



**AN OVERVIEW OF COMMON PARKING
ISSUES, PARKING MANAGEMENT
OPTIONS, AND CREATIVE SOLUTIONS**

**PREPARED FOR:
CITY OF PASADENA
DEPARTMENT OF TRANSPORTATION**

AUGUST 2003

Banerjee & Associates

AN OVERVIEW OF COMMON PARKING ISSUES, PARKING MANAGEMENT OPTIONS, AND CREATIVE SOLUTIONS

Prepared for
City of Pasadena
Department of Transportation

Report prepared by
Banerjee & Associates

Parking is a key component of Pasadena's transportation program. The City has addressed parking problems associated with educational institutions, entertainment uses, religious institutions, commercial activities, special events, and most recently the opening of Gold Line Light Rail service. Experience with such programs underscores the need for the City to foster ongoing coordination and cooperation among businesses, institutions, residents, and governmental agencies in order to address parking needs in a collaborative manner.

The Department of Transportation is conducting a more focused review of parking management programs including options for use in residential neighborhoods. The objective of this review is to create, in collaboration with the community, a toolbox of parking management solutions that can be used throughout the City to address parking problems. This information will be incorporated into a forthcoming community handbook on the City's Neighborhood Traffic Management Program. This briefing material is intended to support and encourage public dialogue on parking solutions.

COMMON PARKING ISSUES

With the high percentage of vehicle ownership in the United States, parking has become a conflicting and confusing situation for a number of people.

Whether at an airport, bus stations and shopping centers, problems with parking are an everyday occurrence. Lack of accessible parking can hurt local business and decrease the quality of life for residents. Due to the importance of parking, cities study and analyze parking programs and performance on an ongoing basis. The following list identifies the kinds of problems that typically occur in a community.

- Inadequate information for motorists** on parking availability and price. Motorists are likely to be frustrated if they expected abundant and free parking but find limited or expensive parking, or if they must spend excessive time searching for a parking space.
- Inefficient use of existing parking capacity.** Local zoning ordinances, building codes, and other development practices can result in an oversupply of parking spaces and an inefficient use of existing parking.
- Excessive automobile use.** Automobile dependency imposes many costs on society. User costs include reduced travel choices, increased vehicle and residential parking costs, and increased accident risk. External costs include increased road and parking facility costs, congestion, uncompensated accident damages, environmental degradation, negative land use impacts, and reduced mobility for non-drivers.
- Economic, environmental and aesthetic impacts of parking facilities.** Businesses ultimately bear the costs of unpriced parking, directly or through taxes that they must pass on to customers. Generous parking requirements can constrain businesses in other ways.
- Parking spaces that are an inconvenience** to nearby residents and businesses. Businesses may experience difficulty in retaining customers and residences may have a problem finding parking close to their homes.
- Demand for handicapped parking spaces.** These spaces are generally located, in both garages and surface lots, as close to access ramps and curb cuts as possible.
- Impact of additional parking spaces** on area traffic and local residents.
- Existing, severe, spillover problems.** When all of the parking demand generated by a certain use (or group of uses) is not being accommodated on the site of those uses or within the adjacent on-street spaces.
- Out-of-town parking.** The majority of vehicles parked in a residential area are from outside of the neighborhood.

- Loading and unloading zones.** Scarce parking for commercial vehicles to load or unload will cause them to block travel lanes.
- Inconvenient parking options.** Parking within a reasonable walking distance (3 blocks) is hard to find during specific times of the day.
- Inadequate pricing methods.** Many require motorists to prepay based on the maximum amount of time that they may be parked and the price structure used at a particular parking space. As a result, motorists often end up paying for time they don't actually use, and if they guess wrong they face a fine.
- Confusing parking policies.** Regulations and fees may apply at certain times but not others. Parking subsidies may be provided to some users but not others.
- Difficulties with parking regulation and pricing.** This problem can cause problems, including traffic congestion as motorist cruise for parking or stop in a traffic lane to wait for a space, and parking congestion in nearby areas.
- Lack of sufficient parking at event site.** Special events can potentially disrupt traffic flow and require crowd management. Each event can generate its own unique transportation issues.
- Low parking turnover rate.** This can occur when cars are parked in the same space for at least 4 hours (on average).

