



**FINAL REPORT:  
RECOMMENDED TDM STRATEGIES & ACTIONS  
FOR THE CITY OF LOS ANGELES**

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**ABOUT THIS REPORT<sup>1</sup>**

This document is the final report of a study conducted for the City of Los Angeles, Department of Transportation (LADOT), that identifies strategies and actions the City of Los Angeles should consider maintaining, enhancing, and/or adopting to reduce the demand for motorized vehicular travel.

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**DISCLAIMER**

The contents of this report reflect the views of the author who is responsible for the facts and accuracy of the data presented herein. The contents are not necessarily the official views of SCAG or DOT. This report does not constitute a standard specification or regulation.

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<sup>1</sup> Material presented in this document supersedes that presented in technical memoranda prepared during the course of the study. Draft reports and technical memorandums were used to inform the analysis presented in this report and should be treated as reference documents only.







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## EXECUTIVE SUMMARY

### INTRODUCTION

Transportation Demand Management (TDM) strategies and actions are directed at influencing the mode, frequency, time, route, or length of travel in order to maximize the efficiency and sustainable use of transportation facilities. TDM measures increase access to transportation systems, improve mobility, and minimize negative impacts of vehicular travel such as traffic congestion, air pollution, and an auto-dominated physical environment. TDM strategies typically include providing information on travel choices, managing parking; marketing and communications, financial incentives and disincentives; providing and operating facilities that make the use of non-solo driving more attractive; and encouraging telework and flexible work strategies.

A myriad of rich and robust TDM strategies and actions have existed in the City of Los Angeles for over 30 years. TDM measures that emerged in the mid-1970s that focused on carpool matching and vanpooling have broadened to include well tested employer-based trip reduction programs, parking and roadway pricing, social marketing initiatives, targeted financial incentives/disincentives, site development requirements, innovative transportation services, and using technology to help travelers make better choices on how and when to travel.

The use of TDM in planning and operating the City's transportation system has grown as community leaders have seen that traditional fixes, such as expanding capacity or improving roadway operations, are limited by constraints on right-of-way, funding for capital projects, resources for transit service, effectiveness of operational improvements, and residential patience for regional traffic using neighborhood streets. This recognition has increased expectations for how TDM can reset the balance between the demand for travel and the supply of transportation facilities in order to offer travelers less congestion, increased mobility, and a cleaner environment.

The City of Los Angeles, with the support of the Southern California Association of Governments (SCAG) and United States Department of Transportation (USDOT) engaged this study to identify strategies and actions that the City of Los Angeles should maintain, enhance, and/or adopt to reduce the demand for motorized vehicular travel.

### BACKGROUND

#### TDM Best Practices

The term "TDM Best Practice" refers to strategies/actions that have proven effective in managing the demand for travel or are innovations shown to have promise for changing vehicular travel demand. There is no universal definition of a TDM Best Practice, but there are common characteristics which make a practice worthy of consideration. Best Practice strategies/actions yield lessons from applications elsewhere outside of the Los Angeles (including jurisdictions in other parts of California) that offer guidance for their application in the City of Los Angeles.



## **Existing Policies, Programs, and Practices**

TDM initiatives are pursued independently by several City of Los Angeles departments with informal coordination occurring when an issue, such as the review of a Traffic Impact Study, arises. The lack of citywide, interdepartmental strategy to guide the role and priority that TDM should play in policy, practices, facility development/management, and delivery of services makes it difficult for departments to be proactive with developing and implementing TDM actions. For example, existing traffic mitigation strategy considers TDM as a secondary mitigation measure after capacity enhancements have been exhausted. Development of a “TDM first” strategy that spanned all City agencies would provide the policy basis for reversing this practice by requiring application of TDM (e.g., specified actions and performance measures) in assessing impacts and identifying mitigation measures before considering capacity enhancements.

The variety of existing TDM programs managed by City departments is evidence that TDM has been considered as a congestion relief and emission reduction strategy for many years. Existing TDM activities/strategies found in the City of Los Angeles tend to be facility-based with fewer being of a regulatory or operational nature. Few of the TDM strategies/actions implemented and/or managed by the City include delivery of services (e.g., on-site Transportation Coordinator), incentives (e.g., transit subsidy), conducting marketing/communication and/or promoting coordination of TDM efforts (e.g., City-wide TDM Coordinator) which are at the core of successful TDM programs.

Major employers see the value of TDM somewhat differently with their focus on using TDM to attract good workers that live long distances from where they work due to the high cost of local housing. Large employers see TDM as a critical element in managing parking in major employment centers.

## **Stakeholder Perspective**

Stakeholders recognized facility-based strategies/actions as being well-established within the City, but feel these strategies/actions should be simplified and/or updated in order to improve impact including strengthening requirements (e.g., add active on-site TDM program management with more ambitious performance measures), and/or improving enforcement. Stakeholders were cognizant of financial and political constraints the City operates under, but felt these constraints should not preclude the City from doing more to improve the effectiveness of TDM.

## **METHODOLOGY**

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Over 198 TDM strategies/actions were identified from communities outside of Los Angeles (i.e., TDM Best Practice strategies/actions), existing TDM measures found in the City of Los Angeles (i.e., Existing TDM strategies/actions), and suggestions from organizations with an interest in using TDM (i.e., Stakeholder-suggested strategies/actions).

TDM strategies/actions were screened and assessed using a two-step framework:



1. An initial screening was conducted based on the Project Team’s knowledge of TDM strategies/actions and conditions in Los Angeles that might affect the applicability of the strategy/action within the City.
2. TDM strategies/actions were assessed further in terms of appropriate setting/application, program benefits/effectiveness, program cost/resource needs, public acceptance/commuter interest, and potential implementation challenges/opportunities (i.e., “Screening Factors”).

**Table ES-1** summarizes the results of the screening and assessment process:

<b>Table ES-1 Summary of TDM Strategy/Action Screening and Assessment Process</b>			
<b>Source</b>	<b>Total # of Measures Identified</b>	<b># of Measures Eliminated in Step 1</b>	<b># of Measures Assessed Further in Step 2</b>
TDM Best Practice	67	29	38
Existing TDM	56	26	30
Stakeholder-Suggested	75	47	28
<b>Total</b>	<b>198</b>	<b>102</b>	<b>96</b>

Twenty-two (22) measures assessed in “Step 2” had similar descriptions and were refined to align with other closely related strategies/actions, resulting in a reduction from 96 to 74 candidate TDM strategies/actions.

Candidate strategies/actions were rated and ranked based on the “Step 2” assessment of Screening Factors and shown by Implementation Mechanism, Policy/Program Emphasis, and Linkages to assist City decision makers in selection of TDM measures for program development and packaging.

**FINDINGS**

**Rating and Ranking**

Ratings ranged between negative ten and positive 41. **Table ES-2** summarizes the results of the rating and ranking process.

<b>Table ES-2 Summary of Strategy/Action Rating and Ranking Process</b>		
<b>Level of Priority</b>	<b>Ratings</b>	<b># of Measures Identified</b>
High (i.e., measures the City should consider developing further first)	18 or more	17
Medium (i.e., measures the City should consider developing further second)	14 to 17	18
Low ( i.e., measures the City should consider developing further last)	13 or less	39
<b>Total</b>		<b>74</b>





The 17 strategies/actions that received “High” rankings are listed below (shown with their rating):

1. Promote awareness of regional rideshare/ridematching websites (41)
2. Have LADOT cooperate in multi-agency transportation fare card (27)
3. Provide Internet access to transit route/schedule information (26)
4. Create City-wide TDM Coordination Program with TDM Coordinator position which could be partially funded by AB 2766 (25)
5. Develop a ridematch tool that is web-based and available to City staff (22)
6. Design and implement Integrated Modal Hubs with Mobility Centers/information kiosks (21)
7. Offer commuter tax benefits (Commuter Choice) for City employees (20)
8. Offer and promote a formal telework/telecommute program for City employees (20)
9. Dedicate on/off street Carshare vehicle parking (18)
10. Fund improvements to facilitate Guaranteed Ride Home (18)
11. Offer access to ITS real-time information by transit providers including better "Next Bus" information at key locations (18)
12. Provide financial incentives for City employees to not drive including Parking Cash Out (18)
13. Offer preferential parking program for vans/car pools to City employees (18)
14. Amend existing TDM Ordinance to add on-site support services, financial incentives, and communication/marketing and eliminate outdated references (18)
15. Give TDM a higher priority in LADOT Traffic Study Policies including methodologies to incorporate effects into Traffic Impact Study analysis and mitigation measures and/or revise, replace or supplement LOS thresholds with VMT based thresholds or multi-modal measurements (18)
16. Develop a TDM check list for City Planning staff to include in project applications and a TDM Toolbox with thresholds for implementation with guidelines on how to apply TDM tools by setting, land use and project size (18)
17. Include TDM requirements in the City's formulation of Sustainable Community Strategies (SCS) and the City's response to SB 375 (18)

The 18 strategies/actions that received “Medium” rankings are listed below (shown with their rating):

1. Reduced parking in TOD zones (17)
2. Unbundled parking from building leases (17)
3. Establish Maximum parking ratios (17)
4. Provide City-wide access to online travel information (16)



5. Promote existing policy of allowing strong TDM plans in lieu of required parking for new developments (16)
6. Standardize TDM and Trip Monitoring Report Process (16)
7. Offer an annual universal multi-modal pass (15)
8. Mark bicycle lanes on local streets (15)
9. Call for SCAQMD to include Parking Cash Out in amendments to Rule 2202 (15)
10. Take local control of the State's Parking Cash Out requirement (15)
11. Create links from department websites to TDM resources (15)
12. Increase density/reduce parking with TDM commitment (14)
13. Provide real-time info on parking availability information including signage (14)
14. Provide "Last/First Mile" transit connections to transit hubs (14)
15. Provide bicycle commute support (14)
16. Designate bicycle commute routes (14)
17. Provide better enforcement of regulations set by existing Specific Plans (14)
18. Simplify and automate City employee transit subsidy program (14)

Strategies and actions ranked as either High or Medium clustered around the following themes:

- Reinforcing existing City TDM efforts (For example: High measure #14 listed above; Medium measures #17 and #18)
- Focusing on parking (For example: High measures #9 and #13 listed above; Medium measures #2, #5, and #9)
- Improving travel information. (For example: High measures #5 and #11 listed above; Medium measures #4 and #11)
- Coordinating TDM efforts throughout City Hall. (For example: High measures #5, #15 and #16 listed above; Medium measure #6)

### **Implementation Mechanisms**

**Table ES-3** identifies mechanisms for implementing TDM strategies/actions. Nearly 50 percent of candidate TDM strategies/actions were identified as “Employer and Consumer-Directed Measures” as shown on **Table ES-4**. Approximately 90 percent of the measures that could be implemented by the “Land Use/Design/Parking” mechanism were either “High” or “Low” strategies/actions while over 80 percent of the measures that could be implemented by the “Preferential Use of Roadways and Parking” mechanism.



Category		Subcategory		Description
1.0	Public Policy / Regulations	1.1	Land Use / Design / Parking	Plans, regulations, ordinances, including agency practices, and guidelines
		1.2	Financial Incentives and Travel Ordinances	
2.0	Construction and Management of City Facilities	2.1	Preferential Use of Roadways and Parking	Facility-based measures including parking lots/structures, right-of-way and pedestrian/bicycle facilities
		2.2	Bicycle / Pedestrian Facilities	
		2.3	Facilities Management	
3.0	Transportation Services	N/A		Local circulators (e.g., Dash), shuttles, private van programs, etc.
4.0	Employer and Consumer-Directed Measures	4.1	Employer Support	Publicly supported and/or employer-based programs such as carpool formation, targeted financial incentives, employer-based teleworking, or communications with travelers
		4.2	City as Employer Actions	
		4.3	Rideshare Support	
		4.4	Information/Education	
		4.5	Financial Incentives	
		4.6	Bicycle/Pedestrian Support	
5.0	Institutional Arrangements	N/A		Agency, department or position devoted to TDM such as a City-wide TDM coordinator

Implementation Mechanism Category	Total # of Measures	Strategies/Action by Ranking		
		High	Medium	Low
<b>1.0 - Public Policy / Regulations</b>	<b>18</b>	<b>5</b>	<b>7</b>	<b>6</b>
1.1 - Land Use / Design / Parking	16	5	7	4
1.2 - Financial Incentives and Travel Ordinances	2	0	0	2
<b>2.0 – Construction and Management of City Facilities</b>	<b>16</b>	<b>1</b>	<b>4</b>	<b>11</b>
2.1 – Preferential Use of Roadways and Parking	12	1	1	10
2.2 – Bicycle / Pedestrian Facilities	2	0	2	0
2.3 – Facilities Management	2	0	1	1
<b>3.0 – Transportation Services</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>4</b>
<b>4.0 – Employer and Consumer-Directed Measures</b>	<b>34</b>	<b>10</b>	<b>6</b>	<b>18</b>
4.1 – Employer Support	3	0	1	2
4.2 – City as Employer Actions	6	4	0	2
4.3 – Rideshare Support	4	3	0	1
4.4 – Information/Education	10	2	3	5
4.5 – Financial Incentives	5	1	1	3
4.6 – Bicycle/Pedestrian Support	6	0	1	5
<b>5.0 – Institutional Arrangements</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>
<b>Total</b>	<b>74</b>	<b>17</b>	<b>18</b>	<b>39</b>





**Policy Emphasis**

TDM strategies/actions that were considered ranged from enhancements to existing measures to actions that break with conventional City policies and practices. Policy makers and program managers should be aware of the degree of change a strategy/action represents in deciding if a measure should be considered further and how that action might be packaged with other measures representing similar degrees of policy/program change (i.e., “Policy/Practice Emphasis”).

Each of the 74 candidate strategies/actions were sorted into the following categories of Policy/Practice Emphasis in order to inform policy makers and program managers of the degree of change a strategy/action represents from existing policy/practice and how a measure might be packaged with others representing similar degrees of policy/program change.

- 1) Status Quo: Enhancements to existing policy/practices; Does not assign more importance to TDM
- 2) Passive: Incremental change; shows increasing reliance on TDM
- 3) Active: Breaks with conventional policies/practices; Demonstrates TDM as a policy/practice priority

Over 60 percent of the candidate strategies/actions were identified as “Active” measures as shown in **Table ES-5**. About 2/3 of the High measures were identified as being “Active.” This grouping suggests that strategies/actions recommended for further consideration represent a departure from conventional polices/practices and would position TDM as a priority.

<b>Table ES-5 TDM Strategy/Action Policy Emphasis Summary</b>				
<b>Policy Emphasis</b>	<b>Total # of Measures</b>	<b>Strategies/Action by Ranking</b>		
		<b>High</b>	<b>Medium</b>	<b>Low</b>
Active	46	11	8	27
Passive	18	4	5	9
Status Quo	10	2	5	3
<b>Total</b>	<b>74</b>	<b>17</b>	<b>18</b>	<b>39</b>

**Linkages**

TDM strategies and actions work best if developed and implemented with complimentary measures directed at affecting similar policies, program management, and implementation practices. For example, the measure calling for creating a “Toolbox” to guide development of site-specific TDM plans (i.e., measure #4 shown on the list of those ranked as “High”) would benefit from having a Citywide TDM Coordinator (i.e., measure #16 shown on the list of those ranked as “High”) to integrate the efforts of the departments of Transportation and City Planning.





## RECOMMENDATIONS

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The Project Team recommends the following actions:

1. The City of Los Angeles should give further consideration to the 35 candidate TDM strategies/actions that received High or Medium rankings listed in the “Rating and Ranking” section above. A program (e.g., cost, timing, responsibilities, implementation process, etc.) for these measures should be developed in order to allow for a complete evaluation of expected benefits, resources requirements, timing, schedule, and assignment of responsibility.

The 39 strategies/actions that received Low rankings warranted no further action at this time. However, these strategies/actions should not be disregarded completely as they were identified to have some value/benefit to the City should the costs/barriers to their adoption/maintenance/enhancement be minimized in the future.

2. LADOT and City Planning staff should form an informal TDM working group to consider how to proceed with this study’s recommendations. This working group could also start to coordinate existing TDM practices to ensure a higher degree of coordination.
3. Linkages among the High and Medium rated strategies/actions should be considered in developing strategies/actions that can be packaged together to achieve a greater benefit/value to be considered further.
4. The measures rated as being High or Medium should be considered the priority for projects to be nominated for funding through Metro’s “Call for Projects,” Caltrans’ Planning Grants and/or other financing opportunities.



## **1.0 INTRODUCTION**

Transportation Demand Management (TDM) strategies and actions influence the mode, frequency, time, route, or length of travel in order to increase access to transportation systems, improve mobility, and minimize negative impacts of travel by motorized vehicles including traffic congestion and air pollution. TDM strategies typically include managing parking and pricing; marketing transit and providing commuter subsidies; promoting walking, bicycling, and ride-sharing; and encouraging telework and flexible work strategies.

### **1.1 Purpose**

The City of Los Angeles, with the support of the Southern California Association of Governments (SCAG) and the United States Department of Transportation (USDOT) engaged the “Transportation Demand Management Strategies” project (i.e., Project) to identify specific strategies and actions the City of Los Angeles should consider maintaining, enhancing, and/or adopting to reduce the demand for motorized vehicular travel.

### **1.2 Background**

A myriad of rich and robust TDM strategies and actions have existed in the City of Los Angeles for over 30 years. The first wave of TDM measures encouraged ridesharing by matching commuter trip profiles and broadened over time to include not only well tested employer-based trip reduction programs, but the pricing of parking and roadways, social marketing initiatives to change consumer behavior, targeted financial incentives/disincentives, conditions of development and a citywide Trip Reduction Ordinance that make TDM facilities part of non-residential properties, innovative transportation services such as car and bicycle sharing systems, and technology to provide travelers access to information to inform their travel decisions prior to and during travel. These advancements also broadened the definition of TDM considerably to include strategies that effect the time in which travel is made, the frequency of travel and the routes travelers used in addition to the traditional focus on changing a traveler’s mode.

