoreline to continue its existing CTR program or is developing and implementing program modifications likely to result in improvements to its CTR program over an agreed-upon length of time.

"Implementation" means active pursuit by an employer of the CTR goals of RCW 70.94.521-555 and this ordinance as evidenced by appointment of an employee transportation coordinator (ETC), distribution of information to employees regarding alternatives to drive alone commuting, and commencement of other measures according to its approved CTR program and schedule.

"A major employer" means a private or public employer, including state agencies, that employs one hundred or more full-time employees at a single worksite who are scheduled to begin their regular work day between 6:00 a.m. and 9:00 a.m. on weekdays for at least twelve continuous months.

"Major employer worksite" or "affected employer worksite" or "worksite" means the physical location occupied by a major employer, as determined by the local jurisdiction.

"Mode" means the means of transportation used by employees, such as single-occupant motor vehicle, rideshare vehicle (carpool or vanpool), transit, ferry, bicycle, walking, compressed work week schedule and telecommuting.

"Notice" means written communication delivered via the United States Postal Service with receipt deemed accepted three days following the day on which the notice was deposited with the Postal Service unless the third day falls on a weekend or legal holiday in which case the notice is deemed accepted the day after the weekend or legal holiday.

"Peak Period" means the hours from 6:00 a.m. to 9:00 a.m. (inclusive), Monday through Friday, except legal holidays.

"Peak Period Trip" means any commute trip that delivers the employee to begin his or her regular workday between 6:00 a.m. and 9:00 a.m. (inclusive), Monday through Friday, except legal holidays.
"Proportion of Drive Alone Trips" or "Drive Alone Rate" means the number of commute trips over a set period made by employees in single occupancy vehicles divided by the number of potential trips taken by employees working during that period.

"Ride Matching Service" means a system which assists in matching commuters for the purpose of commuting together.

"Teleworking" or "Telecommuting" means the use of telephones, computers, or other similar technology to permit an employee to work from home, eliminating a commute trip, or to work from a work place closer to home, reducing the distance traveled in a commute trip by at least half.

"Transit" means a multiple-occupant vehicle operated on a for-hire, shared-ride basis, including bus, passenger ferry, rail, shared-ride taxi, shuttle bus, or vanpool.

"Transportation Demand Management (TDM)" means a broad range of strategies that are primarily intended to reduce and reshape demand on the transportation system.

"Transportation Management Association (TMA)" means a group of employers or an association representing a group of employers in a defined geographic area. A TMA may represent employers within specific city limits or may have a sphere of influence that extends beyond city limits.

"Vanpool" means a vehicle occupied by from five (5) to fifteen (15) people traveling together for their commute trip, resulting in the reduction of a minimum of one motor vehicle trip.

"Vehicle Miles Traveled (VMT) Per Employee" means the sum of the individual vehicle commute trip lengths in miles made by employees over a set period divided by the number of employees during that period.

"Week" means a seven-day calendar period starting on Monday and continuing through Sunday.

"Weekday" means any day of the week except Saturday or Sunday.

"Writing," "Written," or "In Writing" means original signed and dated documents. Facsimile (fax) transmissions are a temporary notice of action that must be followed by the original signed and dated document via mail or delivery.

14.10.020 City of Shoreline CTR Plan.

The goals established for the jurisdiction and affected employers in the City's Commute Trip Reduction Plan set forth in Attachment A are incorporated herein by reference. City staff is directed to make any corrections for typographical errors, include any graphical materials for information, and complete the Commute Trip Reduction Plan.
14.10.030 CTR Goals.

A. Commute Trip Reduction Goals. The City’s goals for reductions in the proportions of drive-alone commute trips and vehicle miles traveled per employee by affected employers in Shoreline, and other areas designated by the City are hereby established by the City’s CTR Plan incorporated by SMC 14.10.020. These goals establish the desired level of performance for the CTR program in its entirety in Shoreline. The City will set the individual worksite goals for affected employers based on how the worksite can contribute to Shoreline’s overall goal established in the CTR plan. The goals will appear as a component of the affected employer’s approved implementation plan outlined in SMC 14.10.060.

