City of Boulder
Parking Best Practices Review

Final Report

November 7, 2005

Presented to:

Downtown & University Hill Management Division
Parking Services

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City of Boulder
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LIST OF ACRONYMS USED IN THIS REPORT

BID - Business Improvement District
CAGID - Central Area General Improvement District
DBBID - Downtown Boulder Business Improvement District
DBI - Downtown Boulder, Inc.
DMC - Downtown Management Commission
DUHMD/PS - Downtown/University Hill Management Division/Parking Services
NPP - Neighborhood Parking Permit Program
RTD - Regional Transportation District
UHGID - University Hill General Improvement District
I. EXECUTIVE SUMMARY

Parking was identified within the Downtown Boulder 2005 Strategic Plan conducted by Progressive Urban Management Associates as a key strategic issue by downtown businesses, residents, and visitors. The City of Boulder’s Downtown and University Hill Management Division/Parking Services, commissioned Carl Walker, Inc. to conduct a limited “Best Practices” review and assessment of its parking management program.

Our scope also included assisting City staff with a feasibility assessment of a “first hour free” parking pricing strategy. Carl Walker provided city staff with a model for projecting the financial impacts of parking validation programs and several variations have been analyzed. Currently, the model is undergoing additional analysis and review by City staff.

The study began with a 4-day visit to Boulder for program orientation and tours of downtown, including all structured parking facilities and surface lots. We met with appropriate city staff and parking system officials as well as conducting a series of customer/user group interviews representing retailers/restaurateurs, developers, business community, hospitality industry, city staff, university officials, public officials, and others.

A key section of this report is the SWOT (Strength, Weaknesses, Opportunities & Threats) evaluation of the existing parking system. This is followed by an extensive collection of municipal parking best practices gathered from parking programs around the country.

It is our opinion following this review that Downtown Boulder has one of the best and most advanced parking systems in the country. The system is effectively organized and managed, has a clearly defined set of guiding principles that it actively strives to achieve. These guiding principles embrace a scope that is much broader than the typical parking program. This is reflected by the fact that the parking program funds several critical programs that significantly impact the economic health and well-being or Boulder. In the coming year for example the parking program, in addition to funding its own operating program, will also contribute to the following:

- Funding of the Eco-Pass Program - $700,000 for 2006
- Repayment of a 3.4 million dollar Mall Improvement Bond - $500,000/yr.
- BID funding and Pearl Street Mall Services Program - $100,000
- Parking structure debt service obligations

Not only is the Boulder parking program a leader in the area of contributing to community economic development programs, they also are recognized for leadership in integrating parking infrastructure development that advances good urban design practices, integrating parking and transportation programs, and along with Portland, Oregon leading the nation in the development of effective parking system branding and marketing programs.
Another impressive aspect of the program was the degree of active engagement between the parking program and organizations such as Downtown Boulder, Inc, the Downtown Boulder Business Improvement District, the University of Colorado, etc. While these groups sometimes have slightly different goals and do not always see exactly eye-to-eye, it is clear there is a good working relationship built on a foundation of mutual respect. This is unfortunately not often the case in many cities we visit.

While recognizing the overall high level of achievement attained by the Boulder parking program, it is true that there is always room for improvement. The parking program recognizes this and should be applauded for their willingness to explore these opportunities. Two key areas stood out for attention:

First, is the need to be fiscally responsible in the face of a constant barrage of requests to assess new programs that could negatively impact system revenues or dramatically increase expenses. Fortunately, parking management is sensitive to the need to be responsive to community input, but strong enough to educate the community that the system must retain a strong financial footing and meet its current and future financial commitments.

The second area is the need to develop a stronger capital maintenance plan and program. This component of the parking program must be developed and will entail significant expenditures in the next few years. However, failure to act will only create more difficult and costly problems down the road.

Although not seen as an immediate priority, in the next several years, Boulder should continue to assess the progress being made in area of parking system technology. Many communities are moving forward with advanced multi-space on-street systems and web-based management systems that can integrate all system components into a unified system. The benefits of these systems, especially with the advent of wireless environments, will revolutionize parking management.

