City of Berkeley

Value-Priced Parking and Transit Program:

Integrating Parking and Transit Pricing with
Real-time Parking Information

Submitted to:
Federal Highway Administration Value Pricing Pilot Program

Submitted by:
City of Berkeley, California

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City of Berkeley VPPT Program

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I. Project Summary

The City of Berkeley, California is pleased to submit this grant application to the FHWA Value Pricing Pilot Program to support critical elements of a coordinated program to relieve traffic congestion and increase safety in Berkeley through parking and transportation demand management.

The overall project, referred to as the Berkeley Value-Priced Parking and Transit (VPPT) Program, involves:

- variable-pricing of parking in downtown Berkeley;
- establishment of a parking benefits district-type program, earmarking a portion of area parking revenue on area improvements;
- a Parking Guidance System (PGS) serving the downtown and Telegraph/Southside areas, providing real-time parking availability information on dynamic wayfaring signage and the regional traveler information system;
- an advanced technology parking monitoring system;
- improved parking-related development policies and programs; and
- Transportation Demand Management programs, including an employer-based Universal Transit Pass program.

The City is requesting a $1,500,000 FHWA Value Pricing Pilot Program grant to support public communication, provide the required technology and infrastructure, enable program implementation, and ensure rigorous evaluation of this innovative program.

With federal assistance, the VPPT Program will:

- use value-pricing principles to set and adjust on-street parking prices,
- improve coordination between on-street and off-street parking prices to meet operational and policy goals,
- provide dynamic wayfaring guidance and traveler information to available parking,
- enhance area Transportation Demand Management efforts, and
- develop a downtown Berkeley employer-based Universal Transit Pass.

Extensive groundwork has been done to date to see the value pricing project through to implementation. As described in the application, numerous stakeholder and public meetings have been held in which strong support has been expressed for the value pricing of curbside parking. In addition, the city recently installed Pay and Display parking kiosks on the primary street in downtown. The new meters facilitate traveler payment and allow the city to make changes in the rate structure as needed.

Finally, the City, the University of California, Berkeley, and the Metropolitan Transportation Commission have conducted extensive parking studies that document downtown traveler behavior, demographic characteristics, and perceptions about parking. These studies also provide detailed data related to parking supply and usage that also will used to establish some of the baseline information needed for program monitoring and evaluation.
VPPT’s Support of Federal Goals and Programs

The VPPT Program contains several key elements that support the USDOT’s Transportation Congestion Initiative including operational testing and evaluation of innovative uses of technology, demand management pricing strategies specifically through value pricing of on-street parking, and parking management tied to transit service.

With respect to operational and technology-based improvements, the City of Berkeley will install and operate wireless dynamic message signs connected to off-street parking availability sensors as well as on-street parking sensors in partnership with private sector vendor(s). In addition, accurate parking information will be made available for the first time to the public on wayfaring signage, the city’s website, and through “511” — the region’s advanced web- and telephone-accessible traveler information system. In the future, on-street data could be combined with the off-street data to provide a comprehensive, real-time inventory of available parking. In addition, the project may later include the distribution of universal transit pass ‘smart’ cards to area employees and residents.

As the VPPT meets the objectives of several federal programs, the City of Berkeley also has submitted proposals to the FHWA’s Intelligent Transportation System - Operation Testing to Mitigate Congestion and the Transportation and Community System Preservation programs. These applications support additional elements within the VPPT: a dynamic Parking Guidance System (PGS) and on-street wireless parking sensors. In addition, the City is collaborating with the San Francisco Bay Area Metropolitan Transportation Commission’s Urban Partners proposal to FHWA.

Lastly, the VPPT also could be considered as a candidate for the non-toll project funding in SAFETEA because it incorporates parking pricing, the unbundling parking costs from new residential development, and carsharing.

Application Overview

This value pricing application contains five sections to facilitate federal interagency committee review and consideration:

1) Program background checklist
2) Transportation and land use in downtown Berkeley
3) Program goals and details
4) Additional elements: project timeline, revenue/expenditure plan, public involvement plan
5) Appendices, which include letters of support, the monitoring and evaluation plan, the financial plan and other pertinent information

We look forward to federal review and feedback and refining our project to best address federal, regional and local goals. Thank you for this exciting opportunity.
II. Program Background Checklist

This section provides information about the Berkeley VPPT Program’s principal contact, lead agency, project partners, and other details as requested in the federal register notice.

✓  **Principal Contact**

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✓  **Congressional District**

This project will be implemented within the Ninth Congressional District of California.

✓  **Lead Agency and Project Partners**

The **City of Berkeley** in Northern California is the lead applicant to the federal value pricing program. Berkeley was incorporated in 1878, and is home to some 104,000 residents, some 70,000 jobs, a diverse economic base, institutions, and world-renown educational, cultural and culinary institutions.

Other key project partners include:

- **The Downtown Berkeley Association** is a private, non-profit Business Improvement District representing over 800 downtown businesses, non-profits, financial institutions, and property owners since 1996. The Downtown Berkeley Association (DBA) administered the California Department of Commerce’s Urban Main Street Pilot Program for downtown Berkeley beginning in 1990. Additional information about DBA may be found at www.downtownberkeley.org

  The DBA is actively supporting the Berkeley VPPT Program (See attached Letter of Support.) DBA is an active force in local parking and transit policy, and has developed valuable parking and transit information for the area. DBA has recently become actively engaged in the development of a proposed Downtown Berkeley Parking Benefits District, and is currently involved in feasibility research focused on legal and structural issues.

- **The University of California Transportation Center (UCTC)** includes engineering, economics, urban planning, and management expertise, and is sponsored by the U.S. Department of Transportation and the California Department of Transportation. UCTC faculty and staff will provide research and program and evaluation design expertise to the VPPT Program. Elizabeth Deakin, UCTC Director and professor of City & Regional Planning at UC Berkeley, and Donald Shoup, Professor of the Department of Urban Planning at UC Berkeley, have provided support to the project.
Planning at UCLA will oversee the monitoring and evaluation research design and analysis (see Appendix B).

✓ **Lead public agency for operating, maintaining, & enforcement**

The City of Berkeley will be the primary public agency responsible for operating, maintaining and enforcing the Berkeley VPPT Program. The Transportation Division of the City’s Department of Public Works will oversee the project. The Division is in charge of multi-modal transportation planning efforts, on- and off-street parking management, TDM programs and policies, carsharing, and the City’s Universal Transit Pass program. Parking enforcement is the responsibility of the Berkeley Police Department.

✓ **Nature of application related to funding, tolling authority**

This application is requesting funding assistance only. Federal tolling authority is not necessary for this project. The city will be providing a 20% non-federal match to any federal funds awarded.

✓ **Urban Program Agreement Potential**

The City of Berkeley is collaborating with the San Francisco Bay Area Metropolitan Transportation Commission’s application to be designated as an Urban Partner. The City supports MTC’s application; regional collaboration provided by MTC could offer critical operational advantages. For example, through the MTC collaboration to date, this project’s proposed real-time parking information will be made available on MTC’s 511 system, the region’s advanced web- and telephone-accessible traveler information system. MTC’s lead role in the development of the Translink smart card also creates a potential within Urban Partner activities for deployment of smart card technology that can pay both parking and transit expenses. Finally, an Urban Partners designation would support valuable information sharing and collaboration between the region’s growing numbers of innovative parking projects.

In the event that MTC is not awarded Urban Partner designation, the City of Berkeley is willing to be a designated a participant in the Urban Partner Program.