The past decade has seen greater recognition by elected officials, City agencies, community organizations, business interest groups, and real estate developers of TDM as one of a handful of strategies that can address mounting mobility and environmental resource concerns associated with existing urban activity as well as impacts of hoped-for economic growth. This recognition has evolved as community leaders recognize that traditional fixes, such as expanding capacity or improving roadway operations, are limited by:

- Constraints on available right-of-way and funding for even simple roadway and transit capacity expansion projects
- Concerns over the impact of roadway expansion and operational improvements on triggering increased motorized vehicle trip making and attendant air quality effects
- Severe funding restrictions for maintaining existing transit service



- Limits on effectiveness of operational improvements
- Concerns for a reduction in a neighborhood's quality of life that may occur as non-residential traffic uses local streets to avoid congested roadways

Innovations in TDM employed in Los Angeles and elsewhere, coupled with constraints in using traditional solutions to address traffic congestion, air quality, and energy consumption concerns, led the City of Los Angeles to engage this study to identify TDM strategies and actions that should be examined for their applicability in Los Angeles.



## 2.0 METHODOLOGY

Nearly 200 TDM strategies/actions were reviewed for their applicability in Los Angeles. The strategies/actions were drawn from a review of three sources: 1) Best practices utilized nationally (i.e., “TDM Best Practice” strategies/actions); 2) Policies and programs that exist within the City of Los Angeles (i.e., “Existing” TDM strategies/actions); and 3) Measures suggested by organizations with an interest in addressing community concerns using TDM (i.e., “Stakeholder-suggested” TDM strategies/actions). **Appendix A** contains a master list of strategies/actions identified by this Project.<sup>1</sup> The master list is organized by source (i.e., **Appendix A-1** lists all the TDM Best Practice strategies/actions identified; **Appendix A-2** lists all the Existing TDM strategies/actions; and **Appendix A-3** lists all the Stakeholder-suggested strategies/actions).

### TDM Best Practice Strategies/Actions<sup>2</sup>

The term “TDM Best Practice” refers to strategies/actions that have proven effective in managing the demand for travel or are innovations shown to have promise for changing vehicular travel demand. There is no universal definition of a TDM Best Practice, but there are common characteristics which make a practice worthy of consideration. The evaluation of Best Practice strategies/actions has yielded lessons from applications elsewhere outside of the Los Angeles (including jurisdictions in other parts of California) that offer guidance for their application in the City of Los Angeles.

**Section 3.0** summarizes materials on TDM Best Practices implemented at national, state, regional, county, local, and site (i.e., property owner and/or employer) levels assembled from the Project Team’s files, internal resources, existing print and web-based materials, and personal contacts.<sup>3</sup>

### Existing TDM Strategies/Actions<sup>4</sup>

Existing TDM strategies/actions within the Los Angeles were identified using the Project Team’s knowledge of local TDM efforts, interviews with parties responsible for implementation and/or management, City policies and practices (e.g., Transportation Element, Transportation Specific Plans) interviews with City and non-City organizations, (e.g., UCLA, Metro), and a review of other public agency documentation, recent studies (e.g., Rand Corporation’s “Reducing Traffic Congestion in Los Angeles”), print and web-based materials.

<sup>1</sup> Each strategy/action listed in **Appendix A** was assigned a “Project Master Id Number” (i.e., No.#) in order to help track strategies/action throughout the various assessments undertaken as part of this project.

<sup>2</sup> *Technical Memorandum No.1: Initial Assessment of Potential Transportation Demand Management Actions (Task 2)*, dated June 1, 2010, provided the original list of the 67 TDM Best Practice strategies/actions identified by the Project Team in “Appendix 1.” This list was revised to assign a “Project Master ID No” to each TDM Best Practice strategies/actions in “Appendix E” of the draft *Technical Memorandum No.2: Assessment of Existing and Stakeholder-Suggested TDM Strategies (Task 3)* dated May 19, 2011.

<sup>3</sup> A summary of TDM Best Practices employed outside of the City of Los Angeles was provided in the *Task 2 City of Los Angeles TDM Screening Briefs* report dated June 1, 2010.

<sup>4</sup> The original list of 56 Existing TDM strategies/actions was provided in “Appendix C” of the draft *Technical Memorandum No.2: Assessment of Existing and Stakeholder-Suggested TDM Strategies (Task 3)* dated May 19, 2011.



**Section 4.0** includes a summary of existing TDM strategies/actions with the City. **Section 5.0** provides an overview of the parties responsible for these strategies/actions.

### **Stakeholder-suggested TDM Strategies/Actions**<sup>5</sup>

Interviews with selected parties responsible for TDM implementation in Los Angeles (i.e. Stakeholders) were conducted to collect additional information needed to describe existing TDM strategies/actions and to obtain Stakeholder perceptions of their strengths and weaknesses.<sup>6</sup> Suggestions for potential TDM strategies/actions for the City to consider were solicited during these interviews.

**Section 6.0** identifies the Stakeholders interviewed and **Section 7.0** summarizes their observations/perceptions with regards to existing TDM strategies/actions.

## **2.1 SCREENING AND ASSESSMENT FRAMEWORK**

A two-step process (i.e., screening and assessment) was developed to consider the potential value of various TDM strategies/actions to the City of Los Angeles. The focus of this process was on how a strategy /action might fit local conditions and meet local priorities.

**Section 8.1** presents the results of the screening and assessment two-step process described below.

### **Step 1: Screening**

An initial screening was conducted based on the Project Team's knowledge of TDM strategies/actions and conditions in Los Angeles that might affect the applicability of the strategy/action within the City.<sup>7</sup> The initial screening identified two types of strategies/actions:

- Strategies/actions that have little or no applicability in the City and/or those not feasible due to one or more critical adoption/maintenance/enhancement issues. Further evaluation of these strategies/actions in Step 2 was not warranted.
- Strategies/actions that have potential benefit and that could be adopted/maintained/enhanced by the City (i.e., "candidate" TDM strategies/actions), indicating that further evaluation in Step 2 was warranted.

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<sup>5</sup> The original list of 75 Stakeholder-suggested TDM strategies/actions was provided in "Appendix D" of the draft *Technical Memorandum No.2: Assessment of Existing and Stakeholder-Suggested TDM Strategies (Task 3)* dated May 19, 2011.

<sup>6</sup> Notes from Stakeholder interviews were provided in "Appendix A" of the draft *Technical Memorandum No.2: Assessment of Existing and Stakeholder-Suggested TDM Strategies (Task 3)* dated May 19, 2011.

<sup>7</sup> This initial review was employed to reduce the number of strategies/actions to be evaluated for this Project as there were 198 TDM strategies/actions identified (i.e., 67 Best Practice, 56 existing and 75 Stakeholder-suggested).



## Step 2: Assessment

Candidate TDM strategies/actions were assessed further in terms of appropriate setting/application, program benefits/effectiveness, program cost/resource needs, public acceptance/commuter interest, and potential implementation challenges/opportunities (i.e., “Screening Factors”). Quantitative Screening Factors (e.g., ability to reduce vehicle trips, reduce travel time, capital costs, etc.) were scored with positive numbers for benefits (i.e., 1, 2 or 3) and negative numbers for costs and challenges (i.e., -1, -2 or -3) for each of these strategies/actions. Non-quantitative screening factors that would be important in TDM strategy/action selection decisions were described where appropriate.

The “TDM Strategy/Action Screening Brief” worksheet template used for documenting this step is provided in **Appendix B**. Completed worksheets are provided in **Appendix C** through **Appendix E**.

### **2.2 Rating and Ranking Framework**

Each candidate TDM strategies/actions was rated and ranked to assist in selection of strategies/actions for further development.<sup>8</sup> **Section 8.2** presents the results of the rating and ranking process described below.

Twenty-two (22) strategies/actions with similar descriptions were refined to align with other closely related strategies/actions (i.e., “Duplicate/Overlapping” strategies/actions) during the rating and ranking process.<sup>9</sup> This refinement reduced the original list of 96 candidate TDM strategies/actions to 74 strategies/actions to be considered.

#### **Rating**

The scores of the individual quantitative Screening Factors were summed to assign a rating (i.e., the “Overall Rating”) to each of the 74 candidate TDM strategies/actions.

#### **Ranking**

Strategies/actions were organized by their Overall Rating and then ranked as “High,” “Medium” or “Low” priority based on the results distribution:

- Strategies/actions that received an Overall rating of 18 (i.e., approximately the 75<sup>th</sup> percentile) or more were ranked as High. These were strategies/actions that the Project Team felt the City should consider its first priority adopting, maintaining and/or enhancing due to their potential value/benefit identified.

<sup>8</sup> Strategies/actions identified by this Project will need to be developed further to provide City decision makers with more detail on expected benefits (e.g., vehicle trip, vehicle miles of travel, and Green House Gas reductions), resource requirements (e.g., cost, staffing), phasing, schedule, and responsibilities before selecting initiatives to be implemented.

<sup>9</sup> The draft *Technical Memorandum No.3: Rating and Ranking of TDM Strategies/Actions* (dated June 14, 2011) documented Duplicate/Overlapping strategies/actions in “Table 4.2” through “Table 4.5C.”



- Strategies/actions that received an Overall Rating between 14 (i.e., approximately 50<sup>th</sup> percentile) and 17 were ranked as Medium. These were strategies/actions that the Project Team felt the City should consider after the High strategies/actions.
- Strategies/actions that received an Overall rating of 13 or below were ranked as Low. These were strategies/actions that the Project Team felt should be considered last due to potential implementation obstacles/issues.

**2.3 Implementation Considerations**

Candidate TDM strategies/actions were grouped into three categories on the basis of implementation mechanism, the degree of policy and/or programmatic emphasis, and linkages among strategies/actions to better understand potential impacts.

**Implementation Mechanisms**

**Table 1.0** identifies mechanisms for implementing TDM strategies/actions (see **Section 8.3** for a listing of TDM strategies/actions by implementation mechanism).

<b>Table 1.0</b>				
<b>City TDM Implementation Mechanism</b>				
<b>Category</b>		<b>Subcategory</b>		<b>Description</b>
1.0	Public Policy / Regulations	1.1	Land Use / Design / Parking	Plans, regulations, ordinances, including agency practices, and guidelines
		1.2	Financial Incentives and Travel Ordinances	
2.0	Construction and Management of City Facilities	2.1	Preferential Use of Roadways and Parking	Facility-based measures including parking lots/structures, right-of-way and pedestrian/bicycle facilities
		2.2	Bicycle / Pedestrian Facilities	
		2.3	Facilities Management	
3.0	Transportation Services	N/A		Local circulators (e.g., Dash), shuttles, private van programs, etc.
4.0	Employer and Consumer-Directed Measures	4.1	Employer Support	Publicly supported and/or employer-based programs such as carpool formation, targeted financial incentives, employer-based teleworking, or communications with travelers
		4.2	City as Employer Actions	
		4.3	Rideshare Support	
		4.4	Information/Education	
		4.5	Financial Incentives	
		4.6	Bicycle/Pedestrian Support	
5.0	Institutional Arrangements	N/A		Agency, department or position devoted to TDM such as a City-wide TDM coordinator

**Policy/Practice Emphasis**

Policy makers and program managers should be aware of the degree of change a strategy/action represents in deciding if a measure should be considered further and how that action might be packaged with other measures representing similar degrees of policy/program change (i.e., “Policy/Practice Emphasis”).





The 74 candidate TDM strategies/actions were sorted into the following categories of Policy/Practice Emphasis (see **Table 4.1** through **Table 4.3** and **Section 8.3** for a listing of TDM strategies/actions categorized by policy and/or programmatic emphasis):

1. **Status Quo:** Enhancements to existing policy/practices; Does not assign more importance to TDM
2. **Passive:** Incremental change; Shows increasing reliance on TDM
3. **Active:** Breaks with conventional policies/practices; Demonstrates TDM as a policy/practice priority

### **Linkages**

Policy makers and program managers should be aware of linkages between candidate TDM strategies/actions in determining how a strategy/action might be packaged with other measures to improve its effectiveness. Strategies/action directed at affecting similar policies, program management, and implementation practices tend to work best if developed and implemented together (i.e., “complimentary” strategies/actions). For example, the measure calling for creating a “Toolbox” to guide development of site-specific TDM plans (i.e., Project Master ID No.127) would benefit from having a Citywide TDM Coordinator (i.e., Project Master ID No.164) to integrate the efforts of the departments of Transportation and City Planning (see **Section 8.3** for further examples of complimentary strategies/actions amongst the High and Medium priority level measures).





### 3.0 TDM BEST PRACTICES OVERVIEW

This section provides an overview of TDM Best Practices drawn from experiences outside of Los Angeles (including jurisdictions in other parts of California) that were identified as having the most suitability (i.e., High and Medium ranking) to Los Angeles. Measures are shown with their “Project Master ID Number (No.#)” (see **Appendix A-1** for the complete list of TDM Best Practice strategies/actions).

**Reduced parking in TOD zones (No.1):** A 2002 Caltrans study on Transit-Oriented development (TOD) success factors concluded that residents who lived near transit hubs were different from residents who lived farther from transit in several characteristics that were associated with their likely travel patterns. Using data from various sources, the study found that residents who lived close to transit had fewer household members than did residents who lived in the same census tracts but farther from transit and were more likely to be younger and childless or retired. They also had fewer vehicles per household and they were more likely to work in locations that were well served by transit. These differences, coupled with the expanded range of multimodal travel options associated with TOD zones have been shown to result in higher use of non-single occupancy vehicle (SOV) modes for travel to and around residential transit hubs. This makes it feasible to consider increasing density in the area and/or reducing the amount of parking that a developer is required to provide for a new building, without a significant increase in vehicle traffic in the area.

Examples that offer guidance include:

- **City of Pasadena, CA** – Pasadena set lower standards for parking requirements for new development projects that were located within 1/4 mile of a light-rail station and that were designed to encourage transit use and pedestrian activity. The minimum parking for office development projects was cut by 25 percent and ratios for other nonresidential uses were cut by 10 percent. Further, in both of these cases, this ratio also became the maximum ratio. Multi-family residential parking ratios were not reduced for TOD areas compared to other areas, but the parking was set to be a maximum for the TOD area, but a minimum for non-TOD areas. So, for example, the TOD parking requirement for units of 650 sq feet or more was a minimum of 1.5 spaces to a maximum of 1.75, while the non-TOD requirement was set as a minimum of 1.5 spaces, with no restriction on additional parking permitted. The ordinance also authorized the City to permit additional residential and non-residential reductions if a parking study showed that parking demand would be less than the new maximum.
- **Other Locations** – Other examples include the following: Montgomery County (MD) reduces parking requirements by as much as 20 percent around Metrorail stations. The County of Los Angeles TOD ordinance allows for a 40 percent reduction in parking requirements near transit stations. Berkeley (CA) established conditions under which reduced parking will be permitted (e.g., the site is located within 1/3 of a mile from a BART station, intercity rail station or rapid bus transit stops). Vancouver (Canada) allows parking reductions ranging from 14 percent to 28 percent in multifamily zones near major transit stations. And the City of Long Beach (CA)



permits parking reductions up to 25 percent for new developments located within 600 feet of a Blue Line transit station.

**Increased density / reduced parking with TDM commitment (No.2):** An increasing number of local planning and zoning organizations are either requiring or permitting developers to incorporate TDM actions into new developments, as approaches that can influence the vehicle trip generation at the developments and reduce reliance on vehicle travel. In return, developers might receive authorization for higher density development than would otherwise be allowed or an opportunity to reduce the amount of parking required to be built.

These efforts can have several components, including the development of guidance that defines appropriate and effective TDM actions for various development scenarios and TDM-friendly design standard for the construction of infrastructure such as pedestrian and bicycle access, preferred parking facilities for bicycles and car/vanpools, shower and locker facilities, access to mass transit, and waiting areas for transit riders. Design guidelines also could encourage developers to consider the layout of buildings and the overall site, including the orientation of buildings toward the street, rather than toward a parking lot and limited setbacks from the street to minimize the walking distance to transit.

The guidelines and standards can be voluntary or mandatory. In mandatory cases, standards can be linked to development proffers and/or submittal of TDM/Traffic Impact Plans required before a city issues a Certificate of Occupancy. Additionally, developers can be required to submit periodic status reports documenting travel impacts for tenants/users of the development.

Examples that offer guidance include:

- Arlington County, VA – As part of an effort to reduce peak-hour travel while permitting high density urban growth, Arlington County requires developers that want to construct commercial or residential buildings that exceed the standard density for the zoned area to implement a range of “site plan conditions” to mitigate the impacts of the increased density. The conditions can include building and site infrastructure and TDM support services, such as parking management, financial incentives, information, and other services that will encourage non-SOV travel by occupants of the buildings. Site plan conditions also can require the developer/property owner to make financial contributions to support area-wide TDM programs and to document trip generation rates, parking utilization, and mode split. In 2008, Arlington negotiated 12 new site plans for a total of 113 County-wide. In addition to the individual site actions, these 12 plans will provide \$1.5M in contributions to support local TDM over the coming 30 years; the County collected \$177,842 during the 2009 fiscal year.
- South San Francisco, CA – The City of South San Francisco implemented a TDM ordinance that allows reduced parking requirements for projects that provide specified TDM services. For example, a mixed-use development was permitted to cut parking by 10 percent from the required minimum in exchange for implementing late-night taxi service and feeder shuttle service, transit subsidies, Guaranteed Ride Home (GRH), and a \$20 parking charge with free parking for carpools and vanpools, for tenants.



- City of Pasadena, CA – The City of Pasadena adopted a TDM ordinance for new development to encourage the use of including public transit, vanpools, carpools and bicycles and alternative work hours. The ordinance, “Established Trip Reduction Standards in Specified Developments,” requires that projects of at least 25,000 square feet (SF) must designate at least 10 percent of employee parking for carpool and vanpool vehicles, install bicycle parking near the employee entrance, and offer transportation information to employees at the site. Properties of 100,000 SF or more must additionally build carpool and vanpool loading areas and connecting sidewalks to facilitate use of ridesharing and walking.

**Parking unbundled from building leases (No.3):** Many commercial and residential leases incorporate or “bundle” the cost of parking spaces in the cost tenants pay for their building space lease, effectively burying the cost of parking, from the perspective of the tenant and requiring the tenant to pay for a share of the building’s parking, even if the tenant does not need or want all the spaces that are allocated in the lease. This action separates the cost of parking from the cost of the building space and offers the tenant an option to purchase only the amount of parking that is needed or desired. Thus, the tenant can save money by paying for less parking than would be allocated in the bundled price. Unbundled parking also can offer property managers an opportunity to sell parking at market value and generate more revenue from tenants who need more parking than is allocated in their lease. In this action, the City’s role would be to encourage developers to implement this leasing approach.