Finally, I would like to applaud the parking program for taking a more active role than most programs in the area of staff education and development and encourage them to continue in this area.

Boulder has a parking problem to be proud of and one that is model for the rest of the country.
II. INTRODUCTION

Located in the foothills of the Rocky Mountains, the City of Boulder is located 35 miles northwest of downtown Denver, Colorado. With a total population of 119,000 people, Boulder is a vibrant city, comprised of 94,600 permanent residents and home to the University of Colorado with 25,000 students.

The City of Boulder’s Downtown and University Hill Management Division/Parking Services, in response to the Downtown Boulder 2005 Strategic Plan, commissioned Carl Walker, Inc. to conduct a limited “Best Practices” review and assessment of its parking management program, including a feasibility assessment of a “first hour free” parking pricing strategy. This study was recommended in response to parking being identified within the 2005 Strategic Plan as a key strategic issue by downtown businesses, residents, and visitors.

Utilizing Carl Walker’s exclusive “20 Characteristics of Best-in-Class Parking Systems” program as a basis, this study provides the City of Boulder with an analysis of strengths, weaknesses, opportunities, and threats focusing primarily on the following areas:

- Parking Garage & Surface Lot Management
- On-Street Metered Parking
- Parking Enforcement Practices

Scope of Services

- Provide the Downtown & University Hill Management Division with an initial request for information (RFI).

- Review this information thoroughly prior to the initial visit to Boulder.

- Conduct an initial 4-day visit to Boulder and become oriented with the city’s parking system by touring all structured parking facilities and surface lots. Meet with appropriate city staff and parking system officials.

- Conduct a series of customer/user group interviews representing
• Provide a SWOT evaluation of the existing parking system and offer comments and recommendations for improving both management and marketing of the existing parking supply that is consistent with the downtown vision.

• Provide a limited evaluation of the current parking program, commenting on program strengths and areas needing improvement. Identify parking best practices in the following areas:

1. Vision & Mission
2. Parking Philosophy / Guiding Principals
3. Parking Planning
4. Community Involvement
5. Appropriate Organization
6. Staff Development & Training
7. Safety, Security & Risk Management
8. Effective Communications
9. Consolidated Parking Program
11. Strategic Parking Management
12. Operational Efficiency
13. Facilities Maintenance Programs
14. Effective Use of Technology
15. Parking System Marketing
16. Customer Service Programs
17. Special Event Parking Programs
18. Parking Enforcement
20. Competitive Environment

• Document findings in a written report.

• Provide a PowerPoint presentation summarizing findings and recommendations of the study for interested parties.
III. STAKEHOLDER INTERVIEWS / WHAT WE HEARD...

During the course of our stakeholder interviews we met with the following groups:

- Property Owners/Developers
- Retail/Restaurant
- Large Employers/Office
- Hotel/Hospitality
- Real Estate Brokers
- DMC Board
- DBI/DBBID Staff/Board Representatives
- Hill Alliance / UHGID Advisory Committee
- GO Boulder
- Parking Task Force Representatives
- Parking Services Management & Staff

We were pleased with the constructive input and candor offered throughout the interview process.

WHAT WE HEARD....

General Comments

- Is Boulder a “large town or small city”?
- It’s all about the “Boulder downtown experience.”
- You “gotta wanna” be downtown! Highest tax rates, parking costs, etc.
- Boulderites are resistant to utilizing structured parking – will circle repeatedly to find an on-street parking space.
- Directions to parking / signage could be improved.
- Expose customers to parking structures and they will appreciate the benefits and availability.
- We should “incentivize the behavior we are trying to achieve”.


WHAT WE HEARD....

