
Trip Reduction Ordinances

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■ Introduction

Trip reduction ordinances (TROs) are increasingly being utilized as a mechanism for managing congestion and obtaining private sector participation in traffic management efforts. TROs, and related requirements imposed via regulation or administrative guidelines, have been in existence in a few jurisdictions for a decade or more, but their use has accelerated considerably over the past few years. In 1987, the U.S. Environmental Protection Agency listed trip reduction ordinances as one of ten transportation control strategies which urban areas unable to attain national ambient air quality standards might consider implementing. The following year, the State of California called for transportation control measures in all areas unable to meet state air quality standards; trip reduction ordinances subsequently were identified by the California Air Resources Board as a reasonably available approach, and were added in separate legislation as mandatory element of the congestion management plans now required in urban counties. Congress also endorsed trip reduction ordinances in the 1990 Clean Air Act Amendments: TROs are identified as a transportation control measure, along with employer-based transportation management plans and local programs and ordinances to facilitate non-automobile travel (Section 108(f) as amended.) Moreover, Congress directed areas with severe and extreme ozone nonattainment problems to implement employer-based trip reduction programs within two years following enactment and to convincingly demonstrate that a 25 percent increase in Average Vehicle Occupancy will occur by November, 1996. This mandate, underscored by an increasing public acknowledgement that congestion relief will require aggressive action, makes it likely that TROs will be more widely applied in the near future.

This chapter presents an overview of TROs. It presents a brief definition of TROs and a statement of typical objectives, discusses the range of approaches which have been used, and presents several examples. It then discusses factors that help determine TRO effectiveness, potential for emissions reductions, and other benefits and costs. The final section presents recommendations on methods for achieving effective implementation. A model trip reduction ordinance is then presented that can be used by cities, counties, or other governmental jurisdictions that are undertaking the development of a TRO.

This informational guidance document has been developed and issued in response to Section 108(f) which in subpart (iv) mandates the preparation of information on "trip reduction ordinances." The information contained in this chapter does not address Environmental Protection Agency requirements regarding Section 182(d)(1)(B) which requires the implementation of employer trip reduction programs in severe and extreme ozone nonattainment areas. Section 182(d)(1)(B) programs are applicable to employers and EPA's requirements for Section 182(d) employer trip reduction programs should be obtained from the EPA Regional Office for your area. The Trip Reduction

Ordinances covered in this chapter refer to statutes or regulations that could be adopted by states, cities, counties, or authorized regional governmental entities.

■ Definition and Objectives

Trip reduction ordinances (TROs) are local, regional, or state government requirements designed to encourage the use of transportation alternatives such as ridesharing, transit, bicycling, and walking – or even telecommunications substitutes – rather than a single occupant vehicle. Most TROs focus on work trips (some focus on peak period work trips), and for this reason many are aimed at developers of commercial properties and/or employers. However, in a few instances policies addressing shopping, personal business, and other trip purposes are also included. Some TROs also set forth local government commitments to develop and implement supportive transportation system management (TSM) measures such as park and ride lots, high occupancy vehicle lanes, and shuttle services. When peak-period travel is the major concern, programs such as flextime and staggered work hours, off-peak scheduling of deliveries, and other peak-reducing methods may be encouraged in addition to strategies to facilitate trip reduction.

The primary objective of most trip reduction ordinances is to alleviate traffic congestion and related problems such as air pollution. Other factors motivating local, regional, or state governments to adopt TROs include financial difficulties in adding new transportation capacity to meet demand; the lag time in getting transit improvements in place; citizen concerns about the social and environmental impacts of such capacity expansions; and, particularly in areas experiencing rapid growth, citizen pressures to minimize traffic impacts associated with new development. There also has been growing recognition of the need to implement travel demand management (TDM) measures more systematically, put TDM activities on a stable financial footing, broaden their client base, and impose development-related requirements more equitably. In several areas these have been major reasons for the use of TROs.

■ Varieties of Trip Reduction Requirements

Responding to the particulars of the situation, local governments have established a wide variety of trip reduction programs. Among the more common variations are the following:

- Policies that encourage but do not require the provision of commute alternatives information and incentives at the workplace. Such policies may encourage employers and property owners/managers to establish a transportation management

association (TMA) to help implement commute alternatives programs and provide incentives for their doing so. Policies also may mandate complementary TDM actions on the part of local government, including the creation of an outreach program to work with interested employers and their employees. Because participation in the programs is voluntary, some employers may choose not to participate, and others may discontinue their programs after several years.

- Utilization of trip reduction requirements as a bargaining element in negotiations over rezoning, or as part of a public-private development agreement. This practice permits the trip reduction program to be fashioned to mitigate the impacts of the specific project under consideration, but may also lead to considerable variation among the requirements imposed on similar projects.
- Requirements for trip reduction activities for those developers or employers who elect to take advantage of incentives or quid pro quos such as reductions in the amount of parking required, density bonuses, or government-backed financing. Here, the issue is whether the exchange is reasonable from both the public and the private interest perspectives.
- Requirements that adequate public facilities and services be in place (or at least programmed and funded) before additional development can be approved. These policies may call for developers to implement specific types of facilities and services (e.g., park and ride lots at all major housing developments; sidewalks and bike paths; on-site transit pass sales and rideshare matching) and/or may establish performance standards (e.g., no worse than LOS D at any intersection), with the means of achieving those standards subject to negotiation. If facilities are already available and service levels are well within standards, no additional action on the part of the developer may be called for.
- Imposition of impact fees or benefit assessments to fund transportation improvements. Diverse projects have been funded in this manner: sidewalks and street furniture, traffic signals and left-turn bays, freeway ramps and arterial widenings, transit station improvements, shuttle buses and rideshare matching services. The funds may be restricted to capital improvements only (i.e., signal equipment, office space for the rideshare program) or in some areas may be used for operating expenses as well. In some states this procedure is unavailable to local governments, and in many it is narrowly restricted by state law.
- Incorporation of trip reduction measures into the conditions of approval for all new development projects (at least those over a certain size). For example, a construction permit may require establishment of on-site parking spaces for high-occupancy vehicles; an occupancy permit may require an on-site transportation coordinator. The specific requirements may be set forth in an ordinance, regulation, or policy statement, or may be negotiated case by case.
- Requirements that all developments and all existing and new employers over a certain size develop and implement demand management programs such as ridesharing, flextime, and subsidies for users of commute alternatives. Specific

actions may be mandated, e.g., preferential parking for carpools, the imposition of parking charges for solo drivers, or a performance standard may be used, e.g., not less than 30 percent of employees in commute alternatives.

As this list suggests, there is a considerable range in the breadth of applicability, the degree of compulsion, and level of detail involved in the various approaches. Some local governments, moreover, utilize several approaches at once (e.g., apply one set of trip reduction requirements to major new developments, another to smaller new developments, and yet another to existing employers.) However, all of these approaches use governmental police powers to obtain private sector participation in trip reduction activities. TROs – or alternatively, regulations and administrative guidelines – authorize, or specify, which approaches will or may be used in the adopting jurisdiction.

■ Application Examples

Trip reduction ordinances are a relatively new phenomenon, although they have roots in traditional land use and transportation planning and regulation. Many have evolved from local subdivision and zoning conditions of approval and environmental impact mitigation requirements, where an ordinance was seen as simpler and more equitable than case-by-case negotiation of TDM requirements. Other TROs have been developed explicitly as congestion relief, transportation/air quality, and/or transit-supportive measures.

The ordinances themselves may be independent enactments, or may be additions or modifications to existing ordinances – often, trip reduction provisions are established through amendments to the local zoning ordinance and/or building occupancy code. In fact, several trip reduction programs are implemented not through ordinances per se, but through regulations or guidelines which implement policy statements or directives in a long-standing zoning ordinance or general plan. There also is considerable variation in the level of detail provided in the ordinances. Some are written to stand alone, while others provide only the basics in ordinance form and rely upon regulations or guidelines to specify trip reduction performance targets, provide details on survey requirements, and so on. The approach taken to trip reduction generally depends on state delegation of authority to localities as well as on local traditions and practices.

Even under the most stringent approaches, the emphasis has been on encouraging socially beneficial travel choices rather than directly controlling traveller behavior. Thus, while developers, employers, and/or government agencies may be required to increase the range of travel options available to the public and provide incentives for their use, the individual traveller's decision to do so is almost always voluntary. (An occasional exception is when workers are assigned to staggered work hours programs.) Consequently, although most TROs establish performance goals and objectives, e.g., a 10 percent reduction in single occupancy automobiles or a 30 percent participation rate

in commute alternatives, penalties are rarely imposed on those who, despite a good-faith effort, fail to achieve those goals and objectives.¹ Currently, there are at least 60 TROs (in one form or another) nationwide, with considerable activity in California and several additional examples from New Jersey, Maryland, Virginia, Washington, Arizona, and Florida. Two TROs are examined in order to provide concrete examples of program components: the Pleasanton, CA, trip reduction ordinance and the Maricopa Association of Governments (MAG) model TRO for the Phoenix, AZ area. In addition, the Los Angeles area South Coast Air Quality Management District's Regulation XV, which establishes TRO-like requirements on all employers not in communities with an equally effective local requirement, will be reviewed.²

Pleasanton, California

The Pleasanton, CA TRO was probably the first such ordinance to apply to existing as well as new employers, and to call for the participation of all employers in an employment complex, not just the large ones. Pleasanton, a small town of less than 50,000 population, is located at the intersection of two freeways, I-680 and I-580, at the fringe of the San Francisco Bay Area. Pleasanton's TRO grew out of the negotiations over Hacienda Business Park, a 500 acre development planned to eventually contain about 8 million square feet of office, commercial and light industrial space, and 24,000 jobs. Conditions in the Hacienda Planned Unit Development (PUD) zoning require the landowners to participate in an assessment district to finance such roadway improvements as are necessary to prevent any Pleasanton intersection or freeway interchange from falling below level-of-service D during peak hours. Other conditions require every employer with 100 or more workers to participate in a trip reduction program. The TRO was developed to engage all Pleasanton employers in such traffic mitigation activities, and therefore to more equitably share the responsibility for traffic management.

The Pleasanton TRO incorporates several notable features. First, rather than specifying a set of traffic mitigation measures that must be implemented, the ordinance sets a performance standard (in this case, to limit peak hour drive-alone commute trips to 55

^{1/} A few local jurisdictions have proposed levies on employers or developers who fail to attain traffic mitigation performance standards. For example, an annual "excess trip" fee might be imposed on employers whose trip reduction plans produce below-average results. Alternatively, a fee might be based on the number of employees who usually drive alone. In either case, the fees might be used to fund community-wide TDM programs, subsidize transit passes or ridesharing programs, etc. To be meaningful, such fees would have to be set at least as high as the cost to provide an aggressive adequate commute alternatives program; otherwise, employers might find it easier and cheaper to pay the fee rather than implement a program, and receipts would be insufficient to produce an equivalent result, at the margin.

^{2/} Note that all three examples are drawn from areas experiencing rapid growth, mounting traffic problems, and continued inability to attain national ambient air quality standards.

percent or less of the daytime work force).³ The performance standard can be met over a three-year period by any reasonable means the employer or complex chooses (including staggered work hours). All non-exempt employers and complexes must, however, name a transportation coordinator, establish a traffic mitigation program, and conduct an annual survey of employees' commute patterns.