Examples that offer guidance include:

- Seattle, WA – In 2008, Seattle reduced parking requirements for multifamily housing in three of the City’s major commercial corridors and is considering a proposal to eliminate minimum parking requirements in Seattle’s six core urban districts and near light-rail stations. This is prompting some developers to build less parking and to unbundled parking as a marketing opportunity. The Civic, a 261-unit project located near major bus and light-rail lines, includes 24 condos without parking. To make the building more attractive to car-free buyers, the developer is offering on-site car sharing. Another Seattle condo building, the Moda, offered 83 of its 251 units with no parking at all and another 125 with unbundled permit parking. Both the Civic and Moda have sold all their unbundled units.
- San Francisco, CA – In June 2009, San Francisco replaced minimum requirements downtown with maximum standards allowing no more than 0.75 parking spaces per unit. Under the new requirements, developers are also required to unbundle the price of parking from the price of the condo.
- Bellevue, WA– This city requires downtown building owners to separate the cost of parking from the building leases and to set the minimum parking cost for long-term parking to be at least twice the cost of a bus pass.



**Maximum parking ratios (No.6):** Most land use and zoning authorities require new developments to provide parking that meets a minimum standard, based on the use of the development (e.g., employment, residential, etc.) and the amount of space or number of units in the development. These values assume that parking is cheap to supply and do not reflect unique conditions, such as availability of transit and TDM services, that could reduce parking demand. An increasing number of municipalities are concluding that these minimums are higher than needed and some have begun to shift to maximum ratios or a combination of lower minimum requirements with maximum parking requirements in an attempt to achieve balanced land use management. Maximum parking requirements limit the number of parking spaces a developer can provide. Instead of asking developers to provide *at least* a certain number of parking spaces, developers are now asked to provide *no more* than a certain number of parking spaces.

Most cities that implement parking maximums link the ratios with the availability of alternative modes. Cities such as Portland (OR), San Diego (CA), Bellevue (WA), Boston (MA), Cambridge (MA), Toronto (Canada) and San Francisco (CA) have established maximum parking requirements for new development as part of “transit first” or auto trip reduction policies and goals. Examples that offer guidance include:

- **Portland, OR** – One notable wide-scale application of this action is in Portland, which instituted commercial development parking maximums substantially under typical parking ratios in the downtown area and six central businesses districts. The parking program permits from 1.0 to 3.4 spaces per 1,000 SF of space, depending on the specific district. These ratios compare to the typical 4.0 to 5.0 spaces per 1,000 SF. An important element of this policy is the linkage with transit. Lower maximums are set for sites within a ¼ mile of a frequently served bus stop or ½ mile from a transit station and the ratios were set in inverse proportion to the amount of transit service, measured by number of transit seats in the area. The downtown area, with parking maximum of 1.0, has 32,000 peak period seats. The Lloyd District, with a maximum of 2.0, has 16,000 seats.
- **Other Cities** – Other examples of maximum parking requirements include the following. San Francisco (CA) limits office parking downtown to 7 percent of the building's floor area. Seattle (WA) allows a maximum of one parking space per 1,000 SF of office space downtown and is considering extending this limit to areas outside of downtown. Redmond (WA), a suburban community, allows a minimum of 4 and a maximum of 5 spaces per 1,000 SF of floor area for most uses in the Neighborhood, Retail, and General Commercial zones. Helena (MT) establishes maximum parking ratios as a percent above the minimum parking ratio (e.g. no more than 110 percent of the minimum for parking lots of more than 51 spaces).

**Real-time information on parking space availability (No.12):** This system would let users know the location of parking facilities and how many spaces were currently available in each facility. Information could be transmitted via a variety of platforms, such as Variable Message Signs (VMSs), the internet, or telephone/personal digital assistant (PDA). It would be appropriate in a variety of settings, wherever parking tends to fill up (making such information useful). This could be at a Park & Ride or transit lot, or at a garage in the central business district.



A variation on this action is a system that automatically tracks the availability and location of parking spaces within a parking facility. It differs from the real-time information regarding capacity described above in that it helps people locate the available parking in a garage (reducing the inconvenience of circling around hoping to find a spot), rather than just providing information regarding what facilities have free capacity. This action is appropriate for any large parking facility that has high demand.

Examples that offer guidance include:

- Santa Monica, CA – Santa Monica has an excellent system available on the internet: <http://parkingspacenow.smgov.net/>. Sixteen parking facilities are highlighted on a satellite photo. The number of spaces available at each facility appears in a box next to the facility; if a facility is full, the box turns red and says “FULL.” Pointing a mouse at a facility results in a pop-up box showing address, capacity, hours, and rates for the lot or garage. The page is updated every five seconds.
- Ann Arbor, MI – The Ann Arbor Downtown Development Authority has a similar system for real-time parking availability on its website, although the presentation is not as sophisticated. ([http://www.a2dda.org/parking\\_transportationAvailable\\_parking\\_spots/](http://www.a2dda.org/parking_transportationAvailable_parking_spots/)). However, it is possible to check the parking availability at a specific facility via touch-tone phone.
- Bay Area, CA– Bay Area Rapid Transit (BART) conducted a pilot project in 2007 that involved placing variable message signs on the highway just before a station location, letting people know how many parking spots were left, as well as establishing a system that let people reserve spots through a variety of media.
- Chicago, IL – In 2006, the Chicago Metra commuter rail system tested a parking information system at two rail station Park & Ride lots. Automated counters tracked the number of vehicles in the lots, and this information was used to compute the remaining spots. This information was displayed on VMSs along the interstate prior to the exits for those stations.
- Montgomery County, MD – The County placed two VMSs along major arterials approaching the Glenmont Metrorail terminal station, where the garage regularly fills up by 8:15 a.m. One VMS is placed such that commuters can obtain parking availability information just before the entrance to a Park & Ride lot with bus service to the station, allowing them to divert to the lot. The other is placed outside the garage, so that commuters can avoid entering and searching for a space in the full garage, and instead can proceed directly to the next station along the line, which usually has capacity. A survey conducted on behalf of the County found that the signs appeared to help people avoid wasting time in the Glenmont facility after it was full, but failed to boost usage of the remote lot, primarily because it was perceived as having insufficient bus service to the Metrorail station.
- Baltimore, MD – The Baltimore Washington International Airport (BWI) has outfitted over 13,000 spaces in its garages with a system that guides drivers directly to a free spot. After taking a parking ticket, the driver is confronted with ramps leading to the six levels of the garage. A sign before the ramps tells the driver exactly how many spaces are available on each level, allowing him or her to make an informed choice as to which ramp to choose. As the driver proceeds through the level, LED signs overhead indicate how many spaces are



available in each row. Red and green LED lights are above spaces, so that drivers can easily see which rows have unoccupied spaces and which rows are full. BWI surveys indicated a very high level of customer satisfaction with this service, and people tend to believe that parking at BWI is easier than at other airports.

**Dedicated on/off street Carshare vehicle parking (No.15):** This action would offer commuters who rideshare and park on-street or in City-owned lots or garages several related benefits. First, parking would be free or discounted for commuters. The impacts of free parking on mode choice have been well-documented; when SOV parking is free, more travelers will drive alone. This action changes that mode choice decision. Second, the action would provide designated on-street parking for commuter carpools and vanpools. Spaces are typically signed for this purpose and require a carpool parking permit, but parking is first-come, first-served. The permit overrides any on-street restrictions that restrict the duration of parking, permitting all-day parking. Parking also can be designated in publicly owned/operated lots and garages. Third, parking could be made still more attractive by being reserved or by being located near entrances/exits or elevators, depending on the facility.

Examples that offer guidance include:

- Several cities in North America, including Washington (DC); Arlington (VA); Vancouver (Canada); Portland (OR); Philadelphia (PA); and Seattle (WA) among others provide some on-street parking exclusively for carshare vehicles. The number of on-street spaces provided ranges from about 20 in Seattle to over 80 in each of Washington and Arlington. Several of the vehicles included in the Los Angeles pilot programs on the USC and UCLA campuses also are located on-street.
- Arlington County, VA – Prior to 2004, all of Arlington’s carshare vehicles were located in private parking lots and garages. At that time, Arlington designated 38 on-street metered parking spaces in a high-density transit corridor for carshare parking. The two carshare operators, Flexcar and Zipcar, retrofitted each space to designate it as an official carshare parking location. These changes included: 1) highly visible, orange signposts with holders for postcards and information on carsharing, “No Parking” and “Towing Enforced” signs affixed to each pole and pavement stencils added to the pavement indicating “No Parking Except Flexcar” or “No Parking Except Zipcar.” Based on results of a 2006 survey of carshare members, the County concluded that on-street parking benefited the program and added 43 additional on-street spaces in 2008.

**Last / First mile transit connections (shuttles / vans to transit hubs (No.27):** This action uses small transit vehicles or vans to transport train and bus riders between mainline transit stations or bus hubs and worksites and home locations. These services completed a critical missing link in a transit network and extend the availability of transit for commuters who otherwise could not complete the entire trip by transit. Shuttle trips typically are short, covering only a few miles. Some connector shuttles circulate on a fixed route and serve fixed stops, while others operate as demand responsive service. They can be open to the public or be restricted to use by employees or residents of sponsoring organizations (e.g., employers or developers). Feeder shuttles can be operated by a public entity, such as a transit operator or local jurisdiction; or in partnership with employers,



property owners, business or merchant associations or other organizations that represent the destination end of the trip. Most shuttles use a paid driver although the vehicles can be driven by a commuter as a form of vanpool.

Examples that offer guidance include:

- Rutherford, NJ - Meadowlink, a Transportation Management Association (TMA) in Northern New Jersey, operates a fleet of shuttle vans and small buses, EZ Ride Shuttles, which provide circulator shuttle service from rail stations to numerous employment sites. The TMA started its first service in early 2001, using a combination of public grants and funding provided by three employers. The TMA now operates “last mile” employment shuttles on more than 10 routes.
- San Mateo County, CA– The San Mateo County ALLIANCE Shuttle Program, brokered by the San Mateo TDM agency, ALLIANCE, operates 27 shuttle services to transport commuters from BART and Caltrain stations to within walking distance of employers located along the routes. The service is funded through a coalition in which San Mateo County Transit District (Samtrans), Caltrain, the Bay Area Air Quality Management District (AQMD), and San Mateo County share shuttle costs with participating local employers. The ALLIANCE serves as a broker between cities and interested employers, providing management to marketing. Many of the shuttles are open to the public and free to all riders; some shuttles require an individual pass.
- King County, WA - As part of an extensive regional vanpool program in the Seattle area, the King County Metro sponsors “VanShare,” a “station car-type” service linking train stations and nearby worksites. Vans are parked overnight at train stations and a volunteer commuter driver drives the participating riders to their worksites. In the afternoon, the driver picks up the other riders and travels back to the station. A popular feature of this program allows participants to use the van for personal errands during the day. The total cost to the participants is \$175 per van per month, which covers insurance, maintenance, fuel, reserved parking at the train station, and a GRH program. Some companies pay the fee for their employees.
- Chicago, IL– PACE, the premier bus operator serving suburban Chicago, offers a similar incentive program to commuters that want to use a Metra train for commuting but need a link for the short distance from the commuter train station to the worksite. PACE provides a van for a monthly fee of \$58 per passenger to cover all vanpool operating expenses. Vanpools are parked overnight at the train station. PACE also offers an Employer Shuttle program, in which employers lease vans for groups of employees to self-transport from train stations to worksites. In 2009, employers paid \$1,029 per month per van.

**City-wide Guaranteed Ride Home (GRH) (No.41):** Commuters often are reluctant to use carpools, vanpools, or transit because of fear of being stranded at work when working late or in the event of a family emergency. Guaranteed Ride Home (GRH) programs address this concern by providing a free ride via taxi, rental car, or company vehicle when needed in case of emergency. GRH programs can provide unrestricted access or specify certain types of emergencies or events that constitute



appropriate use. Whether GRH trips are offered with a small fee or free to employees, the program costs tend to be relatively low since few rides are actually taken; due to limitations on the number of times services can be used in a given period of time, participants often look for another travel option first and use GRH as a last resort option.

The Los Angeles region currently has a regional GRH program through the regional CommuteSmart program; however, this program is eligible only to employees whose employers participate in the program. This action would open GRH to any commuter who works or lives in the City.

Many areas of the country have regional GRH programs that are open to individual travelers, including metropolitan Washington (DC); Minneapolis (MN); Portland (OR); Seattle (WA); and Phoenix (AZ), to name just a few.

**Dynamic Ridesharing for employees working in City (No.42):** Dynamic ridematching is a ridematching system in which users can find carpool partners in real time for a single ride to be made immediately or at some near-term future time. Service users, who register in advance for the service, query an online matching system about trips they want to take to identify if other users are intending or willing to make a similar trip. They then contact the other party by email, telephone, text message, or other wireless technology to inquire about their interest in traveling together. In contrast to conventional ridematching programs, dynamic ridematching allows travelers to arrange rideshare trips on an immediate, as-needed basis. Dynamic ridesharing could be implemented through an existing ridematching program with upgraded software to handle the real-time component. A successful program would also require significantly higher number of registrants than have been attracted with other programs.

Examples that offer guidance include:

- Seattle Smart Traveler (SST), Seattle, WA – This service was one of the first demonstrations of a dynamic rideshare matching system offered by the University of Washington. It operated in the late 1990s to allow students, faculty and staff with flexible schedules to find shared ride transportation. Faculty and staff made up 68 percent of users with students being the remaining 32 percent. Over 30 percent of users secured rides. SST demonstrated the early feasibility of this concept, but its successful was largely attributed to the common travel patterns of users in a university setting and strict parking policies that provide an incentive for users to arrive at the University without a car. The program ended in 1999, when the grant funding ended.
- Bellevue Smart Traveler, Bellevue, WA -- This demonstration of a dynamic matching service was implemented in a downtown employment center. The service set up geographically distinct “ride groups” and users were assigned pagers to alert them when another user was seeking a ride. An evaluation of the project reported that the 53 users offered 509 rides, but participants had difficulty forming matches with compatible times; not enough riders were participating to accommodate varied schedules. The greatest obstacles to the system were inconvenience with ridesharing and the time necessary to access the system and coordinate



the ridematch. Another interesting finding was that people appeared more willing to invite others into their car than to get into someone else's car. The evaluation suggested that for security purposes, the system should pre-screen participants, provide gender information and record and monitor ridematches. A positive finding of the demonstration was that use of pagers for ride request notification was successful. Since this demonstration was completed, communications technology has advanced further; now text messaging would enhance the dynamic, short-term capabilities of the service and enhance its attractiveness to potential participants. But the study concluded that it was not enough of an incentive to overcome other obstacles.

**City-wide access to online travel information (No.49):** The internet is quickly becoming the first source consumers consult for information on a wide variety of topics, including transportation and travel information. This action provides broad access to travel information through personal computers, PDAs, and smart phones. Travel information that could be provided to assist travelers to plan trips for commuting and other travel purposes includes items listed below. Many of these services are available through one or more organizations in the City or region. This action would make the City of Los Angeles Department of Transportation's (LADOT's) travel information website a go-to starting point for each of them.

Commute information:

- Online ridematching
- Online registration for GRH, financial incentives, other services
- Commuter cost and carbon footprint calculators
- Downloadable transit schedules, maps and schedules, telework manuals
- Environmental awareness page
- On-line newsletters
- Park & Ride locations and lot details; HOV locations
- Downloadable bike maps and interactive bike map
- Bicycle commute information

Non-Commute information:

- Tourist-oriented information services
- School travel (school pool)

Employer information:

- Employer-specific webpages
- Downloadable resource materials; links to resources



- Online ordering for bulk quantities of transit schedules and commute brochures

Traffic information and alerts:

- Traffic reports customized by commute routes
- News “scroller” displaying meeting alerts, new shuttle announcements
- Real-time traffic reports and access to real-time roadway condition camera images

LADOT’s website provides access to a wide range of TDM services offered by the City and other organizations in the region. But other services, such as the online ridematching offered through Southern California Rideshare were difficult to find, even with some searching. The LADOT website should have direct access to these services, through clearly marked links. Additionally, the City should attempt to keep information on internet sources continuously updated.

**Mobility Centers, information kiosks at transit hubs (No.51):** The concept of Mobility Centers has been around for almost 40 years. In the U.S. staffed “transit stores” and “commuter stores” have been established in downtown areas to attract walk-in users who need information or to purchase fare media. In Europe, Mobility Centers have been installed in downtown pedestrian zones also to take advantage of walk-in traffic of visitors, commuters, residents. Mobility Centers offers a friendly environment for commuter and other travelers to obtain information on rideshare modes. Most focus on transit information and fare media sales. Self-service, touch-screen information kiosks offer a less expensive method to disseminate transportation information to travelers on an as-needed basis.

Transit stores were prevalent in the U.S. in the late 1970s and early 1980s. Many cities (e.g., San Diego (CA)) have transit stores located in downtown settings that are not part of transit stations themselves. Many areas have implemented kiosks: Washington (DC), Phoenix (AZ), Atlanta’s (GA) Travelink, Los Angeles’ Smart Traveler, Port Authority of NY and NJ (airports), Seattle’s (WA) Riderlink, and Houston’s (TX) Transtar.

Examples that offer guidance include:

- Arlington County, VA – Maintains four staffed Commuter Stores and one Mobile Store that travels among worksites and activity centers. Stores provide transit information and sell fare media, but also serve as the focal point for commuter services, such as ridematching, bicycle information, and employer services. In 2008, the three stores served more than 212,000 customers and sold \$6 million of fare media.
- European Examples -- In Germany, Austria and Switzerland, Mobility Centers are quite common. They provide information on regional transit service, national rail service, and commuter services for residents and workers. Located within pedestrian zones that are most often car-free, these centers also offer employer consulting services to foster TDM programs at worksites. An example of this is the Mobility Center implemented in Wuppertal (Germany)



which accommodated some 6,500 inquiries per month and achieved an 85 percent satisfaction rating with users.

- Washington, DC – The regional Commuter Connections program installed 13 information kiosks in shopping malls and high-volume Metrorail train stations. Two “mobile” units were temporarily placed in large employment centers. Transportation information modules included: rideshare information, ridematch application, Park & Ride locations, transit route and schedule planning, and real-time traffic conditions. A commuter survey conducted in 2007 estimated that more than 25,000 regional residents (0.01 percent of the total population) had used one of these kiosks to obtain travel information months.