✓ **Federal, State and local legal and administrative requirements**

The City of Berkeley is currently a federal-aid recipient. It will meet all federal, state and local legal, environmental, and administrative requirements for project implementation. As this project primarily focuses on adjusting parking prices and minor infrastructure changes, the city envisions streamlined administrative and environmental procedures.

✓ **Transportation Facilities Involved**

The facilities covered in this project are on-street curb parking under the jurisdiction of the City of Berkeley, and off-street parking facilities operated by public and private agencies. This project does not involve an Interstate facility.
III. Transportation and Land Use in Downtown Berkeley

Downtown Berkeley today contains more than 800 businesses, local government offices, as well as Berkeley City College, the 3,000-student Berkeley High School, and numerous entertainment venues. Downtown Berkeley is also adjacent to the University of California, Berkeley main campus which currently has over 32,000 students, 13,000 employees, and 1,200 visitors daily (see Figure 3-1). The long-range planned growth of the University will result in a 5% increase in the student population and a 22% increase in staff and faculty.

The City of Berkeley has enacted numerous policies and programs to enable transit-oriented development downtown and support excellent transit, bicycling and walking infrastructure. In recent years, the city has experienced a surge in high-density residential, cultural and commercial development in Berkeley’s downtown.

This growth is transforming the area into a vital and dense urban area where large numbers of residents and visitors use transit, bicycle and walk. However, there is also a widespread public perception of congestion and parking shortages in the area. Curbside parking is oversubscribed, parking turnover rates are low, and ‘cruising’ behavior contributes to traffic congestion, yet parking remains readily available in off-street facilities.
Figure 3-1: Downtown Berkeley Off Street Parking Facilities
A. Traffic & Parking: Curbside Parking at Capacity, Cruising and Meter Feeding

A 2007 Level of Service Analysis indicates that the existing Level of Service of 48 intersections in Downtown Berkeley operate at LOS D or better, and the City has adopted parking, demand management and development policies aimed at curbing current and foreseeable congestion. Nevertheless, high levels of development threaten to increase traffic congestion. A traffic forecast for the study area will be completed by August 2007 as part of the Downtown Area Plan update.

On-street or curbside parking is commonly filled to capacity. On-street parking occupancy downtown in the evening ranges from 88 percent to 96 percent. Midday parking also is regularly oversubscribed at many locations. According to a 2006 downtown parking turnover study conducted as part of the MTC’s Parking Policies for Smart Growth Study, on-street parking duration for 1-hour time limited spaces ranged on average from 1.3 hours to 2.25 hours. A 2003 study led by Professor Deakin found even longer vehicle turnover rates, as well as high rates of meter malfunction. Although the rate of meter malfunction has been largely resolved since that time, pricing and enforcement practices are failing to prevent significant parking overstays. Further, recent parking utilization surveys shows that downtown off-street parking facilities generally have excess capacity at all times. This capacity is critical so that off-street facilities can serve additional parkers as value pricing of curbside parking rates is implemented (see Appendix C).

Parking Supply

The City owns and operates 665 off-street spaces in downtown Berkeley, distributed in one multi-story parking facility, one subterranean garage (under construction), and one surface parking lot. The City also manages approximately 1,275 metered on-street spaces, controlled by 32 “Pay and Display” kiosks serving 260 spaces, and 1,015 single-head meters (see Figure 3-3). Importantly, the city recently installed these kiosks in partnership with a private sector vendor. There are eight privately owned parking facilities with a total of 1,236 spaces, and four facilities with 348 spaces owned by the University of California. In total, there are approximately 3,524 publicly available parking spaces downtowns, 2,249 off-street and 1,275 curbside.

Figure 3-3:
The City of Berkeley’s New Pay and Display Kiosk
Parking Rates

In March 2007, Berkeley’s on-street parking fee was raised from $0.75 to $1.00 per hour citywide; the first such fee increase since 1993. The increase is expected to generate approximately $1,000,000 on additional revenue per year. City facility off-street pricing includes escalating hourly costs and a $5 evening flat fee. As shown in Figure 3-4, there is a major differential in the rates by which the on-street parking rates are much lower than the off-street rates. As documented by Professor Donald Shoup and others, a parking price differential such as this encourages ‘cruising’ traffic which contributes to traffic congestion and results in inefficient utilization of off-street parking.

![Figure 3-4 Parking Price Comparison between On and Off-Street Parking Fees](chart)

<table>
<thead>
<tr>
<th>Berkeley Parking Costs (assumes moving vehicle at end of 60-90 minute limits on-street)</th>
<th>Off-Street City Parking Fees (weekday rate)</th>
<th>On-Street Metered and Pay/Display Parking (cumulative cost)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 hour</td>
<td>$1.00</td>
<td>$1.00</td>
</tr>
<tr>
<td>2 hours</td>
<td>$3.00</td>
<td>$2.00</td>
</tr>
<tr>
<td>3 hours</td>
<td>$6.00</td>
<td>$3.00</td>
</tr>
<tr>
<td>4 hours</td>
<td>$10.00</td>
<td>$4.00</td>
</tr>
<tr>
<td>More than 4 hours</td>
<td>$15.00</td>
<td>$5.00</td>
</tr>
</tbody>
</table>
B. Alternative Transportation: Downtown Berkeley Residents and Visitors Largely Take Transit, Bicycle and Walk

Downtown Berkeley is one of the busiest surface transit centers in the San Francisco Bay Area. Rail service provided by the Bay Area Rapid Transit (BART) District and bus service by Alameda Contra Costa (AC) Transit District are essential to supporting the vitality of the area. The Downtown Berkeley BART Station averages 22,000 daily riders, a ten percent growth since 1997. Over 900 AC Transit buses stop downtown per day, with 5,357 daily boardings and alightings. In addition, downtown is served by the UC Berkeley Perimeter Shuttle, which serves approximately 1,660 passengers daily, and the Lawrence Berkeley National Laboratory, which carries 2,500 daily.

A 2006 study led by Professor Elizabeth Deakin found that downtown residents, commuters, and visitors use non-automobile transportation at very high rates. A survey found that 60% of all workers and 80% of all shoppers used non-automobile transportation to get to their destinations. A striking 59% of downtown residents reported traveling to work by walking or transit, compared to 33% citywide.¹

<table>
<thead>
<tr>
<th>Mode</th>
<th>Work in Downtown</th>
<th>Live in Downtown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive Alone</td>
<td>52%</td>
<td>30%</td>
</tr>
<tr>
<td>Carpool</td>
<td>11%</td>
<td>4%</td>
</tr>
<tr>
<td>Walk</td>
<td>10%</td>
<td>37%</td>
</tr>
<tr>
<td>BART</td>
<td>10%</td>
<td>14%</td>
</tr>
<tr>
<td>Bike</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
<td>2%</td>
</tr>
</tbody>
</table>

(Source: Downtown Area Plan Existing Conditions Report, IBI Group, 2006.)

A large factor in the high levels of transit usage may be attributed to city policies and programs, including the City of Berkeley’s innovative EcoPass transit program that began in 2002 and was modeled after a similar program between UC Berkeley and AC Transit. Currently, the City of Berkeley in partnership with AC Transit provide approximately 1,300 benefited City employees with an Eco Pass at no cost to the employee. The City of Berkeley and AC Transit have been monitoring the Eco Pass carefully. Results of a 2005 city employee survey show that the number of employees who drive alone to work decreased significantly 47.4% in 2001 to 36.4% in 2005, as shown in Figure __. Correspondingly, the number of employees who traveled to work via BART, bus, walking, or bicycling increased in 2005. In addition, of those survey respondents who reported driving alone to work before they had an EcoPass, 20% now use AC Transit and an additional 17% use another type of alternative transportation mode.

