

MEMORANDUM

Date: January 31, 2017
To: Wendy Nowak, AICP; Placeworks
From: Charles Alexander, PE, AICP
CC: Katy Cole, PE
**Subject: Long Beach Southeast Area Specific Plan
Transportation Demand Management Plan**

OC13-0279.09

This memorandum summarizes the Transportation Demand Management (TDM) Plan for the Long Beach Southeast Area Specific Plan (SEASP). This plan includes:

- A summary of the Vision, Priorities and Guiding Principles of the SEASP related to TDM.
- TDM goals/measures of effectiveness within the SEASP.
- Candidate TDM strategies that can be employed to meet the goals.
- A monitoring framework for the goals/measures of effectiveness.
- An implementation framework for TDM strategies including the formation of a Transportation Management Association (TMA).

The Southeast Area Specific Plan itself included recommendations for TDM. This plan is intended to supersede the TDM recommendations of the SEASP itself.



METHODOLOGY

Fehr & Peers worked with the California Air Pollution Control Officers Association (CAPCOA) to develop the transportation section of the report *Quantifying Greenhouse Gas Mitigation Measures*. This report is now used as a set of guidelines for quantifying the trip reduction and greenhouse gas benefits of TDM strategies. The CAPCOA guidelines were developed by conducting a comprehensive literature review of studies documenting the effects of TDM strategies on reducing vehicle miles traveled (VMT) (for further reference, see the CAPCOA *Quantifying Greenhouse Gas Mitigation Measures* report and fact sheets, available at <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>).

Using the results of the CAPCOA study Fehr & Peers developed TDM+, a quick-response tool that demonstrates trip reductions from commonly used TDM strategies. The tool also accounts for the interaction among different measures in various categories to avoid double counting. TDM+ was used to estimate the effectiveness of the menu of TDM measures identified in this study and to develop TDM-related trip reduction goals for the SEASP planning area.



VISION, PRIORITIES & GUIDING PRINCIPLES

TDM can contribute to several aspects of the SEASP's Vision, including: a livable destination; an active destination; a diversity of uses in close proximity to one another; residential neighborhoods complemented by businesses, restaurants, hospitality uses and recreational amenities; attractive streetscapes; and bike lanes and pedestrian walkways carefully integrated in a safe and efficient network of roadways that, along with the transit system, provide attractive alternatives to the car.

Additionally, TDM is relevant to several Priorities and Guiding Principles:

- Priorities
 - *Traffic. Improve vehicular traffic flow and balance new development with roadway capacity.*
 - *Bike and Pedestrian Transportation Options. Improve pedestrian and bicycle connectivity by creating an active streetscape that promotes safe walking and cycling.*
 - *Greater Mix of Land Uses. Create a land plan that encourages a greater mix of uses and appeals to a diverse population.*
- Guiding Principles
 - *Balance responsible growth with resource preservation through a flexible land use plan that provides a greater mix of uses and through an implementation strategy that is tailored to the local economy.*
 - *Expand multi-modal transportation options through enhanced pedestrian and bicycle connectivity without compromising vehicular traffic flow.*

The SEASP also identifies General Development Standards related to TDM, specifically:

- *Transportation Demand Management (TDM) and Transportation Management Association (TMA) Establishment.*

Transportation Demand Management strategies for Southeast Long Beach is intended to accomplish two broad objectives.

- *Reduce reliance on automobiles and associated congestion and emissions.*



- *Provide economic incentives for residential, hospitality and recreation uses in the area by allowing for opportunities to reduce the number of parking spaces required for a project in a mixed use area.*
- *Reduction of Peak Hour Trips: To reduce peak hour trips, the establishment and continuing maintenance of the Transportation Management Association (TMA) is a high implementation priority for the success of this Plan. Projects that will generate more than 50 peak hour trips are required to join the TMA, while other property owners and tenants are encouraged to join and participate based on incentives and benefits that the TMA will offer.*
- *Reduced Parking Requirements: To reduce the need for parking spaces over those required in the past, SEASP provides for bicycling opportunities and a mix of uses that can capitalize on local and regional bus services in the Southeast Long Beach area. For this reason, mixed use projects are eligible for a parking reduction by incorporating Transportation Demand Management (TDM) strategies, pending Site Plan Review approval.*



TRIP REDUCTION TARGETS

The purpose of a TDM plan is to identify and quantify programs, supporting land-use/infrastructure, and incentives that encourage people to choose travel modes other than driving alone. There are several factors that influence peoples' travel mode choices including access to travel demand management programs and the "Ds":

- Density - residential and non-residential development per acre.
- Diversity - mix of residential, retail and employment land uses on the site.
- Design - connectivity and walkability of the site's transportation networks.
- Destination Accessibility - location relative to the major regional attractions.
- Distance to Transit – employment within one mile and within a 30-minute transit trip.
- Demographics – average household size and auto ownership.
- Development Scale – size of the MXD land area in acres.