**Real-time motorist and transit information (No.55):** Advances in traveler information technology allow easy access to real-time information on traffic and travel conditions via mass media, internet, and cell phones and other wireless devices. These systems provide information on travel delays, traffic levels, and other information pertinent to motorists’ decisions on how and when to travel. Roadway traffic data typically are collected through a network of roadside cameras that transmit data on current traffic conditions. Communications applications permit travelers access to this information while en-route via text messages sent from a central server connected to the camera system. The message alerts the commuter to specific condition of traffic on the route ahead. At this point in a trip, travelers cannot easily change modes, but they can change their route to detour around the problem, reducing their’ travel frustration and helping emergency service agencies by reducing the volume of traffic around incident sites.

These services also can offer real-time information about the location or arrival time of transit vehicles, service disruptions or delay, and updates during emergencies. This information can be disseminated at rail stations or bus stops, on-line, or by PDA/cell phone. Such information can help travelers to make decisions both before and during their trips, as well as increasing comfort and reducing anxiety during trips.

In Southern California, Caltrans and others provide traffic conditions accessed via internet links. Another example is TrafficBee.com, a partnership of Southern California Rideshare and CeloView LLC that provides customized traffic alerts and suggestions for alternative routes to free subscribers based on their normal travel route and times. On Nov 16, 2009, LADOT implemented a beta test version for real-time online info on downtown DASH bus locations and arrivals. This service can be accessed online or via phone or mobile device. LA DOT also offers detailed real-time traffic information on its website (<http://trafficinfo.lacity.org/>).

Examples that offer guidance include:

- United States -- A large portion of the country, including much of Southern California, is covered by the 511 number (<http://www.deploy511.org/deployment-stats.html>.) Each 511 state also has a website; the amount of information available on them varies.
- New York -- New York’s Trips123 service ([www.trips123.com](http://www.trips123.com)) provides very detailed traffic information online.



- Various transit agencies - A number of transit agencies (Washington Metropolitan Area Transportation Authority (WMATA), Virginia Railway Express, etc.) send out automatic fax or text message alerts when delays occur. Riders can sign up for lines they would like to be informed about. Many rail systems also have LED signs in the stations indicating the next two or three trains to arrive, and the expected wait time.
- AT&T Wireless and TrafficStation Service -- These two firms have created a similar service for real-time, route-specific alerts, available to users of the new AT&T Digital PocketNet Service. TrafficStation sends personalized alerts and routing information to subscription customers via cell phone or PDAs. The service is available to selected users in 27 metropolitan areas.
- King County, WA – King County uses the MyBus system to display similar information. On-line or by phone, one may query the system by specifying a route and a transit stop number (each stop is assigned a unique identifying number,) or may access an “emulator” for a particular stop. The emulator basically recreates on-line the actual LED display at that transit stop.

**Annual universal multi-modal pass (No.56):** This action is a combination of two related actions: 1) an annual commute pass and 2) a universal pass that is valid for use of multiple non-SOV modes or services. Annual/long term commute pass programs offer organizations, such as employers, universities, and homeowners’ associations, the opportunity to purchase a long term (e.g., annual or semester) bus passes for constituents (i.e., students, staff/faculty, employees, residents) at significantly reduced prices compared to the retail cost of monthly or daily fares. Participation usually requires purchase of passes for all constituents regardless of past or current transit use.

A universal pass provides access to a range of transportation services. Transit is usually the focus of the pass, but passes also can be used for Carshare, vanpool, bikeshare, and parking services. Smart card technology allows a single card to be used in multiple swipe card readers and to debit value from a central fare collection system. While facilitating automatic fare collection for various service operators, the card also offers convenience for the user. LADOT currently participates in the EZ transit pass monthly pass program that is valid on multiple transit services in the greater Los Angeles region. Combining this service with options to use the pass on other non-SOV services could enhance the desirability of the pass.

Examples that offer guidance include:

- Seattle, WA– King County Metro offers FlexPass, an annual universal pass program available to employers. Similar to other annual transit passes, FlexPass provides unlimited rides on Metro buses and on regional express buses and commuter rail. But FlexPasses also covers up to \$65 of monthly vanpool fares and offers discounts on carshare memberships and Amtrak tickets. Pass holders also are eligible for Metro’s GRH program. Participating employers pay an annual fee per pass based on the number of employees, proximity to transit, and other factors related to likely utilization. In 2007, first-year FlexPass clients in downtown Seattle paid \$287 per pass for the entire year, amounting to less than \$24 per month, a dramatic



saving over the full monthly pass cost. Companies have the option to share up to 50 percent of the cost of the pass with employees.

- **Denver, CO**– The Denver Regional Transit District (RTD) pioneered the use of the Annual/long term commute pass with the creation of their ECO Pass program in 1991. Many of the Annual/long term commute pass initiatives are modeled after RTD’s program. The low cost of the pass to employers encourages ridership among non-users if the company provides the passes to its employees either at no charge or at sufficiently low cost. ECO Passes have increased ridership among those receiving passes by close to 20 percent.
- **Boulder, CO**– The City of Boulder created the Neighborhood Pass, a variation of the employer-based ECO Pass program, which is available to residential communities. Building managers of apartment and condominium buildings can purchase passes in the same manner as an employer. Alternatively, groups of residents can purchase passes for everyone in the neighborhood by collecting contributions from residents to meet a minimum financial threshold. A neighborhood also can elect to increase property taxes to purchase neighborhood-wide ECO Passes. Santa Clara County (CA) and Portland (OR) also have programs for residential purchase of passes

**City-wide TDM Coordination Program (No.67):** City-wide TDM Coordination Programs usually consist of a full-time TDM manager and/or TDM staff that coordinates TDM efforts throughout city agencies. Programs that were reviewed ranged in size from one staff member to a high of seven. All coordinated the delivery of services to property owners, developers, employers, and employees; several also focused services on residents, but that was not the primary focus of most of the programs. Nearly all programs were formed to initiate or elevate a quality of life or sustainability effort of the City. Nearly all programs developed a marketing function within City Hall to create and/or retain control over branding and messaging all TDM services under a common City program identity. Another common element of the programs was the coordination they exerted among other City offices and with external groups that either delivered TDM services (e.g., regional TDM and transit organizations, Transportation Management Associations/Organizations) or could benefit from TDM.

Most city TDM Coordination Programs followed a process that included:

1. Identify and coordinate existing TDM City activities.
2. Identify and coordinate existing activities delivered by external organizations (e.g., regional ridematching and employer outreach) in their jurisdiction
3. Enhance existing services
4. Develop and test new services

The review of existing local agency TDM Coordination Programs suggests that considerable coordination with other City offices is needed. Such actions include:



- Educating City leaders on the role TDM can play in economic development, community planning, housing, environmental quality, and other City goals and how to integrate TDM within these related departments.
- Publicizing TDM efforts within the City and the results achieved.
- Developing strong relationships with local economic development activities to facilitate integration of TDM into infrastructure and community development
- Developing links to City offices responsible for parking management (i.e., management of City assets, City policy, and land use actions affecting parking)
- Working closely with City staff responsible for planning activities.

Coordination with entities external to city TDM activities that considerable coordination is warranted including:

- Engaging communities to identify transportation needs and developing TDM services, then involving communities as the services are implemented and delivered.
- Engaging developers in TDM initiatives to create properties that encourage use of sustainable transportation.
- Working with non-City elected officials to recognize the role of pedestrian options and public spaces on travel choices
- Establishing partnerships with organizations that have similar objectives, including those that are concerned with non-commute trips
- Coordinating with regional TDM programs (e.g., Metro's Commuter Services).
- Developing/maintaining strong relationships with regional transit organizations
- Developing relationships with:
  - Venue organizers for outreach to tourists/visitors
  - Neighboring jurisdictions
  - Funding sources

Examples that provide guidance include:

- Alexandria, VA – Alexandria's TDM program is a unit of the Office of Transit Services within the Transportation and Environmental Services Department. The Department head reports to the City Manager. The TDM function started in the City in the mid 1980s when the local DASH transit service was initiated. At that time, its role was to market the new service. Since that time, the program's role has expanded to cover a broader menu of TDM services, under the



“Local Motion” brand name. The program has four staff positions. The program is primarily directed to employers and employees. Residents are a secondary market for Local Motion. The program is responsible for / manages the following:

- Outreach to employers (currently contracted)
  - Special events, such as Bike to Work Day
  - Marketing TDM activities in the City
  - Coordination with the regional TDM program (Commuter Connections)
  - Coordination with bicycle and pedestrian planning
- **Boulder, CO** – The City Council established the GOBoulder office in 1989 to address issues of mobility and air quality, maintain a high quality of life. The program “GOBoulder,” which is housed in the Transportation Division of the Department of Public Works, is designed to create and maintain a balanced transportation system that “creates and promotes ‘Great Options’ in transportation to increase the travel choices available to our community.” The program has an annual budget of \$2 million and a staff of seven. The program covers a wide range of services targeted to employers and residents. The staff is responsible for / manages the following:
    - Outreach, marketing, and information on all transportation services
    - Community-focused transit circulator services and transit amenities such as shelters and maps.
    - Eco Pass transit fare card programs for employers, neighborhoods, and schools
    - Individualized marketing campaigns with residents (GOSmartBoulder)
    - Extensive system of more than 300-miles of bicycle and pedestrian paths (maintenance, planning, promotion, GOBikeBoulder)
    - Planning for multi-modal, integrated transportation system (ex. providing bike racks on buses)
    - Coordinate with regional partners and the business community on services for employees / customers.
    - Coordinate with City’s community design process to integrate TDM in local planning
    - Coordinate with Denver Regional Council of Governments on some regional TDM services
    - Coordinate with TMAs in Boulder and Denver metropolitan areas
    - Coordinate with regional / inter-city transit services
  - **Redmond, WA** – The TDM Division is located in the City’s Planning Department. The TDM function was initially created as a sub-unit of the Transportation Planning Office in the late 1990s to manage the City’s response to the State Environmental Quality Act and the start of the



Commute Trip Reduction (CTR) employer program law. In 2007, the City created the TDM Division, elevating the function to increase grant opportunities and increase the visibility of TDM's role in supporting the City's sustainability efforts. The program has an annual budget of \$4 million (including transit operations funding) and a staff of seven. The program is responsible for / manages the following services:

- Employer Outreach to employers located in the City
  - R-TRIP – Redmond Trip Reduction and Incentive Program
  - Coordination with TMAs
  - Vanpool incentive program
  - Resident services
  - Coordinates transit partnerships with regional services, identifies service gaps, and provides transit amenities
  - City response to the CTR law/requirement
  - Special events, such as Bike to Work Week
  - TDM service marketing to employers and residents
  - Bicycle and pedestrian planning and information/promotion
  - Parking operations for City-owned parking
  - Development review (commercial and residential multi-unit)
- Seattle, WA – The City of Seattle has had a large and well-developed TDM function for more than 10 years. In early 2003, the TDM Program was officially created during a reorganization that combined the Strategic Planning Office and the Seattle Transportation Department into a new Seattle Department of Transportation. The TDM Program is one of several units in Mobility Programs, along with Transit, Parking Management, and Freight, which are designed to work together for a sustainable transportation system. Thirteen City employees participate on an internal TDM team. Four staff direct reports in the TDM Program and the remaining team members are located in other organizational units. The TDM Program Lead heads the TDM team, which includes staff from Capital Projects, Bike/Pedestrian programs, Communications, Environment/Climate Change, and other offices. The program includes services for both employees and residents; modest effort is devoted to services for tourists. The Program is responsible for / manages the following:
    - “Way to Go Seattle” incentive programs (One Less Car Challenge, Commuter Cash, others) for residents and employees
    - Carshare and Bikeshare programs
    - Marketing and promotion



- Outreach to employers and property managers
- School programs (e.g., Safe Routes to School)
- Coordinate with Downtown Transportation Alliance on transportation polices and activities for the downtown areas (executive and government officials)
- Coordinate with Planning Department on TDM elements in development / site plans
- Coordination with Seattle Metro on regional TDM services
- Coordination with City's parking management group
- Coordinate with Bicycle and Pedestrian Programs
- **Toronto, Ontario (Canada)** – The City initiated TDM guidelines for planners in the later 1990s. In 2003, the TDM and TMA Programs were formed to play a strategic role in the development of TDM strategies for the City. The office has had several organizational homes. It was initially housed in the Health Department, but later moved to a Planning office. In 2006, the function was moved again to its current location as a program in the Toronto Environment Office, with as a direct report to the Deputy Mayor. This location communicates a role of the TDM and TMA Programs to support the City's Climate Change Plan. The office includes a Program Manager and three additional staff. A Senior Planner is responsible for strategic issues and development of TDM policies and needs assessment. Two Coordinators serve as outreach and service delivery to employers. The Program has plans to add a third Coordinator in the future to provide services to residents. The approximate annual budget for the program is \$500,000, not including staff time for support services provided by other City offices (e.g., accounting, etc.). The Program is responsible for / manages the following services:
  - Employer Outreach to employers located in the City
  - Special events, such as Carpool Week, Bike to Work Week, Clean Air Day
  - Live Green Toronto (website with information on environmental actions)
  - Individual marketing (under development)
  - Coordination with the Metrolinx Smart Commute regional TDM program, which provides online ridematching, regional marketing campaigns, Emergency Ride Home, and regional events
  - Coordination with the City's Bicycling Coordinator and Pedestrian Program Manager on bicycle and pedestrian activities
  - Coordination with two TMAs that serve parts of the City (contributes funding to the TMAs)

The TDM Program Manager chairs the Regional TDM Coordination Committee, which includes representatives of various organizations within and outside the City that are responsible for some TDM functions in the Toronto-Hamilton region. The group coordinates regional and local



services and identifies and plans TDM activities that are best coordinated across jurisdiction lines. The Committee is currently developing a workshop for transportation and land use planners in the region on how to integrate TDM into regional planning. A future workshop will be developed to introduce TDM to commercial developers.

- Washington, DC – The TDM function is located in the Transportation Policy and Planning Administration, as a part of the bicycle and pedestrian planning function. The function was added in 2006 when the City saw a benefit of TDM for sustainable transportation. The program has one staff member, but some functions are contracted to outside firms. The program has a budget of \$2 million. The program is primarily directed to employers and employees. Tourists are a secondary market. Residents are a third, but less prominent market. The program is responsible for / manages the following:
  - Employer Outreach to employers located in the City (contracted)
  - City-wide carshare program
  - Bikeshare program
  - Marketing of TDM programs
  - Special events, such as Bike to Work Day, Car Free Day
  - Coordination with regional TDM program (Commuter Connections) and with other regional and local partners
  - Resource for City employees on transportation options (support to Human Resources, which manages the employee benefits program)
  - Review of TDM components in development site plan review
  - Coordinate with Mass Transit Administration for local transit service
  - Coordinate with other City staff in functions related to transportation (e.g., Office of Planning, Development review, zoning code, Department of Environment)



## **4.0 PUBLIC POLICY/REGULATORY OVERVIEW**

The City of Los Angeles and transportation planning agencies with jurisdictions that include the City of Los Angeles have a long history of TDM policies in planning and regulatory programs with almost 80 references to TDM found in Los Angeles City Council files and ordinances since 1985. The predominant theme of TDM related regulations is congestion management and the diversion of single occupant vehicles during peak travel times. A second theme relates to improving the environment, be it the reduction of air quality emissions from mobile sources or the reduction in energy use and green house gas emissions. These rationales for TDM are different from that of the private sector groups who see the value of TDM in terms of reduced parking demand, employee satisfaction, labor recruitment and retention among other benefits.

An overview of relevant TDM-related public policies/regulations at the State, regional, City, and community/civic level is presented below.

### **4.1 State Level**

Proposition 111/Congestion Management Plans (1990): Proposition 111, a 9-cent per gallon increase in statewide gas tax, was enacted in 1990. The local allocation of the increased revenues depended upon adoption of local congestion management programs. Among various requirements, the statute included the requirement to designate a Congestion Management Agency (Metro was designated for Los Angeles County) to prepare the plans including a TDM Element that promotes alternative modes of transportation. The TDM Element required all cities to adopt ordinances requiring owners of properties seeking development approvals to take actions to reduce peak period, commute vehicle trips by installing site amenities that make sharing rides easier and more convenient. The City of Los Angeles's Ordinance 162151 was enacted to meet this requirement.

AB 2766 (1990): The State of California passed a \$4 increase in vehicle registration fees to provide funding for vehicle emission reduction programs in 1990. This is a source of funds for trip reduction programs in the South Coast Air Basin. The surcharge in 2010 is \$6.00 per vehicle.

SB 375 (Steinberg) and AB 32 (Greenhouse Gas Emission Reduction): The State of California passed legislation in 2007 aimed at reducing greenhouse gas emissions. An important focus of these strategies is a reduction in vehicle miles travel (VMT). SB 375 requires the development of Sustainable Community Strategies (SCS) by metropolitan planning organizations with the Southern California Association of Governments (SCAG) responsible for an area encompassing the City of Los Angeles. SCAG has indicated that TDM will be an important part of that strategy.

AB 2109 (Parking Cash Out): A 1992 state law (California Health and Safety Code section 43845) eliminates the solo driver's "subsidy" paid by many employers and requires qualifying employers to provide incentives for commuting alternatives. The law requires businesses with at least 50 employees to offer employees the choice of receiving the cash value of the "subsidy" if they give up their parking space. The California Air Resources Board administers this law which reportedly is not



rigorously enforced. There have been efforts to modify this law to allow local governments to enforce the requirements. Enhancements to this legislation were enacted in 2009 (SB 728) that allows local jurisdictions to enforce employer compliance with the Cash Out requirements.

## **4.2 Regional Level**

SCAG Regional Transportation Plan: Southern California Association of Governments (SCAG) must adopt and update the regional transportation plan every four years. The current version (i.e., 2008) includes important strategies for TDM development including:

- Incentives for commuters to share the ride with others
- Increase work at home programs
- Increase the safety and convenience for non-motorized transportation (walking and bicycling)
- Expansion and gap closure in the high-occupancy vehicle (HOV) lane program on the areas freeway network

South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan (AQMP): SCAQMD is responsible under the California Clean Air Act to adopt a plan for maintaining air quality standards. The AQMP includes regulations to reduce pollutants of both stationary and mobile sources. Under the mobile source strategies is Rule 2202 which is aimed at reducing pollution generated by commuter travel. Employers with 250 or more employees must comply with Rule 2202. A previous version of the regulation (Regulation XV, Rules 1501-1501.1) required companies of 100 or more employees to comply. There are three compliance options:

- Employee Commute Reduction Program (ECRP): Employee Commute Reduction Program (ECRP) allows employers to develop and implement a program to meet an average vehicle ridership (AVR) goal of 1.3 to 1.75 (depending upon geographic location) persons per vehicle in the AM peak period (6:00 to 10:00 a.m.).
- Air Quality Investment Program (AQIP): Air Quality Investment Program (AQIP) allows employers to invest annually \$60 per employee into an AQMD administered restricted fund. Monies collected in this restricted fund will be used by the AQMD to fund proposals that reduce mobile source emissions.
- Emissions Reduction Strategies (ERS): Emission reduction strategies (ERS) allows employers to purchase emission reduction credits, most often in the form of mobile source emission reduction credits (MSERCs), from emission credit vendors whom generate emission reduction credits through voluntary programs offered from SCAQMD, these programs can be found under Regulations XIII, XVI, and XXV. Some of these programs that generate emission reduction credits do so by scrapping old-vehicles, greening fleet vehicles, or utilizing clean energy practices such as clean hotelling operations, or having clean lawn and gardening equipment.

