

Parking and Transportation Demand Management Policy Fact Sheet



Overview

This Policy Fact Sheet includes:

1. [Top 10 Facts About Parking and Traffic](#) (next 2 pages)
2. How to use the [MTC Toolbox/Handbook](#) (Full Title is *Reforming Parking Policies to Support Smart Growth, Toolbox/Handbook: Parking Best Practices & Strategies for Supporting Transit Oriented Development in the San Francisco Bay Area*). The Toolbox/Handbook presents the landscape of possible parking and TDM (Transportation Demand Management) strategies into a decision tree type handbook. The Toolbox/Handbook helps a city select appropriate parking and TDM policies.
3. [Technical Appendices](#): The *Toolbox/Handbook* strategies are distilled down from two technical papers, Existing Bay Area City Parking Policies and Best Practices, and also include a
4. MTC Toolbox/Handbook [Parking Demand Model](#). This fact sheet helps you summarize and navigate through these resources.
5. [MTC's Parking Seminar and Relevant Presentations](#)
6. [Additional Recommended Strategies](#)
7. [Additional Facts Highlighting the Effectiveness of Various Parking and TDM Policies](#)
8. [Examples of Adopted TOD supportive TDM policies](#) – San Leandro, San Mateo, Glendale and Ventura

1. Top 10 Facts and Figures relating to Parking, Traffic and Transit

- **Transit Use and Proximity to Work and Home:** In the Bay Area, people who both live and work within a half-mile of transit are 10 times more likely to use transit.¹
- **Vehicle Ownership by Proximity of Home to Transit:** In the Bay Area, 30% of those who live within a half mile of transit do not own any cars. This is about three times more zero-vehicle households than those living in urban areas further than a half mile from transit.²
- **Vehicle Ownership and Density and Transit:** Studies conducted on vehicle ownership reveal that density and transit availability are significant variables in predicting vehicle ownership.³
- **Seniors and Vehicle Ownership:** In the Bay Area, households with seniors own 31% fewer cars than households with no seniors.⁴
- **BART and Parking Demand:** TODs reduce parking demand per household by 23%.⁵
- **BART neighborhood demographics:** Among BART Station residents, 40% choose to live near BART stations due to location and commuter choices.⁶
- **Higher Income = More Driving:** Higher Income households own significantly more vehicles than lower income households. In the Bay Area, MTC quantified the relationship between household income, travel behavior and vehicle trips based on results from their Bay Area Travel Survey. Households in the highest income quartile (earning >\$100,000/year) generate over 4 more vehicle trips per day (170% increase) than those in the lowest quartile (earning <\$30,000/year). According to Census 2000 data for the Bay Area, 15% of families making between \$25,000 and \$35,000 did not own any cars.⁷

- **Effect of parking on cost of housing:** A 1997 study by Martin Wachs and Wenyu Jia quantified the exact price effects of parking in new developments in several representative San Francisco neighborhoods and found that the availability of a parking space accounted for 13% of the price of a condominium and 12% of a single-family dwelling unit.⁸
- **Cruising for Parking:** Efforts to keep parking free or very low cost often means drivers continually have to hunt for parking. This is common in downtown areas and business districts where parking is free or where parking meters rates have been purposefully held low. The result is that customers come to the area, cannot find parking, and end up cruising for parking. Shoup estimates that as much as 30% of traffic in these areas may be due to the inefficient search for a parking space.
- **Collisions from Cruising:** Transportation researchers have found that 15% to 20% of all vehicle collisions (and 40% to 60% of mid-block collisions) are associated with on-street parking movements. (a.k.a. looking for or getting in or out of a parking spot)⁹

2. How to use the MTC *Toolbox/Handbook* on Parking Best Practices and Strategies for Supporting TOD:

The *MTC Toolbox/Handbook on Parking Best Practices* was developed to help Bay Area cities and counties identify parking strategies that are likely to be effective in their area. Many communities want to improve quality of life by supporting transit oriented development and smart growth principles to support a more livable region. However these goals often lack strategies that address vehicle parking and traffic. Without these considerations the full walkable potential of a place is hindered.