The Ds are already accounted for in the SEASP and vehicle trip generation estimates already reflect Ds-related benefits towards reducing drive alone vehicle travel.

The vehicle trip generation estimates for existing land uses and future land uses reported in *Long Beach SEASP Transportation Impact Analysis* are shown in Table 1. These estimates account for all "built environment factors" (Ds) that will reduce drive alone vehicle travel within and to/from the planning area including mixed land use (Diversity) and active transportation infrastructure (Design). The SEASP will offer pedestrian sidewalks on both sides of the street, providing connections within the site and off-site. The SEASP will also offer traffic calming measures on the streets and intersections in the project site. Using the CAPCOA methodology, these inputs result in a 2.5% active transportation mode share. The SEASP will also offer an increase in bicycle lanes throughout the project site. CAPCOA specifies that for each increase in bicycle lane mile, an additional 1% of mode share can be accomplished. With all the pedestrian and bicycle facilities in the SEASP, the **total active transportation mode-share of 4.9%** was identified and applied to the trip generation estimates.



TABLE 1 PROPOSED PROJECT MXD TRIP GENERATION AND INTERNALIZATION ESTIMATES

Time Period	Gross Trips	Net External Trips	Vehicle Trip Internalization	Vehicle Trip Internalization
<i>Existing Land Uses</i>				
Daily	72,209	65,731	9%	5%
AM Peak Hour	4,486	3,047	32%	19%
PM Peak Hour	7,109	5,299	25%	15%
<i>Future Land Uses (Includes all area land uses: existing, redeveloped, and proposed)</i>				
Daily	124,073	96,299	22%	13%
AM Peak Hour	6,412	4,795	25%	14%
PM Peak Hour	11,225	7,758	31%	18%

Source: Fehr & Peers, 2016

The change in SEASP area total trip generation is the difference between the existing and future trip generation estimates shown in Table 1 and is described as follows:

- Daily: The SEASP will result in 30,568 new daily external trips, or an increase of 46%.
- AM Peak Hour: The SEASP will result in 1,748 new AM peak hour external trips, or an increase of 57%.
- PM Peak Hour: The SEASP will result in 2,459 new PM peak hour external trips, or an increase of 46%.

The strategies addressed in this TDM plan focus on programs that further reduce trip generation beyond what has already been accounted for.

The following TDM goals and measures of effectiveness contribute to the Vision, Priorities and Guiding Principles of the Southeast Area Specific Plan by reducing the dependence on drive alone vehicle trips.

1. Minimize Peak Hour Vehicle Trips
 - a. TDM programs reduce Net External Peak Hour Trips by an additional 10%
 - AM Peak Hour Goal = 4,315 (4,795 trips * 90%). Stated another way: minimize the increase in external AM peak hour trips such that the overall increase with SEASP implementation is 47% instead of 57%.



- PM Peak Hour Goal = 6,980 ($7,758 * 90\%$). Stated another way: minimize the increase in external PM peak hour trips such that the overall increase with SEASP implementation is 36% instead of 46%.
2. Increase Bicycle, Pedestrian, and Transit Use
 - a. 4.9% bicycle and pedestrian mode share for trips within the SEASP Planning Area.
 - b. 10% increase in transit boarding and alighting at transit stops in the SEASP Planning Area.
 - c. 10% increase in bicycling and walking in SEASP.



CANDIDATE TDM STRATEGIES

As described, this plan focuses on TDM programs such as transit incentives and commute trip reduction strategies as the built environment factor (Ds) strategies are already identified and accounted for in the SEASP.

Efficacies for TDM programs that go beyond the built environment strategies (Ds) already included in the SEASP are provided in Table 2. Strategies are organized according to:

- Residential strategies
- Employer strategies
- Other strategies that may have already been addressed by the Specific Plan (typically land use or infrastructure strategies)

TDM strategies, when applied individually, each have a certain level of efficacy *for trip reduction*. However, when applied together, it is difficult (and typically impossible) to isolate the effects of any one TDM strategy. Research shows that when combined with other TDM strategies, an individual TDM strategy's efficacy is lower than when it is applied alone. Therefore, the following table includes the efficacies for strategies both when applied alone and when applied in combination with other strategies. These provided efficacies should be used for planning purposes as maximums and minimums. To maximize the likelihood that transit system and commute trip reduction strategy target is met, the City should ensure that the combination of efficacies is greater than 10%.