Finally, Berkeley also has high rates of bicycling, supported by an excellent network of Bicycle Boulevards, bike routes, lanes and paths, and a bicycle-pedestrian bridge over Interstate 80. In addition, the downtown BART Station contains an attended Bikestation.

C. Transportation Safety in Downtown Berkeley

Pedestrians, private automobiles, buses, shuttles, bicyclists, taxis, delivery and paratransit vehicles all vie for use of the limited roadway, curb and parking spaces in downtown Berkeley. Buses can be forced to board passengers in the middle of the street, delivery vehicles double-park because cars have parked illegally, and pedestrians sometimes ignore traffic signals in order to catch their train, bus, shuttle or taxi.

A collision analysis of three Downtown intersections from 1998 to 2003 shows that a total of 97 collisions occurred at those intersections with an average of 16 collisions per year. On average each year, there were 7 total collisions involving bicyclists and 8 total collisions involving pedestrians. A comprehensive approach to reconciling current and future transportation demand with innovative parking pricing in the Downtown area aims to address traffic safety and reduce exposure rates.

D. On the Horizon: Bus Rapid Transit and Major New Housing, Mixed-Used Developments

A number of major transportation investments and development projects are planned or proposed in downtown Berkeley. While these projects are positive, they also have the potential to significantly increase demands on the transportation infrastructure, including roadways, transit and parking capacity.

Berkeley’s downtown has experienced a remarkable increase in housing in recent years. Since 1990, 530 new housing units have been completed in the Downtown, and 754 units are under construction or planned through 2007. This housing development has been accompanied by a major commercial and arts developments, which has led to a thriving arts district.
Berkeley downtown housing development has been guided by Berkeley’s smart growth and transit-oriented policies, many of which are built into the city’s municipal code. For example, the zoning ordinance requires provision of only one parking space for every three housing units in new residential developments of five units or more in the C-2 district downtown. Finally, the City negotiated development agreements with two new mix-use rental housing projects downtown requiring that parking spaces be “unbundled” the rental of a parking space from the cost of the residential unit. Within the Downtown Area Plan process, the City is considering an expansion of the 1:3 parking ratio, and broader application of an unbundled parking requirement.

There are also three major planning efforts underway which involve downtown Berkeley. In 2005-2006, the City received Transportation for Livable Communities Planning Grant for a public planning process and conceptual re-design of the downtown BART Plaza and adjacent bus boarding areas. The City is currently in the midst of a highly visible Downtown Area Plan update, which is expected to be completed in 2007, and is expected to contain a number of relevant parking policies. The Downtown Area Plan development is generating an analysis of future land use and traffic conditions. This work is expected to be completed by August 2007.

From a transportation perspective, a key development is AC Transit’s federally funded proposed Bus Rapid Transit (BRT) system, for which a Draft Environmental Impact Statement (DEIS) will be released on May 4, 2007. Downtown Berkeley will be a terminal location of the BRT line, and will require construction of new boarding areas, potential designation of dedicated “Bus Only” lanes, and planning for safe boarding and alighting for the estimated 4,300 additional people per day in Berkeley’s downtown. The BRT is a priority transit enhancement in the region and is included in the Regional Transit Expansion Program as adopted in MTC Resolution No. 3434. The BRT is anticipated to improve transit service levels, reliability, and ridership. However, the system design is also expected to reduce some on-street parking. Drivers who shift to BRT can reasonably be expected to reduce the impacts of BRT-related parking losses. It is important that value-priced parking also be implemented to mitigate parking losses resulting from the increased transit service.

Other large changes to the downtown also are on the horizon that will significantly impact traffic volumes, congestion and parking demand:

- A large hotel and conference center is in pre-development phase in the downtown area. The hotel and conference center would bring significant additional visitors and employees to the area. The UC Berkeley Art Museum and Judah L. Magnes Museum plans to re-locate to downtown Berkeley.

- Berkeley City College opened a new campus building on Center Street, a half block from the BART plaza, and has projected enrollment increases.

- U.C. Berkeley’s Long Range Development Plan anticipates a 5,320 person increase in the campus population during the regular term and by 9,370 during the summer. Additional University housing, research and instructional facilities will be constructed in the downtown area to accommodate some of this growth.
IV. Program Goals and Details

The City of Berkeley proposes to implement a comprehensive value-pricing approach to parking and transportation demand management in its downtown. In 2006, downtown Berkeley was selected as a case study in the regional Parking Policies for Smart Growth Study managed by the Metropolitan Transportation Commission and funded by Caltrans. Consulting firm Wilbur Smith Associates is the lead consultant on the project, with KT Analytics also involved in Berkeley’s Case Study process. The data and analysis led the MTC Case Study to recommend value pricing of curbside parking to tackle the persistent issues of traffic congestion, impeded non-motorized transportation access, and below market rate on-street parking charges.

With the support of federal funding, the city would implement the MTC Case Study’s recommendations by instituting variable on-street parking pricing and providing employee transit passes in Downtown Berkeley. The proposed VPPT Program will also make use of intelligent transportation system innovations with on-street wireless sensors, changeable message signs, and the regional real-time traveler information system.

Local political feasibility and stakeholder acceptance are critical requirements for successful implementation. The City has already taken steps to ensure program success through on-going communication and public outreach sessions with key stakeholders. In 2006, a stakeholder consultation process was carried out within the MTC Parking Policies for Smart Growth Case Study, which included downtown business interests via the Downtown Berkeley Association, residents, development and other community interests via the City’s Transportation Commission and Downtown Area Plan Advisory Committee, as well as city staff from Planning & Development, Public Works-Transportation, and Police Department Parking Enforcement.

In addition, a graduated on-street pricing scheme is a high priority for the city, as demonstrated in several policies in the General Plan supporting this proposal (see Appendix D), and current draft proposals in the Downtown Area Plan which is under development and is scheduled to be in November 2007.

VPPT Goals and Outcomes

The VPPT Program goals and intended outcomes are:

- to institute a parking pricing and management project in downtown Berkeley using value-pricing principles to reduce traffic congestion by reducing cruising traffic and by shifting drivers to alternative modes;
- to improve system performance and promote mobility by achieving modal shifts towards transit, bicycle, pedestrian, and ridesharing travel among workers, residents and visitors to downtown Berkeley;
- to provide a Universal Transit Pass program for downtown employees;
- to direct drivers seeking parking to off-street parking facilities or to alternative modes using price signals, a dynamic Parking Guidance System, and the regional traveler information system;
• to enhance economic development and sustain program effectiveness by investing new parking revenues in alternative transportation, streetscape and other area improvements; and
• to reduce air and water pollution, and greenhouse gas emissions resulting from transportation.

Overall through VPPT, the city hopes that parkers will see the value in parking at convenient metered parking by reducing the time they cruise for parking and overall vehicle miles traveled in downtown. Residents, visitors and local businesses will experience the value in significant improvements to pedestrian, bicycle and transit services funded through the increased revenue.

Long term, the VPPT pilot efforts in the downtown area also will enable the expansion of parking pricing and management programs to neighborhood commercial districts. The City’s is preparing local conditions by expanding the installation of Pay Display meters in the other commercial areas.