Second, the Pleasanton TRO establishes explicit monitoring and enforcement requirements and procedures, including procedures for mandating the implementation of additional TSM measures if monitoring results prove them to be necessary. Responsibilities for overseeing these efforts are assigned to a task force drawn largely from the business community rather than to the city's transportation coordinator or other city staff. The intent is to use peer review (and peer pressure, if necessary) as the principal strategy for obtaining compliance, rather than to rely on government enforcement as the first response.⁴

Because the Pleasanton ordinance focuses on local street level-of-service during a one-hour peak period, alternate work hours are a feasible means of meeting its performance standard, and have been the primary strategy utilized in the community to date. Carpooling and vanpooling have been only moderately successful, except in one case where a parking shortage inadvertently developed; while that parking shortage lasted, a 40 percent carpool/vanpool mode share was attained. Overall, however, drive-alone has remained the mode choice of the vast majority of commuters and increases in the use of alternate modes have been hard to attain.

Maricopa Association of Governments (MAG), Arizona

The MAG model TRO was developed for the Phoenix, AZ area and was based explicitly on the need to improve air quality as well as reduce congestion. (The trip reduction ordinance eventually adopted in Phoenix was a variation of a similar ordinance in Tucson. The adopted Phoenix ordinance differs somewhat from the MAG model ordinance described in this subsection.) The model ordinance, which follows the Pleasanton ordinance in many respects, was designed to apply to both existing and new

^{3/} The Pleasanton performance standard deserves comment. Traffic analysts for the city had used the assumption that not more than 55 percent of employees would drive alone in the peak hour. With that assumption, all planned development could be accommodated at acceptable levels of service on the local streets and freeway ramps. Pleasanton's standard thus was set to assure that the assumed traffic levels would not be exceeded. Whether they would have been, absent government intervention, is debatable: MTC's 1981 survey data for East Bay suburban fringe communities including Pleasanton indicate that fewer than 40 percent of the workers drive alone during the morning or afternoon one-hour peak, a rate that is considerably below the Pleasanton standard. Note, however, that the MTC data are areawide, while the Pleasanton standard applies to individual employers, whose peak hour drive alone percentages vary from close to 0 to nearly 100 percent.

^{4/} Note, however, that the ordinance provides for substantial fines in cases of continuing non-compliance.

employers of 100 or more. It would require appointment of a transportation coordinator, annual dissemination of information about commute alternatives, surveys of employee commute patterns, development of plans to reduce single occupancy commute trips, and reports on the previous year's accomplishments.

The MAG model ordinance proposes trip reduction objectives of not less than five percent a year for the first two years. In year three and thereafter, recommended regional trip reduction objectives would be provided by MAG, and local trip reduction objectives would be established by the transportation coordinator for each jurisdiction, in cooperation with an advisory committee appointed by the jurisdiction's elected officials. This would permit each jurisdiction to account for local travel conditions, transportation options, and employer characteristics.

Failure to comply with the ordinance would be punishable by fines. Unlike the Pleasanton TRO, however, the MAG model ordinance does not provide for the promulgation of mandatory trip reduction measures.

The MAG model ordinance also contains brief language authorizing reductions in required amounts of parking in return for the provision of certain measures such as shuttle bus services, park-and-ride facilities, transit pass subsidies, and fee parking with discounts for poolers. The permitted reductions would be determined by the responsible jurisdiction on a case-by-case basis.

To assist MAG-area communities in implementing the model ordinance, a detailed set of implementation guidelines also has been prepared (KT Analytics, 1988). These guidelines offer advice on how to handle such matters as notifying employers of the ordinance requirements, budgeting for city responsibilities, managing ongoing responsibilities such as employee surveys and review of employer plans, and implementing enforcement proceedings if necessary. Examples, references, and a list of persons to contact also are included.

South Coast Air Quality Management District Regulation XV

The South Coast Air Quality Management District's Regulation XV, adopted in December 1987 and updated in May 1990, sets forth actions employers must take to promote employee participation in trip reduction programs "...intended to reduce emissions from vehicles used for commuting between home and the worksite." (SCAQMD, 1987, as updated.) Under Reg. XV, employer programs are to be designed to achieve the target "average vehicle ridership" (AVR) for the area in which they are located. AVR is calculated by dividing the employee population at a given worksite between 6 and 10 am by the number of vehicles driven during these hours by commuting employees. Bicycles, transit vehicles, pedestrian trips, use of telecommuting, and certain low pollution vehicles are excluded from the denominator. SCAQMD has established an AVR target of 1.3 for outlying areas, 1.5 for inner-suburban areas, and 1.75 for the Los Angeles Central City area.

The regulation applies to all employers of 100 or more persons at any worksite. This includes all public and private sector organizations. To make the implementation process manageable, it was phased in, starting with employers of 500 or more in the first year (1988), employers of 200 or more a year later (1989), and employers of 100 or more after that (1990 and later). By June 30, 1991, over 8,000 organizations will be covered by the regulation and it is the responsibility of those organizations to meet the compliance requirements by that date.

Within 90 days of receiving notice of the requirements of the regulation, an employer must submit a plan which 1) presents a verifiable estimate of existing AVR (based on the employee survey, which must have a 75 percent response rate), 2) lists the measures the employer currently is using to increase AVR, 3) specifies the incentives to be used over the next 12 months to achieve target AVR levels, 4) designates a trained transportation coordinator to implement the plan and 5) includes a commitment letter from the CEO or highest ranking management level employee at the site. Rideshare matching, subsidies, and incentives are suggested as strategies, along with facility improvements supportive of ridesharing and bike use, flextime and compressed work weeks, and telecommuting.

An Employee Transportation Coordinator (ETC) is a person who completes a SCAQMD approved training course in the fundamentals of transportation systems and demand management, and who develops, implements, and monitors the trip reduction program at the worksite. These people ordinarily have other duties in addition to the trip reduction program and are usually most successful if they have a marketing background and good human relations skills. They are the daily contact person for all employees at the worksite.

SCAQMD has 60 days to review an employer's plan and approve or disapprove it for reasons stated. In the latter case, a revised plan must be resubmitted within 30 days.⁵ Employers also must submit an annual plan review and update which verifies plan implementation, estimates and verifies through a survey AVR levels attained, evaluates results, and proposes additional incentives as needed to correct deficiencies. Failure to submit a plan, submit an annual update, or offer any incentive listed in an approved plan is a violation and is subject to penalties, but failure to attain an AVR target is not a violation.

To date, about 7,500 plans have been submitted by employers. To answer the many questions that come in about the regulation, a hotline has been established. To keep track of the plans and updates and to evaluate the effectiveness of Regulation XV, a data management system has been installed. Some 5,000 of the plans have been approved; approximately 20 percent are disapproved after the initial evaluation and must be revised and resubmitted within 30 days of disapproval. Initial analyses indicate that the AVR targets may not be easily met, but real improvements have been made; for example, for 812 employers where a plan has been implemented one full year, AVR

^{5/} An employer subject to a city or county ordinance which SCAQMD has found to be at least as effective as Reg. XV can be exempted from plan submission and review. As of July, 1991, no local ordinance has been approved to meet this exemption provision.

increased from 1.23 to 1.26. The drive alone mode share decreased by 6.5 percent from 75.8 to 70.9. The percentage of people carpooling changed from 13.5 to 18.7 percent, an increase of 38.5 percent.

Other Areas' TROs

Several of the TROs adopted or proposed for other urban areas contain noteworthy provisions. For example:

- Seattle Metro has produced a model ordinance which provides detailed language suitable for use with several of the most common local government approaches to development review and approval; in addition, Metro has TDM policy guidelines which provide advice on implementation strategies (Metro and Puget Sound COG, 1986 and 1988).
- A Sacramento County ordinance specifies parking reductions and other development credits to be given for specific TDM measures (Sacramento Co., 1984).
- San Francisco has promulgated guidelines on conditions of approval for major new developments which set forth specific, detailed guidance on what kinds of traffic mitigation programs should be considered and how they might be implemented effectively (San Francisco Planning Dept., 1986).
- Berkeley, CA adopted zoning amendments establishing a Transportation Services Fee to finance commute alternatives programs; outreach activities will be carried out by a transportation management organization jointly sponsored by the city and other public and private employers, rather than by the city's many small employers acting individually (City of Berkeley, 1984).

These and a number of other ordinances are collected in a notebook available from the California Department of Transportation (Caltrans, 1990 and updates).

■ **Determinants of TRO Effectiveness**

Because trip reduction ordinances are relatively new, there is limited direct evidence on their performance. This evidence suggests that both the **design of the ordinance itself** and the **characteristics of the environment in which it is implemented** must be considered.

Ordinance Design Characteristics

Trip reduction ordinance effectiveness is largely determined by the ordinance's scope, the nature of its mandates, and the ways it assesses performance. Major factors are:

- Whether the programs are voluntary or mandatory;
- The types of trips and percentage thereof affected by the ordinance;
- The types of trip reduction responses permitted; and
- The measure(s) of success used.

Voluntary or Mandatory

Local governments often are reluctant to impose trip reduction requirements on existing employers and businesses, particularly when these groups argue that such requirements are onerous and unnecessary. Allowing the employers and businesses to develop their own trip reduction plans has been seen by some as more flexible than simply mandating what measures to offer, and many ordinances include such provisions at least in part. Some localities in addition have made trip reduction activities voluntary for a trial period (e.g., 2-3 years.) Typically, such a TRO establishes a procedure for mandating programs should the trial period results fall short of expectations.

If participation is entirely voluntary or if enforcement of mandatory programs is weak, program effectiveness depends in large part on whether benefits accrue to the developers or employers who must take action. If there is little incentive for them to participate in a trip reduction program, many will choose not to do so, will be half-hearted in implementing the program, or will terminate their activities should financial or other concerns arise.

TROs which require participation are more likely to attain results. Leaving program content up to the individual employer seems to be appreciated; however, experience suggests that there is less individual tailoring of programs than might be expected, given the arguments made in support of this approach. The reality is that many employers hire a consultant to put the initial program together (and the consultants "mass produce" programs for clients), or they model their programs after one another.

Types and Percentages of Trips Affected

Most trip reduction programs aim at a subset of overall travel – for example, peak period work trips to major employers. Localities that restrict the reach of their ordinances in such a fashion usually do so in order to concentrate their efforts on the "best markets" for trip reduction. The tradeoff between permitting numerous trips to go unaffected and aiming resources at the most promising targets for change should be carefully considered in designing a TRO.

If, as is usually the case, the TRO applies only to work trips, it follows that only about 30 percent of the trips generated in the jurisdiction (and perhaps 35-40 percent of the VMT)

will be affected.⁶ However, these trips tend to occur during periods of heavy travel and thus tend to be disproportionate contributors to congestion, emissions, and energy consumption. They also tend to be the trips most easily made by transit or ridesharing. If the TRO only applies to work trips that occur during the peak period, the share of overall travel that will be effected is further reduced. Here, the effect will depend both on the peaking characteristics prevalent in the area and on the way in which the peak period is defined. A one hour peak definition will capture far fewer trips than a two or three hour peak; typically, only 30-50 percent of trips to work occur during the one hour am peak – even less in some regions – whereas perhaps 70 percent occur during a three hour am peak period. (Note also that not all peak period trips are work trips – perhaps 20 percent of am peak period trips and 25-30 percent of pm peak period trips are for other trip purposes.) The effects of these programs on spreading the peak over a longer period should be considered. A program with a one hour peak, for example, may not result in reduced trips at all, but simply adjustment in travel time.

Some TROs apply only to peak period travel to large employers (commonly, those with over 100, or even over 500, employees). Employer size distributions vary widely among jurisdictions, but it is not unusual for 15-30 percent of a city's total jobs to be at places with over 500 employees, and 40-60 percent to be at places with over 100 employees. If the TRO also applies to all employers in multi-tenant buildings and complexes with over the threshold number of employees, its reach usually can be increased substantially – to as much as 70-80 percent of total employment. The effectiveness of the ordinance will increase less than proportionately, however, because of the considerably greater complexity of promoting carpooling or other commute programs in multi-employer situations. On the other hand, in many communities, multi-tenant facilities are much more common than large single-employer facilities. Thus, a larger market for trip reduction is tapped by applying the ordinances to these facilities. Understanding the mix of employers and the size of their workforces is critical in the development stage.