1. Commute Trip Reduction Goals for Affected Employers
   a. The drive-alone and VMT goals for affected employers in Shoreline are hereby established as set forth in the CTR Plan incorporated by SMC 14.10.020.
   b. If the goals for an affected employer or newly affected employer are not listed in the CTR Plan, they shall be established by the City at a level designed to achieve Shoreline’s overall goals for the jurisdiction and other areas as designated by the City. The City shall provide written notification of the goals for each affected employer worksite by providing the information when the City reviews the employer’s proposed program and incorporating the goals into the program approval issued by the City.

14.10.040 Responsible Agency.

The City of Shoreline shall be responsible for implementing this Chapter, the CTR Plan and the City’s CTR program for its own employees. The City Manager or his or her authorized designee shall have the authority to issue such rules and administrative procedures and delegate authority to other City departments as may be necessary to implement this Chapter.

14.10.050 Applicability.

The provisions of this ordinance shall apply to any affected employer within the geographic limits of the CTR Plan adopted in SMC 14.10.020.

A. Notification of Applicability. In addition to the City’s established public notification for adoption of an ordinance, a notice of availability of a summary of this ordinance, a notice of the requirements and criteria for affected employers to comply with the ordinance, and subsequent revisions shall be published at least once in the City’s official newspaper not more than 30 days after passage of this ordinance or revisions.

1. Affected employers located in Shoreline are to receive written notification that they are subject to this ordinance. Such notice shall be addressed to the company’s chief executive officer, senior official, CTR program manager, or registered agent at the worksite. Such notification shall provide 90 days for the affected employer to perform a baseline measurement consistent with the measurement requirements specified by the City.
2. Affected employers that, for whatever reason, do not receive notice within 30 days of passage of the ordinance and are either notified or identify themselves to the City within 90 days of the passage of the ordinance will be granted an extension to assure up to 90 days within which to perform a baseline measurement consistent with the measurement requirements specified by the City.

3. Affected employers that have not been identified or do not identify themselves within 90 days of the passage of the ordinance and do not perform a baseline measurement consistent with the measurement requirements specified by the City within 90 days from the passage of the ordinance are in violation of this ordinance.

4. If an affected employer has already performed a baseline measurement, or an alternative acceptable to the City, under previous iterations of this ordinance, the employer is not required to perform another baseline measurement.

B. Newly Affected Employers

1. Employers meeting the definition of "affected employer" in this ordinance must identify themselves to the City within 90 days of either moving into the boundaries outlined in the CTR Plan adopted in SMC 14.10.020 or growing in employment at a worksite to one hundred (100) or more affected employees. Employers who do not identify themselves within 90 days are in violation of this ordinance.

2. Newly affected employers identified as such shall be given 90 days to perform a baseline measurement consistent with the measurement requirements specified by the City. Employers who do not perform a baseline measurement within 90 days of receiving written notification that they are subject to this ordinance are in violation of this ordinance.

3. Not more than 90 days after receiving written notification of the results of the baseline measurement, the newly affected employer shall develop and submit a CTR Program to the City. The program will be developed in consultation with City of Shoreline staff to be consistent with the goals of the CTR Plan adopted in SMC 14.10.020. The program shall be implemented not more than 90 days after approval by the City. Employers who do not implement an approved CTR Program according to this schedule are in violation of this ordinance and subject to the penalties outlined in SMC 14.10.090(D) below.

C. Change in Status as an Affected Employer. Any of the following changes in an employer's status will change the employer's CTR program requirements:

1. If an employer initially designated as an affected employer no longer employs one hundred (100) or more affected employees and expects not to employ one hundred (100) or more affected employees for the next twelve (12) months, that employer is no longer an affected employer. It is the responsibility of the employer to notify the City that it is no longer an affected employer. The burden of proof lies with the employer.

2. If the same employer returns to the level of one hundred (100) or more affected employees within the same twelve (12) months, that employer will be
considered an affected employer for the entire 12 months and will be subject to the same program requirements as other affected employers.

3. If the same employer returns to the level of one hundred (100) or more affected employees twelve (12) or more months after its change in status to an "unaffected" employer, that employer shall be treated as a newly affected employer and will be subject to the same program requirements as other newly affected employers.

14.10.060 Requirements for Employers – RCW 70.94.531.

An affected employer is required to make a good faith effort, as defined in RCW 70.94.534(2) and this ordinance, to develop and implement a CTR program that will encourage its employees to reduce VMT per employee and drive alone commute trips. The CTR program must include the mandatory elements as described below.