PARKING MANAGEMENT OPTIONS

Although each neighborhood is unique, several parking issues and potential solutions are the same. The challenge is to provide adequate parking to meet a community's needs for mobility and economic strength, to encourage people to use other modes of travel, and to minimize the impacts of parking on neighborhood character.

The following recommendations outline several parking solutions to consider in order to create a parking management system capable of solving existing and future problems.

- ❑ **Prioritizing funds.** Devoting land and funds to automobile parking often reduces the resources available to support other non-auto modes. As a result, policies that increase parking supply tend to reduce overall transportation choices.
- ❑ **Consider long-term commuter parking needs versus short-term.** A functional and financial analysis of constructing a parking garage or long term surface lot would yield important information for the area as it plans for new development rather than solving the existing condition.
- ❑ **Improve information for motorists.** Create signs, brochures and other information resources indicating parking availability and price.
- ❑ **Reduce automobile dependency and encourage transportation alternatives.** Improve availability and accessibility of public transport including bus stops and discounted bus fares.
- ❑ **Increase the range of parking convenience and price levels available to consumers.** Strengthen parking enforcement by developing more convenient payment and time options.
- ❑ **Share parking facilities.** Parking can be shared among different business in an area to take advantage of different peak periods. Encourage businesses to share parking. For example, businesses with no night-time hours can make their parking available for those that have night-time hours.
- ❑ **Park once and walk.** Focused on centralized, shared parking that will create a “park once, then walk” environment. This is the key in promoting businesses in cities, particularly within central business districts which allows multiple users to reach multiple destinations.
- ❑ **Mixed-use parking.** Require shared parking in mixed-use developments and in mixed use areas, since peak demand periods occur at different times. For instance, churches often address their parking needs by sharing parking with nearby commercial establishments since most churches co-exist with single-family residences and

commercial structures. This works well because religious and commercial uses typically have peak parking at different times.

- ❑ **Explore opportunities to make greater use of remote parking locations and shuttle services.** The objective is to have a bus system that would transport a group of people from a remote parking structure to their destination. A great example of this is the partnership between a zoo and a shopping mall. During the mall's peak shopping seasons, shoppers have the option to park their cars at the zoo and take the shuttle provided by the shopping mall to the stores.
- ❑ **Provide shuttle services to parking facilities.** In some situations (airports, large entertainment centers, and large commercial centers), shuttle buses may allow longer distances between parking facilities and destinations.
- ❑ **Advertise shuttle services.** It is important to publicizing shuttle services by posting on the Internet, on other nearby community buses and through media targeted to the user groups.
- ❑ **Foster coordination and cooperation with businesses, residents, and other governmental agencies to address parking needs.** Obtain participation from businesses and parking management companies with the validation approach where people generally receive either a reduced rate for parking or free parking for a specified time. This option is attractive when the demand is in off-peak parking hours.
- ❑ **Address spillover parking problems.** This difficulty can be addressed by pricing, regulation, and enforcement in areas that experience such problems and compensation to residents who bear negative impacts. In some instances, good neighbor efforts are used. For example, in some communities, residents near high schools and colleges are given free tickets to sport events to compensate for spillover parking problems that occur during such events.
- ❑ **Preferential residential parking zones.** To ensure those residents and their visitors will have a place to park in certain neighborhoods, cities may permit the establishment of a preferential parking zone. This limits the length of time vehicles may be parked on-street, unless a valid residential permit is displayed.
- ❑ **Promote preferential parking for carpools and vanpools.** This provides an inexpensive way to encourage High Occupancy Vehicle commuting and it can reduce the need for employee parking.
- ❑ **Residential parking permit ordinance.** Residential neighborhoods with documented problems from parking that "spill-over" nearby non-residential activity centers. The residential permit parking ordinance prohibits on-street parking generally for more than two or three hours during varying time periods. The City posts signs in each block of the parking districts describing the time limits and hours of enforcement. Vehicles displaying the appropriate parking permits are exempt from these restrictions.