**Program Elements**

The following VPPT Program elements are described in this section:

1. Implementation of Value-Pricing of Curbside Parking
2. Distribution of a Downtown Employee Universal Transit Pass and TDM programs
3. Strengthening Parking Policies governing development
4. Residential Parking Permit Zones: Monitoring and Value-Pricing Pilot Project
5. Integration of ITS Technology: Parking Guidance, On-street Sensors, Traveler Information
6. Program Evaluation and Dynamic Adjustment
7. Regional Value-Priced Parking Coordination

1. **Implementation of Value-Pricing of Curbside Parking**

The VPPT Program proposes setting curbside rates in the downtown area to vary by time of day and day of week. Value-pricing principles will be used to improve on-street parking availability and encourage the high-turnover, short-term curbside parking. Parking prices will also be coordinated between on- and off-street parking to encourage visitors, especially long-term parkers to available off-street parking.

The MTC Case Study recommends graduated, progressive pricing on Shattuck Avenue in downtown and the side streets in the immediate vicinity. Shattuck Avenue is a heavily utilized main commercial street and has Pay Display meters that can be programmed for progressive rates comparable to the progression of off-street rates in the area.

The VPPT Pre-Implementation Phase will craft the final parking rate schedule and carry out the policy changes and public process required to establish value-pricing of parking in Berkeley.
Importantly, the City’s recently installed “pay and display” meter kiosks on Shattuck Avenue and some of the side streets. This new infrastructure facilitates traveler payment as well as future changes to a value pricing rate schedule. According to the kiosk’s manufacturer for the city, Cale Parking Systems USA, the equipment is capable of charging graduated rate, flat rate, and fixed rate with a combination of two or three rates in the day.

a. Establish a Value-Price Parking Rate
A specific parking rate schedule will be determined by the City through consultant and stakeholder consultation, and then evaluated and adjusted as ongoing monitoring and evaluation suggest. The pricing will be determined based on an 85% occupancy rate of curbside parking spaces. Key considerations in setting the new rate schedule also are: the relationship of on-street and off-street parking costs in the area, the level of parking fees in nearby jurisdictions, and the relationship of parking costs to transit costs.

The MTC Case Study recommends that downtown Berkeley’s on-street parking should be priced at no less than the current $1.00 per hour, $1.50-$3.00 for two hours, $6.00 for three hours, $10.00 for four hours, and $15 for more than four hours. These rates coincide with those in the City’s downtown off-street parking facilities. The Case Study’s recommended on-street rates also are comparable to those at nearby city centers. San Francisco rates are $2.50 to $3.00 per hour downtown and Oakland’s are $1.25 per hour. In addition, transit would maintain a cost advantage to long-term parking downtown; BART fares range from $5 to $7, less than the recommended on-street rates and current off-street rates.

There is concern, however, that progressively priced curbside parking can encourage meter-feeding and create parking enforcement challenges. Although it may be possible to resolve these enforcement challenges through the use of parking sensors, the VPPT Pre-implementation process also will consider the benefits of a simple hourly parking rate increase instead of graduated rate increase. Other complimentary enhancements, such as a validation program, the use of ‘smart’ parking cards, and other new payment methods, will be studied and considered for implementation during the VPPT Program period.

Time-of-day variable pricing is being strongly considered. The City currently charges a $5 flat fee for parking for any length of time after 6pm in its off-street parking facilities in order to meet the parking needs of the area’s many theaters and restaurants. In order to better coordinate the off-street and on-street prices, the VPPT will consider instituting a similar flat fee/no time limit price scheme for the evenings and portions of the weekend curbside.

b. Evaluate Time Limits
The city also will evaluate and determine if the on-street time limits will be retained, extended or removed entirely within the VPPT Program. Parking time limits may not be needed if the impact of value-pricing results in desired mode and parking location shift to off-street parking, and does not result in excessive parking violations. The proposed use of wireless, on-street parking sensors combined with frequent observational parking studies will assist the City in evaluating the impacts of changes to parking duration regulation.

c. Extend and Enhance Parking Enforcement
The synergistic mix of commercial, educational and arts institutions in the area , and contribute to making the downtown heavily visited and patronized, even into the late evening hours. As a result, parking demand remains high into the night. The MTC Case Study recommends
extending parking enforcement times to better manage this demand, and the VPPT Program will extend parking enforcement by four hours into the evening from the current operational period from 6:00 p.m. to 10:00 p.m.

Parking enforcement also will be increased to reduce parking violations downtown. As part of VPPT activities, the City will examine the feasibility of using enforcement vehicles equipped with GPS-enabled cameras to scan license plates to better enforce against meter feeding. The cities of Monterey, Palo Alto, Sacramento, and Chicago are currently testing such systems.

2. Distribution of a Downtown Universal Transit Pass and TDM programs

The City’s General Plan and other adopted policies clearly state that Transportation Demand Management (TDM) strategies are important to effectively reduce solo driving in downtown and to maximize the efficiency of the existing transportation system. In addition, stakeholder interviews conducted as part of the MTC Case Study indicate that the level of acceptance of on-street parking price changes are dependant in part on simultaneous improvements to transit and TDM options for area employees and residents.

Federal grant support for Berkeley’s VPPT Program will enable employers and residential properties in the downtown area to provide coordinated travel benefits. Centralized administration provided by the City, the Downtown Business Association and other agencies will enable even small employers to be able to offer their employees transit passes, car-sharing memberships, ride matching services, and discounted carpool parking spaces. Funds will support an employee position to serve as the Downtown TDM Coordinator, who will administer the Universal Transit Pass program and advise employers on other TDM strategies, including pre-tax commuter benefits, telework and variable work hours, and parking cash-out.

The effort builds on many years of TDM program experience in downtown Berkeley, including sixteen years of joint UC-City operation of the Berkeley TRiP Commute Store as well as more recent TDM outreach efforts. Further, as discussed in the preceding section, the City of Berkeley has implemented an innovative EcoPass Program, which provides a monthly transit pass to city employees and has led to major increases in transit ridership in the downtown.

In addition to a downtown transit pass, other TDM program elements will be drawn from the City’s 2001 Downtown-Southside TDM Study and other adopted policies. The VPPT also will enable the City to continue negotiations with the Alameda County Guaranteed Ride Home Program to extend program eligibility to employers with fewer than 75 employees.

3. Strengthening Parking Policies Governing Development

Berkeley has substantial experience in reforming parking policy to meet policy and operational objectives. For instance, the City Zoning Code includes parking requirements of just 1 parking space for every 3 dwelling units in the Downtown Core.

The City has also developed innovative TDM agreements with developers that include provision of carsharing services, bicycle and transit incentives, and ‘unbundled’ parking (see Appendix D.)
For example, Library Gardens, a 176-unit, mixed-use rental housing project, was completed in downtown Berkeley last year and Oxford Plaza, a 96-unit, affordable housing project is currently under construction in downtown. Both projects ‘unbundle’ parking expenses from their rental agreements as a result of TDM Plans negotiated during the City’s review of the developments permit applications.

In the near-term, the city’s Downtown Area Plan Advisory Committee will consider adoption of an unbundled parking policy in the Downtown Area Plan, which is scheduled for adoption in 2007.

The VPPT Program will enable the City to expand and enforce the practice of unbundling parking, and to monitor the impacts on travel behavior, vehicle ownership, program costs, and vacancy rates. If an unbundling parking policy is adopted as part of the Downtown Area Plan, FHWA funds will be spent to support communication, monitoring and enforcement activities applicable to all new development in downtown Berkeley. If such a policy is not adopted, grant funds will be spent to negotiate development agreements on a case-by-case basis and for program monitoring and evaluation.