The *Toolbox/Handbook* includes a printed and web version of a handbook that should be reviewed in conjunction with this fact-sheet. A copy of this can be obtained by calling MTC or by downloading documents from this webpage:



http://www.mtc.ca.gov/planning/smart_growth/parking/parking_seminar.htm

MTC Parking TOOLBOX/HANDBOOK

A. Define Your Community

The Community Types Matrix on **page 4** organizes various community characteristics into the following community types:

- Regional Center
- City Center/Urban Neighborhood
- Suburban Center/Town Center
- Transit Neighborhood
- Rural/Small Town

At the beginning of each subsection on **pages 7-16** are more in-depth descriptions of each community type.

B. Exploring Potential Strategies

- The Parking strategies matrix on **page 6** shows a recommended suite of potential strategies organized by Community Type.
- The strategies are organized into the following 6 broad categories of which there are 3 to 5 strategies each:
 - Transit/TOD Supportive Policies
 - Parking Requirements
 - Parking Pricing
 - Parking Management Strategies
 - Parking Districts
 - Parking Financing

- **Potential Strategies by Community Type - pages 7-16** For each community type, this section spreads out matrix content on two pages. We recommend that you print out just the section for your community type. Use these pages as a checklist when you investigate the **Best Practices** section and the **Technical Appendices**.

Policy/Program	Potential Effectiveness (percent reduction in demand)	Comments
Parking Pricing	HIGH TYPICALLY 5-20%	Proving to be one of the most effective ways to manage parking demand. May also be a revenue source.
Shared Parking	MEDIUM/HIGH TYPICALLY 10-20%	Shared parking solutions can be readily implemented with the correct land use type mix.
Reduced Parking Requirements	MEDIUM TYPICALLY 10-15%	Requires the ability to build new space elsewhere to offset any space demand reduction in other land uses.
Unbundling and Cash-Out Options	MEDIUM TYPICALLY 10-15%	This is likely a mixture of parking pricing and cash-out options. May be used in combination with other strategies.
Transit Passes and Incentives	MEDIUM/LOW TYPICALLY 5-10%	The availability of transit passes depends on the type of transit. For example, the availability of transit passes may be limited to certain transit modes.
Car Sharing	LOW TYPICALLY 2-5%	Car sharing requires lower household car ownership rates. It may be used in combination with other strategies to reduce parking demand.

- **Effectiveness - page 17** provides a useful table showing effectiveness of each strategy category: most effective are Parking Pricing related strategies. But note that the policies work best when combined and customized to the local setting.

C. Best Practices Section (Introductory Information on Candidate Policies) - pages 18-43

- This section is organized by categories (from the page 6 matrix). It includes a narrative description of each strategy with relevant citations and links to further references.
- Following the descriptions are examples of at least one actual program adopted.
- At the beginning of this section is a reference to **Task 3 – Best Practices** for more in depth coverage of various strategies. This is a separate document, described below in Section III.B.
- **Existing Bay Area Policies** (page 19) – Use this page to describe compelling reasons why your city should re-examine parking policies and how current policies may fail to support Smart Growth and TOD.

D. Implementation - pages 44-51

This section provides 1-2 pages each about the following factors that affect Implementation of Best Practices:

- **Stakeholder Involvement** – Some generic information about engaging community members
- **Parking Information** – Recommendations for properly gathering data useful for setting baseline figures that inform the success of implementation outcomes.
- **Analysis** – A brief description of the Parking Demand Model developed for this effort. Page 47 includes a useful range of parking requirements for a range of community types. The parking standards were aggregate figures observed in Case Study cities reviewed in developing the Toolbox/Handbook. Ideally cities will use the model to see what effects various parking strategies can have on parking demand. Page 49 provides Financial Modeling recommendations needed to fully assess the costs and benefits of implementing new strategies.

- **Best Practices** – Page 50 provides five key pieces of information to ask example jurisdictions for about their implementation experience. After identifying some similar cities who have implemented a strategy you're interested in, call them up and find out how successful they've been by asking for this info.
- **Monitoring** – This page highlights the importance of monitoring the success of parking program implementation and provides an example of how Redwood City codified the need to regularly monitor in order to achieve the ideal parking space availability of 15%.

E. Resource Documents - pages 52-53

This section provides a very brief description of resource documents that are described in greater detail within the Technical Appendices. While most of the documents cited are books that are not available online. The following are a list of references available online.