Many of the City of Los Angeles programs and policies are outdated in that they refer to Regulation XV, which was replaced by Rule 2202 in 1995.



Los Angeles County Metropolitan Transportation Authority (LACMTA/Metro) Long Range Transportation Plan (LRTP): LACMTA/Metro's 2009 LRTP makes reference to TDM programs in five project areas:

- Call for Projects – The Call for Projects is the biennial solicitation from Cities for funding of transportation initiatives.
- Rideshare and Commuter Services Program – The rideshare and commuter services program includes ride matching services, outreach to companies, educational programs, marketing and vanpool coordination.
- Parking Policy – It's the intention of the parking policy to implement park and ride facilities to maximize inter-modal connections.
- Smart Growth Initiatives – The Smart Growth Initiative provides support for transit oriented development and utilization of joint development opportunities on LACMTA/Metro owned properties.
- Congestion Management Program – LACTMA/Metro implemented the Congestion Management Program after the passage of Proposition 111 made LACTMA/Metro the agency responsible for coordinating land use and transportation decisions for Los Angeles County.

The LRTP also includes the County's program to complete the high occupancy vehicle (HOV) lanes network on the freeway system. More recently, LACMTA/Metro, is leading a pilot project funded by the United States Department of Transportation to test the viability of converting HOV lanes to high occupancy toll (HOT) lanes as an additional tool to reduce vehicle trips and miles of travel.

A separate section of policies and programs to support bicycling and pedestrians is included in the LRTP. In addition to planning for a countywide network of bicycle lanes, retrofitting buses to carry bicycles, LACMTA/Metro has funded bicycle lockers (at rail stations) and is initiating shared bicycle demonstration projects.

LACMTA/Metro Short Range Transportation Plan (SRTP): LACMTA/Metro prepares a SRTP for Los Angeles County that addresses more immediate programs and priorities for the countywide agency. The SRTP, which is consistent with the LRTP, helps establish programs in METRO's biannual Call for Projects.

LACMTA/Metro Congestion Management Plan (CMP): LACMTA/Metro is required to monitor the success of TDM programs in its role as the CMP authority/lead agency for Los Angeles County (as required under Proposition 111). According to the 2004 CMP, TDM projects accounted for 6 percent of the VMT reduction between 1990 and 2003. Of the various strategies, telecommuting accounted for 44 percent and ridesharing operations accounted for 32 percent of the reductions in Los Angeles County. In METRO's SRTP, the CMP authority is cited for the potential to charge a countywide congestion management fee, which is thought of as a potential demand management tactic.



LACMTA/Metro Call for Projects: LACMTA/Metro biennially solicits proposals for funding of transportation projects from public agencies in Los Angeles County for projects in a number of modal categories using funds from a variety of local, state, and federal sources.

- Regional Surface Transportation Improvements (RSTI)
- Transit Capital (TC)
- Bikeways Improvements (BI)
- Pedestrian Improvements (PI)
- Transportation Enhancement Activities (TEA)
- Transportation Demand Management (TDM)
- Goods Movement (GM)

All of the above categories support TDM in the broadest sense except for the RSTI. More specifically, the TDM category had the following objectives according to the 2009 announcement:

The TDM modal category's primary function is to implement strategies that improve transportation mobility in Los Angeles County. Demand management strategies may include policy changes, physical improvements, programs or operational changes that enhance mobility and air quality other than through building major new transportation infrastructure. Specific application are those that improve transportation demand management and air quality through (a) technology and innovations; (b) incentives that change travel demand and travel behavior; (c) and/or infrastructure improvements that support commuters in using transit and/or alternative transportation modes, such as bicycling or walking. A successful project in the program improves the capacity and efficiency of the regional transportation system and contributes to overall regional mobility. LACMTA/Metro seeks proposals that contribute to the implementation of Metro's adopted 2001 LRTP for Los Angeles County, with a specific focus on achieving the following policy objectives:

- Increasing the use of high occupancy vehicles, transit, carpooling, and vanpooling
- Reducing the number of single occupancy vehicle trips and/or VMT during peak hours
- Encouraging the use of alternative transportation modes (transit, bicycling and walking)
- Fostering the adoption and use of new technologies that support the other objectives (e.g., technology and innovation, applied telecommunications devices, dynamic signage, etc.)<sup>1</sup>

### **4.3 City Level**

The City of Los Angeles does not have an explicit and comprehensive TDM policy. TDM policies and actions have been generally enacted incrementally in response to external requirements to bring the City into compliance with federal, state, or local laws or regulations.

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<sup>1</sup> Los Angeles County Metropolitan Transportation Authority, "Instruction for Completion of 2009 Call for Projects Applications", January 2009



The City adopted specific requirements for TDM as early as 1985 with an ordinance directed at reduction of employee commuting trips in response to the Federal Clean Air Act.

- Ordinance 162151 (CF 85-0361) created the City's first employee rideshare ordinance that required employers with 700 or more employees and new buildings with over 550,000 square feet to achieve rideshare goals of 1.75 Average Vehicle Ridership (AVR) for the Central City and 1.5 AVR elsewhere in the City. This ordinance also created a "Ridesharing Task Force" to inform City Council of experience and further recommendations. Departments on the task force included LADOT, City Planning, CRA, SCAQMD, SCAG, Los Angeles County Transportation Commission (i.e., pre-cursor agency to METRO), Commuter Computer, and seven business representatives that were appointed by the Mayor. The task force is no longer active.
- Section 85.05 of the Ordinance was amended in 1989 to reflect the then current requirements for employee trip reduction programs from SCAQMD (i.e., Regulation XV). The revised Section 85.05 requires that any employer subject to Rule 1501 (i.e., Regulation XV) must provide a \$15 per month transit subsidy to employees if they provide free parking to any of their employees. This City mandated employee rideshare subsidy needs to be revised since Regulation XV has been replaced with Rule 2202.

Subsequent TDM requirements implemented by the City's Department of City Planning and Department of Transportation (LADOT) include:

- Bicycle parking requirements for new buildings were adopted requirements in 1991 (LAMC 12.21 A16 - Ordinance 167,049) that requires owners of proposed non-residential buildings over 10,000 square feet to provide bicycle parking and related amenities.
- The City's TDM regulation (LAMC 12.26J/Ordinance 168700 - CF 93-0456) was adopted in 1993 in response to METRO's CMP requirements for local TDM ordinances. The ordinance requires the following of non-residential new buildings:
  - 25,000 square feet or more – kiosks and notice boards on commuting alternatives
  - 50,000 square feet or more – designation of carpool places in the parking area
  - 100,000 square feet or more – clear paths and connections to transit and carpool spaces
- Parking Management Ordinance (LAMC Section 12.21 A 4 y, Ordinance No. 165,773) allows a property owner to reduce their off-street parking requirements on the basis of providing off-site parking and/or transportation alternatives that the Director of Planning deems to be sufficiently effective in reducing parking demand. Planning does not have any published standards for determining the validity of claims for reduction in parking demand. Few, if any, projects have taken advantage of this provision of the LAMC since most property owners want to provide more parking than the City's minimum requirement.
- The Citywide Land Use/Transportation Policy (CF 93-0478) was adopted in 1993 to support development of an anticipated rail network. New development would be entitled to a ten



percent reduction in parking at locations within quarter mile of future funded rail stations under this policy.

- The City's General Plan consists of a citywide policy document, the Framework, a number of Citywide Elements, including a Transportation Element (adopted in 1999), 35 Community Plans and numerous Specific Plans within Community Plan areas. The Transportation Element has the following eleven TDM policies:
  - Evaluate the benefits of major transportation projects based on movement of persons and goods, rather than vehicle-movement, and look for opportunities on the arterial system to enhance ridesharing and transit.
  - Cooperate with regional agencies to establish region wide TDM programs to achieve regional trip reductions and/or increased vehicle occupancy.
  - Promote the development of transportation facilities and services that encourage transit ridership, increase vehicle occupancy, and improve pedestrian and bicycle access including: Locally-based Transportation Management Organizations (TMOs); Enhanced transit services and improved transit safety; Merchant incentives; Preferential parking; and Bicycle access and parking facilities.
  - Adequate and appropriate lighting for pedestrian, vehicular, bicycle, and transit uses.
  - Provide park-and-ride shuttle services to activity centers and special events.
  - Provide bicycle access in or near mixed use corridors, neighborhood districts, and community centers that affords easy accessibility to many non-work purpose destinations.
  - Design and implement a public education program to promote ridesharing including carpooling, vanpooling, and transit).
  - Encourage businesses to implement telecommuting, flexible work schedules, and teleconferencing programs.
  - Continue to integrate transit and environmental planning to enhance environmental preservation.
  - Expand telecommute programs and encourage the continued growth in communications, thereby providing options to vehicular travel.
  - Secure funding and rights-of-way for implementation of the Citywide Bicycle Plan Bikeway System.
  - Continue and expand requirements for new development to include bicycle storage and parking facilities, where appropriate.
- Specific Plans: Virtually all of the Specific Plans incorporate some or all of the above policies. The following Specific Plans contain references to TDM or TDM-related provisions for qualifying properties :



- Warner Center - Achieve an AVR of 1.4 and to cap parking with HOV parking as an exception. Mandates the creation of a TMO.
- LAX/Coastal – Reduce vehicle trips by 25 percent
- Ventura/Cahuenga – Requires higher than Citywide parking requirements, satisfaction of Regulation XV (i.e., Rule 2202) and credits for contributing to public parking program and/or valet parking
- Central City West – requires development and monitoring of TDM programs
- Westwood/West Los Angeles Traffic Improvement Mitigation Program – establishes TDM goal of 1.3 to 1.5 AVR
- Westwood Village – shared parking allowed and higher bicycle parking requirement (5 percent of auto requirement)
- Porter Ranch – mandates the creation of a TMO. Variable trip reduction goals of 5 percent to 15 percent trip generation through TDM.
- Cedars- Sinai – mandated TDM program with annual reports. Goal of 18 percent trip reduction for new peak hour trips and 9 percent trip reduction for total pm peak hour trips.
- Century City – a trip cap limit for the entire Specific Plan area.
- Downtown Peripheral Parking Policy – a parking cap for commercial development set at 60 percent of the already reduced parking requirement for the central city area.
- Mobility Policies: The Department of City Planning has included TDM as part of its priorities for Mobility Policies in its recent efforts to update Specific Plans. The policies include a statement of priorities for capacity enhancement that includes the following before the City should consider roadway widening: Transit Options; Transportation Demand Management (TDM); and finally Transportation System Management (TSM). The stated desirable components of TDM are listed in the following standard text box to the new Specific Plans:
  - “Transportation Demand Management (TDM) is the term given to a variety of measures that encourage people to change their mode or time of travel or not make the trip all (e.g., ridesharing, pricing incentives, parking management and telecommunication). TDM measures and services incentivize alternatives to the single-occupant vehicle to manage congestion and often include the following:
    - Formation of a Transportation Management Association
    - Merchant incentives
    - Preferential parking
    - Encourage employers to participate in Metro’s B-Tap program
    - Parking management strategies to incentivize ridesharing
    - Park-and-ride shuttle services to activity centers and special events



- Public Parking Structures
  - One-stop parking (valet service system)
  - Incentives for walking and bicycling
  - Adequate and appropriate lighting for pedestrian, vehicular, bicycle, and transit uses
  - Bicycle access and parking facilities
  - Flexible work hours
  - Carpooling and Vanpooling
  - Local business centers to facilitate work at home strategies
  - Technology and marketing events to enhance the use of transit
  - Enhanced transit services, including a transit center, and improved transit safety
  - Strategies that bridge the first/last mile gap between transit stop/station and a person's origin/destination"
- Focused Mobility Studies: The City of Los Angeles initiated four studies/plans that will help configure revisions to the Mobility Element as well as guide actions that can be implemented in the short term:
    1. Maximizing Mobility Options: First Mile/Last Mile Strategies – The Department of City Planning and LADOT coordinated a project to identify projects that would increase transit ridership by making it easier to get to and from transit stops. Many of the recommendations included nontraditional programs and services. Study recommendations endorsed by the Planning Commission in November 2009 for further investigation included:
      - Casual Carpool
      - Expanded Taxis
      - Car-sharing
      - Short-term Car Rental
      - Folding Bikes on Transit
      - Bicycle Sharing Program
    2. Bicycle Master Plan – The Department of City Planning released an updated Bicycle Master Plan in 2010. City Council approved the Plan in April 2011. The Plan includes: Goals, Policies and Programs supporting the bicycling in Los Angeles; a Citywide Network for bicycle facilities; and a Technical Design Handbook for bicycle facilities. An abbreviated list of the programs and polices includes:



- Implementation (This includes the creation of a Bicycle Plan Implementation Task Force to monitor implementation.)
  - Engineering standards
  - Creation of additional bicycle parking
  - Integration of bicycles with transit
  - Education of the public on benefits and policies
  - Enforcement of bicycle laws
  - Monitoring and Evaluation
3. Street Classification and Benchmarking System – The Department of City Planning is revising the Street Classification system to reflect multi-modal priorities in the implementation of the Circulation Element. A second objective of the project is to develop recommendations for the best ways to evaluate City programs consistent with goals of the recent Sustainable Community Strategies (SCS) requirements of AB 32 and SB 375.
  4. Transportation Strategic Plan for the City of Los Angeles – LADOT is developing a plan to coordinate the multitude of transportation projects being implemented in the City of Los Angeles. The project will create a prioritized and sustainable list of transportation projects that can be utilized for funding opportunities and monitoring the City's progress in implementation of its efforts to improve transportation. A second part of the effort is to develop a transportation forecasting model, consistent with the City's land use plans and designed to assist in the development of a Sustainable Community Strategy (SCS).

#### **4.4 Community/Civic Organizations Level**

West Los Angeles Mobility Project (Planning Company Associates – December 2008): This report was funded by an association of concerned private sector businesses through the collaboration of the California Community Foundation to address the concerns of growing congestion in West Los Angeles. The study focused on short and intermediate term strategies to address congestion in a sustainable way. An important finding for the Westside is that almost 50 percent of the population works within 5 miles of their homes. The study highlights the potential of system management and demand management, including the following TDM projects:

1. Employer based transit – potential to reduce daily vehicle trips by 3 percent
2. Employer transit subsidies – allowance for \$115 per month per employee
3. Van pools
4. Preferential parking for vanpools and carpools
5. Teleconference centers
6. Proximate commuting centers



7. Unbundle of parking
8. Reduction in required parking for new development
9. In-lieu parking fees to support alternative transportation initiatives
10. Privately funded housing – including employer assisted housing and location efficient mortgages (LEM's)

**Figure 1.0** summarizes TDM measures cited in the report and their estimated effectiveness.

Moving Los Angeles (Rand Corporation - September 2008): This report addresses business community concerns about congestion. The report expresses in detail the concept of “triple convergence” as a strategic issue (i.e., that congestion can be solved by changing routes, changing time or changing mode of transportation). It expresses the opinion that only through congestion pricing can one effect long-term shifts in these factors. The study team reviewed a host of transportation policy options and evaluated them according to a four part objectives strategy: (1) manage peak hour automotive travel; (2) raise transportation revenue; (3) improve alternative transportation options; and (4) use existing capacity more efficiently. Thirteen specific programs were recommended including the following TDM strategies:

1. Bus only lanes
2. Promote voluntary trip reduction programs in selected large organizations (including ride-sharing, telecommuting, and flexible work schedules). Note that expansion of “mandatory” trip reduction programs, such as Regulation XV were reviewed and rejected.
3. Variable on-street parking pricing – with funds to return to local merchants.
4. Enforce existing California parking cash out regulations.
5. Develop and market deep discount transit fares in areas well served by transit.
6. Expand BRT program.
7. Implement a region-wide bicycle network.