TABLE 2 TDM PROGRAM MENU OF STRATEGIES AND EFFACACIES

RESIDENTIAL STRATEGIES				
Strategy	Description	Applicable to Existing Development?	Efficacy (Individual)	Efficacy (Combined)
Unbundled Parking	<p>Parking costs are generally subsumed into the rental price of housing. Although the cost of parking is often hidden in this way, parking is never free; instead the cost to construct and maintain the “free” parking is hidden in the lease pricing. For all residential units, the cost to lease a second parking space (or even a first) could be unbundled from the cost of housing. The rate would be based upon projections regarding the required VMT reduction as well as considerations of what the market can currently accept. The rate may be adjusted over time to keep pace with inflation or provide greater TDM effects. The unbundled parking policy would provide a financial incentive to residents to lease only the amount of parking they need. For residential development, unbundled parking may prompt some residents to dispense with one of their cars and to make more of their trips by other modes. Among households with below-average vehicle ownership rates (e.g., low-income people, singles and single parents, seniors on fixed incomes, and college students), unbundled parking can also provide a substantial financial benefit that increases housing affordability.</p>	Maybe	5%	0.2%



TABLE 2 TDM PROGRAM MENU OF STRATEGIES AND EFFACACIES

RESIDENTIAL STRATEGIES				
Strategy	Description	Applicable to Existing Development?	Efficacy (Individual)	Efficacy (Combined)
Vanpool/Carpool	<p>Vanpool: Vanpool programs help vanpools to form by matching drivers and passengers and by providing or subsidizing vans. A matching platform can be integrated into a commuter information Web site and mobile app, or use a stand-alone service provider. A TDM Coordinator would provide support and matching for existing vanpool programs. Employers can offer full or partial subsidies for vanpool costs; financial incentives can also be provided to drivers and participants.</p> <p>Carpool: Carpool matching programs help carpools to form by matching drivers and passengers. The City is working on a citywide carpool matching program that would be used to implement this strategy. Employers may also choose to provide financial incentives to carpool drivers and participants.</p>	Yes	1.25-4%	0.1%
Safe Routes to Schools Programs	Safe Routes to Schools programs encourage students and parents to walk or bike to school through a variety of educational, enforcement and encouragement programs. The programs typically target both students and their parents.	Yes	10%	0.4%
Smart Trips Programs	A Smart Trips program involves actively reaching out to residents of an area to encourage them to walk, bike, take transit and carpool. Through such a program, existing and new residents are targeted and provided with information and resources regarding transportation options. For example, a Smart Trips program could provide targeted residents (including new development areas) with free bus passes or bike share memberships, as well as informational packets including walking/biking/transit maps and information about other resources such as the forthcoming City carpool program.	Yes	9-13%	0.4%

Source: Fehr & Peers.



TABLE 2 TDM PROGRAM MENU OF STRATEGIES AND EFFACACIES

EMPLOYER STRATEGIES				
Strategy	Description	Applicable to Existing Development?	Efficacy (Individual)	Efficacy (Combined)
Transit				
TAP Card or OCTA Pass	When employers purchase a TAP card or an OCTA pass for their employees, their transportation options are expanded and the individual trip cost of transit is removed. These offer a number of benefits to employees including, reduction in commuting costs and savings on cost of parking. TAP cards utilize smart card tap technology, making program administration and riding transit easy.	Yes	10%	0.4%
Transit subsidies	Employers, building managers, or developers can provide a subsidized transit pass to employees or residents. In this case, the employee or resident purchases a transit pass from the employer or building manager at a discounted price.	Yes	2.5-8%	0.1%
Parking				
Unbundled Parking	Unbundling parking from other benefits provided by an employer requires the user to consider the cost of driving which includes parking and would encourage people to use an alternative mode to driving alone.	Yes	Up to 5%	0.1%
Shared Parking	City planning policy can be updated to encourage shared parking between compatible uses, where parking demand peaks at different times of day or on different days of the week.	Yes	Unknown	Unknown
Commute Trip Reduction				