- For a comprehensive online reference of Transportation Demand Management strategies see the Victoria Transport Policy Institute's TDM Encyclopedia. <http://www.vtpi.org/tdm/>
- EPA's Parking Spaces Community Places: Finding the Balance through Smart Growth Solutions – The EPA developed this guide to demonstrate the significance of parking decisions in development patters, illustrate the environmental, financial and social impact of parking policies, strategies for balancing parking with other community goals, and provide case studies of places that are successfully using these strategies:
<http://www.epa.gov/smartgrowth/pdf/EPAParkingSpaces06.pdf>
- Caltrans TOD Study – The California State Department of Transportation developed a Special Report on Parking and TOD: Challenges and Opportunities which addresses parking for transit oriented development, from their statewide report on key transit oriented development projects and significant issues, see:
<http://transitorienteddevelopment.dot.ca.gov/PDFs/Parking%20and%20TOD%20Report.pdf>
- Parking for Transit Stations – Parking for transit stations needs to address the impacts on transit ridership, congestion and transit revenues, as well as opportunities for sharing, pricing and design. A recent presentation with some useful ideas may be found at:
http://nelsonnygaard.com/ITE_Parking_for_TOD.pdf

3. Technical Appendices

A. Technical Paper – [Existing Bay Area Parking Policies](#) (31 pages)

A [Summary of Existing Parking Policies](#) is provided in a 12 page abbreviated format. The following sections are included in both versions however the tables are referring to the longer version.

1. **Description of national parking guidelines and references.** This includes how each resource is used by cities and comparisons to how they should be used. The review highlights the limitations as well as specializations of each source. Documents covered:
 - ITE's *Parking Generation*,
 - ULI's *Dimensions of Parking*,
 - APA's *Flexible Parking Requirements*,
 - Weant and Levinson and the Eno Foundation's *Parking*,
 - ULI's *Shared Parking*,
 - Don Shoup's *The High Cost of Free Parking* and
 - Victoria Transport Policy Institute's *Parking Solutions: A Comprehensive Menu of Solutions to Parking Problems*.

2. **Inventory of Parking Policies in 15 Bay Area Communities.** The cities represent three area types:
 - low suburban (1,000-5,999 people per square mile),
 - high suburban (6,000-9,999 people per square mile), and
 - Urban (10,000+ people per square mile).
 The inventory includes the following useful **summary tables**:
 - **Table 3 – Residential Multiple-Family Dwelling Minimum Parking Requirements page 18**
 - **Table 4 – Retail and Office Minimum Parking Requirements – page 20**
 - **Table 5 – Cities with Transit Oriented Development Parking Policies – page 27**
3. **Local Parking Programs Pertaining to Infill, TOD and Downtown Development.** Section III of the Existing Policy Inventory (**page 22**) is a discussion of each of the following issues, with examples cited in the following cities:
 - Zoning – FAR’s and Transit Overlay districts – San Mateo
 - Parking Districts and Zones – Central Parking District/Downtown Parking District, Pedestrian Retail Zones, Limited Parking Zones –Walnut Creek
 - Reduced Parking Requirements –El Cerrito
 - In-Lieu Fees – Mountain View
 - Transportation System Management/Transportation Demand Management – San Mateo.
 - Pedestrian and Bicycling Encouragements – Pedestrian amenities around parking lots - Menlo Park and Morgan Hill.
4. **Understanding and Addressing Parking Issues and Concerns (Section IV) – page 28** This section articulates some reasons for pursuing reformed parking standards as well as providing some advice about process and implementation. These include:
 - The need for Community Stakeholders
 - Recognizing that land is a finite resource and that cities should plan accordingly.
 - Recognize that parking problems require economic solutions, not just engineering solutions.
 - The need to tailor parking management strategies by neighborhood type.
 - Work with community leaders
 - The need to have a regional motivation for cities to experiment with new policies.

C. Technical Paper – Best Practices (67 pages)

- The point of this paper is to provide further examples and in depth information about *Parking Toolbox/Handbook* Strategies. Policies are organized into 6 categories which roughly mirror those found in MTC’s Parking Policies Toolkit. The category names are slightly different, but the strategies included in the Toolkit are also covered more substantively. Some of the examples include the full text of the adopted code language with occasional summary tables of policies adopted by various cities. A majority of the examples are not Bay Area examples, but they do serve to show that programs are being implemented throughout the country. The best use of this document is to start with the Toolkit and then determine what topics you need more information on.
- This section is followed by a 2 page Q & A on **What is Parking Management? Page 62.** This can serve as a helpful handout to introduce people to the concept.
- At the end is an exhaustive four page reference list of works cited throughout the document.