A. Mandatory Program Elements. Each employer’s CTR program shall include the following mandatory elements:

1. Employee Transportation Coordinator (ETC). The employer shall designate an Employee Transportation Coordinator (ETC) to administer the CTR program. The ETC and/or designee’s name, location, and telephone number must be prominently displayed physically or electronically at each affected worksite. The ETC shall oversee all elements of the employer’s CTR program and act as liaison between the employer and the City. The Transportation Coordinator must complete the basic ETC training course as provided by King County within six months of assuming the status of designated transportation coordinator, in order to help ensure consistent knowledge and understanding of CTR laws, rules and guidelines statewide. The objective is to have an effective transportation coordinator presence at each worksite; an affected employer with multiple sites may have one ETC for all sites.

2. Information Distribution. Information about alternatives to drive alone commuting as well as a summary of the employer’s CTR Program shall be provided to employees at least once a year and to new employees at the time of hire. The summary of the employer’s CTR Program shall also be submitted to the City with the employer’s program description and regular report.

B. Additional Program Elements. In addition to the specific program elements described above, the employer’s CTR program shall include additional elements as needed to meet CTR goals. Elements may include, but are not limited to, one or more of the following:

1. Provision of preferential parking for high-occupancy vehicles
2. Reduced parking charges for high-occupancy vehicles;
3. Instituting or increasing parking charges for drive alone commuters;
4. Provision of commuter ride matching services to facilitate employee ridesharing for commute trips;
5. Provision of subsidies for rail, transit, or vanpool fares and/or transit passes;
6. Provision of vans or buses for employee ridesharing;
7. Provision of subsidies for carpools, walking, bicycling, teleworking, or compressed schedules;
8. Provision of incentives for employees that do not drive alone to work;
9. Permitting the use of the employer's vehicles for carpooling or vanpooling;
10. Permitting flexible work schedules to facilitate employees' use of transit, carpools, or vanpools;
11. Cooperation with transportation providers to provide additional regular or express service to the worksite;
12. Construction of special loading and unloading facilities for transit, carpool, and vanpool users;
13. Provision of bicycle parking facilities, lockers, changing areas, and showers for employees who bicycle or walk to work;
14. Provision of a program of parking incentives such as a rebate for employees who do not use the parking facilities;
15. Establishment of a program to permit employees to work part- or full-time at home or at an alternative worksite closer to their homes which reduces commute trips;
16. Establishment of a program of alternative work schedules, such as a compressed work week, which reduces commute trips;
17. Implementation of other measures designed to facilitate the use of high-occupancy vehicles, such as on-site day care facilities, emergency taxi services, or guaranteed ride home programs;
18. Charging employees for parking, and/or the elimination of free parking;
and
19. Other measures that the employer believes will reduce the number and length of commute trips made to the site.

C. CTR Program Report and Description. Affected employers shall review their program and file a regular progress report with the City in accordance with the format provided by the City. The CTR Program Report and Description outlines the strategies to be undertaken by an employer to achieve the commute trip reduction goals for the reporting period. Employers are encouraged to consider innovative strategies and combine program elements in a manner that will best suit their location, site characteristics, business type, and employees' commuting needs. Employers are further encouraged to cooperate with each other to implement program elements. At a minimum, the employer's CTR Program Report and Description must include:

1. a general description of the employment site location, transportation characteristics, employee parking availability, on-site amenities, and surrounding services;
2. the number of employees affected by the CTR program and the total number of employees at the site;
3. documentation on compliance with the mandatory CTR program elements as described in SMC 14.10.060(A);
4. description of any additional elements included in the employer's CTR program as described in SMC 14.10.060(B); and
5. a statement of organizational commitment to provide appropriate resources to the program to meet the employer's established goals.
D. Biennial Measure of Employee Commute Behavior. In addition to the baseline measurement, employers shall conduct a program evaluation as a means of determining worksite progress toward meeting CTR goals. As part of the program evaluation, the employer shall distribute and collect Commute Trip Reduction Program Employee Questionnaires (surveys) at least once every two years, and strive to achieve at least a 70% response rate from employees at the worksite.