Finally, some TROs apply only to major new developments, or call for vigorous programs only at major new developments. While developers often raise concerns about the equity of focusing traffic mitigation requirements only on the newcomers, this limitation may be accepted due to concerns about exceeding local authority (i.e., the local government's police powers may clearly allow trip reduction requirements as conditions of development approval, but may not be as clear with regard to extant businesses). (Sometimes, the limitation may be accepted out of deference to existing businesses' wishes.) When only new development is affected, the effectiveness of the TRO will depend on the rate of growth and the type of development the local jurisdiction is experiencing.⁷ In a fast-growing area with a number of large-scale

6/ Work trips are about 25 percent of total weekday trips and about 30 percent of VMT in most areas. However, the number of trips and amount of VMT affected by programs aimed at commuting will be higher than the work trip numbers, because midday travel and trips made on the way to or from work also will be affected.

7/ It should be noted that new development cannot be equated with new employers. Many new developments are occupied by employers who have been in the community for years; many new employers occupy "old" space. Also note that employment growth can occur without new development; in some areas re-use of warehouse and industrial properties for (Footnote continued on next page.)

development projects, the TRO may well affect the travel options of a significant percentage of commuters. In an area where growth is occurring at a more modest pace, and where employers or developments are smaller, the TRO will have a much more limited impact; the effect will be at the margin for years to come.

Taken together, these factors determine the share of total trips (or travellers) that the TRO can influence – the "reach" of the program. For example, a TRO that applies to all work trips made to all employers and complexes with 100 or more employees could reach perhaps 15-20 percent of the area's travel (50-70 percent of 30 percent); one that applies only to peak hour work trips at employers of 500 or more might reach only 2-5 percent of an area's trips (30-50 percent of 15-30 percent of 30 percent).

Responses Permitted

The kinds of actions which are permitted or encouraged under a TRO are a third design consideration. Most TROs aim to reduce use of the single-occupant vehicle (SOV) mode of travel and related environmental impacts. However, TROs which allow flextime or use of close-by fringe parking will produce smaller overall reductions than those which restrict creditable activities to shifts to alternative modes of travel or trip elimination. This is especially important in areas that are trying to reduce emissions, fuel consumption, and/or parking requirements as well as congestion: TRO requirements which reduce both total SOV use, including whenever feasible the highly inefficient "cold start", are far more effective.

Measures of Performance Used

A fourth consideration in the design of a TRO is how success is to be measured. A variety of approaches have been used, some of which emphasize procedures and others of which emphasize outcomes. For example, a number of TROs focus on whether employers have developed and implemented a trip reduction plan. Somewhat fewer consider whether auto use has actually declined as a result. Obviously the latter is the more stringent and meaningful measure of performance.

Note that a mandatory **employee participation rate** (e.g., a plan must result in 35 percent of employees participating in commute alternatives programs) is not the same as a mandatory **performance standard** (e.g., a plan must reduce drive alone trips by 35 percent). Mandatory **implementation of specified measures** (e.g., requiring preferential parking for carpools and vanpools) is yet another approach. Some TROs use one or another of these approaches, and a few combine two or three.

(Footnote continued from previous page.)

office and retail purposes has led to sizeable employment growth accompanied by little or no increase in the square footage of development. The reverse can also be true: new development can occur with little or no increase in employment, if square footage per employee drops or older buildings are abandoned or converted to less intensive uses. Thus, programs which address only new development are by no means addressing "growth".

Implementation Environment

Not all those subject to the provisions of a TRO will change their travel behavior. Some commuters will need a car for a midday work-related trip or for family business on the way to or from work; some will not find reasonable commute alternatives available for their trips; and some will simply be unwilling to alter their travel patterns. Understanding the factors that affect such travel choices is important in designing an effective ordinance.

Travel choices reflect transportation system characteristics, the physical and temporal distribution of activities, socioeconomic characteristics of the affected travellers, economic climate and business conditions. The synergistic effects of these factors should be considered in developing a TRO. For the typical TRO (aimed at work trips to large employers), among the most important factors are:

- The availability and quality of transportation alternatives;
- Travel patterns and trip lengths;
- Employee and employment characteristics; and
- Efforts made to support the use of commute alternatives and to overcome difficulties faced by potential users.

Availability and Quality of Transportation Alternatives

The "reasonableness" of commute alternatives needs to be considered from the consumer's viewpoint, since he or she must decide whether to switch modes or continue solo commuting. In general, commuters look for an alternative that can compete in speed (travel time) and cost with the single-occupant auto; and for most commuters, unless parking is very expensive, time is by far the more important consideration. A few commuters can be attracted by other benefits of commute alternatives (such as exercise, or ability to read while making the trip), but these factors do not appear to be as influential, overall, as the time/cost factors. (They also may be offset by the loss of privacy, constraints on travel time and destination, and safety concerns inherent in certain modes.)

Transit can attract riders if it offers reasonably competitive travel times and fares are comparable to auto out-of-pocket costs. Unfortunately, many areas, particularly in the suburbs, receive minimal transit service, and very little that is fast and direct. Subscription buses or shuttles may offer an option if there are sufficient numbers of potential riders in an area to keep the costs affordable. However, carpooling is the most frequently promoted commute alternative in trip reduction programs, largely because it can be made to work in areas lacking good transit service and it imposes relatively modest costs on public coffers.

Bicycling and walking can be reasonable alternatives in areas where there are safe routes, secure bicycle storage is possible, and neither weather nor topography is a

barrier. Bicycling may also raise questions about appropriate dress, with some areas requiring showers so that a change of clothing is simplified.

Travel Patterns and Trip Lengths

Travel patterns and trip lengths are another way of looking at markets for commute alternatives. Transportation services tend to be better, and the number of potential ridesharing "matches" larger, for trips destined to major employment centers such as central business districts and large-scale suburban office parks. Consequently, some TROs establish tougher requirements in the markets most likely to produce results.

Long trips tend to be the best market for ridesharing programs. Carpooling with non-family members, for example, is most effective when the poolers live at least 10-15 miles (or at least 20 min.) from work; for shorter trips, the added time to make connections often proves too onerous. The rule of thumb commonly used for vanpooling is 20 miles or more, for both time and cost reasons. Occasionally, local circumstances such as ubiquitous HOV lanes or high parking prices may shorten these time and distance ranges. Nevertheless, median work trip lengths in most communities are in the 4-10 mile range, so that most employees live too close to work for pooling to be attractive.

For employees who live within 10 miles of work, bus transit is often a reasonable alternative. (Rail services and express buses can be effective over a much larger radius, if they are available and access to them is convenient.) Bicycling and walking also are options for close-by trips. Typical commutes by these modes are short – usually under three miles for bike and well under a mile for walk.

Employee and Employment Characteristics

Even when good alternatives are available, some employees simply will not be willing to change travel modes. The best markets for commute alternatives are usually found among employees who are new hires, new to the location, or have recently moved residences; come from moderate income households; work on a fixed daily and weekly schedule; and lack a guaranteed, free, convenient parking space. It usually is much more difficult to reduce drive-alone commuting among employees who have done so for a considerable time; enjoy high incomes; work irregular hours or unpredictable overtime; arrive or depart very early or very late; and are provided a free or inexpensive, reserved or assured parking space.

Among those who report that they need a car for midday work-related trips, it may be possible to encourage part-time use of commute alternatives (on days when no midday trips are planned), or to reduce the need for a car for these midday trips by providing attractive alternative modes (transit, shuttles, taxi, bicycle) and incentives for their use. The need for a car for family trips on the way to or from work may be reduced by the provision of services (convenience groceries, dry cleaners, banks, etc.) and care for infants and very young children at employment centers, near transit stations, or at park-and-ride facilities; and by establishing at-school supervision or programs for 5-12 year olds both in the early mornings and until 6 pm. However, there is little experience with these measures on which to base estimates of their effectiveness.

Employer characteristics and employment patterns can also affect the efficacy of a trip reduction ordinance. Large employers or developments, for instance, are usually in a better position to provide shuttle services, in-house carpool matches, and so on than are small ones; employers enjoying healthy economic returns may be more inclined to subsidize commute alternatives than they would be if faced with weaker economic conditions. Employers that need to maintain tight control over worker arrival and departure hours (for example, because of the service nature of the work, to maintain security, etc.) may find flexible work hours impractical and may even frown on transit use if arrival times are not entirely reliable. TROs may need to provide the flexibility to accommodate different employer and employment styles and needs.

Supportive Actions

In many cases, policies and programs outside the control of the employer will have a major effect on how successful the employer's trip reduction program will be. Policies and programs that would support trip reduction efforts include:

- Business expense treatment of employer subsidies for commute alternatives, and/or removal of expense treatment of parking for employees;
- Taxation of employees for employer-provided parking, and/or greater deductibility of subsidies for commute alternatives;
- Availability of high-occupancy vehicle lanes for buses, carpools and vanpools; and
- Availability of rideshare matching services, a "guaranteed ride home" program, discount transit passes and sales outlets, and preferential parking for pool vehicles in public facilities.

Local government policies also can support or detract from the effectiveness of a TRO. For example, local requirements for plentiful on-site parking may remove any incentive for an employee to consider transit or an employer to charge for parking. Restrictions on mixed use development may retard the provision of on-site services such as eating places, child care facilities at office centers, or banking and hence make having a car at work more important to employees than it otherwise would be. A thorough review and revision of such policies can be the local jurisdiction's contribution to the trip reduction effort. An assessment of local policies on these issues is essential prior to adoption of an ordinance as these policies will have a significant impact on the overall effectiveness of a trip reduction ordinance.

■ **Expected Travel Impacts**

As this discussion illustrates, the likelihood of mode changes due to TRO activities must be determined for each particular situation. Some assistance may be available in this

task from regional agencies, most of whom have travel demand models which are adequate for forecasting mode shares at least for drive-alone, shared ride, and transit. Ridesharing promotion agencies also may be able to assist in the assessment of market potential. In general, reasonable initial targets for the programs established under a TRO might be a 5-10 percent reduction in single-occupancy vehicle trips, with somewhat larger reductions (perhaps in the 15 percent range) if substantial fees for parking are imposed. Larger reductions in peak period trips could be produced if use of alternative work hours is permitted and the peak in the area is short. If trip elimination strategies such as telecommuting are promoted and if the peak period is lengthy (i.e., 3 hours or more), larger reductions may be possible. However, in areas where competitive modes have been available and well promoted for some time, percentage reductions may be lower despite energetic and well designed programs, simply because the commute alternatives market has been served already.

Analysts also should be cautious about predicting steady reductions in drive-alone shares due to TROs. It is often the case that after an initial start-up period, major gains are made, followed by a stabilization or even a decline in the use of commute alternatives. This is especially likely when dealing with businesses that have relocated from other parts of the region. In the initial year or two, employees who live close to the former business location are often prime candidates for carpools, vanpools, and subscription buses. Over time, as some of these employees move closer to the new job site and new hires are drawn from the local area, pooling may well decline.

Because the estimation of mode shares is complicated and is likely to change over time, it is advisable to design the employee surveys carefully so that they can be used to assess market potential. Objectives for the TRO programs then can be revised periodically so that they are as realistic as possible.