### 4. Residential Parking Permit Zones: Monitoring and Value-Pricing Pilot Project

An important consideration in the establishment of VPPT is its potential impact to adjacent neighborhoods, which currently uses residential permit parking (RPP) to manage the duration and number of non-residents parking in the area. Current city policy allows non-residents to park in the RPP zones for two hours.

The VPPT Program will regularly monitor parking behavior in the RPP zones closest to downtown to assess parking utilization changes resulting from spillover parking. The city will also conduct stakeholder and focus group consultation regarding the feasibility and acceptance of instituting paid, long-term commuter parking on selected RPP-governed streets. This VPPT Program element will be of great value in assessing the public acceptability of various value-priced RPP programs, such as neighborhood Pay Display kiosks (on one or both sides of the street), limited RPP sale or auction, in-car permits, prepaid onboard hang-tag, and parking benefit districts.

The impacts research and public outreach efforts will be presented in a report with recommendations for a Value Pricing Pilot Program in a RPP Zone near downtown Berkeley. This RPP pilot is expected to be implemented in Year 3 of the VPPT Program.

### 5. Integration of ITS Technology: Parking Guidance, On-street Sensors, Traveler Information

The VPPT Program will employ the innovative parking technology in several program elements:

To monitor curbside parking behavior, the City will install wireless individual parking space sensors to pinpoint overstays, track use and turnover, and potentially alert enforcers to problem areas. The VPPT Program intends to design the use of such sensors in such a way as to gauge their cost-effectiveness in evaluating demand, turnover and violations before and after revised on-street meter rates. The sensors will be compared on cost and other factors to traditional
observation-based parking studies. Several private firms (including Spark Parking, Parking Karma, Streetline, and Sense) involved in parking sensor deployment with in the San Francisco Bay Area will be invited to submit proposals through a competitive bidding process.

The VPPT Program also includes an intelligent Parking Guidance System (PGS). Development of a dynamic, real-time Parking Guidance System (PGS) was a recommendation of the Downtown/Southside Transportation Demand Management Study adopted by City Council in 2001. The PGS planning phase, including public and stakeholder outreach, conceptual system and sign design/siting, was completed and adopted by Berkeley City Council in June 2005.

In 2006, the City issued a Request for Proposals for turnkey PGS equipment, installation, and management. A highly qualified vendor has been selected, pending Council approval. The PGS project has a capital budget of $2.05 million and $132,000 in annual operating and maintenance expenses. If funding is awarded, the project is prepared to move forward quickly; the PGS system can be installed, tested and fully operational within approximately 20 months of the grant award.

Berkeley’s PGS will connect real-time off-street parking availability to a network of changeable and static wayfinding message signs directing drivers searching for parking in Berkeley’s downtown and Telegraph areas. The PGS will be a significant public-private investment intended to increase visibility and utilization of off-street parking facilities and reduce congestion by providing drivers with accurate and timely information about parking availability and location.

This improved, dynamic driver guidance is expected to direct drivers more readily to existing off-street parking, particularly if on-street parking rates are increased to better match off-street prices. The integration of PGS with value-priced parking is a central element of Berkeley’s VPPT. It is critical to public acceptability to clearly communicate about travel and parking alternatives and program intentions when raising parking prices to discourage long-term parking curbside.

6. Program Evaluation and Dynamic Adjustment

There is a significant need in the U.S. for more research and information evaluating the effectiveness of value-pricing of parking, of the effect of price elasticity on parking and transit, of dynamic parking guidance on driver behavior, and of Universal Transit Passes on commute mode choice.

The VPPT program is proposing a comprehensive analytical approach which will generate high-quality academic research on the impacts of value-pricing on congestion and cruising traffic, travel patterns and mode share, parking utilization, turnover and revenue generation, economic development, air quality, energy consumption, and political acceptance.

The monitoring and evaluation program will be design by University of California Transportation Center, including professors Elizabeth Deakin and Donald Shoup (see Appendix B). The goal is that information from this effort will be useful to the Federal Highway Administration for its annual report to the United States Congress on the value pricing program.
7. Regional Value-Priced Parking Coordination

As part of MTC’s Urban Partner Agreement proposal and this VPP proposal, the City of Berkeley, the University of California Transportation Center, and MTC propose to provide extensive coordination and information-sharing among regional value-priced parking programs and other interested agencies in the region.

The City will participate in MTC’s regional Urban Partner program to facilitate cross-fertilization and coordination of value pricing programs in the Bay Area. Within the region, Berkeley is already in communication with the City and County of San Francisco on parking pricing and wayfinding guiding issues, the Port of San Francisco and the City of Emeryville regarding the use of on-street sensors, Redwood City on value-pricing and parking payment options, and with the City of San Jose on Parking Guidance System implementation.
IV. Additional Elements

Key information is provided in this section about several plans to be implemented to ensure a successful VPPT program. These plans include: a proposed work plan and timeline, revenue and expenditure plan, and public involvement. Additional details also are provided on social equity and technology as requested in the 2006 Value Pricing Federal Register notice.

Proposed Work Plan, Timeline and Budget (See Attachment E)

Public Involvement

The City and its citizens have expressed their formal support for parking policies and programs such as those included in the VPPT Program (see Appendix D.)

More recently, a significant stakeholder outreach and consensus-building effort was undertaken as part of the MTC Case Study. In addition, public discussions of parking pricing and other VPPT elements have been discussed at several important public meetings over the past few months.

In September 2006, the Downtown Area Planning Advisory Committee (DAPAC) hosted a public meeting on downtown parking policy where Professors Shoup and Deakin presented value-pricing concepts. At this meeting, the public discussed parking pricing at length and expressed support for many of the ideas included in this proposal.

In 2006, the city’s Transportation Commission, a citizen advisory body to the City Council, unanimously adopted a motion to support parking policy reforms, including the following:

“Price parking appropriately. To assure that on-street parking spaces will be available to accommodate drop-offs and quick errands, on-street parking and surface/structured lots should be optimized through a pricing structure that places a premium cost on on-street parking spaces. Parking time limitations could vary across blocks and areas of downtown based on the specific mix of uses in different locations and should be long enough to accommodate shoppers, diners, theater patrons and other users of downtown services.”

The Downtown Berkeley Association, which largely represents the area business community, has expressed their supports for the VPPT Program (see Attachment A.) As a closely related project, DBA is working to evaluate the feasibility of a downtown Parking Benefits District.

In addition to pre-implementation outreach, ongoing public participate and communication are needed throughout the program period. All VPPT-related parking price changes will be presented at the City’s Transportation Commission, and must be adopted in a properly-notice Public Hearing by the Berkeley City Council.

A communication strategy and outreach program to downtown employers regarding the Universal Transit Pass program will be carried out in partnership with the Downtown Berkeley Association (DBA), AC Transit, and others. A broad communications strategy will also be developed to provide public awareness about the new parking rate schedule and to publicize the transportation alternatives and other improvements funded through new parking revenues. The DBA will also be a partner in developing materials and distributing promotional materials.
Potential Equity Impacts
The City believes that the proposed VPPT Program design specifically addresses social equity impacts. By providing a Universal Transit Pass to all downtown employees, the program offers an alternative mode to those who may be affected by increase parking costs. In addition, Downtown availability of carsharing, discounted HOV parking, regional rideshare incentives, and bicycle and pedestrian infrastructure provide ample alternatives to paying for parking.

Nevertheless, attention will be paid to any negative distributional effects related to social equity discovered during the project’s pre-implementation phase, and mitigation strategies will be developed as appropriate to minimize impacts. Equity impact estimates will be developed through demographic analysis, indexing of pricing impacts to existing alternatives, and public opinion. Focus groups and stakeholder meetings will include representative levels of low-income populations.