TABLE 2 TDM PROGRAM MENU OF STRATEGIES AND EFFACACIES

EMPLOYER STRATEGIES				
Strategy	Description	Applicable to Existing Development?	Efficacy (Individual)	Efficacy (Combined)
Employee Parking Cash-out	The plan would require employers to offer employee parking "cash-out." The term "cash-out" is used to describe the employer providing employees with a choice of forgoing their current subsidized/free parking for a cash payment equivalent to the cost of the parking space to the employer.	Yes	0.5-3%	0.1%
Alternative Work Schedules	Encouraging telecommuting and alternative work schedules reduces the number of commute trips and therefore VMT traveled by employees. Alternative work schedules could take the form of staggered starting times, flexible schedules, or compressed work weeks.	Yes	2.2%	0.1%
TDM Marketing and Education Campaigns	Individualized marketing campaigns typically target a neighborhood, corridor, or employment site. These campaigns provide individualized marketing travel options materials in a designated area to encourage people to use alternative modes.	Yes	2.4%	0.1%
Car Share	A pre-determined amount of car share parking spaces would be provided and employers would work with car share providers to provide vehicles at the development. Car share cars would be provided with preferential parking. These vehicles would be open to both residents and employees and would not be located in any parking facility where access is restricted to residents. Car share provides members with access to a fleet of shared vehicles, making it easier for households to live without a car or a second vehicle.	Yes	0.5-1%	0.1%



TABLE 2 TDM PROGRAM MENU OF STRATEGIES AND EFFACACIES

EMPLOYER STRATEGIES				
Strategy	Description	Applicable to Existing Development?	Efficacy (Individual)	Efficacy (Combined)
Vanpool/Carpool	<p>Vanpool: Vanpool programs help vanpools to form by matching drivers and passengers and by providing or subsidizing vans. Matching platform can be integrated into commuter information website and mobile app, or use a stand-alone service provider. The TDM Coordinator would provide support and matching for existing vanpool programs provided by existing providers. Employers can offer full or partial subsidies for vanpool costs; financial incentives can also be provided to drivers and participants.</p>	Yes	1.25-4%	0.1%
	<p>Carpool: Carpool matching programs help carpools to form by matching drivers and passengers. The City is working on a citywide carpool matching program that would be used to implement this strategy. Employers may also choose to provide financial incentives to carpool drivers and participants.</p> <p>Vanpool and carpool would also be provided with preferential parking spaces.</p>			
Circulator Shuttle	Operation of or subsidizing a shuttle service to connect hubs within the Southeast Area as well as nearby neighborhoods such as Cal State Long Beach, Belmont Shore, and Naples. The shuttle service could be provided as a fixed-route or demand-responsive system, potentially in conjunction with existing transit.	Maybe	0.75-2.5%	0.1%
Guaranteed Ride Home Program	Provides a free taxi (or Uber/Lyft) ride home from the office for alternative transportation commuters in the event of an emergency.	Maybe	5%	0.1%



TABLE 2 TDM PROGRAM MENU OF STRATEGIES AND EFFACACIES

EMPLOYER STRATEGIES				
Strategy	Description	Applicable to Existing Development?	Efficacy (Individual)	Efficacy (Combined)
Commuter Trip Reduction (CTR) Program	A mandatory or a voluntary CTR program would discourage single-occupancy vehicle trips and encourage alternative modes of transportation such as carpooling, taking transit, walking, and biking by utilizing the above strategies and setting performance standards and monitoring and reporting results.	Yes	Included in other categories listed	Included in other categories listed

Source: Fehr & Peers.

TABLE 2 TDM PROGRAM MENU OF STRATEGIES AND EFFACACIES

ADDITIONAL STRATEGIES				
Strategy	Description	Applicable to Existing Development?	Efficacy (Individual)	Efficacy (Combined)
Land Use/Location				
Housing Density	Designing the plan with increased densities reduces GHG emissions associated with traffic in several ways. Density is usually measured in terms of persons, jobs, or dwellings per unit area. Increased densities generally shorten the distance people travel and provide greater options for the mode of travel they choose. This strategy also provides a foundation for implementation of many other strategies which would benefit from increased densities	No	N/A – already addressed in trip generation by the Ds	