So far the discussion of effectiveness has been in terms of influencing people's travel modes, with trip reduction measured from an estimated "baseline" of what might have occurred without the TRO. But in many cases local officials and citizens are looking, not merely for higher mode shares for transit and carpooling or a less dramatic peak, but for an actual reduction in traffic levels. Another way the issue is sometimes framed is whether the local need is to prevent serious traffic problems from occurring, or to manage traffic problems that already exist.

TROs may help a community to stay within reasonable traffic limits, allowing growth to occur without a degradation in traffic level of service. But it is unlikely that the typical TRO will have a broad enough "reach" to substantially alleviate congestion that is already occurring. A more realistic objective in these cases might be the prevention of significant deterioration of traffic conditions as growth and development proceeds.

■ Effectiveness at Reducing Emissions

The extent to which TROs can reduce emissions depends, first, on their effectiveness in changing commute modes and second, on the extent to which they transfer trips to less congested periods (in which emissions per mile would likely be lower, due to fewer stops, starts and delays.) Analysts should be mindful that reductions in single-occupant vehicles (SOVs) are rarely the same as reductions in vehicle trips, since some trips formerly by SOVs will be made in HOVs. Also, care should be taken to accurately account for trip lengths and cold starts in emissions calculations. To the extent that trips are shortened (e.g., directed to a park-and-ride lot, fringe parking area, or satellite work center) rather than eliminated, emissions reductions will be disproportionately smaller than trip reductions counted at the workplace. In addition, to the extent that most mode changes occur among those making very long trips, actual emissions reductions may be lower than would be estimated using data on average emissions per mile.

■ Other Benefits and Costs

TROs offer significant promise as an integrated approach to traffic management. At their best, they offer the following benefits:

- TROs call for an overall traffic management plan aimed at a specified target of accomplishment, rather than a series of separate TDM measures. Under a TRO, for example, rideshare matching should be coordinated with transit promotion, HOV treatments, and parking policy. Thus implemented as a plan, the potential for cumulative and synergistic effects may be captured, and the all-too-common situation in which various program elements work at cross-purposes may be avoided.
- By applying to entire classes of actors (e.g., all employers with daytime work forces of 100 or more, or all new commercial developments of over 30,000 sq. ft.), TROs can help assure a greater degree of consistency than often results from case-by-case decision-making, and can lay to rest many concerns about equity. In addition, regional vs. local approaches can provide consistency which can be important to large multi-site employers. Moreover, TROs can obtain broad-based participation among the private sector actors (developers and employers) whose endorsement of travel demand management can make a major difference in its success rate, and can help assure that employer participation is sustained over time.
- TROs can provide financial security for commute alternatives programs, which in turn may make it easier for program staff to argue convincingly that such strategies are "here to stay" and facilitate aggressive service promotion as well as experimentation with innovative concepts.

- TROs can foster the development of standards for the provision of, and incentives for the use of, transit, ridesharing, and bicycle and pedestrian facilities and services; flexible or staggered work hours; and/or supportive site design and parking management practices.
- TROs can establish procedures for monitoring the effectiveness of trip reduction policies and actions, as well as mechanisms for revising policies and actions found to not work well.

In short, a well-designed TRO can help to establish well-coordinated trip reduction programs, put them on a stable institutional and financial footing, improve their equity, and provide for their ongoing review and enhancement. In addition, TROs can serve as a catalyst for mobility services (i.e., shuttles, vans, traditional transit) which previously were not available. Its role, then, can be a broad one, implementing and integrating TSM activities.

At the same time, many of the ordinances have limitations and costs (financial or other) that should be recognized:

- The technical basis for TROs' performance standards or trip reduction targets is often weak. In some cases, the performance standards reflect calculations of the maximum traffic levels that the local street system can bear, rather than estimates of the feasibility of mode shifts, flextime use, etc. In addition, estimates of mode shift potential are often "borrowed" from reports of successful programs elsewhere, without careful checking that the situations are analogous.
- There are indications that implementing the ordinance-mandated programs can be difficult for smaller employers and multi-tenant buildings, as well as for certain types of businesses (e.g., ones in which a significant number of employees require a car for their work.) Yet most ordinances are "one size fits all" devices with few clear ways for exceptions to be made.
- Some of the TROs require considerable commitments of staff and budget on the part of an implementing agency, especially for assessment of progress, report review, enforcement, and the like. It may be hard to maintain these commitments of public resources on a long-term basis. Already, monitoring compliance has proven to be a headache in some areas; tabulating and evaluating employer surveys is a major task, for example.
- Enforcement may prove to be a weak point for many TROs. How to handle cases of substandard performance (as opposed to outright noncompliance) is an issue in some cases, and in some jurisdictions there is doubt that the public prosecutor will pursue even the cases of outright refusal to comply.
- Costs to the employer can be \$10-\$60 per employee per year, or as much as \$600 per single occupancy vehicle removed per year. While such costs are not high in comparison with the costs of increasing transportation supply, they still may be an important consideration for some employers. (Additional data on costs and cost-

effectiveness are provided as part of the chapter on Employer-Based Transportation Management Programs.)

- Although many TROs are closely tied to the approval of new developments, few provide any mechanism to explicitly consider the cumulative impact of development plans for the community, and relatively little attention has been given to such concerns as the balance between employment growth and growth in the supply of affordable housing, or to related development questions which fundamentally determine the commute pattern of an area.
- Traffic impacts (as well as traffic's air quality consequences) are often felt on a regional basis, but most current trip reduction efforts are limited to the concerns of each individual jurisdiction. Failure to address "spillover" impacts (including congestion on regional facilities, or cost impacts on transit operators) may undermine the effectiveness of at least some of the programs now being attempted.
- Legal authority to adopt, implement, and enforce these programs must be assured and needed institutional relationships can be difficult to develop.

Many of these shortcomings can be corrected, for example by carrying out the technical studies needed to establish reasonable performance standards and targets, avoiding overly ambitious monitoring requirements (providing for periodic, random audits of employee surveys rather than annual review, e.g.); providing for administrative flexibility to accommodate exceptional cases; building "automatic enforcement" provisions into the ordinances (e.g., traffic impact fees to be collected from any non-exempt business not in compliance, rather than fines), and so on. Others might best be handled simply by not overselling or exaggerating the effectiveness of TROs.

■ Guidelines for Achieving Effective Implementation

Although TROs are relatively new, the evidence on their performance indicates that important benefits are, in fact, being produced; auto trips are being shifted out of peak periods, modest increases in ridesharing and transit use are occurring, and related emissions, and fuel use are being reduced. The results are perhaps more modest than some proponents had hoped, but this no doubt reflects the difficulty of changing travel behavior, given today's land use patterns, activity systems, income levels and time constraints.

Several features are recommended in order to make TROs as effective as possible:

- Both existing and new developments and employers should be covered. If a minimum size is established, it should be relatively small (e.g., 50 or 100 employees in order to target a substantial number of employers.)⁸
- Multi-employer buildings and complexes should be included, whether through programs offered by property owners or managers, via employers' transportation management organizations, or through joint public-private efforts.
- Basic program requirements should include an annual employee survey, a trip reduction plan which is annually updated based on the survey findings, and an ongoing commute alternatives information and promotion program.
- A management commitment and an on-site coordinator should be required within each implementing organization.
- Performance standards/trip reduction objectives should be based on actual data for the area, so that they are realistic, and should be reviewed periodically and updated if necessary.
- Guidance should be provided on specific trip reduction measures and their probable effectiveness in the particular application, and as experience with the measures accumulates, the actual results should be reported as well. Program managers should be strongly encouraged to devote most attention and resources to the measures most likely to have a payoff rather than to try all possible trip reduction measures.
- Provision should be made for the issuance of administrative regulations or guidelines to specify certain procedural matters or to add detail, as needed, to the programs, rather than relying entirely on the language of the ordinance. Consistency in the application of the ordinance is desirable, particularly if it applies to many diverse employers in an area.
- The TRO should be designed to minimize paperwork and the need for enforcement actions.

^{8/} Minimum sizes are often established 1) because the cost of a trip reduction program for a small employer is high on a per-employee basis; 2) transportation coordinators are not particularly effective unless they spend a substantial part of their work time – e.g., 20 percent or more – on trip reduction activities; 3) in-house rideshare matches are often hard to make at small employers; and 4) inclusion of small employers greatly increases the number of plans, surveys, etc. to be reviewed and monitored without proportionately increasing the effectiveness of the overall program. However, several jurisdictions have devised reasonable requirements for small employers (e.g., exempting them from development of their own trip reduction plans, but not from the employee survey and information program requirements; or requiring them to join a TMO which then handles all requirements.) It is recommended that some requirements be applied to small employers both for equity and for effectiveness reasons.

- A broadly representative committee from public and private sector employers should be established to advise on the trip reduction program's design, implementation, enforcement, and if necessary, revision.

One implication of these points is that trip reduction ordinances should be viewed as a learning process. It will be important to periodically review local, regional, and state governments' experiences with the ordinances, and to look for ways to improve their performance.

■ Bibliography

1. California Department of Transportation, "A Directory of California Trip Reduction Ordinances," Sacramento, CA, January 1990.
2. Ferguson, Erik, "A National Directory of Trip Reduction Ordinances," Association for Commuter Transportation, Washington, D.C., February 1991.
3. Ferguson, Erik, "Transportation Demand Management: Planning, Development, and Implementation," Journal of the American Planning Association.
4. Giuliano, Genevieve, Keith Hwang and Martin Wachs, "Mandatory Trip Reduction in Southern California: First Year Results," University of Southern California, Los Angeles, CA, January 1992.
5. Peat Marwick Main & Co., Status of Traffic Mitigation Ordinances, Report No. DOT-T-90-06. U.S. Department of Transportation, Washington, DC, August 1989.

Model Trip Reduction Ordinance

■ Introduction

This model ordinance is intended to provide a framework for the drafting of a local ordinance for trip reduction. While the model covers all topics required in a trip reduction ordinance – required actions, regulatory procedures, review and appeals processes, and enforcement provisions – it is not necessary that the model ordinance be adopted word-for-word. Variations in planning and development law as well as in local government law make it necessary that the model be reviewed for consistency with the applicable mandates in each state. In addition, the model should be edited as needed to reflect local transportation problems and opportunities, employment characteristics, development patterns and sizes, and resources available for trip reduction planning, implementation, and enforcement. The model is drafted assuming implementation by a City or County; it also can be used by regional entities having the legal authorization to adopt such ordinances or by states.

The model ordinance requires all employers to conduct an annual employee travel survey and a commute alternatives information/marketing program. Employers of 50 or more also must name a transportation coordinator, develop and implement trip reduction programs, and annually update their programs based on survey results. Employers of 100 or more must in addition obtain approval of their trip reduction programs and annual reports and are subject to city/county-mandated revisions, unless they opt to adopt parking charges, transit pass subsidies, and ridesharing subsidies.

Employment complexes of 125,000 sq. ft. or more must provide bike parking, preferential parking for carpools and vanpools, and information on commute alternatives, provide a transportation coordinator for small employers within the complex and for other employers on request, and submit an annual report on their programs.

The City/County must provide technical assistance to employers and complexes, review all submittals, approve programs for large employers, and produce an annual status report. The City/County also appoints an Appeals Board, which provides oversight and hears appeals on problem programs. For new developments, certain transportation system management programs are required and others encouraged.

It is strongly recommended that certain key features of the model ordinance be preserved. The key features are: 1) action requirements that vary with employment size, with more expected of larger employers (reflecting the greater feasibility and success rate of trip reduction at larger work sites); 2) use of an annual employee travel survey as the basis for trip reduction programs and updates; and 3) provision of a set of minimum requirements which, if implemented, will constitute an acceptable trip reduction program. Certain other provisions of the model ordinance can be considered optional. They are: 1) requirements applying to employment complexes, and 2) transportation system management requirements for new developments.