- ❑ **Manage residential on-street parking.** This can be applied by setting permit prices to reflect demand and available curb space, or limit the number of new residential parking permits.
- ❑ **General parking restrictions.** No permits are issued. This works well for spillovers. No permits are issued. All vehicles, including residential are not allowed to park on the street.
- ❑ **Zone system.** An example of this approach is to limit parking to 2 hours. It established to discourage “sleeper parking” a common practice of downtown employees who shuffled their cars between 2 hour spaces and to free up parking for visitors.
- ❑ **Valet parking.** The benefit of providing valet parking is to improve business by reducing the number of cars driving around looking for a space. Also up to twice as many cars can fit into a lot when valet services are used.
- ❑ **Establish Traffic Management Associations.** This group offers parking brokerage services so that facilities with excess parking capacity can seek, lease or trade it to others. This allows all building owners to benefit from flexible parking requirements, not just developers of new facilities.
- ❑ **Clustering parking.** This layout can reduce the number of driveways onto arterials and can further improve traffic flow and safety, and create more accessible land use patterns.
- ❑ **Transit Oriented Districts.** Parking policies that encourage higher-density, clustered development create more accessible land use, which supports walking, cycling and public transit use. Some companies offer bicycle parking showers, financial incentives to use transit, and provides a mid-day shuttle for their employees.
- ❑ **Location of parking lots.** Locating buildings close to the street, with parking facilities behind, can help create a more accessible, pedestrian-friendly streetscape. Parking facilities located in front of a building tend to reduce pedestrian access compared with buildings located close to the street with parking located in the back.
- ❑ **Seek a balance between providing sufficient parking, minimizing the amount of land used for parking lots and improving appearance.** Many parking lots designs result in far more spaces than actually required. By implementing a “green” parking lot concept, parking guidelines will set maximums for the number of parking lots created, minimizing the dimensions of parking lot spaces. Utilizing alternative pavers in overflow parking areas can improve the visual aspects of parking lots particularly near residential areas.
- ❑ **Parking space comparison.** A larger number of small parking spaces are more useful and attractive than fewer, larger parking facilities.

- ❑ **Encourage use of intelligent parking systems.** Advanced Parking Systems (APS) obtain information about available parking spaces, process it and then present it to drivers by means of variable message signs. APS is used in two ways: to guide drivers in congested areas to the nearest parking facility with empty parking spaces and to guide drivers within parking facilities to empty spaces.
- ❑ **Locate parking.** This theory takes a look at strategic intercept points to minimize driving into and through central areas of the community.
- ❑ **Ensure sufficient handicapped parking to meet existing needs and regulations.** Parking facilities that reflect Universal Design principles with features that make parking facilities better to accommodate people with special needs, with handicapped parking spaces and circulation paths designed for wheelchairs can better accommodate people with disabilities.
- ❑ **“Cashing Out” the value of parking.** Encourage employers to participate in this program to fully or partially subsidize parking offer workers the option to give up their parking space in exchange for its monetary value.
- ❑ **Transit-rich area.** In walkable, transit-rich neighborhoods, eliminate minimum zoning requirements for parking to encourage non-auto travel.
- ❑ **Paid parking.** Some attractive, livable cities have very limited and expensive parking. It is a costly and inconvenient to drive and mobility is achieved through convenient and ubiquitous transit.
- ❑ **Pricing strategies.** This approach discourages long-term use of off-street parking in order to make spaces available for customers of a business district.
- ❑ **Meter options.** Use parking meters to optimize turnover of spaces for priority users. Raise meter prices to reflect the market demand. Charge for curb space during peak hours, e.g. night time entertainment districts would require meter charges during peak night time hours.
- ❑ **Load/unload zones.** For businesses with quick turnarounds (banks, dry cleaners) and delivery needs. Usually these zones have a 30-minute time limit.
- ❑ **Replace surface parking lots with subterranean ones.** More costly but they free up land and convenient and close-in parking.
- ❑ **Zoning requirements for new development.** Use zoning as a tool to encourage new development to be more pedestrian friendly. Neighborhood commercial zones define pedestrian-oriented shopping or mixed-use areas, and discourage the placement of parking between the building and the street.
- ❑ **Modify the zoning requirements.** Most codes require developers and employers to provide a certain number of parking spaces for every built square foot of space. Local

government can amend parking requirements to limit, rather than require a minimum number of parking spaces per floor area or employee.