- Unfortunately this document doesn't do the best job at explaining *why* the various strategies are determined to be the Best Practice. Occasionally there is reference to specific studies that highlight the documented success of various strategies, but there is relatively little guidance about how to put these strategies together.

4. MTC Toolbox/Handbook Parking Demand Model

This model is an MS Access database that allows the user to input a variety of existing land use conditions and produce an estimated parking demand figure based on current and future development in concert with implementation of various traffic demand management strategies from transit pass subsidies to pricing parking. The files are available on the website and in the CD that comes with the Toolbox/Handbook.

1. The model takes a long time to set up.
2. Contact Valerie Knepper, Transportation Planner at MTC for help with using the model. (510) 817-5824, email: vknepper@mtc.ca.gov.
3. For Great Communities Collaborative Priority and Secondary Sites, please contact Ann Cheng with TALC (510-740-3150x316 or ann@transcoalition.org) if you are interested in using this model to run various land use scenarios to determine what a future parking demand will be.

5. MTC's Parking Seminar and Relevant Presentations

The paper copy of the *Toolbox/Handbook* includes a CD that includes all of the items described below. Additionally it includes Parking Model files, Cruising Memo, and Case Studies on Parking Model output for 6 different cities.

- The **Parking Seminar** portion of the website includes a video of the June 2007 seminar held to train officials Bay Area wide on the components of this Toolbox/Handbook. It also includes powerpoint presentations used in the Seminar. The power points used in the seminar include:
 - "Executive Leadership Overview, Using the Handbook, and Elements of Parking Management Program" by Bill Hurrell, Wilbur Smith Associates [Powerpoint](#) [27MB]
 - "Elements of a Parking Management Program" [Powerpoint](#) [15MB]
 - Of particular interest is the presentation by Redwood City's Redevelopment Manager and Downtown Development Coordinator on their experience implementing new parking strategies that support the walkability and viability of their downtown. Powerpoint: "Experience from Redwood City", Susan Moeller, Redevelopment Manager, and Dan Zack, Downtown Development Coordinator [PowerPoint](#) [28 MB].

6. Additional Recommended Strategies

In addition TALC has developed a few additional tips garnered from other sources. These tips are not explained in more detail in MTC's Toolbox/Handbook.

- Create a timeline of activities for phasing in a complete program. See City of San Buenaventura's [Downtown Specific Plan](#) for a concise example in **Section IX. D.** on **page 11**.
- Many cities need to have a dedicated a Parking or TDM program Manager on staff in order to achieve great results.
- Communities should also consider adopting performance benchmarks such as:
 - reduced vehicle traffic volumes,

- increased pedestrian or bicycle traffic,
- reduced collisions with vehicles,
- reduced fatalities or
- a zero fatality goal.
- These are also known as Multi-modal Levels of Service (see the Complete Streets Policy Fact Sheet for more information).

7. Additional Facts Highlighting the Effectiveness of Various Parking and TDM Policies

Unbundling Parking

- **Unbundling residential parking** can significantly reduce household vehicle ownership and parking demand by as much as 35% depending on the monthly cost of the parking space.¹⁰
- San Francisco housing units with off-street parking bundled into the unit sell for 11-12% more than otherwise similar units without parking.¹¹

Parking Cash-out

- On average, a financial incentive of \$70 per month reduced parking demand by over one-quarter. At the University of Washington a financial incentive of just \$18 per month reduced parking demand by 24%. The financial incentives typically take the form of parking cash-out by employers.¹²
- A study on **parking cash-out** summarized results from seven work sites, estimated a 26% reduction in parking demand.¹³

Free Transit Passes

- **Santa Clara County's ECO Pass program** resulted in a 19% reduction in parking demand.¹⁴
- **Free Transit Passes:** As many case studies illustrate, free transit passes are an extremely effective means to reduce the number of car trips in an area; reductions in car mode share of 4% to 22% have been documented, with an average reduction of 11%.¹⁵
- **Class Pass:** After implementing a class pass (free transit for students), UC Berkeley Transit ridership tripled from 5.6% in 1997 prior to implementing the class pass to 14.1% in 2000.¹⁶

Car-Sharing

- U.S. studies and surveys indicate that between 11% and 26% of carsharing participants sold a personal vehicle, and between 12% and 68% postponed or entirely avoided a car purchase. In the U.S. over the last 10 years, 17 new carsharing organizations were established. Altogether 76,000 members are carsharing with an average of 64 members to one car.¹⁷