14.10.070 Record Keeping.
Affected employers shall maintain a copy of their approved CTR Program Description and Report, their CTR Program Employee Questionnaire results, and all supporting documentation for the descriptions and assertions made in any CTR report to the City for a minimum of 48 months. The City and the employer shall agree on the record keeping requirements as part of the accepted CTR program.

14.10.080 Schedule and Process for CTR Program Description and Report.
A. Document Review. The City shall provide the employer with written notification if a CTR program is deemed unacceptable. The notification must give cause for any rejection. If the employer receives no written notification of extension of the review period of its CTR program or comment on the CTR program or annual report within 90 days of submission, the employer's program or annual report is deemed accepted. The City may extend the review period up to 90 days. The implementation date for the employer's CTR program will be extended an equivalent number of days.
B. Schedule. Upon review of an employer's initial CTR program, the City shall establish the employer's regular reporting date. This report will be provided in a form provided by the City consistent with SMC 14.10.060(C) above.
C. Modification of CTR Program Elements. Any affected employer may submit a request to the City for modification of CTR requirements. Such request may be granted if one of the following conditions exist:
1. The employer can demonstrate it would be unable to comply with the CTR program elements for reasons beyond the control of the employer, or
2. The employer can demonstrate that compliance with the program elements would constitute an undue hardship.
D. The City may ask the employer to substitute a program element of similar trip reduction potential rather than grant the employer’s request.
E. Extensions. An employer may request additional time to submit a CTR Program Description and Report, or to implement or modify a program. Such requests shall be via written notice at least 30 days before the due date for which the extension is being requested. Extensions not to exceed 90 days shall be considered for reasonable causes. The City shall grant or deny the employer's extension request by written notice within 10 working days of its receipt of the extension request. If there is no response issued to the employer, an extension is automatically granted for 30 days. Extensions shall not exempt an employer from any responsibility in meeting program goals. Extensions granted due to delays or difficulties with any program element(s) shall not be cause for discontinuing or failing to implement other program elements. An employer's regular reporting date shall not be adjusted permanently as a result of these
extensions. An employer's annual reporting date may be extended at the discretion of the City.

F. Implementation of Employer's CTR Program. Unless extensions are granted, the employer shall implement its approved CTR program, including approved program modifications, not more than 90 days after receiving written notice from the City that the program has been approved or with the expiration of the program review period without receiving notice from the City.

14.10.090 Exemptions and Goal Modifications

A. Worksite Exemptions. An affected employer may request the City to grant an exemption from all CTR program requirements or penalties for a particular worksite. The employer must demonstrate that it would experience undue hardship in complying with the requirements of the ordinance as a result of the characteristics of its business, its work force, or its location(s). An exemption may be granted if and only if the affected employer demonstrates that it faces extraordinary circumstances, such as bankruptcy, and is unable to implement any measures that could reduce the proportion of drive alone trips and VMT per employee. Exemptions may be granted by the City at any time based on written notice provided by the affected employer. The notice should clearly explain the conditions for which the affected employer is seeking an exemption from the requirements of the CTR program. The City shall grant or deny the request within 30 days of receipt of the request. The City shall review annually all employers receiving exemptions, and shall determine whether the exemption will be in effect during the following program year.

B. Employee Exemptions. Specific employees or groups of employees who are required to drive alone to work as a condition of employment may be exempted from a worksite's CTR program. Exemptions may also be granted for employees who work variable shifts throughout the year and who do not rotate as a group to identical shifts. The City will use the criteria identified in the CTR Board Administrative Guidelines to assess the validity of employee exemption requests. The City shall grant or deny the request within 30 days of receipt of the request. The City shall review annually all employee exemption requests, and shall determine whether the exemption will be in effect during the following program year.

C. Modification of CTR Program Goals

1. An affected employer may request that the City modify its CTR program goals. Such requests shall be filed in writing at least 60 days prior to the date the worksite is required to submit its program description or annual report. The goal modification request must clearly explain why the worksite is unable to achieve the applicable goal. The worksite must also demonstrate that it has implemented all of the elements contained in its approved CTR program.

2. The City will review and grant or deny requests for goal modifications in accordance with procedures and criteria identified in the CTR Board Guidelines.
b. An employer may not request a modification of the applicable goals until one year after city/county approval of its initial program description or annual report.