- ❑ **Annual review.** Periodic evaluation of parking related ordinances should occur to align current parking practices and enforcement with City policy.
- ❑ **Parking enforcement coordination.** Coordinate parking enforcement activities among all City Departments including Transportation, Police, and Public Works
- ❑ **On-street parking.** Useful resource in business districts or on adjacent streets in residential areas where adequate parking exists.
 - **Signed parking restrictions.** Encourage short-term parking and turnover, and loading/unloading. Changes are generally at the request of adjacent business and property owners.
 - **Metered parking.** Mainly used in commercial areas with the support of business and property owners. Meters encourage short-term parking access and availability, and turnover that businesses value.
 - **Angled parking.** Can increase overall supply of on-street parking, if the street is wide enough.
- ❑ **Off-street parking.** The amount of parking for commercial uses is based on the type of use and assumptions about the parking demand it generates (short-term, handicapped, carpool/vanpool spaces).
 - These proposals should be applied fairly and do not single out certain property owners.
 - Do not make development regulations unduly complex or substantially raise the cost of development or housing.

Although parking can become a controversial issue for many people, resolution of some issues can be helped through the application of clear and concise rules, adequate analysis, and provision of information to all interested parties.

CREATIVE PARKING SOLUTIONS

When parking conditions occur, communities quickly contact City Hall for a solution. Rather than relying just on current policies and enforcement, some communities throughout the country have used the following set of ideas to discourage spillover traffic and reduce the amount of required parking spaces.

1. St. Alban's church has limited off-street car parking facilities for people attending the church, increased by free street parking (one hour limit between 8:30 and 18:00, Mon-Fri, and 8:30 to 12:30 Saturdays). St. Alban's has no off-street parking but adequate parking along the residential Downing Street. Parishioners are encouraged to carpool. Those who need transport assistance, or who can provide assistance to others are encouraged to contact the Parish Office. These services are often advertised at the service, brochures and the Internet.
2. The City of Dallas Library and Kroger Company entered into an agreement where Kroger Company construct a new grocery store on property owned by joint-use parking lot on adjacent Library and Kroger property. In return for parking, Kroger designed and constructed a new library, including site parking, lighting and landscaping and contributed \$175,000 for a temporary operate Library services during the construction period. The shared parking arrangement benefits the Library and Kroger. The grocery attracts library users and vice versa. Library patronage has increased significantly.
3. The Downtown Tampa Partnership Elementary School has an innovative public-private partnership plan. The Hillsborough County Public School System entered into a lease with the First Presbyterian Church to house a K-5th grade elementary school. This partnership between the private and public sectors has encouraged increased parental involvement and has helped alleviate overcrowding in neighborhood schools.
4. At ParkingSearch.com, thousands of unique visitors at this website from across the nation look for parking to rent or buy each week. This website establishes TMA Associations that offer parking brokerage services so that facilities with excess parking capacity can sell, lease or trade it to others. This allows all building owners to benefit from flexible parking requirements, not just developers of new facilities.
5. Most churches in Delaware are paying for discount parking passes before noon on Sundays at the state Park and Ride lot outside the small towns. Churchgoers ride the DART First State bus into downtown from there.
6. At the Padri Restaurant in Aguora Road, business is happening on Friday and Saturday nights with no place for customers to park their cars. The owner pays about \$1,000 a month out of his pocket for the valet service, which is free for the customers. This helps to prevent people from parking in the shopping center lot located next to the restaurant.

7. Split-user or shared parking could create more spaces during peak demand hours for a secondary user, which would occur during non-peak primary user hours. For example, in Eagle Hill, the East Boston High School parking lot is generally filled during the day and empty at night, which is the time when nearby businesses and residents could occupy some of the spaces until the morning.
8. Brigham Young University created a master plan which uses pedestrian-oriented residential development patterns mixed with day-to-day commercial needs to entice high levels of walking and transit use. The series of innovative park blocks is designed to provide Provo with outstanding public space that simultaneously encourage walking and discourage driving.
9. At the St. Mary Orthodox Church in Massachusetts, instructions to park on designated streets are provided to parishioners. Arrangements have also been made for use of a parking lot two blocks away however parishioners are told that this lot is only available on Sundays since it is reserved for employees of several neighborhood business during weekdays.
10. The University of California, Pomona came up with alternative ideas in solving the parking problem. They designated certain lots for upperclassmen while lesser-used lots farther away could be assigned to freshmen and sophomores. This sort of program would require the university to issue different versions of the parking permit that are only valid for certain lots.
11. Cal Poly's other suggestion was to offer more classes at night. Most parking lots are empty after four in the afternoon and by providing more classes during that period of time would ease traffic and parking problems and it would also decrease the amount of time that students spend hunting for a space.
12. After receiving complaints from customers who have no place to park, and from neighboring merchants who say these customers are actually parking in their lots, Willow Street Pizza's parking lot will connect with the lot behind Blaine's Lighting, providing customers with an additional 16 spots to park their cars. In addition, Willow Glen Billiards and Brew rely on a different solution--a valet parking service Thursday through Saturday nights from 7 p.m. to midnight. Both solutions are meant to better manage customers while keeping patrons out of other businesses' parking lots.
13. The Burke Presbyterian Church informs parishioners through the Internet and in brochures that they should park in a designated lot, and spillover parking is accommodated on a designated street. An Oxford Church in Mississippi found that most churches co-exist with single-family residences and commercial structures. This works well because parking is shared. Religious and commercial uses are good candidates to share parking because they typically have opposite peak parking times.