TABLE 2 TDM PROGRAM MENU OF STRATEGIES AND EFFACACIES

ADDITIONAL STRATEGIES				
Strategy	Description	Applicable to Existing Development?	Efficacy (Individual)	Efficacy (Combined)
Land Use Diversity (Mixed Use)	Having different types of land uses near one another can decrease VMT since trips between land use types are shorter and may be accommodated by non-auto modes of transport. The mix of high density housing as well as retail and restaurants provide land use diversity that would reduce the number of automobile trips that residents or tenants make.	No	N/A – already addressed in trip generation by the Ds	
Destination Accessibility	Destination accessibility is measured in terms of the number of jobs or other attractions reachable within a given travel time, which tends to be highest at central locations and lowest at peripheral ones. The location of the commercial/employment hubs also increases the potential for pedestrians to walk and bike to these destinations and therefore reduces the VMT.	No	N/A – already addressed in trip generation by the Ds	
Active Transportation				
Pedestrian Network	Providing a pedestrian access network to link areas of the project site encourages people to walk instead of drive. This mode shift results in people driving less and thus a reduction in SOV trips. The successful project would provide a pedestrian access network that internally links all uses and connects to all existing or planned external streets and pedestrian facilities contiguous with the project site. The project would minimize barriers to pedestrian access and interconnectivity. Physical barriers such as walls, landscaping, and slopes that impede pedestrian circulation would be eliminated.	No	N/A – already addressed in trip generation by the Ds	



TABLE 2 TDM PROGRAM MENU OF STRATEGIES AND EFFACACIES

ADDITIONAL STRATEGIES				
Strategy	Description	Applicable to Existing Development?	Efficacy (Individual)	Efficacy (Combined)
Bicycle Facilities	<p>Providing a bicycle access network to link areas of the project site encourages people to bike instead of drive. This mode shift results in people driving less and thus a reduction in VMT. The project would provide a bicycle access network that internally links all uses and connects to all existing or planned external streets and bicycle facilities contiguous with the project site. The project would minimize barriers to bicycle access and interconnectivity. Physical barriers such as walls, landscaping, and slopes that impede bicycle circulation would be eliminated.</p> <p>End-of-trip facilities, including bicycle parking, showers, lockers, and repair stations would also be encouraged.</p> <p>Bike share would also be expanded within the plan area to serve a larger percentage of existing and future plan area residents and employees.</p>	No	N/A – already addressed in trip generation by the Ds	
Traffic Calming	<p>Roadways throughout project site would be designed to improve safety by reducing motor vehicle speeds. Traffic calming features would encourage higher levels of bicycling and walking. In some cases, walkways or bikeways themselves may provide a traffic calming benefit.</p>	Maybe	N/A – already addressed in trip generation by the Ds	

Source: Fehr & Peers.



MONITORING FRAMEWORK

The City will monitor the efficacy of the TDM plan using a variety of transportation counts, surveys, and other data sources. Monitoring travel patterns and collecting data that provides a true picture of TDM plan effectiveness is complex for the following reasons:

- Travel characteristics such as trip internalization will change over time as land-uses redevelop.
- There is not a direct way of counting just vehicle trips associated with the land uses in the planning area because there will be through trips that skew the counts.
- Travel patterns can vary from day to day and vary based on people's trip purpose.

We have developed a simple and straightforward monitoring framework that will provide data that serves a proxy to approximate the Goals/Measures of Effectiveness identified in this Plan. The following data collection techniques will be used:

- Employee and resident surveys – surveying employees and residents within the SEASP will reveal their mode share characteristics. The surveys should ascertain the mode share of commute trips as well as non-commute trips. The surveys should also measure employees' and residents' use of and familiarity with provided TDM programs.
- Traffic counts and trip generation studies:
 1. Peak hour cordon counts. These will establish the overall flow of vehicles, bicyclists and pedestrians into and out of the plan area.
 2. Trip generation studies. Collecting traffic counts of employment and residential areas to establish trip generation rates is an effective way of understanding whether or not TDM strategies (both infrastructure and programmatic) are effective. To simplify the studies, these should focus on entirely residential areas (single family, multi-family or both).
 3. Multimodal counts of vehicles, pedestrians and bicyclists and indicative plan area roadway segments or intersections. These counts will not reveal overall mode share statistics; however, will provide empirical evidence that bicycling and walking is (or is not) occurring and can be used to track strategy implementation over time.



- Transit boardings/alightings at transit stops within the plan area – Similar to multimodal counts, transit boardings/alightings will not reveal overall mode share statistics; however, will provide empirical evidence that transit ridership is (or is not) occurring and can be used to track strategy implementation over time.
- Bike share ridership – Bike share is already provided within the plan area and additional stations may be added over time. The number of bikes checked out from plan area stations can be monitored over time to reveal changes in bike share usage.
- Big Data – Data from in-vehicle navigation systems or mobile phones (as is available from INRIX, Streetlight or Airsage) can be used to understand origin and destination patterns (where residents within the SEASP planning area are going to and where people entering the planning area are coming from) and through traffic patterns.