Income and Parking Requirements

- **Households that rent their homes** own 28% fewer vehicles than owner occupied units. As a result some cities (such as Larkspur) require less parking for rentals.¹⁸

Importance of Availability versus Price on Parking Demand

- Repeatedly, surveys of downtown shoppers have shown that the *availability* of parking rather than *price* is of prime importance. A recent "intercept" survey of downtown Burlingame, CA visitors were asked which factor made their parking experience less pleasant:
 - The number one response was "difficulty in finding a space"
 - Followed by "chance of getting a ticket"
 - "Need to carry change" was third
 - and the factor that least concerned the respondents was the "cost of parking"

It is interesting to note that Burlingame has the most expensive on-street parking on the Peninsula (\$0.75 per hour) and yet cost was the least troubling factor for most people.¹⁹

Cost of Building Parking Spaces

- **Parking In-lieu One-Time Fee Examples:** Mill Valley - \$6,500; Davis \$8,000; Concord - \$8,500; Berkeley - \$10,000. Per Year Fees: Pasadena - \$134.67²⁰
- **Cost per parking space added** for several recent downtown public parking garages: UCLA - \$21,000; Mountain View (2000) - \$26,000; Walnut Creek (1994) - \$32,400; Palo Alto (2002) - \$50,994; San Jose (2002): \$57,000.²¹

Cities with Parking Benefit Districts: West Hollywood, Santa Cruz, Tucson, San Diego, Ventura, San Francisco and Portland.²²

California Vehicle Code Sections providing legal basis for Setting Demand Responsive Parking Prices (CVC Sec. 200258) and for Creating Parking Benefit Districts or Parking Zones (CVC Section 22508).

8. Examples of Adopted TOD Supportive TDM Strategies

A. Downtown San Leandro Transit Oriented Development Strategy

Adopted May 29, 2007. This recently adopted TOD plan includes a thorough implementation chapter covering TDM strategies. Each category includes a task ID, a priority of 1, 2, or 3 and assignments to city departments responsible for implementing them. The tasks listed below are more innovative and are policies to recommend for station area plans in development.

Streetscape Improvements and Bicycle and Pedestrian Circulation: 13 tasks

- Study traffic for possible street width reductions, street closures, and improved streetscape designs for better connections to transit
- Revising the City's Bicycle and Pedestrian Master Plan to include projects identified in this report

Traffic Strategies: 9 tasks divided between Travel Demand Reduction and Traffic Capacity

- Create a Transportation Management Association where new development would be required to participate and pool resources to provide transit passes, Commuter Check, TransLink or TravelChoice type programs.
- Require new development to charge for parking
- Adopting a Traffic Impact Fee to fund improvements to pedestrian and bicycle connections to transit.
- Amend LOS to include a corridor time travel metric to balance poor operating conditions at some intersections with acceptable average speeds along the length of key corridors.

Parking Strategies: 20 tasks

Commercial and Retail strategies in the BART Area:

- Charge market based parking prices to discourage long-term parking
- Focus on developing shared use parking structures
- Phase down parking requirements from 2.5-3 spaces per 1,000 sf to 2 spaces per 1,000.
- Provide parking exemption to uses 5,000 sf or less.
- Consider developing a parking district to collect in-lieu fees for parking structures.
- Implement parking payment technology that is user friendly and convenient.

Residential

- Areas adjacent to BART reduce parking requirements to 1.0 parking space per unit.
- Maximum parking ratio of 1.5 per unit

- Implement a Residential Parking Permit Program

Overall

- Create a Parking Benefit District that aims for 85% occupancy to prevent cruising for parking. Develop a “Shoupian” model of a market-based pricing structure which varies prices by time of day and location.

B. San Mateo TDM Plan

This concise document adopts policies with accompanying actions, rationales or explanations.

http://www.cityofsanmateo.org/dept/planning/rail_corridor/rail_corridor_plan.html

Transportation Demand Management section of the **Implementation Chapter Ch.7** (8 pgs) and **Technical Appendices A – TDM Measures** (9 pgs). The TDM section of the Implementation Chapter adopts explicit policies whereby the city:

- Establishes a goal of reducing the number of trips in the whole corridor by 25%,
- Creates a Transportation Management Authority that monitors implementation of TDM's,
- Requires studies of trip reduction techniques in addition to traffic studies,
- Requires conditions of approval that require establishing parking minimums and maximums,
- Requires conditions that monitor achievement of projected trip reduction, and
- Requires use of market-based parking pricing if other TDM measures fail to reduce traffic.