14. In order to eliminate spillover parking, some communities are encouraging recreational and leisure facilities to share parking areas with appropriate nearby facilities. The partnership that Glendale Galleria has with the Los Angeles Zoo's parking lot during the peak shopping seasons is a great example of this concept. Shoppers park in the Zoo lot and the Galleria provided a shuttle to the mall.
15. Harvard Associates has joined Zipcar, the regional car-by-the-hour service that suits people who only need cars for occasional trips or errands, for just \$20 with no deposit. Carpoolers get reduce-rate preferential parking on campus, and Harvard's first vanpool shuttle thrifty commuters from Southern New Hampshire to Cambridge, where their van receives free preferential parking. Even bicycles will reap benefits from changes in parking which will add 70 covered spots for bicycles.
16. Tenants are urging their building managers to provide indoor bicycle parking. Traveling by bicycle in New York City, the surrounding suburbs, and Long Island, is convenient, inexpensive, non-polluting, and a healthy way to get around. With secure bicycle parking, buildings are more attractive and accessible to those traveling by bicycle.
17. The schoolyard at the Kennedy School near Day Square is a potential candidate for renovations under the City's Boston Schoolyards Initiative. As part of such renovations. One option under consideration s reorienting the access to parking so that its main egress would allow for shared parking with nearby businesses during evening hours.
18. The town of Brookline has managed to retain the traditional neighborhoods and town-like quality which have long since disappeared from other suburbs. The layout of the town supports several neighborhood centers, a fine school system and good public transportation, all within walking distance of most residences. Brookline's walkable nature serves to increase the mobility of people, particularly children and elderly, who would otherwise have difficulty getting around town without a car.
19. Planning for growth is a continuous ministry at the Landmark Church. For example, the church leadership had considered a temporary shuttle service both before and after church from the park's farthest parking lot to the church. The decision has also been made to implement two shuttle services this fall with adequate time between services to avoid traffic jams.
20. Stanford University is required to develop an event traffic management plan. As part of this plan, public notification of large events will be improved including publication in at least two newspapers and via a special events telephone hotline and website.
21. When the demand for parking exceeds the supply of spaces, the strategy is to allocate priority for different parking purposes based upon the adjoining land use activity. In Garden City, the residential areas parking priority is proposed in the following order: Residential car parking; high occupancy vehicles, in particular buses; visitor car parking; parking for people with disabilities; loading zones and commuter parking.

22. Existing parking lots could be enhanced and/or enlarged and made more welcoming to attract more users off the street. In some instances existing parking can be redesigned to support new commercial activities.
23. For the residents of San Francisco, minimum parking requirements have proven to be an obstacle to affordable housing and transit-oriented development. To remedy this situation, city planners have proposed eliminating the minimum parking requirements for developments close to highly used transit areas and other specific institutions. Maximum parking standards would be instituted varying from one space per unit in less developed areas of the city.
24. To ensure the success of maximum parking standards, Portland established advisory committees with bankers, environmentalist, developers, real estate brokers and other business interests along with city officials. In Cambridge, city legislation encouraged developers to find ways of reducing traffic by providing less parking rather than lose space.
25. The Columbia Pike has a Form Based Code which is designed to create a pedestrian oriented development that will make Columbia Pike a pleasant walking experience. The codes will foster a vital “main street” through a lively mix of shopfronts, sidewalk cafes, and other commercial uses at street level, overlooked by canopy shade trees and upper story residences and offices. The parking plan includes a focus on centralized, shared parking that will create a park once then walk environment.

NOTES