Private Sector Involvement
Berkeley’s VPPT Program contains opportunities for unleashing private sector innovation in the United States. The Program will employ several innovative parking technologies and practices, including on-street parking sensors, a dynamic Parking Guidance System, ‘smart’ parking enforcement equipment, transit pass technology. There will also be private sector growth opportunities in consulting and parking management services experienced value-pricing parking principles. Such technological innovation in parking management may illustrate a significant market opportunity for ITS applications.

Electronic Toll Collection Compatibility
As this is a parking pricing project, electronic toll collection will not be employed. However, within MTC’s proposed Urban Partner Agreement, Berkeley’s VPPT Program will be integrated with 511, the regional traveler information system. With VPP funding, Berkeley, San Francisco and MTC will also study the feasibility of integrating parking payments with the regional Translink smart card and the State’s FastTrak electronic toll collection system.
Appendix A: Council Resolution & Letters of Support

1. April 24, 2007 City Council Resolution
2. UCTC
3. Downtown Berkeley Association
Appendix B:

Berkeley Value-Priced Parking and Transit Program: Preliminary Monitoring and Evaluation Program

According to a recent Transit Cooperative Research Program (TCRP) report about parking pricing, few empirical analyses have been published that extensively examine the impact of parking price changes to travel behavior, particularly for variable pricing at curbside parking meters, non-work trips, and over time. For this reason, it is of utmost importance that the City of Berkeley’s VPPT Program provide an exemplary demonstration project and a model monitoring and evaluation program in order to better understand impacts on travel behavior, congestion, distributional consequences related to equity, and economic development.

The City of Berkeley’s VPPT Program will establish a detailed task-specific monitoring and evaluation program tailored to the future refinement of the overall project. The primary goals of the monitoring and evaluation program are to:

1) document the project’s implementation process;
2) assess its impacts on travel and parking demand, transportation system performance as well as its social, economic, and environmental effects; and
3) provide key information to the Federal Highway Administration regarding value pricing of parking and transit.

Thus, regular analyses of the project’s effects will be provided to the Federal Highway Administration and circulated upon request to other local jurisdictions interested in pursuing changes to their parking pricing policies. Detailed Program Fact Sheets will be posted on the City’s website and developed for distribution to policymakers, researchers and other interested parties.

UCTC will conduct project monitoring and evaluation with the assistance of Elizabeth Deakin, UCTC director and Professor of City and Regional Planning, and Donald Shoup, Professor of Urban Planning at UCLA. UCTC has the unique ability to draw on UC transportation experts from nine UC campuses, as needed, and also may call upon PATH – Partners for Advanced Transit and Highways, a statewide program located at UC Berkeley. As a result, UCTC has access to a wealth of highly qualified researchers and graduate students, particularly in the fields of city and regional planning, civil engineering, economics, public health, and urban design/architecture.

At this time, the City of Berkeley and UCTC anticipate that the following key tracks and associated data and research methods would be included as part of the project’s monitoring and evaluation program:

1. Travel, Air Quality, and Social Equity Impacts
2. Revenue Generation/Expenditures
3. Governance Structure

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4. Public Perceptions, Attitudes, and Outreach Process (Initial and On-going)

5. Economic/Business Impacts

6. Administration/Enforcement and the Role of Technology in Project Implementation and Evaluation

Each track will have “before” implementation and “after” data generated for it. The “after” data will be collected to provide both short & long-term evaluations at regular intervals, particularly to document impacts as prices may be adjusted over time. Much baseline “before” data are contained in an MTC Case Study of downtown Berkeley conducted by a Wilbur Smith Associates-led consulting team, as well as two in-depth University of California, Berkeley studies that examined Downtown Berkeley in 2004 and 2006. These studies contain thorough analyses of downtown travel patterns. Surveys also were conducted to document and assess visitors’ concerns with the downtown, including transportation and parking. Further, surveys were administered in competitor shopping districts in Berkeley to compare them to downtown. As a result, these studies provide time-series data, which will be used to examine the impact of price increases to downtown. In addition, supplemental baseline data, particularly related to parking usage and turnover rates, will be gathered through the smart parking sensor technology to be installed prior to implementation and through other methods as appropriate.

**Track 1: Travel Behavior, Air Quality and Social Equity Impacts**

This track is designed to rigorously analyze the impacts of variable parking pricing on travel behavior, air quality and social equity. To provide context, downtown’s transportation supply and demographic characteristics of downtown travelers, including origins and destinations, will be documented and updated throughout implementation.3

The two main travel behavior changes to be monitored are: 1) changes in parking location in which all-day parkers shift from on-street parking to off-street facilities, and 2) changes in mode shift to alternative transportation due to value-priced parking and employee transit pass programs. Further, numerous discrete factors contribute to the impact of price on parking search traffic and travel behavior, including driver’s income and value of time, parking price (on and off-street), fuel price, parking availability, parking duration, vehicle occupancy, and level of service for alternative modes.4 The City of Berkeley and UCTC will be able to calculate detailed parking price elasticities and determine parking location and mode choice based on empirical data about downtown visitors’ sensitivity to variable parking prices.

Key travel and corresponding air quality impacts to be evaluated in this track include:

1) Short and longer term travel behavior changes by different user groups in parking location, duration, trip purpose, cruising, mode choice and accompanying cost changes;

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3 Characteristics of downtown’s transportation supply include: transit service including hours of operation, frequency, and fare; pedestrian/bicycle network; carsharing spaces; carpooling assistance; and, parking supply curb and off-street.

2) Broader changes in travel behavior, mode choice, trip purpose, destination due to: area improvements funded through parking revenue, employer responses, business and business association responses, private parking facility owner responses (in rates and/or supply) to changes in curbside meter rates, and changes in city policy such as unbundled parking; and

3) Impact on adjacent residential areas in terms of spillover parking, if any.

**Data Sources/Methods:** smart parking technology/sensors, Pay and Display kiosk records, field observation, parking turnover/occupancy studies, license plate surveys, intercept and mail-back surveys, interviews, traffic counts, regular accounting of parking supply including rates of privately owned parking lots, agency records, census data, new focus groups and surveys, and interviews with housing property owners, particularly for unbundled parking policy information. In addition, the recent UC Berkeley studies and MTC Case Study provide time-series data and points of comparison to the downtown and competitor districts.

**Track 2: Revenue Generation/Expenditures**

In addition to travel behavior impacts, a major interest of the VPPT Program is the potential for additional funds to be used improve travel alternatives and assist in continued revitalization of downtown Berkeley. This track will monitor the amount of revenue generated from increased parking rates and the distribution of those revenues to eligible uses, as will be established by the City of Berkeley. Key variables for this track to monitor include:

- Parking rate schedule (price per hour, daily rates, etc.)
- Amount of revenue generated from the parking price increase as well as parking citations (Baseline information on current revenue generation from meters, off-street parking and citations will be documented.)
- Administrative costs due to enforcement, signage, public information, including costs associated with program monitoring/evaluation; on-going operations and maintenance costs; and, capital costs for project start-up, including sensors and other new parking technologies.
- Funding allocation to eligible projects.

**Data Sources/Methods:** Expected versus collected revenue from single-head and Pay and Display parking meters, revenue from City off-street parking facilities, revenue from parking violations, expenditure plans (budgeted and actual), agency records, data generated from smart parking technology/sensors.