Additional comments are provided in italic notes at the beginning of each section. Items requiring decisions in developing an ordinance for a particular jurisdiction appear in parentheses and upper case in the text where the concept is first introduced.

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Model Trip Reduction Ordinance

NOTE: Sections I-III of the model ordinance state its purpose, set forth the basis for action, and specify goals and objectives. They can be reordered, combined, or revised, as needed, to reflect local drafting conventions as well as local conditions.

The (CITY/COUNTY OF ()) does ordain as follows:

I. Purpose

NOTE: The recitation of purpose should be drafted in the format usually utilized by the adopting city/county. It could be combined with Section III, Goals and Objectives.

The purpose of this ordinance is to establish (CITY/COUNTY) programs and requirements for new and existing employers and owners of employment complexes in the (CITY/COUNTY) that will contribute to reductions in traffic and improvements in air quality from levels that would otherwise exist.

II. Findings and Determinations

NOTE: Findings and determinations should set forth a factual basis for City/County action. Federal, state, and local requirements and policies which will be furthered by the ordinance should be identified, along with relevant data on traffic conditions, air quality needs, and so on.

The (CITY/COUNTY) finds and determines that:

- A. High levels of vehicular traffic result in unhealthful levels of air pollution and noise as well as high levels of fuel use, wear and tear on vehicles, and time losses and inconvenience to individuals and businesses.
- B. Vehicular traffic on streets and highways in and serving the (CITY/COUNTY OF ()) is projected to increase due to growth in per capita trip-making, intensification of land uses, and new development.
- C. Unless substantial additional measures are taken both to make the most efficient possible use of existing and future transportation facilities and to manage traffic

levels, traffic increases will make the (CITY/COUNTY) a less desirable place to live, work, visit, and do business.

- D. Use of commute alternatives is beneficial in reducing traffic and associated air pollution, noise, fuel use, vehicle wear and tear, and time losses and inconvenience from the levels that would otherwise occur, and thereby contributes to making the (CITY/COUNTY) a more attractive and healthful place to live, work, visit, and do business.
- E. (CITY/COUNTY) policy, as set forth in (STATE SOURCE: SECTIONS OF GENERAL PLAN), mandates (CITE RELEVANT GP PROVISIONS, E.G., reduce dependence on single occupancy automobiles / achieve acceptable traffic flow / improve air quality.)
- F. State policy, as set forth in (STATE SOURCE: E.G., Government Code ...) requires (CITE RELEVANT PROVISIONS, E.G., develop, adopt, and annually update a congestion management program / adopt and implement a trip reduction and travel demand management ordinance / implement transportation measures to reduce emissions.)
- G. The Clean Air Act Amendments of 1990 call for the adoption, implementation and enforcement of transportation control measures sufficient to assure the attainment of Federal ambient air quality standards in the (AREA) not later than (DATE).
- H. The State Implementation Plan for the (AREA) sets forth requirements to achieve ambient air quality standards which include (SAY WHAT THE RELEVANT COMPONENTS ARE, E.G., the implementation of commute alternatives and trip reduction ordinances designed to improve air quality.)
- I. Travel demand management programs offered through employers, owners of multi-tenant buildings and building complexes, transportation management organizations, and their contractors are an effective and equitable way to encourage the use of commute alternatives, and hence implement (CITY/COUNTY GENERAL PLAN / AIR QUALITY PLAN) policies and strategies.
- J. A concerted, (CITY/COUNTY)-wide approach to travel demand management will create an environment conducive to its successful implementation and, together with other actions to maximize the efficiency of existing and future transportation facilities, will equitably allocate responsibility for traffic.
- K. Adoption of this ordinance will promote the public health, safety, and general welfare both within the (CITY/COUNTY) and in the region.

III. Goals and Objectives

NOTE: This section should set forth the types and levels of performance required under the Clean Air Act, the State Implementation Plan, and/or other legal mandates. This could include, for example, an Average Vehicle Ridership ("AVR") requirement, a percent of employees in commute alternatives requirement, or a percent reduction in drive-alone (or the traffic- or emissions-reduction equivalent of any of the above.) The rate(s) should be based on modelling or other analyses for the area of applicability and should reflect a feasible yet ambitious target.

The size of employer to which various requirements should apply is a key decision for the City/County. The smaller the employer, the more difficult it may be to accomplish effective trip reduction. On the other hand, in most areas a substantial portion of employment is provided by small employers, and an ordinance that focuses only on employers with more than 50 or 100 employees may "miss" most employees.

A. GOALS. The goals of this ordinance are:

1. To obtain the most efficient possible use of existing and future transportation facilities and reduce both peak period trips and the number of vehicle miles travelled by commuters; and
2. To reduce traffic-related air pollution, noise, fuel use, and vehicle wear and tear from the levels that would otherwise occur within the (CITY/COUNTY) and region.

B. OBJECTIVES. The specific objectives of this ordinance are:

1. To monitor the commute travel patterns of all employees in (CITY/COUNTY), and to provide employees with information and marketing on commute alternatives through employers and employment complexes;
2. To implement, at all places of employment of (SIZE: 50 or more) employees at a single site, trip reduction programs which encourage the use of commute alternatives;
3. To produce, over a (TIME: three year) period, for all employers of (SIZE: 100 or more) employees at a single work site, an average vehicle ridership ("AVR") of (XXX) (OR: A XXX% REDUCTION IN DRIVE-ALONE MODE SHARE IN THE APPLICABLE CITY/COUNTY OR SUBAREA, TRAVEL ZONE OR DISTRICT) or an equivalent reduction in traffic and emissions; and
4. To increase the efficacy of trip reduction programs through (CITY/COUNTY), employer, employment complex, and developer implementation of transportation system management projects at major new and expanded developments.

IV. Definitions

Note: This section should be edited as needed, to accommodate already adopted state/local definitions, add additional terms, or omit ones deemed unnecessary. The section could be moved to later in the ordinance if desired.

- A. "Average Vehicle Ridership" ("AVR") shall mean the figure derived by dividing the employee population at a work site that reports to work during the a.m. peak period by the number of vehicles driven by these employees commuting from home to the work site during these hours. Bicycles, transit vehicles, buses serving several work sites, and cars stopping on route to other work sites shall be excluded from the vehicles counted, as shall be low pollution vehicles as approved by the (Air Quality Management District.)
- B. "Baseline" shall mean the conditions existing during the first year following adoption of this ordinance, or for employers or complexes to which the ordinance becomes applicable later than 8 months following said adoption, the conditions existing during the first year of applicability of this ordinance.
- C. "Carpool" shall mean a private motor vehicle occupied by two (2) to six (6) employees traveling together for 75% or more of their commute trip distances.
- D. "Coordinator" shall mean a person appointed by the responsible entity to oversee, manage, and/or assist in trip reduction activities.
- E. "Commute Trip" shall mean a home-to-work or work-to-home trip made on a regular basis.
- F. "Commute Alternatives" shall mean carpooling, vanpooling, transit, bicycling, and/or walking as commute modes.
- G. "Commute Alternatives Program" shall mean any reasonable method or approach for providing, supporting, subsidizing, and/or encouraging the use of commute alternatives, including but not limited to matching and placement services for carpools and vanpools, provision of carpool and vanpool vehicles, carpool and vanpool operating subsidies, carpool and vanpool preferential parking location and/or fees, fees for employee parking, reduction or elimination of parking for single occupant vehicles, provision of and/or placement services for subscription bus, provision of shuttle services, transit fare subsidies, on-site waiting and loading facilities for transit, travel allowances for bicyclists and pedestrians, on-site paths, parking, and showers and lockers for bicyclists and pedestrians, guaranteed ride home and guaranteed transportation in emergencies for users of commute alternatives, and on-site child care and other service/convenience facilities which lessen the need for a personal vehicle at the place of employment.

H. "Complex" shall mean either:

1. Any business park or other commercial, business, and/or industrial project of (SIZE: 125,000 gross square feet) or more, in separate or common ownership, which can be identified by two or more of the following characteristics:
 - a. It is known by a common name given to the project by its developer;
 - b. It is governed by a common set of covenants, conditions and restrictions;
 - c. It was approved, or is to be approved, as an entity by the (CITY/COUNTY);
 - d. It is covered by a single tentative or final subdivision map; or
2. Any multi-tenant building or group of buildings on a single site with (SIZE: five hundred (500) or more) employees, which is not included under the definition in 1. above.

I. "Employee" shall mean any person hired by any employer in the (CITY/COUNTY), including any part-time and/or seasonal employee, who reports to the work site between 5 a.m. and noon at least two days a week during five or more months of the year, but excluding any independent contractors hired by the employer as well as any employees living at the work site.

J. "Employer" shall mean any public or private employer, including the (CITY/COUNTY), who has a permanent place of business in the (CITY/COUNTY). "Employer" shall not include contractors with no permanent place of business in the (CITY/COUNTY) and other businesses with no permanent workplace location.

K. "Information Dissemination and Marketing" shall mean measures undertaken to inform employers and employees about commute alternatives and promote their use, including, but not limited to, posting and distribution of updated information on available commute alternatives programs, newsletter articles, transportation fairs, new-tenant and new-employee orientation, meetings with zip-code groups, presentations at staff meetings, distribution of carpool and vanpool applications, commute alternatives incentive programs, and commute alternatives information centers at the workplace.

L. "Owner" shall mean the owner or owners of record, or the owner or owners' designee, of any multi-tenant building, group of buildings on a single site, or building complex, whether in separate or common ownership.

M. "Participation Rate" shall mean the percentage of employees utilizing commute alternatives.

N. "Peak Periods" shall mean the hours from (SET HOURS: 6:00 a.m. to 10:00 a.m. and 3:30 p.m. to 6:30 p.m.) Monday through Friday, except legal holidays.

- O. "Peak Period Trip" shall mean any employee's commute trip which begins and/or ends within the peak periods.
- P. "Single-Occupancy Vehicle" shall mean a motor vehicle occupied by one (1) employee for commute purposes.
- Q. "Transit" shall mean a vehicle operated on a for-hire, multiple-occupant, shared-ride basis, including bus, light rail, heavy rail, shared-ride taxi, and shuttle bus or van.
- R. "Trip Reduction Program" shall mean any reasonable combination of commute alternatives and information dissemination and marketing designed to attain the goals and objectives set forth in Section III of this ordinance.
- S. "Vanpool" shall mean a van occupied by seven (7) to fifteen (15) employees traveling together for 75% or more of their commute trip distances.
- T. "Vehicle Trip Rate" shall mean the number of vehicles brought to the work site by commuter employees during the peak periods.
- U. "Work Site" shall mean the place of employment, base of operation, or predominant work location of an employee.

V. Responsibilities of Employers

NOTE: As drafted here, all employers must at least participate in monitoring, reporting, and public information activities; employers of 50 or more must develop, submit, implement, and update trip reduction programs, but need not obtain program approval; employers of 100 or more must develop and implement programs which are subject to approval unless, in the alternative, they implement a specified set of measures including parking pricing, commute alternatives subsidies, and information and marketing. The requirements of the alternative program must be set to obtain a level of trip reduction sufficient to meet the goals and objectives of Section III. It is recommended that this be based on explicit modelling or other detailed analysis.

A City/County may wish to review and approve all programs submitted to it, if it has sufficient resources to permit this. Also, the City/County may wish to set a calendar period for employee surveys (e.g., Feb.-Mar.), so that all survey results are taken during the same season (hence are compatible). Some jurisdictions may wish to establish a single due date for program submission (e.g., July 1), while others may prefer to balance the workload by staggering due dates throughout the year.