Table 3 identifies the Goals/Measures of Effectiveness and data collection methods.

TABLE 3 TDM PLAN MONITORING FRAMEWORK

Goal/Measure of Effectiveness	Data Collection Framework
<p><i>Minimize Peak Hour Vehicle Trips</i></p> <p>TDM programs reduce net external peak hour trips by an additional 2%.</p>	<ul style="list-style-type: none"> • This goal is specifically related to trips entering/exiting the plan area. Conduct cordon counts to determine the total number of vehicles entering/exiting the plan area. The trip generation estimates indicate that implementation of the SEASP will result in an increase in AM and PM peak hour external trips of 57% and 46% respectively. To meet the 10% TDM effectiveness goal, the cordon counts should not increase by more than 47% during the AM peak hour and 36% during the PM peak hour. • Trip generation estimates for residential uses indicate that actual trip rates should be 14.9% less than typical ITE trip generation rates to account for active modes and TDM strategies. Note that the trip generation counts will not distinguish between vehicle trips internal and external to the SEASP planning area; therefore, this count does not measure the effectiveness of internalization. • Big data could be used to estimate the amount of through traffic that traverses the SEASP planning area.



Goal/Measure of Effectiveness	Data Collection Framework
<i>Increase Bicycle, Pedestrian, and Transit Use</i>	
4.9% bicycle and pedestrian mode share for trips within the SEASP planning area	<ul style="list-style-type: none"> Employee and resident surveys that include questions about mode choice for work and non-work trips within the planning area.
10% increase in daily transit boarding and alighting at transit stops in the SEASP Planning Area.	<ul style="list-style-type: none"> Transit boarding/alighting data for transit stops within the planning area show increase in transit use.
10% increase in peak period bicycling and walking in the SEASP planning area.	<ul style="list-style-type: none"> Multi-modal counts on key corridors/intersections indicate increase in bicycling and walking. Bike share statistics show increase in peak period (7-9am and 4-6pm) bicycle check outs.

Source: Fehr & Peers, 2017

MONITORING LOCATIONS

- Employee and resident surveys – All possible residents and employees within the SEASP planning area.
- Traffic counts and trip generation studies:
 - Peak hour cordon counts:
 - Major access roadways to SEASP area: Studebaker Road (north), Pacific Coast Highway (north and south), 2nd Street-Westminster Boulevard (east and west), and Eliot Street.
 - Minor access roadways to SEASP area: Flint Avenue, Winslow Avenue, Bellflower Boulevard, Colorado Street, Studebaker Road (south), Channel Drive, Margo Avenue, and Silvera Avenue.
 - Trip generation studies. Existing and future residential uses.
 - Multimodal counts:
 - Key Intersections: Pacific Coast Highway/Loynes Drive, Pacific Coast Highway/2nd Street-Westminster Avenue, and Studebaker Road/2nd Street-Westminster Avenue.
 - Key Segments: Eliot Street (south of Colorado Street), Bixby Village Drive (path), and Long Beach Bikeway Route 10 (path along Los Cerritos Channel).



- Transit boardings/alightings: Transit stops within the plan area.
- Bike share ridership: Stations within the plan area.

MONITORING TIMING, FREQUENCY & REPORTING

Monitoring should be completed every two years (ideally even-numbered years to match U.S. Census data), in the fall once school is back in session and normal travel patterns have been established. Monitoring should be completed before Thanksgiving as the holidays typically affect travel patterns. The results of monitoring should be summarized in a brief technical memorandum.



IMPLEMENTATION

TRANSPORTATION MANAGEMENT ASSOCIATION FORMATION

A Transportation Management Association (TMA) is an organization formed to implement TDM programs and services within a community or member area. A TMA is typically formed and funded by participating employers and can also include residential areas. A TMA will have a board consisting of representatives from participating employers and, if appropriate, homeowner associations. A TMA will need to be formed to implement TDM programs within the Southeast Area Specific Plan area.

DEVELOPERS' GUIDE

Developers building within the Southeast Area Specific Plan area will need to conform with the TDM Plan. To conform with the TDM plan, a developer should:

- Join the TMA (if the development generates more than 50 peak hour trips) and demonstrate that their project is consistent with the TDM Plan (see next bullet).
- Incorporate Ds-related strategies (see pages 5 and 15-16) into the project's design and work with employers or homeowner associations to participate in the TMA and contribute their fair-share to the TMA to implement TDM strategies.