14.10.100 Enforcement.
A. Compliance. For purposes of this section, compliance shall mean:
   1. Fully implementing in good faith all mandatory program elements as well as provisions in the approved CTR Program Description and Report;
   2. Providing a complete CTR Program Description and Report on the regular reporting date; and
   3. Distributing and collecting the CTR Program Employee Questionnaire during the scheduled survey time period.
B. Program Modification Criteria. The following criteria for achieving goals for VMT per employee and proportion of drive alone trips shall be applied in determining requirements for employer CTR program modifications:
   1. If an employer meets either or both goals, the employer has satisfied the objectives of the CTR plan and will not be required to improve its CTR program;
   2. If an employer makes a good faith effort, as defined in RCW 70.94.534(2) and this ordinance, but has not met the applicable drive alone or VMT goal, no additional modifications are required.
   3. If an employer fails to make a good faith effort as defined in RCW 70.94.534(2) and this ordinance, and fails to meet the applicable drive alone or VMT reduction goal, the City shall direct the employer to revise its program within 30 days to come into compliance with the measures defined by RCW 70.94.534(2), including specific recommended program modifications. In response to the recommended modifications, the employer shall submit a revised CTR Program Description and Report, including the requested modifications or equivalent measures, within 30 days of receiving written notice to revise its program. The City shall review the revisions and notify the employer of acceptance or rejection of the revised program. If a revised program is not accepted, the City will send written notice to that effect to the employer within 30 days and, if necessary, require the employer to attend a conference with program review staff for the purpose of reaching a consensus on the required program. A final decision on the required program will be issued in writing by the City within 10 working days of the conference.
C. Violations. The following constitute violations of this ordinance:
   1. Failure to self identify as an affected employer;
   2. Failure to perform a baseline measurement, including:
      a. Employers notified or that have identified themselves to the City within 90 days of the ordinance being adopted and that do not perform a baseline measurement consistent with the requirements specified by the City within 90 days from the notification or self-identification;
      b. Employers not identified or self-identified within 90 days of the ordinance being adopted and that do not perform a baseline measurement consistent with the requirements specified by the City within 90 days from the adoption of the ordinance;
3. Failure to develop and/or submit on time a complete CTR program;
4. Failure to implement an approved CTR program, unless the program elements that are carried out can be shown through quantifiable evidence to meet or exceed VMT and drive alone goals as specified in ordinance;
5. Submission of false or fraudulent data in response to survey requirements;
6. Failure to make a good faith effort, as defined in RCW 70.94.534 and this ordinance; or
7. Failure to revise a CTR program as defined in RCW 70.94.534(4) and this ordinance.

D. Penalties
1. A violation of this ordinance shall be punishable as a civil infraction under RCW 7.80, with each day of noncompliance constituting a separate violation. The civil penalty for a violation shall be $250 per day.
2. No affected employer with an approved CTR program which has made a good faith effort may be held liable for failure to reach the applicable drive alone or VMT goal. An affected employer shall not be liable for civil penalties if failure to implement an element of a CTR program was the result of an inability to reach agreement with a certified collective bargaining agent under applicable laws where the issue was raised by the employer and pursued in good faith. Unionized employers shall be presumed to act in good faith compliance if they:
   a. Propose to a recognized union any provision of the employer's CTR program that is subject to bargaining as defined by the National Labor Relations Act; and
   b. Advise the union of the existence of the statute and the mandates of the CTR program approved by the City and advise the union that the proposal being made is necessary for compliance with state law (RCW 70.94.531).

14.10.110 Appeals of administrative decisions.
A. Appeal of Final Decisions. Employers may file a written appeal to the city’s hearing examiner of the city’s final decisions regarding the following actions:
   1. Rejection of an employer’s proposed program.
   2. Denial of an employer’s request for a waiver or modification of any of the requirements under this chapter or a modification of the employer’s program.
   3. Denial of exemptions requested under SMC 14.10.100.
B. Appeals filed under this section must be filed with the city within 20 days after the employer receives notice of a final decision and shall stay the final decision. Determinations on appeals shall be based on whether the decision being appealed was consistent with the state law.
Appendix H:

Proposed TDM Policy
Decision Tree