Appendix A explains in detail a toolkit of TDM measures that can manage parking demand along the corridor. They also serve as a menu of options to consider in developing Conditions of Approvals for specific projects. Specific strategies described include:

- Non-residential market-rate parking permit systems including a formula for calculating market price of parking
- Employer parking cash-out,
- Market-rate residential parking charges including unbundling parking,
- Transit pass subsidies for residents and employees,
- Car-sharing,
- Residential permit parking,
- Preferred HOV parking and carpool promotion,
- Bicycle support facilities including parking, showers, lockers,
- Participation in the Guaranteed Ride Home Program and
- Employee scheduling that encourages telecommuting, flex-schedules or compressed work week.

This model of TDM planning puts the responsibility of developing a strategy and monitoring success on the individual developers. It is also applied mostly to new development and programs to be implemented by the TMA.

C. The Glendale Downtown Mobility Study, Adopted March 6, 2007. Chapter 5 Parking Management (57 pages), Chapter 6 Transportation Demand Management (43 pages).

http://www.ci.glendale.ca.us/planning/mobility_plan.asp

This link provides a short description of the plan and links to download the entire plan, study appendices and a power point presentation on the plan to the City Council from March 6, 2007.

The Downtown Mobility Study was created as a requirement of the Downtown Specific Plan adopted a year earlier. This is effectively a multi-modal approach to ensure that future downtown growth will result in improved transit, pedestrian, bicycle conditions in addition to vehicle traffic conditions. Unlike the San Mateo Corridor TDM policies, this program applies throughout the downtown and not just the transit zone. These chapters provide a wealth of information providing direct evidence in support of implementing TDM strategies. The Mobility Study also includes a funding strategy and implementation timeline in Chapters 7 and 8 of the plan, which can be found online.

Chapter 5 Parking Management Recommendations include:

- a. Create a Park Once district in the downtown that manages all public parking as a whole.
- b. Implement parking management for on and off-street parking, using demand responsive pricing to achieve 85% occupancy.
- c. Implement a multi-modal transportation and parking way finding system with info on parking location, pricing and real-time parking occupancy.
- d. Install multi-space pay stations utilizing the latest technologies to improve downtown customer friendliness, revenue management and occupancy parking
- e. Create a Downtown Transportation and Parking Management District and hire a staff person if needed.
- f. Dedicate parking revenue towards transportation and streetscape improvements, capacity enhancement, and both transit and pedestrian improvements.
- g. Authorize the DTMD manager to adjust downtown parking rates to achieve 85% occupancy.
- h. Require a condition of approval for new downtown development that all non-residential parking be made available to public when not needed for primary use and shared with other uses when possible.
- i. Consider implementing a traffic congestion impact fee.
- j. Revise the zoning code to legalize more efficient parking arrangements in new downtown development and adaptive reuse projects in order to facilitate better ground floor urban design.
- k. Expand existing provisions in the zoning code that allow new downtown development and adaptive reuse projects to go below existing parking minimums by right under very specific conditions.
- l. If after implementing recommendations of the Downtown Mobility Study the parking demand is not met, build new public shared parking as needed.

Chapter 6 TDM Recommendations include:

- a. Adopt a new TDM ordinance including mandatory TDM programs.

- b. Require transit passes to be provided to all downtown residents and employees as part of the new TDM ordinance.
- c. Require parking cash-out for all employers (not just those with over 50 employees).
- d. Revise development standards to include bicycle support facility requirements.
- e. Encourage the establishment of a car-sharing pod.
- f. Establish a Downtown Transportation Resource Center.
- g. Strengthen the existing Transportation Management Associates as the body that manages coordination of TDM.
- h. Monitor effectiveness of TDM programs.

Both of these chapters provide a wealth of data specific to Glendale illustrating benefits to be realized and trip reduction effectiveness data from studies of similar TDM measures implemented throughout the country.

D. City of San Buenaventura (Ventura) Downtown Specific Plan – Chapter 5 Implementation Programs includes the Downtown Parking Management Program (15 pages)

http://www.cityofventura.net/depts/comm_dev/downtownplan/index.asp

This link provides a description of the plan and link to the entire plan with additional links to meeting information that took place to date on the process.