- A. **ANNUAL EMPLOYEE SURVEY – ALL EMPLOYERS.** Every employer shall conduct or cause to be conducted, within (TIME, e.g., 30 days) following notice from the (CITY/COUNTY), a Baseline Employee Survey. Thereafter, every employer shall conduct an Employee Survey each year during the anniversary

month and week of its Baseline Employee Survey unless otherwise directed by the (CITY/COUNTY).

1. The Employee Survey shall obtain information from employees in such form and during such periods as shall be required by the (CITY/COUNTY), in order to establish commute pattern data and calculate the employer's (MEASURE OF PERFORMANCE, e.g., average vehicle ridership (AVR)). The Employee Survey shall also be designed to serve as a data base for the design, implementation and monitoring of Trip Reduction Programs.
2. The information to be obtained by the Employee Survey shall include, but not be limited to, the following, for each shift:
 - a. The number of employees residing in each Zip code;
 - b. The number of employees commuting to the workplace by each of the following modes of transportation:
 - i. Single occupancy vehicle;
 - ii. Carpool, including the average number of occupants per vehicle;
 - iii. Vanpool, including the average number of occupants per vehicle;
 - iv. Transit;
 - v. Walk;
 - vi. Bicycle; and
 - vii. All other modes;
 - c. The number of employees participating in alternative work hours program(s), and the percentage of such employees using each mode of transportation; and
 - d. The times at which all employees normally enter and leave the worksite.
3. The employer shall prepare, or cause to be prepared, an analysis of the results of the survey in such form and through such procedures as shall be specified by the (CITY/COUNTY), and shall submit a copy of such analysis to the (CITY/COUNTY) not later than sixty (60) days after the date of said survey. All completed survey forms shall be maintained on file for a period of two (2) years, and upon written request by the (CITY/COUNTY) shall be made available for auditing purposes.
4. Upon written request of the employer and for good cause shown, the (CITY/COUNTY) may grant an extension of time, not to exceed (TIME, e.g., a

maximum of sixty (60) days in total), for the conduct and/or submittal of the analysis of the Employee Survey.

5. The (CITY/COUNTY), at its option, may develop a standard format for the Employee Survey and for reports on the survey analysis and require use of such standard format(s), establish mandatory survey procedures and minimum response rates, promulgate guidelines or establish requirements for survey analysis procedures, and/or establish such other guidance as it deems necessary and appropriate to assure the accuracy and reliability of the Employee Survey effort.

B. INFORMATION DISSEMINATION AND MARKETING MEASURES – ALL EMPLOYERS. Not less frequently than once per calendar year, every employer shall distribute or cause to be distributed to every employee up-to-date materials designed to inform employees about commute alternatives available at or to the work site and to promote their use. Each newly hired employee shall be supplied this same information.

C. TRIP REDUCTION PROGRAMS – ALL EMPLOYERS OF 50 OR MORE EMPLOYEES. Every employer of 50 or more employees shall develop and implement, or cause to be developed and implemented, within (TIME, e.g., ninety (90) days) following submittal of the Employee Survey results), a Trip Reduction Program designed to achieve goals and objectives set forth in Section III as expeditiously as possible, but not later than three years following the adoption of this ordinance, and to maintain said goals and objectives thereafter.

1. The Trip Reduction Program shall be designed to respond to needs and opportunities identified in the Baseline Employee Survey and shall include the following:
 - a. A summary of the findings of the most recent Employee Survey;
 - b. A description of the employer's transportation and parking policies in effect as of the date of the Baseline Employee Survey, including but not necessarily limited to the following:
 - i. The number of off-street parking spaces provided for or available to employees, on or off the site;
 - ii. The number of off-street parking spaces reserved for employee vanpools, employee carpools, and employee single-occupancy vehicles, and the number of each occupied on a typical day;
 - iii. The price, if any, charged on a daily, weekly, or monthly basis for parking employee carpools, employee vanpools, and employee single-occupancy vehicles;

- iv. A description of any shuttle service provided by the employer and/or a third party;
 - v. The amount of subsidy, if any, being provided for transit passes, carpools, vanpools, or other commute alternatives;
- c. Any reasonable combination of commute alternatives programs to be offered by the employer, designed to achieve the objectives set forth in Section III;
 - d. Any reasonable combination of information dissemination and marketing measures to be carried out by the employer, designed to promote the use of commute alternatives;
 - e. The name, title, and telephone number of the employer's Transportation Coordinator, who shall be responsible for implementation of the Trip Reduction Program at the workplace and shall serve as the employer's liaison to the (CITY/COUNTY); and
 - f. If the Trip Reduction Program includes measures to be implemented by a third party, including an employment complex owner, a transportation management organization, or any other entity, a letter from each such party agreeing to implement said measure or measures on behalf of the employer, signed by a person authorized to legally commit the entity.
- 2. The Trip Reduction Program shall be submitted, along with required filing fees, by the employer to the (CITY/COUNTY) not later than (TIME, e.g., ninety (90) days following the submittal of the employee survey analysis). The employer shall begin implementation of the Trip Reduction Program as of the date of submittal.
 - 3. Upon written request of the employer and for good cause shown, the (CITY/COUNTY) may grant an extension of time, not to exceed (TIME, e.g., sixty (60) days), for submittal and/or implementation of a Trip Reduction Program.
 - 4. The (CITY/COUNTY), at its option, may develop a standard format for documenting Trip Reduction Programs and require use of such standard format, establish minimum qualifications and performance requirements for Transportation Coordinators, promulgate guidelines on commute alternatives programs and information dissemination and marketing measures which could be undertaken by employers, and/or establish such other guidance as it deems necessary and appropriate to assure the effectiveness of Trip Reduction Programs.
- D. **ANNUAL PROGRESS REPORTS AND PROGRAM UPDATES – ALL EMPLOYERS OF 50 OR MORE EMPLOYEES.** Every employer of 50 or more employees shall prepare and implement, or cause to be prepared and implemented, an annual

Progress Report and Program Update, which shall become an addendum to the employer's Trip Reduction Program.

- 1. The Progress Report and Program Update shall contain a description of the transportation demand management measures undertaken during the immediately preceding year and their results, in sufficient detail to allow the (CITY/COUNTY) to determine the extent to which the employer's Program for the preceding year has been implemented and to evaluate the effectiveness of such efforts. The Progress Report and Program Update shall also set forth any revisions to the employer's Trip Reduction Program which will be implemented in the ensuing year, and shall provide such additional information as may be required by the (CITY/COUNTY), including, but not necessarily be limited to, the following:**
 - a. A summary of the findings of the most recent employee survey;**
 - b. A description of the employer's transportation and parking policies in effect during the preceding year, including but not necessarily limited to the following:**
 - i. The number of off-street parking spaces provided or made available by the employer or complex, on or off the site;**
 - ii. The number of off-street parking spaces reserved by the employer or complex for employee vanpools, employee carpools, and employee single-occupancy vehicles, and the number of each occupied on a typical day;**
 - iii. The price, if any, charged on a daily, weekly, or monthly basis for parking employee carpools, employee vanpools, and employee single-occupancy vehicles;**
 - iv. A description of any shuttle service provided by the employer and/or a third party;**
 - v. The amount of subsidy, if any, being provided for transit passes, carpools, vanpools, or other commute alternatives;**
 - c. A description of the commute alternatives made available to employees during the preceding year;**
 - d. A description of the information dissemination and marketing measures used to promote the use of commute alternatives during the preceding year;**
 - e. A discussion of progress made and/or problems encountered in attaining the objectives set forth in Section III of this ordinance, and identification of**

revisions to be made to the Trip Reduction Program to enhance that progress and/or correct the problems encountered;

- f. A discussion of any other changes to be made to the Trip Reduction Program for the ensuing year and the reasons for those changes;
 - g. The name, title, and telephone number of the employer's Transportation Coordinator; and
 - h. If the Trip Reduction Program and/or Progress Report and Program Update includes measures to be implemented by a third party, including the owner of a building or complex, a transportation management organization, or any other entity, a letter from each such party agreeing to implement said measure or measures on behalf of the employer, signed by a person authorized to legally commit the entity.
2. Each Progress Report and Program Update shall be submitted by the employer, along with required fees, to the (CITY/COUNTY) on the first anniversary of the submittal of its Trip Reduction Program and each subsequent anniversary thereafter. The employer shall begin implementation of the Program Update upon submittal.
 3. Upon written request of the employer and for good cause shown, the (CITY/COUNTY) may grant an extension of time, not to exceed (TIME, e.g., sixty (60) days), for submittal and/or implementation of a Progress Report and Program Update.
 4. Records of data reported in the Progress Report and Program Update shall be maintained on file for a period of two (2) years, and upon written request by the (CITY/COUNTY) shall be made available for auditing purposes.
 5. The (CITY/COUNTY), at its option, may develop a standard format for Progress Report and Program Updates and require use of such standard format, in order to provide a consistent reporting base for all employers and complexes.
- E. **SPECIAL PROVISIONS FOR EMPLOYERS OF 100 OR MORE EMPLOYEES – APPROVAL REQUIRED FOR PROGRAMS AND PROGRAM UPDATES UNLESS SPECIFIED ALTERNATIVE STRATEGIES ARE IMPLEMENTED.** Every employer of 100 or more employees shall be required to obtain the written approval of the (CITY/COUNTY) for its Trip Reduction Program and each annual Progress Report and Program Update, in accordance with Section IX of this ordinance, and shall be subject to the provisions of that Section providing for mandatory revision of such programs and updates, unless said Trip Reduction Program and/or Program Update includes, at a minimum, the following alternative strategies:

1. For any parking provided on or off the site, a charge of not less than (AMOUNT: \$60.00 per month) for all vehicles except carpools, vanpools, and vehicles qualified to use spaces for the disabled;
 2. A transit pass subsidy of not less than (AMOUNT: \$30.00 per month) for all employees who request such subsidy;
 3. A carpool or vanpool subsidy of not less than (AMOUNT: \$30.00 per month) for all employees who request such subsidy;
 4. An information and marketing program designed to inform employees about the Trip Reduction Program and available subsidies for employees who use transit, carpool, or vanpool.
- F. **JOINT ACTIVITIES AND THIRD PARTY SERVICES PERMITTED.** Notwithstanding its number of employees, any employer may by mutual agreement join with any other employer or, if located in a complex, with the complex, to develop and implement joint commute alternatives programs and/or information dissemination and marketing programs. Any employer also may utilize the services of a third party, including but not limited to services obtained by membership in or by arrangement with a transportation management organization, to carry out its survey and reporting, information dissemination and marketing, and/or commute alternatives programs. However, neither joint activities nor third party services shall relieve any party of its individual responsibilities under this section or ordinance.

VI. Responsibilities of Owners of Employment Complexes

NOTE: This section is optional. It offers a way of reaching small employers in large buildings, an important consideration in some areas. On the other hand, it may considerably complicate the administration of the trip reduction program, especially where building complexes lack on-site management.