**Track 3: Governance Structure**

This track will evaluate the governing structure and processes used and/or established to account for and distribute those dollars. Revenue collection and distribution from VPPT will be accompanied by new or modified institutional structures, policy and procedures to related to directing a portion of parking revenues to the origin area and potentially to adopting a spending plan for such funds. It will be important to document the enhanced coordination and assignments of responsibility of this process. It will occur:
1) within departments of the City of Berkeley, including Public Works Transportation Division, the Finance Department, and the City Manager’s Office; and

2) externally with transportation agencies (AC Transit, BART, Alameda County Congestion Management Agency, MTC), non-profit organizations (DBA, Bicycle-Friendly Berkeley Coalition, Berkeley BART Bike Station operators), private parking facility owners/managers, the University of California, Berkeley, and others.

Careful documentation of these relationships over time will be necessary. Given the normal turnover in political administrations, business leaders, and agency staff, this information will be useful to public agencies and other interested parties for determining possible avenues for perpetuating and refining the parking benefits district concept over the long term. Several likely stages of implementation will be documented, including: 1) the Project Pre-implementation Phase where arrangements are defined and negotiated, 2) the “start up” phase after the project’s initial implementation, 3) adjustment and refinement of responsibilities after the start-up period, and 4) longer term maintenance.

**Data Sources/Methods:** agency records/meeting minutes, public discussion records, small group meetings and interviews with agency staff and associated revenue expenditure committee participants and others

**Track 4: Public Perceptions, Attitudes, and Outreach Process (Initial and On-going)**

The key to the broader implementation of pricing strategies is public acceptance and political feasibility. To facilitate more extensive applications of parking pricing nationwide, this important track will include detailed documentation of the public planning and decision making processes pursued in the project’s design and implementation. This effort is directly related to Track 3 regarding governance structure.

Special attention will be paid to recording and evaluating concerns voiced during the process about proposed parking rates and/or use of the additional revenues as these two areas are generally subject to debate in variable pricing projects. Public and business concerns about parking rates and parking supply should be anticipated.

Time-series perception surveys of stakeholder groups will be conducted. Stakeholder groups and intercept surveys will be conducted with downtown businesses and employers, residents, commuters, shoppers, the media, University officials, transit agencies, as well as the general public. Changes in attitude over time will be identified and explored.

Finally, the evaluation will include “lessons learned” and recommendations on the most effective ways to seek public input as well as communicate changes in parking policies and use of additional revenue. Challenges faced related to public perception and public outreach will be evaluated in detail. Marketing materials and other public information developed for the project will also be assessed.

**Data Sources/Methods:** surveys, interviews, focus groups with key stakeholder groups; content review of media accounts; documentation of discussions and debate at public meetings; and recording of any negative reported activity such as vandalism of meters and related signage.
**Track 5: Economic/Business Impacts**

A key motivation for the VPPT Program from the city and business leaders’ perspective is the potential for the program to assist with continued revitalization in Downtown Berkeley. This track will evaluate the economic/business impacts of the project to downtown over time. It is important to note that in May 2007, AC Transit will release the Draft Environmental Impact Report on a proposed Bus Rapid Transit project which will include several stations, including the northern terminus in downtown Berkeley.

The City also has aggressive housing policies that have enhanced downtown development. Thus, a careful analysis is needed to examine the linkages between area parking conditions, BRT and other transportation infrastructure, as well as external economic factors. The analysis will draw from objective data sources, such as retail/sales tax earnings, as well track of perceptions of the parking program’s economic impacts from key informant interviews and focus groups. Further, points of comparison will be made with competitor shopping districts in Berkeley. To form the basis of this analysis, data to be collected include:

- Changes in retail sales & sales tax revenues, rental rates and property values
- Changes in occupancy/vacancy rates and mix of land uses (office, retail, and housing, arts district-related)
- Changes in retail mix, types of businesses (including first and upper floors)
- Perceptions of downtown employers, visitors and residents of improvements funded through VPPT in impacting downtown’s vibrancy, livability and place of economic activity.
- Changes on the part of downtown businesses after streetscape enhancements.

**Data Sources/Methods:** agency records on sales tax receipts and land use mix, interviews, focus groups, surveys, information about the city’s façade improvement program (project location, date, scope of improvement), photographs of downtown area before/after streetscape and façade improvements.

**Track 6: Administration/Enforcement and the Role of Technology in Implementation and Evaluation**

The use of state-of-the-art technology is a critical component in VPPT Program implementation as it has the potential to increase project efficiencies in data collection and enforcement of the curbside meters. Key issues to be addressed in this track include:

1) Did the new parking technology work as well as expected? What were the success & failure rates? Did it provide data in a useful format to facilitate project evaluation?

2) What were the administrative costs for capital, operations, labor, and enforcement? Could the parking technology be helpful in reducing the city’s police enforcement needs in terms of monitoring meter violations? To what extent has the VPPT Program provided any cost savings or efficiencies related to parking management and enforcement?

3) Are there any “lessons learned” in terms of developing and maintaining public-private partnerships related to procurement and use of new technologies?
Data Sources/Methods: agency records on violation rates; labor and capital/operations costs associated with meter enforcement; success/failure rates of implemented smart parking technology/sensors, revenue from parking citations; interviews with key public agency officials including staff involved in enforcement, program evaluators, consultants and vendors of selected technology.
### Appendix C: Parking Utilization Data

**Figure 1:**
On Street Parking Utilization in Downtown Berkeley:
(Occupancy rates greater than 80% in bold.)

<table>
<thead>
<tr>
<th>Street</th>
<th>Limits</th>
<th>Occupancy Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M-F AM</td>
</tr>
<tr>
<td>University Avenue</td>
<td>Milvia to Shattuck</td>
<td>28%</td>
</tr>
<tr>
<td>University Avenue</td>
<td>Shattuck to Oxford</td>
<td>11%</td>
</tr>
<tr>
<td>Addison Street</td>
<td>Milvia to Shattuck</td>
<td>64%</td>
</tr>
<tr>
<td>Addison Street</td>
<td>Shattuck</td>
<td>83%</td>
</tr>
<tr>
<td>Addison Street</td>
<td>Shattuck to Oxford</td>
<td>20%</td>
</tr>
<tr>
<td>Center Street</td>
<td>Milvia to Shattuck</td>
<td>34%</td>
</tr>
<tr>
<td>Center Street</td>
<td>Shattuck to Oxford</td>
<td>38%</td>
</tr>
<tr>
<td>Milvia Street</td>
<td>Addison to Center</td>
<td>62%</td>
</tr>
<tr>
<td>Shattuck Avenue (w)</td>
<td>University to Addison</td>
<td>50%</td>
</tr>
<tr>
<td>Shattuck Avenue (e)</td>
<td>University to Addison</td>
<td>44%</td>
</tr>
<tr>
<td>Shattuck Avenue (w)</td>
<td>Addison to Center</td>
<td>83%</td>
</tr>
<tr>
<td>Shattuck Avenue (e)</td>
<td>Addison to Center</td>
<td>29%</td>
</tr>
<tr>
<td>Shattuck Avenue</td>
<td>Center to Allston</td>
<td>0%</td>
</tr>
<tr>
<td>Shattuck Avenue</td>
<td>Allston to Kittredge</td>
<td>53%</td>
</tr>
<tr>
<td>Shattuck Avenue</td>
<td>Kittredge to Bancroft</td>
<td>32%</td>
</tr>
<tr>
<td><strong>Downtown Averages:</strong></td>
<td></td>
<td><strong>42%</strong></td>
</tr>
</tbody>
</table>