This plan outlines policies to be applied to the entire downtown. The adopted Downtown Parking Management Program lays out a specific and concise implementation timeline allowing the downtown to adapt to new parking management strategies over a 5-10 year period with eventual phase out of parking requirements altogether. The adopted timeline includes the following TDM strategies that include parking management as a key component:

To be implemented in conjunction with the adoption of the DTSP (March 2007)

- a. Reduce minimum parking requirements to levels that reflect actual demand in downtown.
- b. Require unbundling of parking costs.

To be implemented 2007-2008

- c. Hire new parking management staff.
- d. Complete a study of existing parking supply and demand for all public on and off street parking, private lots and structures in the plan area.
- e. Determine where future parking supply should go, reserve potential locations, and begin planning for a new structure where demand is anticipated to be greatest.

To be implemented 2008-2011

- f. Form Commercial Parking Benefit District that dedicates revenues to landscaping, trash receptacles and collection, street cleaning, pedestrian lighting, transit and bicycle infrastructure and management of downtown transportation amenities and infrastructure.
- g. Implement a paid parking program to achieve Downtown revitalization goals.
- h. Establish a Residential Parking Benefit District to prevent spillover.

- i. Require all employers to provide parking “cash-out”.
- j. Perform on-going monitoring.

To be implemented 2011 and Beyond

- k. Use net revenues from Commercial Parking Benefit District to pay for long term demand management, incentives and street improvements such as universal transit passes for all residents and employees within the district and a visible car-sharing pod in the downtown.
- l. Construct additional parking supply when peak parking demand exceeds 80% in the downtown core.
- m. Through Development Code revisions, continue to reduce parking requirements in a phased approach as parking supply balances with parking demand.
- n. Once parking resources are shared to meet demand and future supply needs are funded, remove minimum parking requirements.
- o. Continue on-going monitoring, supply and demand analyses.

References

¹ Metropolitan Transportation Commission. 2006. *New Places, New Choices: Transit Oriented Development in the San Francisco Bay Area*.

² Ibid

³ Ewing, Read and Shi-Chiang, Li. 1998. *A Vehicle Ownership Model for FSUTMS*. Washington, DC: National Research Council, Transportation Research Board.

⁴ Russo, Ryan. *Rethinking Residential Parking: Costs, Needs and Solutions*. Nonprofit Housing Association of Northern California. 2000.

⁵ Cervero, Robert. 1996. *California's Transit Village Movement*. Journal of Public Transportation. Volume 1, number one. Center for Urban Transportation Research.

⁶ Cervero, Robert and Michael Duncan. 2002. *Residential Self-Selection and Real Communities: a Nested Logit Analysis*. University of California transportation center. Working paper, Berkeley, CA.

⁷ Metropolitan Transportation Commission. Bay Area Travel Survey.

⁸ Jia, Wenya and Martin Wachs. 1998. *Parking Requirements and Housing Affordability: a Case Study of San Francisco*. University of California Transportation Center. Paper#380.

⁹ Shoup, Donald. 2006. *The High Cost of Free Parking*. American Planning Association. Chicago, IL.

¹⁰ City of San Buenaventura. 2007. *Downtown Parking Management Program. Downtown Specific Plan*. Page V-13.

¹¹ Jia, Wenya and Martin Wachs. 1998. *Parking Requirements and Housing Affordability: a Case Study of San Francisco*. University of California Transportation Center. Paper#380.

¹² Shoup, Donald and Richard W. Willson. 1992. "Employer-Paid Parking: The Problem and Proposed Solutions," *Transportation Quarterly*, Vol. 46, No. 2, 169-192.

¹³ Shoup, Donald. February 1992. *Cashing out Employer Paid for Parking*. Federal Transit Administration. Washington, DC.

¹⁴ City of San Buenaventura. 2007. *Downtown Parking Management Program. Downtown Specific Plan*. Page V-16.

¹⁵ City of San Buenaventura. 2007. *Downtown Parking Management Program. Downtown Specific Plan*. Page V-16.

¹⁶ Nuwersoo, Cornelius. 2005. *Discounting Transit Passes*. Access. Berkeley, CA.

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- ¹⁸ Nelson\Nygaard. 2004. Marin County Parking Standards. Marin County.
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- ²⁰ City of Glendale. 2006. Glendale Downtown Mobility Study. Page 5-47.
- ²¹ City of Glendale. 2006. Glendale Downtown Mobility Study. Page 5-58.
- ²² City of Glendale. 2006. Glendale Downtown Mobility Study. Page 5-54.