- A. **APPLICABILITY.** This section applies to all employment complexes as defined in this ordinance.
- B. **TRIP REDUCTION PROGRAMS – COMPLEXES.** Every complex shall develop and implement, or cause to be developed and implemented, a Trip Reduction Program designed to help employees and employers within the complex achieve the objectives set forth in Section III as expeditiously as possible.
 1. The Trip Reduction Program for each complex shall include the following:

- a. Appointment of a Transportation Coordinator who shall be responsible for implementation of the Trip Reduction Program at the complex and shall serve as the liaison to the (CITY/COUNTY) and any Employee Transportation Coordinators in the complex. The complex's Transportation Coordinator shall also serve as Transportation Coordinator for employer(s) of less than fifty (50) employees located within the complex. The name, title, and telephone number of the complex's Transportation Coordinator shall be provided to each employer located in the complex and shall be prominently displayed in the common areas of the building or complex.
 - b. Any reasonable combination of measures for coordinating and assisting the Trip Reduction Programs of employers within the complex;
 - c. Any reasonable combination of commute alternatives programs to be offered by the complex to employers and/or employees within the complex, including programs to be offered to all employers of less than fifty (50) employees within the complex, designed to achieve the objectives set forth in Section III. Each complex shall include in its program, at a minimum, the following:
 - i. For any complex which makes on or off-site parking available to occupants, reservation, upon request, of parking closest to building entrances and other preferentially located parking for carpools and vanpools, and provision, upon request, of secure bicycle parking;
 - ii. Display of information on commute alternatives, preferential parking, bicycle parking, and other elements of the complex's and employer-tenants' Trip Reduction Programs in common areas of the building or complex;
 - iii. Provision of rideshare matching assistance, upon request, to any employer or employee in the complex;
 - d. Any reasonable combination of information dissemination and marketing measures to be undertaken by the complex to promote the use of commute alternatives. At a minimum, a written summary of the complex's Trip Reduction Program shall be provided to each employer-tenant and shall be prominently displayed in the common areas of the building or complex.
2. Every complex available for occupancy at the time this ordinance is adopted shall submit a copy of its Trip Reduction Program to the (CITY/COUNTY) and shall begin implementation within (TIME, e.g., one year) following the effective date of this ordinance. Every complex not in existence as of the effective date of this ordinance shall submit a copy of its Trip Reduction Program to the (CITY/COUNTY) and shall begin implementation within (TIME, e.g., 180 days) following the availability for occupancy of the first building in the complex. Upon written request of the complex and for good cause shown, the

(CITY/COUNTY) may grant an extension of time, not to exceed sixty (60) days, for submittal of a Trip Reduction Program.

3. The complex' Trip Reduction Program shall be deemed to remain in effect unless modified in writing with notice to the (CITY/COUNTY) and all employer-tenants in the complex. Reassignment of the position of Transportation Coordinator shall constitute a modification requiring written notice.
4. The (CITY/COUNTY), at its option, may develop a standard format for documenting complexes' Trip Reduction Programs and require use of such standard format; may establish minimum qualifications and performance requirements for complexes' Transportation Coordinators; may promulgate guidelines and performance standards on commute alternatives programs and information dissemination and marketing measures which could be undertaken by complexes; and/or may establish such other guidance as it deems necessary and appropriate to assure the effectiveness of complexes' Trip Reduction Programs.
5. Every complex owner or manager and/or agent thereof shall include reference to the requirements of this ordinance and mandatory participation therein (i) in the recorded conditions, covenants, and restrictions governing the complex, if any, and (ii) in every lease entered into subsequent to the effective date of this ordinance.

D. **JOINT ACTIVITIES PERMITTED.** Any complex may by mutual agreement join with any other complex, or with any employer, to develop and implement joint commute alternatives programs and/or information dissemination and marketing programs. Any complex also may utilize the services of a third party, including but not limited to services obtained by membership in or by arrangement with a transportation management organization, to carry out its responsibilities. However, neither joint activities nor third party services shall relieve any party of its individual responsibilities under this Section or ordinance.

VII. (CITY/COUNTY) Responsibilities

NOTE: City/County responsibilities here refer to oversight and support activities. Note that in the definitions section, the City/County is identified as an employer for purposes of this ordinance.

A. **APPOINTMENT OF TRANSPORTATION MANAGER.** The (CITY/COUNTY) (hereby appoints (TITLE: THE PLANNING DIRECTOR OR HER DESIGNEE .../shall appoint within 90 days of the adoption of this ordinance) a Transportation Manager to carry out the provisions of the ordinance and to undertake such additional activities as may be necessary and appropriate to support and enhance

employers' and complexes' Trip Reduction Programs and related activities. The Transportation Manager shall serve as the (CITY/COUNTY)'s Transportation Coordinator to carry out the (CITY/COUNTY)'s obligations as an employer, and shall serve as staff to the Appeals Board.

- B. TECHNICAL GUIDANCE AND SUPPORT.** The Transportation Manager shall provide technical guidance and support to employers' and complexes' Trip Reduction Programs and related activities, including but not necessarily limited to the following:
1. Establish standards, procedures, formats, and other guidance on required surveys, programs, reports, and other actions;
 2. Compile, annually update, and distribute materials on commute alternatives and provide examples of successful approaches;
 3. Carry out marketing and promotion activities for commute alternatives;
 4. Provide training, continuing education and information exchange programs for Transportation Coordinators;
 5. Provide or help obtain advice and assistance for employers and complexes in the development and implementation of their Trip Reduction Programs;
 6. Develop and implement pilot programs and demonstration projects focusing on the residential end of trips and on shopping, personal business, and other trip types.
- C. REVIEW OF SUBMITTALS.** The Transportation Manager shall review and analyze all documents and materials submitted to the (CITY/COUNTY) by an employer or complex and shall notify the employer or complex of any deficiencies as provided in Section IX.
- D. ANNUAL STATUS REPORT.** The Transportation Manager each year shall review compliance with the requirements of this ordinance and evaluate progress toward attainment of its goals and objectives, and shall report the findings in an Annual Status Report to the (CITY COUNCIL/BOARD OF SUPERVISORS) during the anniversary month of the adoption of this ordinance. The Annual Status Report shall contain but not necessarily be limited to the following:
1. A summary of results of trip reduction activities, as indicated by the Employee Survey reports and the Transportation Manager's estimate of (CITY/COUNTY)- wide (AVR/ performance on objectives);
 2. A review of employers' and complexes' Trip Reduction Programs and/or Progress Reports and Program Updates, and evaluation of accomplishments, steps to be taken to improve performance, and prospects for success;

3. An assessment of overall compliance with the requirements of this ordinance, including a compilation of the number, type, and current status or disposition of cases in which extensions were granted, and/or notices of deficiency were issued;
4. A discussion of the relationship of (CITY/COUNTY)-wide trip reduction and related activities to region-wide air pollution control and traffic management efforts;
5. A discussion of overall progress toward attainment of the goals of this ordinance, prospects for success, and recommendations for any changes to this ordinance as may be necessary to meet the goals established herein.

E: OTHER (CITY/COUNTY) TRANSPORTATION PROGRAMS AND ACTIVITIES. The (CITY/COUNTY) shall annually carry out, or cause to be carried out, additional transportation programs and activities designed to further the goals of this ordinance, including, but not necessarily limited to, the following:

1. Collect, analyze, and disseminate data and information on traffic conditions in the (CITY/COUNTY);
2. Audit, from time to time, Employee Surveys and data presented in employers' and complexes' Progress Report and Program Updates;
3. Coordinate the activities of all (CITY/COUNTY) departments with transportation-related functions, and recommend to the (COUNCIL/BOARD OR SUPERVISORS) any changes in plans or policies needed for consistency with this ordinance;
4. Cooperate with other jurisdictions in developing and implementing transportation system management improvements and traffic reduction programs;
5. Participate in and coordinate with regional trip reduction and transportation system management activities.

F. ESTABLISHMENT OF FEES. The Transportation Manager shall, on an annual basis, and after consultation with the Appeals Board, recommend to the (CITY COUNCIL/BOARD OF SUPERVISORS) a schedule of fees to offset costs to the (CITY/COUNTY) associated with the implementation of this ordinance, including but not necessarily limited to review of plans and reports, technical guidance and support, program review, and such other items as are directly related to the development and administration of the Trip Reduction Program. Said fees shall apportion costs in equitable proportion to services received and/or costs imposed, (OPTIONAL: provided, however, that no fee shall exceed (DOLLAR AMOUNT: \$5??) per employee or (DOLLAR AMOUNT: \$1000?) per employer per year, not including costs of hearings before the Appeals Board, if any.)

VIII. Appeals Board

NOTE: The composition of the appeals board should reflect local needs. An existing board could be assigned this responsibility, or a new board created.

A. **APPOINTMENT: RESPONSIBILITIES.** The (CITY COUNCIL/BOARD OF SUPERVISORS) shall within (TIME: 30 days following the adoption of this ordinance), appoint an Appeals Board which shall be the final administrative authority for the enforcement and administration of this ordinance. The Appeals Board also shall be responsible for reviewing compliance with the requirements of this ordinance and for recommending actions needed to help ensure that, to the fullest extent possible, the goals of this ordinance will be met.

1. **COMPOSITION.** The Appeals Board shall consist of the following:

(RECOMMENDED: PROVIDE FOR APPOINTMENT OF REPRESENTATIVES OF GOVERNMENT, EMPLOYERS AND COMPLEXES, AND OTHER INTERESTED PARTIES)

2. **MEETINGS.** The Appeals Board shall hold its first meeting within (TIME, e.g., two (2) months) following the effective date of this ordinance, and shall continue to meet on a regularly scheduled basis, as determined by the Appeals Board but not less often than once every (FREQUENCY: three months.)

3. **COMPENSATION.** The Appeals Board shall serve without compensation (except as provided by ... - EDIT TO REFLECT LOCAL POLICY.)

B. **DUTIES.** The Appeals Board shall undertake the following:

1. Review data on traffic conditions, commute alternatives, alternative work hours, transportation projects, and (CITY/COUNTY) transportation policies, and advise the Transportation Manager and (CITY COUNCIL/BOARD OF SUPERVISORS) on actions which are necessary or appropriate to meet the goals of this ordinance;

2. Review the Annual Status Report and forward comments and recommendations to the (CITY COUNCIL/BOARD OF SUPERVISORS) ;

3. Pursuant to Section IX, hear appeals, issue orders, and dispose of cases.

The Appeals Board may undertake such other activities as it deems necessary and appropriate to the effective administration and enforcement of this ordinance.

IX. Required Revisions to Submitted Documents

NOTE: This section should be edited to comply with state law and local ordinance or other procedural requirements. Note the use of an in-lieu fee in case of continued inadequacy of plans; this option is not available in some states. See also Section X, Penalties, which may be the final recourse in some areas.

This model permits a three year period before revisions would be required for falling short of the ordinance's stated objectives. Some cities/counties may wish, or be required, to provide for more or less time.