**Figure 2.0** summarizes the expected effectiveness of the programs.



**Figure 1.0 - Improvement Potentials and Costs Matrix**  
West Los Angeles Corridor Mobility Program, Planning Company Associates - December 2008

Corridor Improvements	Short, Medium or Long-Term	Evaluation Criteria [a]								Cost Estimate [c]
		VMT	Mode Split	Transit Accessibility	Congestion Relief	Regional, Corridor, or Local Scale	Environmental Issues	Right of Way Property Impacts	Constructability	
Light rail extension to Santa Monica (Expo-Olympic-Santa Monica or Expo-Venice-Sepulveda-Olympic, Santa Monica)	L	4	5	5	5	5	3	4	1	\$1.1 B
Shuttle buses from local employment centers and residential areas to stations as part of LRT	L	4	5	3	5	5	5	5	5	N/A
Privately operated shuttle buses from local employment centers and residential areas to stations	S	4	5	4	5	5	5	5	5	N/A
Alternative or additional managed lane facility along Expo right-of-way	M	2	2	1	4	3	3	5	3	\$55-\$83 M
Interim transit/shuttle facility along Expo right-of-way	M	4	5	3	5	5	5	5	3	\$35-\$52 M
Multi-purpose trail along LRT alignment	M	3	2	3	2	3	5	5	4	\$4.8-\$7.2 M
Provide amenities for bicycle users (i.e. lockers, storage) as part of LRT	L	3	2	3	2	3	5	5	5	N/A
<b>Expo Venice/Sepulveda Alignment</b>										
Light rail extension to Santa Monica	L	4	5	5	4	5	1	3	1	\$1.6 B
Shuttle buses from local employment centers and residential areas to stations as part of LRT	L	4	5	4	4	5	5	5	5	N/A
<b>Employment/Destination Centers</b>										
Areawide circulator transit system as alternative to local auto trips	S	4	2	4	3	5	N/A	N/A	N/A	
Fare-free access to transit funded by employers	S	4	2	4	3	5	N/A	N/A	N/A	
Employer subsidized transit services (shuttle, vanpools)	S	4	2	4	3	5	N/A	N/A	N/A	
Measures to spread commuter/peak-period traffic to other times	S	4	1	1	4	5	N/A	N/A	N/A	
Measures to divert commuter/peak-period traffic loads to other routes	S	4	1	1	4	5	N/A	N/A	N/A	
Adjust shipping/receiving practices to avoid peak hours	S	4	1	1	3	5	N/A	N/A	N/A	
Promote life style changes through flextime, ride sharing, shuttles, pool vehicles/flexcar, telecommuting	S	4	3 [b]	2	3 [b]	5	N/A	N/A	N/A	
Provide incentives for employees to change commute habits/ Disincentives for driving	S	4	3 [b]	2	3 [b]	5	N/A	N/A	N/A	
Parking cash-out	S	4	3 [b]	1	3 [b]	5	N/A	N/A	N/A	
Housing programs, i.e. employer assisted housing (EAH) and location efficient mortgages (LEM)	M	4	3 [b]	3	3 [b]	5	N/A	N/A	N/A	
<b>Local Agency</b>										
Uniform parking restrictions	S	3	1	1	3	3	5	5	5	
Reduce on-street parking and develop replacement parking off-street	S	3	1	1	3	3	3	3	5	
Improve enforcement of parking restrictions	S	3	1	1	4	3	N/A	N/A	N/A	
Increase parking fees	S	4	3 [b]	1	3 [b]	5	3	N/A	N/A	
Reduce off-street parking requirements	S	4	3 [b]	1	3 [b]	5	N/A	N/A	N/A	
Unbundle residential parking	S	4	3 [b]	1	3 [b]	5	N/A	N/A	N/A	
Implement strategies to support bicycle activity, pedestrian activity, and supportive land use policies	S	4	3 [b]	3	3 [b]	5	N/A	N/A	N/A	

Notes:

a. Rankings: 5 is best, 1 is worst.

b. Demand management measures rated as low to mid-level effectiveness on an individual basis; in combination, however, could yield commute mode shift/trip reduction of 15% or more.

c. N/A = Not Applicable (item already in place, already funded, or a mitigation measure) NC = No Cost (operational item)





Figure 2.0 - Overview of Strategy Assessments  
Moving Los Angeles, Rand Corporation - September 2008

Strategy	Public-Sector Cost/Revenue Implications	Short-Term Congestion Reduction	Long-Term Congestion Reduction
	 High cost      High revenue	 Negligible      High	 Negligible      High
<b>TSM strategies</b>			
Freeway ramp metering			
Signal timing and control			
HOV lane strategies			
Park-and-ride facilities			
Officers at intersections			
Left-turn signals			
Curb-parking restrictions			
One-way streets			
Rush-hour construction bans			
Incident management			
<b>Voluntary TDM</b>			
Ride-sharing			
Telecommuting			
Flexible work hours			
Car-sharing			
Traveler information systems			
<b>Regulatory TDM</b>			
Mandatory TDM programs			
Driving restrictions			
<b>Pricing</b>			
HOT lanes			
Cordon congestion tolls			
Variable curb-parking rates			
Parking cash-out			
Local fuel taxes			
<b>Public transit</b>			
Variable transit fares			
Deep-discount transit passes			
BRT			
Bus route reconfiguration			
<b>Nonmotorized Travel</b>			
Pedestrian strategies			
Bicycle strategies			

RAND MG748-S.1a





**Figure 2.0 (CONTINUED) - Overview of Strategy Assessments**  
Moving Los Angeles, Rand Corporation - September 2008

Strategy	Other Transportation Goals	Other Social Goals	Implementation Obstacles	Current Implementation in Los Angeles
	Very bad  Very good	Very bad  Very good	High  Low	None  Advanced
<b>TSM strategies</b>				
Freeway ramp metering				
Signal timing and control				
HOV lane strategies				
Park-and-ride facilities				
Officers at intersections				
Left-turn signals				
Curb-parking restrictions				
One-way streets				
Rush-hour construction bans				
Incident management				
<b>Voluntary TDM</b>				
Ride-sharing				
Telecommuting				
Flexible work hours				
Car-sharing				
Traveler information systems				
<b>Regulatory TDM</b>				
Mandatory TDM programs				
Driving restrictions				
<b>Pricing</b>				
HOT lanes				
Cordon congestion tolls				
Variable curb-parking rates				
Parking cash-out				
Local fuel taxes				
<b>Public Transit</b>				
Variable transit fares				
Deep-discount transit passes				
BRT				
Bus route reconfiguration				
<b>Nonmotorized Travel</b>				
Pedestrian strategies				
Bicycle strategies				

NOTE: HOT = high-occupancy toll.

RAND MG748-5.1b







**5.0 TDM RESPONSIBILITIES WITHIN THE CITY OF LOS ANGELES**

TDM initiatives are pursued by City departments independently with informal coordination occurring with other departments if and when an issue may require interaction rather than having any standing coordination. Departmental responsibilities for selected TDM efforts are shown on **Table 2.0**. The lack of a citywide strategy guiding the role and priority that TDM should play in policy, practices, facility development/management, and delivery of services makes it difficult for departments to be proactive with developing and implementing coordinated TDM actions. For example, existing traffic mitigation practices considers TDM as a secondary mitigation measure after capacity enhancements have been exhausted. Development of a “TDM First” strategy spanning all agencies would provide the policy basis for reversing this practice by requiring application of TDM (e.g., specified actions and performance measures) in assessing impacts and identifying mitigation measures before considering capacity enhancements.

**Table 2.0  
City TDM Responsibilities**

TDM Actions	City Departments*						
	Environmental Affairs	City Planning	Transportation	Commuter Options & Parking Selection	Building & Safety	City Administrative Office	Community Redevelopment Agency
<b>Funding</b>	<ul style="list-style-type: none"> <li>•CMAQ</li> <li>•AB 2766</li> <li>•City Mobile Source Air Pollution Reduction</li> <li>•Trust Fund</li> </ul>		<ul style="list-style-type: none"> <li>•Proposition A</li> <li>•Proposition C</li> <li>•Call for Projects</li> <li>•Transportation Impact Mitigation Program (TIMP) Fees</li> </ul>	<ul style="list-style-type: none"> <li>•Rideshare Trust Fund</li> </ul>		<ul style="list-style-type: none"> <li>•Parking Occupancy Tax</li> </ul>	<ul style="list-style-type: none"> <li>•Increment Tax Revenue</li> </ul>
<b>Development Review</b>		<ul style="list-style-type: none"> <li>•Discretionary Permits</li> <li>•Specific Plans</li> </ul>	<ul style="list-style-type: none"> <li>•Traffic Studies</li> </ul>		<ul style="list-style-type: none"> <li>•Building Permits</li> </ul>		<ul style="list-style-type: none"> <li>•Project Permits</li> </ul>
<b>Plans and Policies</b>	<ul style="list-style-type: none"> <li>•Environmental Manual</li> </ul>	<ul style="list-style-type: none"> <li>•General Plans</li> <li>•Transportation Element</li> <li>•Community Plans</li> <li>•Specific Plans</li> <li>•SB 375</li> <li>•Land Use/Transportation</li> <li>•Bicycle Plan</li> </ul>	<ul style="list-style-type: none"> <li>•Regional Transportation Plans</li> </ul>			<ul style="list-style-type: none"> <li>•Employee Relations Board</li> </ul>	
<b>Operations</b>			<ul style="list-style-type: none"> <li>•Transit Services</li> <li>•Transit Priority</li> <li>•Public Parking Enforcement</li> <li>•TDM Monitoring</li> </ul>	<ul style="list-style-type: none"> <li>•Rule 2202 Reports</li> <li>•Carpool Matching</li> <li>•Vanpool Coordinating</li> </ul>	<ul style="list-style-type: none"> <li>•Code Enforcement</li> </ul>		<ul style="list-style-type: none"> <li>•Pilot Programs/Projects</li> </ul>

\*Proprietary Departments of the City pursue TDM policies independently including the Departments of Water & Power (DWP), Los Angeles World Airports (LAWA), and Ports & Harbors (HARBORS).







## 6.0 STAKEHOLDERS

Stakeholder interviews were conducted with major planning agencies, employers, and TMOs.

### 6.1 Planning Agencies

City of Los Angeles Department of Transportation (LADOT): LADOT operates the City's surface transportation system including traffic signal timing, installation and controls, traffic safety devices, street marking, public parking supply, regulations and enforcement (including on-street and off-street), traffic officers, commuter and local bus service, and bicycle programs. They advise the City Planning Department on traffic impact and development review

City of Los Angeles Department of City Planning (LADCP): LADCP is the lead agency for comprehensive planning within the City. They prepare and process all zoning regulations, including developer parking requirements and conditions of approval for discretionary development projects. LADCP prepares all supporting documents and position papers in satisfaction of legislated planning mandates including the General Plan and its associated elements, Community Plans, Specific Plans and ordinances affecting zoning and new development requirements. A detailed description of the role of City agencies in reviewing development applications and use of transportation mitigation measures, including TDM, can be found in **Appendix F**.

Los Angeles County Metropolitan Transportation Authority (LACMTA/Metro): LACMTA/Metro operates an extensive bus and rail transit service for Los Angeles County and provides a multitude of other transportation services, including rideshare coordination and matching services. LACMTA/Metro is the designated Congestion Management Agency (CMA) for Los Angeles County, the coordinator of federal and state funding of transportation projects, and administrator of countywide funding sources including various sales tax measures. LACMTA/Metro prepares a short range and long range plan that serves as the policy document for its funding programs, including its biannual Call for Projects. The Call for Projects has a TDM category of funding as well as a bicycle and pedestrian category.

LACMTA/Metro provides a range of employer and traveler oriented services through its Commuter Services group including:

- Ride matching. Current efforts are focused on the Commute Smart Website, an on-line ride matching service.
- Facilitating vanpools.
- Development of the 511 program (including the go511.com website) which provides commuters with real time traffic congestion as well as information on alternative modes of travel, including transit route planning and ridematching.
- Publication of transit and bike maps.



- Participation in local rideshare festivals and coordination of an annual countywide “Ride to Work” and “Bike to Work” days.
- Marketing of transit fare media, including discounted transit passes. Current efforts are focused on the TAP program. There are over 400 vendor locations where transit passes can be purchased.
- Training of employee transportation coordinators (ETC’s), including a certification program to ensure competent transmittal of information on alternative mode travel.
- Support services to TMO’s. A TMO advisory group is established to disseminate rideshare strategies and programs.

South Coast Air Quality Management District: The SCAQMD’s Planning, Rules, & Area Sources Department is responsible for developing, adopting and implementing the region’s air quality management plan (AQMP) as required by the California Clean Air Act. The plan includes a number of programs, regulations and rules governing businesses and their air pollutants. In addition to the rules, there are funding programs administered by the District to partially offset the costs of some of the regulations and to incentivize programs that can demonstrably reduce pollutants.

One of the funding sources comes from DMV registration fees, through California Assembly Bill 2766 (AB 2766). These funds are focused on the reduction of pollutants from mobile sources. SCAQMD administers a portion of these funds within the South Coast Air Quality Basin. Forty percent of the funds collected from the DMV are returned to local governments by the SCAQMD, representing approximately \$19 million annually. The remaining funds are divided as follows: 30 percent goes through a competitive proposal process administered through an interagency Mobile Source Air Pollution Reduction Review Committee (MSRC) established to recommend selection of discretionary projects to the SCAQMD Governing Board (discretionary fund); and the remaining 30 percent to fund SCAQMD mobile source reduction enforcement, research and development (Technology Advancement Office). Projects eligible for AB 2766 discretionary funding include:

- Alternative fuel vehicles
- Transportation / mobile source related land use planning
- Public transportation
- Traffic management
- Transportation demand management
- Transportation pricing
- Bicycle projects
- Public education related to clean fuel vehicles or alternative transportation modes

Employers of more than 250 employees at a single worksite are required to comply with Rule 2202 that is aimed at reducing mobile source emissions. Employers may comply using one of three options: employee commute reduction program (ECRP), emissions reduction program (ERS), or pay a fee into



the Air Quality Investment Program (AQIP). Approximately 48 percent of the regulated worksites choose to prepare ECRPs. SCAQMD has an extensive data base documenting the effectiveness of the ECRP's. In addition to providing data on best practices, SCAQMD also conducts training classes for Employee Transportation Coordinators (ETC).

## **6.2 Employers/Institutions**

City of Los Angeles, Department of Personnel: The Department of Personnel administers rideshare programs through the City's Commuter Options and Parking Section (COPS) of the Personnel Department.

The benefits received by City employees are agreed to in Memoranda of Understanding with unions representing City employees. A Joint Labor/Management Committee oversees employee benefit programs including the benefits of the Commute program. Funding for the Commute Program comes from a Rideshare Trust Fund which includes employee parking fees, vanpool fees, and any outside grants (such as SCAQMD programs). COPS does not administer rideshare programs for the City proprietary departments (i.e., Harbor, LAWA or DWP). COPS also prepares the City's Rule 2202 plan for clusters of City sites as the City has over 30 regulated sites. The only department that complies using AQIP is the Police Department as their operations are not conducive to ridesharing programs.

The City's Commute Program includes:

- A transit subsidy of up to \$50 per employee per month
- A bike/walk subsidy at \$50 per employee per month
- Reduced cost and preferential parking for carpoolers and vanpoolers (at City Hall it can take up to 17 years seniority to get a parking space and regular parking costs \$50.60 per month with carpool parking costs costing \$37.95 per month) – carpools must consist of two to six people traveling together for the majority (51 percent) of the total trip distance
- Vanpool program – includes 105 operating vanpools which is the second largest fleet in Southern California
- Guaranteed Ride Home
- Bicycle lockers – 30 currently installed with more to follow
- Flextime – 4 day work week and 9/80 schedule (2 work weeks) and some employees are allowed to work at home
- Commute program information at new employee orientation
- Rideshare promotional events
- Bike to Work Week (May)
- Internal rideshare matching



The City program is successful. SCAQMD specifies a target of 1.75 AVR for employers with over 250 staff in the downtown area. The Civic center has exceeded that target for the last six years. Civic Center worksites have a 1.81 AVR with the Downtown Library site having a 1.86 AVR. Over 3,400 employees take advantage of the transit subsidy program with 900 employees participating in the vanpool program. Only 75 employees request the subsidy for walk/bicycle.

Cedars Sinai Medical Center (CSMC): The CSMC campus houses 11,000 employees, 2,000 volunteers, and 25,000 daily visitors. CSMC is subject to SCAQMD's Regulation 2202 and TDM regulations imposed to mitigate traffic impacts associated with the approval of a Specific Plan that governs campus development. TDM responsibilities, including compliance with Rule 2202, are coordinated with management of CSMC's parking. Included in the parking program is a hospital owned and operated shuttle system linking ten off-site CSMC buildings.

Parking is in short supply at CSMC with only 7,000 parking spaces and a few off-site parking facilities providing parking for all travelers. TDM efforts to reduce employee vehicle trips helps manage parking.

CSMC provides a number of services to help employees find and use alternatives to driving alone. Employees are offered a \$30 per month incentive to not drive to campus. The payment can be used for walking, bicycling, riding transit, carpooling, and vanpooling.

University of California, Los Angeles (UCLA): UCLA's commitment to trip reduction fits in with its desire to be an integral part of the community. Not only does UCLA focus on ridesharing for the campus, but it formed the Westwood Transportation Network, a Transportation Management Association (TMA) to coordinate transportation initiatives for Westwood Village as well as the campus. UCLA's Long Range Development Plan (LRDP) laid out a comprehensive 25 year vision of the campus that included a trip mitigation agreement to keep traffic 37,122 afternoon peak period vehicle trips and 139,500 Average Daily Trips. These trip thresholds have been met or exceeded. The LRDP expired in 2002, yet UCLA continues to monitor its progress in sustaining trip reductions. The LRDP also focused on a housing strategy that would significantly increase the number of on-campus residents (both students and employees), another component to its vehicle trip reduction progress.

UCLA is subject to SCAQMD Regulation 2202 and prepares annual reports to the Air Quality District as well. Employee commute related program include:

- Discounted Carpool parking permits.
- Vanpool program – largest in Southern California with over 175 vans – that is available to UCLA employees as well as commuters working in Westwood.
- BruinGo!, a program with some municipal bus operators (Santa Monica and Culver City) that accepts reduced payment with student/employee identification
- GoMetro is a transit pass subsidy program that includes reduced cost transit passes for Metro service (bus and rail), LADOT Commuter Express, Santa Clarita Transit, and the Antelope Valley Transit Authority.



- A shuttle bus that circulates through the campus, to remote parking lots, and through the Westwood Village.
- Shared vehicle program offered through ZIPCAR. A fleet of 16 cars are available on campus. UCLA pays a fixed \$1,600 per month and provides members 8 hours of free use to support emergency local trips (e.g., doctor appointments) for ridesharing commuters.
- A Facebook application for ridesharing.
- Construction of a transit center on campus that makes use of transit easier.
- Use of parking fees to support trip reduction programs.
- Westwood Transportation Network (Westwood Village TMA).
- UCLA partners with LAWA/Flyaway and Amtrak to help connect the campus community with transportation-to-travel options.

The program is a great success story due to UCLA's desire to make the program an on-going commitment and to sustain the program. The annual vehicle trip monitoring report indicates that average vehicle trips is 22.5 percent below the trip cap and almost 28 percent below the peak period trip caps. The campus wide AVR during the commute peak period is 1.67. Transit ridership to the campus has increased from 7 percent to 15 percent in the last 10 years.

### **6.3 Transportation Management Organization**

Warner Center Transportation Management Organization (WCTMO): The mission of the Warner Center TMO is to develop commuter choices for Warner Center employees, educate the employees, survey the commuting habits and offer other necessary rideshare services to the members of the TMO. The TMO was initiated through an interest by key employers and later codified in the Warner Center Specific Plan that requires participation among identified property owners.

The TMO offers the following services:

- Assist companies in meeting requirements of SCAQMD Rule 2202.
- A rideshare database to assist in carpool and vanpool formation.
- Advocate for new transit service to and from Warner Center. Warner Center is served by multiple bus service providers.
- Coordinate Guarantee Ride Home services.
- Conduct Rideshare promotional events to inform employees of options.
- Manage vanpool services.
- Offer a \$50 incentive program to try vanpooling.