## Appendix D

### Figure 2: Off-Street Parking Occupancy Rates

<table>
<thead>
<tr>
<th>Facility Name</th>
<th>Ownership Type</th>
<th>M-F AM</th>
<th>M-F Afternoon</th>
<th>M-F PM</th>
<th>Sat AM</th>
<th>Sat PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxford Street Parking Lot</td>
<td>City of Berkeley</td>
<td>90%</td>
<td>77%</td>
<td>75%</td>
<td>56%</td>
<td>68%</td>
</tr>
<tr>
<td>Center Street Garage</td>
<td>City of Berkeley</td>
<td>98%</td>
<td>88%</td>
<td>51%</td>
<td>35%</td>
<td>32%</td>
</tr>
<tr>
<td>Berkeley Way Lot</td>
<td>City of Berkeley</td>
<td>29%</td>
<td>81%</td>
<td>71%</td>
<td>45%</td>
<td>65%</td>
</tr>
<tr>
<td><strong>City of Berkeley Averages:</strong></td>
<td></td>
<td>72%</td>
<td>82%</td>
<td>66%</td>
<td>45%</td>
<td>55%</td>
</tr>
<tr>
<td>Surface Lot</td>
<td>UC Berkeley</td>
<td>TBS</td>
<td>TBS</td>
<td>NA</td>
<td>TBS</td>
<td>TBS</td>
</tr>
<tr>
<td>University Hall Structure</td>
<td>UC Berkeley</td>
<td>96%</td>
<td>TBS</td>
<td>27%</td>
<td>13%</td>
<td>10%</td>
</tr>
<tr>
<td>University Hall West</td>
<td>UC Berkeley</td>
<td>95%</td>
<td>TBS</td>
<td>65%</td>
<td>65%</td>
<td>65%</td>
</tr>
<tr>
<td>Banway Lot</td>
<td>UC Berkeley</td>
<td>100%</td>
<td>TBS</td>
<td>15%</td>
<td>TBS</td>
<td>9%</td>
</tr>
<tr>
<td>Tang Center (Bancroft/ Fulton Lot)</td>
<td>UC Berkeley</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td><strong>UC Berkeley Averages:</strong></td>
<td></td>
<td>97%</td>
<td>TBS</td>
<td>36%</td>
<td>39%</td>
<td>28%</td>
</tr>
<tr>
<td>Allston Way Parking</td>
<td>Private</td>
<td>73%</td>
<td>84%</td>
<td>37%</td>
<td>27%</td>
<td>11%</td>
</tr>
<tr>
<td>Kittredge Street Parking (new facility only)</td>
<td>Private</td>
<td>57%</td>
<td>70%</td>
<td>58%</td>
<td>48%</td>
<td>74%</td>
</tr>
<tr>
<td>Promenade Parking</td>
<td>Private</td>
<td>57%</td>
<td>TBS</td>
<td>30%</td>
<td>TBS</td>
<td>0%</td>
</tr>
<tr>
<td>Golden Bear Garage</td>
<td>Private</td>
<td>78%</td>
<td>TBS</td>
<td>22%</td>
<td>TBS</td>
<td>0%</td>
</tr>
<tr>
<td>2126 Bancroft Parking</td>
<td>Private</td>
<td>TBS</td>
<td>TBS</td>
<td>NA</td>
<td>TBS</td>
<td>TBS</td>
</tr>
<tr>
<td>Al's Parking Lot</td>
<td>Private</td>
<td>129%</td>
<td>129%</td>
<td>21%</td>
<td>71%</td>
<td>0%</td>
</tr>
<tr>
<td>Bank of America Building</td>
<td>Private</td>
<td>TBS</td>
<td>TBS</td>
<td>NA</td>
<td>TBS</td>
<td>TBS</td>
</tr>
<tr>
<td>Firestone Parking Lot</td>
<td>Private</td>
<td>TBS</td>
<td>TBS</td>
<td>NA</td>
<td>TBS</td>
<td>TBS</td>
</tr>
<tr>
<td><strong>Private Operators Averages:</strong></td>
<td></td>
<td>79%</td>
<td>94%</td>
<td>34%</td>
<td>49%</td>
<td>17%</td>
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<tr>
<td><strong>Downtown Averages:</strong></td>
<td></td>
<td>82%</td>
<td>88%</td>
<td>43%</td>
<td>45%</td>
<td>30%</td>
</tr>
</tbody>
</table>

City of Berkeley Reserved Parking Spaces and Permits: Center Street Garage: 16 spaces (6 reserved for Court), Berkeley Way Lot: 19 permit, Old City Hall: 8 spaces, New City Hall: 13 spaces, Veterans Building: 12 spaces.

n/a: not available  
Sources: City of Berkeley, UC Berkeley, Private Operators, and Surveys.
Appendix D:

City of Berkeley Parking Policy

Berkeley’s policy, expressed through the Downtown Plan and the General Plan, clearly demonstrates substantial endorsement of the city and council’s support for parking management and suggest the use value-pricing, especially to manage long-term and short-term parking demand. An overall objective in the transportation element is to “improve the management of public parking to better serve the needs of residents, businesses, and visitors.”

Specific Plan Policies

The Downtown Plan (adopted by reference in the General Plan) has the following Objective:

- Objective 3: Create adequate parking facilities to support land use policies for the Downtown

Parking policies for the Downtown emphasize the parking demands of short-term parkers (generally less than four hours) in order to create a viable retail commercial sector. However, some long-term parking needs must also be met for those commuters who cannot use alternative modes of transportation.

Policies

3.1 Increase the availability of short-term parking spaces on the periphery of the core downtown area.

3.2 Discourage the use of existing public and private parking facilities for long-term parkers in the high demand area of the Downtown core.

General Plan Policies

The City of Berkeley General Plan Transportation Element contains several policies that are relevant to Berkeley’s proposed VPPT Program:

- Policy T-3 Eco-Pass Program
  Establish an “Eco-Pass” program for Berkeley employers that would allow pass holders free unlimited rides on AC Transit and/or BART.

- Policy T-10 Trip Reduction
  Limitations on the supply of long-term commuter parking and elimination of subsidies for commuter parking.

- Policy T-11 City of Berkeley
  Use market pricing mechanisms to discourage all-day parking in City garages.

- T-14 Private Employers
  Market pricing mechanisms for employee parking to reduce automotive use and discourage all-day parking.
• **Policy T-34 Downtown and Southside Parking Management**
  Manage the supply of Downtown public parking to discourage long-term, all-day parking and increase the availability of short term parking for local businesses.

• **Policy T-34 Downtown and Southside Parking Management**
  Work with the business and arts community and owners of existing parking lots and garages, including the University, to cooperatively manage parking demand and parking resources, coordinate parking policies, parking rates and parking information programs, and widely disseminate parking maps and parking information.

• **Policy T-35 Public Parking Supply in the Downtown and Southside**
  Prioritize implementation of improved parking conditions in the Downtown and Southside through better utilization of existing parking and through implementation of policies to reduce demand for parking. Allow enough time for these improvements to be in place to demonstrate their effectiveness before considering public expenditures on construction of additional City-owned public parking spaces in the area.

• **Policy T-35 Public Parking Supply in the Downtown and Southside**
  Working cooperatively with the Downtown Berkeley Association and other stakeholders, develop approaches (incentives and disincentives) that would discourage employees from parking at meters, preventing those spaces from being used by short-term visitors and customers.

• **Policy T-40 Parking Impacts**
  Parking supply and demand may easily be adjusted by changing local pricing policies and by changing how the supply is managed.