- A. APPLICABILITY.** Any employer or complex may be required to revise any submittal which is found to be incomplete. Any employer of 100 or more employees which does not opt to implement the alternative strategies set forth in Section V.E. of this ordinance may be required to revise a Trip Reduction Program or Progress Report and Program Update which is found to be inadequate, in accordance with this Section.
- B. REVISIONS TO CORRECT INCOMPLETE SUBMITTALS.** If, within (TIME: e.g., 60 days) from the date of receipt of an Employee Survey Report, Trip Reduction Program, or Progress Report and Program Update, the Transportation Manager determines that the submittal is incomplete, the Transportation Manager shall so notify the employer or complex and require that revisions and/or additions be made to correct the deficiency.
- C. REVISIONS TO CORRECT INADEQUATE PROGRAMS OR PROGRAM UPDATES – CERTAIN EMPLOYERS OF 100 OR MORE EMPLOYEES.** This subsection applies to any employer of 100 or more employees which has not opted to implement the alternative strategies specified in Section V.E. If, within (TIME: e.g., 60 days) from the date of receipt of an employer's Trip Reduction Program or any Progress Report and Program Update thereafter, or at any time on the basis of monitoring data or audits, the Transportation Manager determines that, for good cause stated, the measures described in the Trip Reduction Program and/or the Progress Report and Program Update have not resulted in reasonable progress, and/or that the measures proposed for the ensuing year are not likely to result in reasonable progress during the next year, the Transportation Manager shall so notify the employer and require that revisions and/or additions be made to correct the deficiency.
 - 1. The following shall be considered reasonable progress:**
 - a. At the time of the first Progress Report and Program Update, evidence of implementation of all elements of the Trip Reduction Program submitted to the (CITY/COUNTY) and documentation of Employee Survey results, as applicable, shall be considered reasonable progress;**

- b. At the time of the second Progress Report and Program Update, achievement of (AVR of not less than XX: 10% improvement in AVR??) shall be considered reasonable progress;
 - c. At the time of the third Progress Report and Program Update, and thereafter, at the time of each subsequent Progress Report and Program Update, full achievement and maintenance or improvement of the objectives of this ordinance shall be considered reasonable.
2. Notice of inadequacy shall be given in writing and shall be accompanied by a review of the employer's Trip Reduction Program and/or Progress Report and Program Update, a statement of the reason(s) for the finding of inadequacy, and recommendations for correcting the deficiencies identified. Copies of said notification, review, and recommendations also shall be sent to the members of the Appeals Board.
3. The employer shall submit to the (CITY/COUNTY) its revisions and/or additions for review and approval within (TIME: e.g., sixty (60) days) following issuance of the Transportation Manager's notice. The Transportation Manager may grant an extension of time for compliance not to exceed (time: thirty (30) days). If no revision is received within the allowed time the Transportation Manager shall assume that it is the employer's intention to proceed with its existing Trip Reduction Program and/or Progress Report and Program Update and may proceed with an Appeals Board hearing as provided in Subsection C.4. of this Section.
4. Any submittal under this section which is determined by the Transportation Manager to remain inadequate after (TIME: ninety (90) days) following notice to the employer shall be referred to the Appeals Board, along with the Transportation Manager's recommendations, for review and action. Notice of such referral shall be made in writing to the employer. The Appeals Board shall conduct a hearing on the referral and may order any of the following actions:
 - a. Require continuation of the Trip Reduction Program and/or Program Update then in force;
 - b. Require implementation of the employer's proposed revisions and/or additions;
 - c. Require implementation of the Transportation Manager's recommendations, and/or payment of an annual fee in lieu of full compliance;
 - d. Require implementation of such alternative measures as the Appeals Board determines to be necessary; and/or payment of an annual fee in lieu of full compliance.

Any in-lieu fee shall be determined by the Transportation Manager to cover the full costs of offsetting excess trips produced by the employer's employees and shall be

used to provide additional benefits and incentives for the use of commute alternatives at other places of employment in the (CITY/COUNTY). Notice of the Appeals Board's decision and order shall be provided in writing to the employer.

- D. **RIGHT OF APPEAL; HEARING.** Any employer or complex required to revise a submittal pursuant to this Section may, within (TIME, e.g., 30 days) and upon notice to the (CITY/COUNTY), appeal such action to the Appeals Board. Any employer required to implement a program under Subsection C.4. of this section may request a second hearing before the Board. The hearing shall be held before the Appeals Board within (TIME, e.g., sixty (60) days) of receipt of the notice of appeal. The Appeals Board may, for good cause, approve, modify, or overrule the action(s) required by the Transportation Manager or its own previous actions on the basis of good cause shown.

X. Penalties

NOTE: This section must be edited to reflect state and local law. Penalties should be sufficient to act as a deterrent, and where permitted by law, funds so obtained should be reserved for use in additional trip reduction activities.

- A. **FAILURE TO PERFORM REQUIRED ACTIONS.** Any employer or complex which fails to conduct an Employee Survey, submit an Employee Survey report, prepare and submit a Trip Reduction Program, prepare and file a Progress Report and Program Update, implement a Trip Reduction Program and/or Program Update, or revise a submittal as required by this ordinance, after (TIME: e.g., thirty (30) days) notice to remedy such failure, shall be guilty of an infraction.
1. The fine shall be an amount not exceeding one thousand dollars (\$1,000) for the first infraction, an amount not exceeding two thousand dollars (\$2,000) for a second infraction within one year, and an amount not exceeding five thousand dollars (\$5,000) for a third or subsequent infraction within one year.
 2. Each failure to conduct a survey, supply a report, or implement a Trip Reduction Program, following the (CITY/COUNTY)'s written request for such material and/or act, shall constitute a separate violation.
- B. **OTHER VIOLATIONS OF THIS ORDINANCE, EXCEPT SECTION IX.C.** Any employer which fails to comply with any other provision of this ordinance, except those requirements mandated pursuant to Section IX.c., after (TIME: e.g., thirty (30) days) notice to remedy such failure, shall be guilty of an infraction punishable as in Section X.A.
- C. **FAILURE TO COMPLY WITH ORDERS OF THE APPEALS BOARD.** Any employer shall have (TIME: thirty (30) days) after notice of any order of the

Appeals Board pursuant to Section IX of this ordinance and following final appeal to comply with the order. Failure to comply with such order within the said time period shall be a violation and subject to a civil penalty of (AMT.: e.g., five hundred dollars (\$500) per week) from 30 days following the date of the Appeals Board order and final appeal until the failure to comply is corrected.

XI. Transportation System Management Project Requirements – New Developments

NOTE: A city/county may want to include this section setting forth TSM requirements for new developments as part of its trip reduction ordinance, or it may choose to handle these matters separately. Over time, TSM requirements would help make the trip reduction ordinance more effective and practical by building the wherewithal for commute alternatives and parking management into the physical design and operating programs of new developments.

The language provided in this section is for illustrative purposes. The city/county choosing to include TSM requirements as part of its trip reduction ordinance must edit the language so that it complies with state legal requirements pertaining to development standards and development impact fees, and so that the measures called for are ones that are realistic and desirable in that jurisdiction. TSM requirements also could be tied to indirect source reviews in areas where such reviews apply.

- A. **APPLICABILITY.** This Section shall apply to every new residential development containing (NUMBER: 100 or more) dwelling units, every new nonresidential development which will be occupied by (NUMBER: 100 or more) employees as determined by actual employee projections for the project, and every nonresidential development in existence as of the date of this ordinance which increases the facility's gross floor area by at least 25,000 square feet and which will be occupied, in total, by (NUMBER: 100 or more) employees.

- B. **TRANSPORTATION SYSTEM MANAGEMENT PROJECT REQUIREMENTS.** Every new development subject to this Section shall, as a condition of its (CITY/COUNTY TO INSERT APPROPRIATE WORDING, E.G., USE PERMIT, BLDG. PERMIT, OCCUPANCY PERMIT) develop and implement such transportation system management projects as the (SPECIFY: (CITY/COUNTY), City Transportation Engineer/ Planning Director/ ...), after consultation with the project sponsor and review of the project plans, shall determine to be necessary and appropriate.
 - 1. The following transportation system management projects shall be required for every new residential development:
 - a. Sidewalks or pedestrian paths;

- b. Loading areas and/or park-and-ride areas for transit vehicles, carpools, vanpools, and/or shuttles;
 - c. Signage and/or displays providing information about commute alternatives at loading and/or park-and-ride areas or other common areas.
 2. The following transportation system management projects shall be considered for every new residential development project and may be required when the (CITY/COUNTY), after consultation with the project sponsor and review of the project plans, shall determine them to be necessary and appropriate:
 - a. Bus stop improvements, including bus pullouts, bus pads, and bus shelters;
 - b. Bikeways or bike paths;
 - c. A commuter information center at a location conveniently accessible to all occupants of the development, and/or office space for one or more Transportation Coordinators;
 - d. On-site child care and other service/convenience facilities which lessen the need for travel by auto;
 - e. Such other transportation system management projects as may reasonably be necessary at the development project under consideration.
 3. The following transportation system management projects shall be required for every new nonresidential development project:
 - a. Sidewalks or pedestrian paths providing direct access to main entrances of each building;
 - b. Stops and loading areas for transit vehicles, carpools, vanpools, and/or shuttles convenient to main entrances of each building;
 - c. Preferentially located and assigned parking spaces for carpools and vanpools;
 - d. Bicycle parking facilities for use by employees and tenants at no cost to the user;
 - e. Signage and/or displays at parking facilities providing information about commute alternatives.
 4. The following transportation system management projects shall be considered for every new nonresidential development project and may be required when

the (CITY/COUNTY), after consultation with the project sponsor and review of the project plans, shall determine them to be necessary and appropriate:

- a. Bus pullouts and bus pads;
 - b. Bus shelters and/or right-of-way for shelters on-site and/or along public streets;
 - c. On-site bicycle paths;
 - d. Showers and lockers for use by bicyclists and pedestrians;
 - e. On-site child care and other service/convenience facilities which lessen the need for a personal vehicle at the place of employment;
 - f. Pricing of parking at market rates;
 - g. A commuter information center at a location conveniently accessible to all occupants of the development;
 - h. Office space for one or more Transportation Coordinators;
 - i. Such other transportation system management projects as may reasonably be necessary at the development project under consideration.
5. The (CITY/COUNTY) shall issue guidelines specifying the criteria that shall be utilized in determining the need for, design and location of, and extent of each of the transportation system management projects at a development project.

C. REDUCTION OF PARKING REQUIREMENTS IN RETURN FOR A TRANSPORTATION SYSTEM MANAGEMENT PLAN. A new development project will be allowed to reduce its on-site parking requirement by up to (AMOUNT, E.G. 20 PERCENT) upon approval by the (CITY/COUNTY) (Transportation Engineer, Planning Director, Zoning Administrator) of a Transportation System Management Plan incorporating trip reduction programs and transportation system management measures adequate to offset a portion of the parking needs that would otherwise occur.

1. The development project proponent shall submit to the (CITY/COUNTY) a detailed plan which identifies the specific programs and measures proposed for implementation, an assessment of their effectiveness, mitigation measures which will be implemented should parking demand exceed parking availability, and such other items as the (CITY/COUNTY) deems necessary.
2. The (CITY/COUNTY) (Transportation Engineer, Planning Director,...) will determine the amount that the parking requirement can be reduced on the basis of the amount of trip reduction that reasonably can be expected due to the proposed programs and measures.

- D. ENFORCEMENT.** No ((CITY/COUNTY) TO INSERT APPROPRIATE LANGUAGE, E.G. BUILDING PERMIT, OCCUPANCY PERMIT) shall be issued to any new development subject to the provisions of this Section which is not in compliance with this Section. For any other violation of this Section, including failure to implement and/or maintain in effect the measures required under this Section, the (Zoning Administrator) shall institute revocation proceedings in accordance with ((CITY/COUNTY) TO INSERT CODE PROVISIONS RE ENFORCEMENT AND PENALTIES FOR PERMIT VIOLATIONS.)

XII. Additional Provisions

NOTE: Edit this section to comply with (city/county) practices and legal requirements.

- A. NOTICE.** Notice shall be deemed to be given to an employer or an employment complex when it is mailed or delivered to the employer's or complex's address of record.
- B. RECEIPT OF SUBMITTALS.** Submittals to the (CITY/COUNTY) shall be sent or delivered to the (Transportation Manager)
- C. SEVERABILITY.** If any section, subsection, sentence, clause, or phrase of this ordinance is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of the ordinance. The (CITY COUNCIL/BOARD OF SUPERVISORS) of the (CITY/COUNTY) declares that it would have passed this ordinance and each section, subsection, sentence, clause and phrase thereof, irrespective of the fact that any one or more other sections, subsections, sentences, clauses or phrases be declared invalid or unconstitutional.
- D. PUBLICATION.** Within fifteen (15) days after its first reading, this ordinance shall be published once in a newspaper of general circulation in the (CITY/COUNTY).
- E. EFFECTIVE DATE.** This ordinance shall be effective immediately upon its final passage.