The WCTMO has been successful in generating interest in ridesharing in this outlying suburban employment center. Less than seventy percent of employees working in Warner Center drive alone compared with the 85 percent who did before the TMO began in 1989. The proportion of commuters



carpooling has more than doubled from ten percent before the TMO began assisting employers to more than 23 percent now sharing rides. Bus ridership has jumped more than twelvefold, from 0.4 percent to 5 percent of the workforce.



## 7.0 STAKEHOLDER OBSERVATIONS

The variety of existing TDM programs managed by City departments (**Table 2.0**) is evidence that TDM has been considered as a congestion relief and emission reduction strategy for many years. Major employers see the value of TDM somewhat differently with all three interviewed employers and the WCMTO looking at TDM as necessary to attract good workers that must live long distances from where they work due to the high cost of housing in and around activity centers. Employers, like CSMC and UCLA, also see TDM as a critical element in managing parking in major employment centers.

Recurring comments from Stakeholders are summarized below:

- Lack of clear TDM leadership within the City of Los Angeles: In the City of Los Angeles, as in many large organizations, departments have difficulty coordinating TDM efforts as there is no explicit lead within the City's organizational structure. Many Stakeholders suggested that the City designate a TDM lead to advocate and coordinate the City's TDM efforts and policies as is done for bicycle issues through the LADOT's Bicycle Coordinator. There was no consensus among Stakeholders to where the TDM coordinator should be housed. AB 2766 funds were suggested as a source of funds for the position. It was also suggested that the TDM Coordinator should have an Advisory Board, made up of City departments with TDM responsibilities, to provide input and assistance. It has been noted that the City's initial TDM ordinance (CF 85-0361) created a Ridesharing Task Force consisting of selected City Departments and Business representatives, appointed by the Mayor. An interim step for creating a TDM Coordinator would be to have the Mayor appoint a TDM Task Force, similar, but with broader objectives, to the Ridesharing Task Force.
- Access to TDM funds by employers: The Stakeholder interviews suggested that employers could use additional funding to support existing and enhanced activities. This raises the question as to how the public sector could devise financial incentives for innovative and sustainable TDM programs. There was mention of the using Metro's Call for Projects as a possible source. Since Metro's position is that the transportation funds awarded by Metro cannot go directly to the private sector, a suggestion was made to have LADOT, or the City, find ways to solicit Call for Projects ideas and partnerships with major employment centers.
- Better Enforcement: Interviews revealed that enforcement of TDM requirements was lacking. Several suggestions were made to improve the enforcement including the following:
  - Automating surveys and reporting
  - Standardizing TDM mitigation measures (e.g., TDM check list)
  - Inclusion of TDM monitoring fees in the TDM mitigation requirements
  - Assign the responsibility for monitoring to the proposed TDM Coordinator
- Need for Additional Transportation Management Associations (TMA): The Warner Center TMO appears to be the only active TMA within the City of Los Angeles. Other TMAs were created through the imposition of them as conditions of approval on new development, but



are not active or visible. Both Metro and SCAQMD staff find TMAs a means to coordinate communication with employers and property owners with TDM responsibilities.

The consensus is that there needs to be a better understanding of how TMAs can be successful and sustainable. The Warner Center TMO is renowned for its accomplishments, but it was acknowledged that its success is related to the fact that the TMO was created voluntarily by proximate employers. It was later legislated as a requirement in the Warner Center Specific Plan to sustain its programs. Other legislated TMA's (Howard Hughes Center, Porter Ranch) are not currently active.

A summary policy paper on the parameters and needs for successful TMAs should be prepared to advise the City on ways to incentivize TMAs.

- **Performance Metrics:** The measurement requirements to monitor TDM programs are varied and not standardized in the City of Los Angeles. A focused discussion by the TAC is needed to determine recommendations for TDM metrics. The strengths and weaknesses of the various measures were discussed with the Stakeholders:
  - Average Vehicle Ridership (AVR) uses employer surveys. Metro provides survey administration and tabulation services at no cost to employers as part of its Commuter Services.
  - Vehicle Trip Caps are easily automated with automatic traffic counting equipment, but don't add any information to the success or marketing of TDM programs.
  - Vehicle Miles Travelled (VMT) is important to greenhouse gas (GHG) review and objectives, but less so for the reduction of criteria pollutants related to air quality goals. The SCAQMD importantly noted that 90 percent of harmful automobile emissions occur in the first 1 mile of a vehicle trip.



## 8.0 FINDINGS

The nearly 200 TDM strategies/actions that were assessed using the methods described in **Section 2.0** were drawn from three sources:

- Sixty-seven (67) TDM Best Practice strategies/actions
- Fifty-six (56) Existing TDM strategies/actions
- Seventy-five (75) Stakeholder-suggested TDM strategies/actions

### 8.1 Screening and Assessment

TDM strategies/actions were screened and assessed using the two-step framework described in **Section 2.1**.

#### Step 1: Screening

An initial screening was conducted based on the Project Team's knowledge of TDM strategies/actions and conditions in Los Angeles that might affect the applicability of the strategy/action within the City.<sup>1</sup> The initial screening identified:

- One hundred-two (102) strategies/actions with little or no applicability in the City and/or those not feasible due to one or more critical adoption/maintenance/enhancement issues. Further evaluation of these strategies/actions in Step 2 was not warranted.
- Ninety-six (96) strategies/actions were identified as having potential benefit and that could be adopted/maintained/enhanced by the City (i.e., "candidate" TDM strategies/actions), indicating that further evaluation in Step 2 was warranted.

#### Step 2: Assessment

The 96 candidate strategies/actions that warranted further evaluation were assessed further in terms of appropriate setting/application, program benefits/effectiveness, program cost/resource needs, public acceptance/commuter interest, and potential implementation challenges/opportunities (i.e., "Screening Factors"). Quantitative Screening Factors (e.g., ability to reduce vehicle trips, reduce travel time, capital costs, etc.) were scored with positive numbers for benefits (i.e., 1, 2 or 3) and negative numbers for costs and challenges (i.e., -1, -2 or -3) for each of these strategies/actions. Non-quantitative screening factors that would be important in TDM strategy/action selection decisions were described where appropriate. As previously noted, the TDM Strategy/Action Screening Brief Worksheets documenting this step can be found in **Appendix C** through **Appendix E**.

**Table 3.0** summarizes the results of the screening and assessment process.

<sup>1</sup> This initial review was employed to reduce the number of strategies/actions to be evaluated for this Project as there were 198 TDM strategies/actions identified (i.e., 67 Best Practice, 56 existing and 75 Stakeholder-suggested).



Source	Total # of Measures Identified	Measures Eliminated in Step 1	Measures Assessed Further in Step 2
TDM Best Practice	67	29	38
Existing TDM	56	26	30
Stakeholder-Suggested	75	47	28
<i>Total</i>	<i>198</i>	<i>102</i>	<i>96</i>

## 8.2 Ratings and Rankings

Twenty-two (22) Duplicate/Overlapping strategies/actions were identified and combined during the rating and ranking process as noted in **Section 2.2**. The resulting 74 candidate TDM strategies/actions were rated and ranked according to the methods described in **Sections 2.2**.

Level of Priority	Ratings	# of Measures Identified
High	18 or more	17
Medium	14 to 17	18
Low	13 or less	39
<i>Total</i>		<i>74</i>

**Table 4.0** summarizes the results of the rating and ranking process. Ratings ranged between negative ten and positive 41 for the 74 candidate TDM strategies/actions as shown in **Tables 4.1, 4.2** and **4.3** below. The source (i.e., TDM Best Practice or “BP”; Existing or “EX”; and Stakeholder-suggested or “SS”) of each strategy/action and policy type are listed for cross-referencing with **Appendix A** and the discussion of Policy/Practice Emphasis in **Section 8.3**.



**Table 4.1**  
**Ratings and Policy Type for Strategies/Actions Ranked High<sup>1</sup>**

# <sup>2</sup>	Description (Project Master ID Number) <sup>3</sup>	Source <sup>4</sup>	Rating	Policy Type
1	Promote awareness of regional rideshare/ridematching websites (No.42, No.111 & No.112)	BP, EX & EX	41	Status Quo
2	Have LADOT cooperate in multi-agency transportation fare card (No.120)	EX	27	Active
3	Provide Internet access to transit route/schedule information (No.117)	EX	26	Status Quo
4	Create City-wide TDM Coordination Program with TDM Coordinator position which could be partially funded by AB 2766 (No.67 & No.164)	BP & SS	25	Active
5	Develop a ridematch tool that is web-based and available to City staff (No.180)	SS	22	Passive
6	Design and implement Integrated Mobility Hubs with Mobility Centers/information kiosks (No. 51 & No.124)	BP & SS	21	Active
7	Offer commuter tax benefits (Commuter Choice) for City employees (No.178)	SS	20	Active
8	Offer and promote a formal telework/telecommute program for City employees (No.198)	SS	20	Passive
9	Dedicate on/off street carshare vehicle parking (No.15 & No.153)	BP & SS	18	Active
10	Fund improvements to facilitate Guaranteed Ride Home (GRH) (No.41, No.109 & No.181)	BP, EX & SS	18	Passive
11	Offer access to ITS real-time information by transit providers including better "Next Bus" information at key locations (No.55, No.93 & No.162)	BP, EX & SS	18	Active
12	Provide financial incentives for City employees to not drive including Parking Cash Out (No.106 & No.107)	EX & EX	18	Active
13	Offer preferential parking program for vans/car pools to City employees (No.108)	EX	18	Active
14	Amend existing TDM Ordinance to add on-site support services, financial incentives, and communication/marketing and eliminate outdated references (No.125)	SS	18	Active
15	Give TDM a higher priority in LADOT Traffic Study Policies including methodologies to incorporate effects into Traffic Impact Study analysis and mitigation measures and/or revise, replace or supplement LOS thresholds with VMT based thresholds or multi-modal measurements (No.126 & No.134)	SS & SS	18	Active
16	Develop a TDM check list for City Planning staff to include in project applications and a TDM Toolbox with thresholds for implementation with guidelines on how to apply TDM tools by setting, land use and project size (No.127 & No.129)	SS & SS	18	Active
17	Include TDM requirements in the City's formulation of Sustainable Community Strategies (SCS) and the City's response to SB 375 (No.128)	SS	18	Passive

Footnotes:

- <sup>1</sup> TDM Strategy/Action Screening Brief worksheets for the High measures are located in **Appendix C** presented in the order above.
- <sup>2</sup> # = Strategy/action's sequential table number
- <sup>3</sup> Project Master ID Number (No.#) = strategy/action number assigned in the Project Master List (see **Appendix A**)
- <sup>4</sup> Source = "BP" for TDM Best Practice strategies/actions; "EX" for Existing TDM strategies/actions; and "SS" for Stakeholder-suggested strategies/actions.





**Table 4.2**  
**Ratings and Policy Type for Strategies/Actions Ranked Medium<sup>1</sup>**

# <sup>2</sup>	Description (Project Master ID Number) <sup>3</sup>	Source <sup>4</sup>	Rating	Policy Type
1	Reduced parking in TOD zones (No.1)	BP	17	Active
2	Unbundled parking from building leases (No.3 & No.69)	BP & EX	17	Active
3	Establish Maximum parking ratios (No.6 & No.71)	BP & EX	17	Active
4	Provide City-wide access to online travel information (No.49)	BP	16	Status Quo
5	Promote existing policy of allowing strong TDM plans in lieu of required parking for new developments (No.132)	SS	16	Status Quo
6	Standardize TDM and Trip Monitoring Report Process (No.187)	SS	16	Status Quo
7	Offer an annual universal multi-modal pass (No.56 & No.119)	BP & EX	15	Active
8	Mark bicycle lanes on local streets (No.89)	EX	15	Status Quo
9	Call for SCAQMD to include Parking Cash Out in amendments to Rule 2202 (No.130)	SS	15	Passive
10	Take local control of the State's Parking Cash Out requirement (No.171)	SS	15	Active
11	Create links from department websites to TDM resources (No.188)	SS	15	Passive
12	Increase density/reduce parking with TDM commitment (No.2)	BP	14	Active
13	Provide real-time info on parking availability information including signage (No.12, No.76 & No.82)	BP, EX & SS	14	Active
14	Provide "Last/First Mile" transit connections to transit hubs (No.27)	BP	14	Active
15	Provide bicycle commute support (No.63)	BP	14	Passive
16	Designate bicycle commute routes (No.86)	EX	14	Passive
17	Provide better enforcement of regulations set by existing Specific Plans (No.131)	SS	14	Status Quo
18	Simplify and automate City employee transit subsidy program (No.161)	SS	14	Passive

Footnotes:

- <sup>1</sup> TDM Strategy/Action Screening Brief worksheets for the Medium measures are located in **Appendix D** presented in the order above.
- <sup>2</sup> # = Strategy/action's sequential table number
- <sup>3</sup> Project Master ID Number (No.#) = strategy/action number assigned in the Project Master List (see **Appendix A**)
- <sup>4</sup> Source = "BP" for TDM Best Practice strategies/actions; "EX" for Existing TDM strategies/actions; and "SS" for Stakeholder-suggested strategies/actions.



**Table 4.3**  
**Ratings and Policy Type for Strategies/Actions Ranked Low<sup>1</sup>**

# <sup>2</sup>	Description (Project Master ID Number) <sup>3</sup>	Source <sup>4</sup>	Rating	Policy Type
1	Promote/support Carshare (No.29)	BP	13	Active
2	Create municipal marketing campaign (No.50)	BP	13	Active
3	Offer start-up financial incentive (No.58)	BP	13	Active
4	Offer tourism promotions/information (No.54)	BP	12	Passive
5	Create bike stations with storage and maintenance facilities (No.66)	BP	12	Active
6	Offer a vanpool subsidy for LA-based employees (No.59)	BP	11	Active
7	Implement signal pre-emption for buses (No.92)	EX	11	Passive
8	Promote trip audits / traveler feedback (No.52)	BP	9	Active
9	Create community walking programs / bicycle programs (No.64)	BP	9	Passive
10	Support bikeshare or "public use" bicycles (No.65)	BP	9	Active
11	Provide Park & Rides in residential areas near rail/Bus Rapid Transit (No.80)	EX	9	Active
12	Offer a residential location incentive (No.8)	BP	8	Active
13	Provide dedicated, free/discounted rideshare parking in City-owned lots (No.14 & No.152)	BP & SS	8	Active
14	Offer flexible fleet vanpools for employees in the City (No.28 & No.95)	BP & EX	8	Active
15	Offer special non-SOV promotions and events (No.53)	BP	8	Passive
16	Have LADOT create Bus Rapid Transit routes (No.98)	EX	8	Status Quo
17	Offer flexible/compressed work schedules to City employees (No.104)	EX	8	Passive
18	Expand the role of TDM into the congestion pricing pilot projects (No.150)	SS	8	Passive
19	Offer advance reservation for HOV parking in transit lots/public lots (No.13 & No.77)	BP & EX	7	Active
20	Offer financial contribution to employers that implement worksite TDM (No.35)	BP	7	Active
21	Offer access to ITS real-time information for motorists including in-vehicle alerts (No. 55 & No.94)	BP & EX	7	Active
22	Offer on-going financial incentives (No.57)	BP	7	Active
23	Provide neighborhood circulator shuttles (No.30 & No.97)	BP & EX	6	Active
24	Support School Pool formation (No.43)	BP	6	Active
25	Provide pedestrian connection from neighborhoods to arterials (No.88)	EX	6	Active
26	Support proximate commuting (No.179)	SS	6	Active
27	Create parking-benefit districts (No.7)	BP	5	Active
28	Provide dedicated, on-street car/vanpool parking allowance (No.155)	SS	5	Active
29	Create residential parking permit zones (No.78)	EX	4	Status Quo
30	Create car-free pedestrian zones in TOD areas (No.5)	BP	3	Active
31	Provide assistance for development of employer-sponsored TDM actions (No.34)	BP	3	Active
32	Facilitate shared parking agreements between proximate job sites with possible coordination through the adoption of "parking management districts" in association with TMOs (No.151)	SS	3	Active
33	Provide HOV/HOT lanes on arterials (No.16)	BP	2	Active
34	Reduce parking requirement with agreement for shared use (No.4 and No.70)	EX	2	Passive
35	Centralize parking ("park once, then walk" lots) (No.156)	SS	2	Passive
36	Create short-term parking restrictions / enforcement in retail zones (No.79)	EX	1	Status Quo
37	Allow private/non-profits to apply for Call for Projects funding (No.133)	SS	0	Passive
38	Transportation concurrency management (No.74)	EX	-3	Active
39	Offer student fare passes (No.121)	EX	-10	Active

Footnotes:

<sup>1</sup> TDM Strategy/Action Screening Brief worksheets for the Low measures are located in **Appendix F** presented in the order above.

<sup>2</sup> # = Strategy/action's sequential table number

<sup>3</sup> Project Master ID Number (No.#) = strategy/action number assigned in the Project Master List (see **Appendix A**)

<sup>4</sup> Source = "BP" for TDM Best Practice strategies/actions; "EX" for Existing TDM strategies/actions; and "SS" for Stakeholder-suggested strategies/actions.





### 8.3 Implementation Considerations

The rating and rankings of candidate measures are shown by Implementation Mechanism, Policy/Program Emphasis, and Linkages (described in **Section 2.3**) below.

#### Implementation Mechanism

Nearly 50 percent of candidate TDM strategies/actions were identified as “Employer and Consumer-Directed Measures” as shown on **Table 5.0**. Approximately 90 percent of the measures that could be implemented by the “Land Use/Design/Parking” mechanism were either “High” or “Low” strategies/actions while over 80 percent of the measures that could be implemented by the “Preferential Use of Roadways and Parking” mechanism.

Implementation Mechanism Category	Total	High	Medium	Low
<b>1.0 - Public Policy / Regulations</b>	<b>18</b>	<b>5</b>	<b>7</b>	<b>6</b>
1.1 - Land Use / Design / Parking	16	5	7	4
1.2 - Financial Incentives and Travel Ordinances	2	0	0	2
<b>2.0 – Construction and Management of City Facilities</b>	<b>16</b>	<b>1</b>	<b>4</b>	<b>11</b>
2.1 – Preferential Use of Roadways and Parking	12	1	1	10
2.2 – Bicycle / Pedestrian Facilities	2	0	2	0
2.3 – Facilities Management	2	0	1	1
<b>3.0 – Transportation Services</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>4</b>
<b>4.0 – Employer and Consumer-Directed Measures</b>	<b>34</b>	<b>10</b>	<b>6</b>	<b>18</b>
4.1 – Employer Support	3	0	1	2
4.2 – City as Employer Actions	7	4	0	2
4.3 – Rideshare Support	4	3	0	1
4.4 – Information/Education	10	2	3	5
4.5 – Financial Incentives	5	1	1	3
4.6 – Bicycle/Pedestrian Support	6	0	1	5
<b>5.0 – Institutional Arrangements</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>
<b>Total</b>	<b>74</b>	<b>17</b>	<b>18</b>	<b>39</b>

**Table 5.1** shows the rating and rank for each of the candidate TDM strategies/actions according to the mechanism(s) that the City could use for implementation (see **Table 1.0** of **Section 2.3**).



**Table 5.1**

**TDM Strategies/Actions By Implementation Mechanism**

# <sup>1</sup>	Strategy/Action (shown with Project Master ID Number)	Rating	Ranking
<b>1.0 - Public Policy / Regulations</b>			
<b>1.1 - Land Use / Design / Parking</b>			
1	Design and implement Integrated Mobility Hubs with Mobility Centers/information kiosks (No.51 & No.124)	21	High
2	Amend existing TDM Ordinance to add on-site support services, financial incentives, and communication/marketing and eliminate outdated references (No.125)	18	High
3	Give TDM a higher priority in LADOT Traffic Study Policies including methodologies to incorporate effects into Traffic Impact Study analysis and mitigation measures and/or revise, replace or supplement LOS thresholds with VMT based thresholds or multi-modal measurements (No.126 & No.134)	18	High
4	Develop a TDM check list for City Planning staff to include in project applications and a TDM Toolbox with thresholds for implementation with guidelines on how to apply TDM tools by setting, land use and project size (No.127 & No.129)	18	High
5	Include TDM requirements in the City's formulation of Sustainable Community Strategies (SCS) and the City's response to SB 375 (No.128)	18	High
6	Reduced parking in TOD zones (No.1)	17	Medium
7	Unbundled parking from building leases (No.3 & No.69)	17	Medium
8	Establish Maximum parking ratios (No.6 & No.71)	17	Medium
9	Promote existing policy of allowing strong TDM plans in lieu of required parking for new developments (No.132)	16	Medium
10	Call for SCAQMD to include Parking Cash Out in amendments to Rule 2202 (No.130)	15	Medium
11	Increase density/reduce parking with TDM commitment (No.2)	14	Medium
12	Provide better enforcement of regulations set by existing Specific Plans (No.131)	14	Medium
13	Create car-free pedestrian zones in TOD areas (No.5)	3	Low
14	Reduce parking requirement with agreement for shared use (No.4 and No.70)	2	Low
15	Transportation concurrency management (No.74)	-3	Low
16	Allow private/non-profits to apply for Call for Projects funding (No.133)	0	Low
<b>1.2 - Financial Incentives and Travel Ordinances</b>			
17	Offer a residential location incentive (No.8)	8	Low
18	Create parking-benefit districts (No.7)	5	Low
<b>2.0 – Construction and Management of City Facilities</b>			
<b>2.1 – Preferential Use of Roadways and Parking</b>			
19	Dedicate on/off street Carshare vehicle parking (No.15 & No.153)	18	High
20	Provide real-time info on parking availability information including signage (No.12, No.76 & No.82)	14	Medium
21	Provide Park & Rides in residential areas near rail/Bus Rapid Transit (No.80)	9	Low
22	Provide dedicated, free/discounted rideshare parking in City-owned lots (No.14 & No.152)	8	Low
23	Expand the role of TDM into the congestion pricing pilot projects (No.150)	8	Low
24	Offer advance reservation for HOV parking in transit lots/public lots (No.13 & No.77)	7	Low
25	Provide dedicated, on-street car/vanpool parking allowance (No.155)	5	Low
26	Create residential parking permit zones (No.78)	4	Low





**Table 5.1 (CONTINUED)**

**TDM Strategies/Actions By Implementation Mechanism**

# <sup>1</sup>	Strategy/Action (shown with Project Master ID Number)	Rating	Ranking
<b>2.0 – Construction and Management of City Facilities</b>			
<b>2.1 – Preferential Use of Roadways and Parking</b>			
27	Facilitate shared parking agreements between proximate job sites with possible coordination through the adoption of "parking management districts" in association with TMOs (No.151)	3	Low
28	Provide HOV/HOT lanes on arterials (No.16)	2	Low
29	Create short-term parking restrictions / enforcement in retail zones (No.79)	1	Low
30	Centralize parking ("park once, then walk" lots) (No.156)	2	Low
<b>2.2 – Bicycle / Pedestrian Facilities</b>			
31	Mark bicycle lanes on local streets (No.89)	15	Medium
32	Designate bicycle commute routes (No.86)	14	Medium
<b>2.3 – Facilities Management</b>			
33	Simplify and automate City employee transit subsidy program (No.161)	14	Medium
34	Implement signal pre-emption for buses (No.92)	11	Low
<b>3.0 – Transportation Services</b>			
35	Provide "Last/First Mile" transit connections to transit hubs (No.27)	14	Medium
36	Promote/support Carshare (No.29)	13	Low
37	Offer flexible fleet vanpools for employees in the City (No.28 & No.95)	8	Low
38	Have LADOT create Bus Rapid Transit routes (No.98)	8	Low
39	Provide neighborhood circulator shuttles (No.30 & No.97)	6	Low
<b>4.0 – Employer and Consumer-Directed Measures</b>			
<b>4.1 – Employer Support</b>			
40	Take local control of the State's Parking Cash Out requirement (No.171)	15	Medium
41	Offer financial contribution to employers that implement worksite TDM (No.35)	7	Low
42	Provide assistance for development of employer-sponsored TDM actions (No.34)	3	Low
<b>4.2 – City as Employer Actions</b>			
43	Offer commuter tax benefits (Commuter Choice) for City employees (No.178)	20	High
44	Offer and promote a formal telework/telecommute program for City employees (No.198)	20	High
45	Provide financial incentives for City employees to not drive including Parking Cash Out (No.106 & No.107)	18	High
46	Offer preferential parking program for vans/car pools to City employees (No.108)	18	High
47	Offer flexible/compressed work schedules to City employees (No.104)	8	Low
48	Support proximate commuting (No.179)	6	Low
<b>4.3 – Rideshare Support</b>			
49	Promote awareness of regional rideshare/ridematching websites (No.42, No.111 & No.112)	47	High
50	Develop a ridematch tool that is web-based and available to City staff (No.180)	22	High
51	Fund improvements to facilitate Guaranteed Ride Home (GRH) (No.41, No.109 & No.181)	18	High





**Table 5.1 (CONTINUED)**

**TDM Strategies/Actions By Implementation Mechanism**

# <sup>1</sup>	Strategy/Action (shown with Project Master ID Number)	Rating	Ranking
<b>4.0 – Employer and Consumer-Directed Measures</b>			
<b>4.3 – Rideshare Support</b>			
52	Support School Pool formation (No.43)	6	Low
<b>4.4 – Information/Education</b>			
53	Provide Internet access to transit route/schedule information (No.117)	26	High
54	Offer access to ITS real-time information by transit providers including better "Next Bus" information at key locations (No.55 & No.162)	18	High
55	Provide City-wide access to online travel information (No.46)	16	Medium
56	Standardize TDM and Trip Monitoring Report Process (No.187)	16	Medium
57	Create links from department websites to TDM resources (No.188)	15	Medium
58	Create municipal marketing campaign (No.50)	13	Low
59	Offer tourism promotions/information (No.51)	12	Low
60	Promote trip audits / traveler feedback (No.49)	9	Low
61	Offer special non-SOV promotions and events (No.53)	8	Low
62	Offer access to ITS real-time information for motorists including in-vehicle alerts (No.55 & No.94)	7	Low
<b>4.5 – Financial Incentives</b>			
63	Have LADOT cooperate in multi-agency transportation fare card (No.120)	27	High
64	Offer an annual universal multi-modal pass (No.56 & No.119)	15	Medium
65	Offer start-up financial incentive (No.58)	13	Low
66	Offer on-going financial incentives (No.57)	7	Low
67	Offer student fare passes (No.121)	-10	Low
<b>4.6 – Bicycle/Pedestrian Support</b>			
68	Provide bicycle commute support (No.63)	14	Medium
69	Create bike stations with storage and maintenance facilities (No.66)	12	Low
70	Offer a vanpool subsidy for LA-based employees (No.59)	11	Low
71	Create community walking programs / bicycle programs (No.64)	9	Low
72	Support bikeshare or "public use" bicycles (No.65)	9	Low
73	Provide pedestrian connection from neighborhoods to arterials (No.88)	6	Low
<b>5.0 – Institutional Arrangements</b>			
74	Create City-wide TDM Coordination Program with TDM Coordinator position which could be partially funded by AB 2766 (No.67 & No.164)	25	High

<sup>1</sup> # = Strategy/action's sequential table number





**Policy/Practice Emphasis**

The 74 candidate TDM strategies/actions were sorted into the three Policy/Practice Emphasis categories (as described in **Section 2.3**) and shown on **Tables 4.1, 4.2** and **4.3**.

Table 6.0 TDM Strategy/Action Policy Emphasis Summary				
Policy Emphasis	Total # of Measures	Strategies/Action by Ranking		
		High	Medium	Low
Active	46	11	8	27
Passive	18	4	5	9
Status Quo	10	2	5	3
<b>Total</b>	<b>74</b>	<b>17</b>	<b>18</b>	<b>39</b>

Over 60 percent of candidate TDM strategies/actions were identified as Active measures as shown on **Table 6.0**. About two-thirds of the 17 measures given a High ranking were identified as being Active while 44 percent and 69 percent of Medium and Low ranked measures were associated with Active initiatives. This packaging suggests that the strategies/actions recommended for further consideration represent a departure from conventional polices/practices initiatives and would position TDM as a priority.

**Linkages**

Complimentary strategies/actions were identified amongst the High and Medium candidate strategies/actions. A matrix illustrating the linkages between complimentary strategies/actions amongst the High and Medium priority level measures is located in **Appendix G**.

**8.4 Themes**

Strategies and actions ranked as either High or Medium clustered around the following themes:

- Reinforcing existing City TDM efforts. For example:
  - Amend existing TDM Ordinance to add on-site support services, financial incentives, and communication/marketing and eliminate outdated references (#14 listed in **Table 4.1**)
  - Provide better enforcement of regulations set by existing Specific Plans (#17 listed in **Table 4.2**)
  - Simplify and automate City employee transit subsidy program (#18 listed in **Table 4.2**)
- Focusing on parking. For example:
  - Dedicate on/off street Carshare vehicle parking (#9 listed in **Table 4.1**)





- Offer preferential parking program for vans/car pools to City employees (#13 listed in **Table 4.1**)
- Unbundled parking from building leases (#2 listed in **Table 4.2**)
- Promote existing policy of allowing strong TDM plans in lieu of required parking for new developments (#5 listed in **Table 4.2**)
- Call for SCAQMD to include Parking Cash Out in amendments to Rule 2202 (#9 listed in **Table 4.2**)
- Improving travel information. For example:
  - Develop a ridematch tool that is web-based and available to City staff (#5 listed in **Table 4.1**)
  - Offer access to ITS real-time information by transit providers including better "Next Bus" information at key locations (#11 listed in **Table 4.1**)
  - Provide City-wide access to online travel information (#4 listed in **Table 4.2**)
  - Create links from department websites to TDM resources (#11 listed in **Table 4.2**)
- Coordinating TDM efforts throughout City Hall. For example:
  - Create City-wide TDM Coordination Program with TDM Coordinator position which could be partially funded by AB 2766 (#4 listed in **Table 4.1**)
  - Give TDM a higher priority in LADOT Traffic Study Policies including methodologies to incorporate effects into Traffic Impact Study analysis and mitigation measures and/or revise, replace or supplement LOS thresholds with VMT based thresholds or multi-modal measurements (#15 listed in **Table 4.1**)
  - Develop a TDM check list for City Planning staff to include in project applications and a TDM Toolbox with thresholds for implementation with guidelines on how to apply TDM tools by setting, land use and project size (#16 listed in **Table 4.1**)
  - Standardize TDM and Trip Monitoring Report Process (#6 listed in **Table 4.2**)

Strategies and actions ranked as Low clustered around the following themes:

- Focused on financial incentives. For example:
  - Offering start-up financial incentive and on-going financial incentives (#3 and #22) listed in **Table 4.3**)
  - Offer a vanpool subsidy for LA-based employers (#6 listed in **Table 4.3**)
  - Offer a residential location incentive (#12 listed in **Table 4.3**)
  - Offer financial contribution to employers that implement worksite TDM (#20 listed in **Table 4.3**)
- Supporting pedestrians and bicyclist. For example:



- Create community walking programs/bicycle programs (#9 listed in **Table 4.3**)
- Support bikeshare or “public use” bicycles (#10 listed in **Table 4.3**)
- Provide pedestrian connection from neighborhoods to arterials (#23 listed in **Table 4.3**)
- Preferential use of roadways and parking facilities. For example:
  - Provide dedicated, free/discounted rideshare parking in City-owned lots and [Citywide] car/vanpool parking allowance (#13 and #28 listed in **Table 4.3**)
  - Expand the role of TDM into the congestion pricing pilot projects (#18 listed in **Table 4.3**)
  - Offer advance reservation for HOV parking in transit lots/public lots (#19 listed in **Table 4.3**)
  - Create residential parking permit zones (#29 listed in **Table 4.3**)
  - Facilitate shared parking agreements between proximate job sites with possible coordination through the adoption of "parking management districts" in association with TMOs (#32 listed in **Table 4.3**)
  - Provide HOV/HOT lanes on arterials (#33 listed in **Table 4.3**)
  - Create short-term parking restrictions / enforcement in retail zones (#34 listed in **Table 4.3**)
  - Centralize parking ("park once, then walk" lots) (#35 listed in **Table 4.3**)



## 9.0 CONCLUSION

Nearly 200 TDM strategies/actions were assessed conceptually for their impact and applicability to Los Angeles. The focus of this process was on how a strategy/action might fit local conditions and meet local priorities.

Seventy-four (74) candidate strategies/actions show promise for successful implementation based on an evaluation conducted in terms of appropriate setting/application, program benefits/effectiveness, program cost/resource needs, public acceptance/commuter interest, and potential implementation challenges/opportunities (i.e., Screening Factors).

Candidate strategies/actions were rated, ranked and sorted by Implementation Mechanism, Policy/Program Emphasis, and Linkages to provide to assist City decision makers in selection of TDM measures for program development and packaging.

The Project Team recommends the following actions:

### **Recommendation No.1**

The City of Los Angeles should give further consideration to the 35 candidate TDM strategies/actions that received High or Medium rankings listed below. A program (e.g., cost, timing, responsibilities, implementation process, etc.) for these measures should be developed in order to allow for a complete evaluation of expected benefits, resources requirements, timing, schedule, and assignment of responsibility.

The 17 strategies/actions (shown as listed in **Table 4.1**) that received High rankings should be considered as first priority for further action by the City:

1. Promote awareness of regional rideshare/ridematching websites
2. Have LADOT cooperate in multi-agency transportation fare card
3. Provide Internet access to transit route/schedule information
4. Create City-wide TDM Coordination Program with TDM Coordinator position which could be partially funded by AB 2766
5. Develop a ridematch tool that is web-based and available to City staff
6. Design and implement Integrated Modal Hubs with Mobility Centers/information kiosks
7. Offer commuter tax benefits (Commuter Choice) for City employees
8. Offer and promote a formal telework/telecommute program for City employees
9. Dedicate on/off street Carshare vehicle parking
10. Fund improvements to facilitate Guaranteed Ride Home (GRH)



11. Offer access to ITS real-time information by transit providers including better "Next Bus" information at key locations
12. Provide financial incentives for City employees to not drive including Parking Cash Out
13. Offer preferential parking program for vans/car pools to City employees
14. Amend existing TDM Ordinance to add on-site support services, financial incentives, and communication/marketing and eliminate outdated references
15. Give TDM a higher priority in LADOT Traffic Study Policies and Procedures including methodologies to incorporate effects into Traffic Impact Study analysis and mitigation measures and/or replace LOS with multi-modal measurement/standards
16. Develop a TDM check list for City Planning staff to include in project applications and a TDM Toolbox with thresholds for implementation with guidelines on how to apply TDM tools by setting, land use and project size
17. Include TDM requirements in the City's formulation of Sustainable Community Strategies (SCS) and the City's response to SB 375

The 18 strategies/actions that received Medium rankings (shown as listed in **Table 4.2**) should be considered as second priority for further action by the City:

1. Reduced parking in TOD zones
2. Unbundled parking from building leases
3. Establish Maximum parking ratios
4. Provide City-wide access to online travel information
5. Promote existing policy of allowing strong TDM plans in lieu of required parking for new developments
6. Standardize TDM and Trip Monitoring Report Process
7. Offer an annual universal multi-modal pass
8. Mark bicycle lanes on local streets
9. Call for SCAQMD to include Parking Cash Out in amendments to Rule 2202
10. Take local control of the State's Parking Cash Out requirement
11. Create links from department websites to TDM resources
12. Increase density/reduce parking with TDM commitment
13. Provide real-time info on parking availability information including signage
14. Provide "Last/First Mile" transit connections to transit hubs
15. Provide bicycle commute support
16. Designate bicycle commute routes



17. Provide better enforcement of regulations set by existing Specific Plans
18. Simplify and automate City employee transit subsidy program

The 39 strategies/actions that received Low rankings warranted no further action at this time. However, these strategies/actions should not be disregarded completely as they were identified to have some value/benefit to the City should the costs/barriers to their adoption/maintenance/enhancement be minimized in the future.

### **Recommendation No.2**

LADOT and City Planning staff should form an informal TDM working group to consider how to proceed with this study's recommendations. This working group should also start to coordinate existing TDM policies and practices to ensure a higher degree of coordination and effectiveness.

### **Recommendation No.3**

Linkages among the High and Medium rated strategies/actions should be considered in developing strategies/actions that can be packaged together to achieve a greater benefit/value to be considered further.

### **Recommendation No.4**

The measures rated as being High or Medium should be considered the priority for projects to be nominated for funding through Metro's "Call for Projects," Caltrans' Planning Grants and/or other financing opportunities.