Parking Management Comments

- Customers confused by rules & regulations.
- System confusing – too many options and exceptions.
- Consider “first hour free” or “2 hour free” pricing strategy.
- Consider on-street first “15 minute free” pricing strategy.
- Customers “don’t know about the parking garages.”
- Parking maps need to be “better distributed.”
- People worry about parking at meters and getting tickets – but won’t park in the structures.
- Customers don’t know about the structures.
- Explore Public/Private parking cooperation – improve parking experience consistency.
- Ensure consistency of parking rules in all structures.
- Property owners horde permits.
- There are equity issues related to signage restrictions.
- Limited availability of permits is a concern to business owners.
- Parking financial obligations must be appreciated.
- The parking system has conservative “over-sell” policies.
- Explore technology options – pay-on-foot, pay-by-space, pay-by cell phone.
- Provide tools to make parking easier.
- Evaluate parking payment integration with E-470 Easy Pass.
- Review lack of parking permits for everyday users.
- Evaluate privatization of certain Parking Management functions.
- Would like to validate for the whole day (Why a three hour restriction?)
- Evaluate space availability sign systems/directional systems.
WHAT WE HEARD....

Parking Branding/Promotion & Education Comments

- Promote parking programs aggressively.
- Promote using “Banner” on Channel 8.
- Parking moneys stay downtown – make people aware of it.
- Consider marketing strategies targeted directed toward women.
- Lack of parking Downtown largely a perception problem – needs promotion.
- “Boulders best keep secret” – “weekend parking is free in parking structures.”
- Continued perception of “lack of parking.”
- Engage the community (businesses) in promoting parking programs.
- Parking education (through the businesses).
- Change the perception of Downtown parking –
  - Ads in Daily Camera featuring people other Downtowners may know
  - Get the word out!
  - Enhance Parking Marketing Program.
- Consider parking website upgrades?
- Consider development of a Parking map for the Hill area?
- Improve promotion of recent accomplishments.
- Last 8 years have been the most improved and least appreciated.

Employee Parking Comments

- Employee parking is difficult.
- Parking is a huge employee retention/moral problem.
- Many businesses pay for employee parking or try to offset the cost for employee parking.
- Employees that feed meters – impact efficiency.
- Need remote/affordable employee parking options.
WHAT WE HEARD….

Employee Parking Comments (continued)

- Identify # of employees parking on the street.
- Provide more employee parking options.
- Partner with businesses to solve employee parking problems.

Enforcement Comments

- Perception of overly aggressive parking enforcement.
- Clarify mission/goals for on-street enforcement.
- “Enforcement needs to be nicer.”
- Evaluate “Enforcement vs. Ambassadors” approach.
- Evaluate enforcement of non-parking issues - in Downtown.

Facilities Comments

- Security concerns about parking in a structure.
- Improve facility lighting and maintenance.
- Older facility lighting and cleanliness issues.
- Enhance level identification – theme.
- Pigeons are a constant maintenance problem.

Economic Development Comments

- Don’t be short-sighted when looking at financial constraints.
- Consider increases to sales tax revenues as part of the larger equation.
- Track lost business – parking is most common complaint.
WHAT WE HEARD….

Balanced Access/Access Alternatives Comments

- Encourage use of alternative modes without saying you cannot park downtown.
- Decrease in local traffic (alt mode focused) / increase in outside traffic (auto focused).
- Parking should fit into the overall community context – have it available, but not have it detrimental.
- Support high level of transit and Eco-Pass use.
- Eco-Pass is essential.
- Consider road system capacity limitations.

Financial Impacts/Options Comments

- Should parking meter hours and enforcement be extended?
- Declining sales tax – how to fix?
- Some businesses are looking to relocate from DT – largely because of parking.
- Evaluate sustainability of Eco-Pass program.
- Extend on-street meter rates later in the evening.
- “Non-restaurants pay the freight for restaurants.”
- Indirectly, downtown merchants are subsidizing the 29th Street Mall.

Hill Issues

- Lack of parking.
- Improve parking signage.
- Improve parking “visibility.”
- Access issues limits business development / success.
- Parking Control Officers (PCO’s) are nasty.
- Loading zone access limited.
WHAT WE HEARD....

Hill Issues (Continued)

- “Tons of delivery issues.”
- Old-district – limited delivery access/loading zones.
- Can’t reload cash key on-line or over the phone – not easy.
- CU doesn’t have enough parking – spill over impacts the Hill.
- Hill residents don’t have enough parking.
- Signage from Broadway confusing.
- Signage clutter.
- Neighborhood Parking Permit Program – works well to promote turnover.
- Patchwork of NPP – leads people to continue to search for spaces.

Perceived Obstacles to Resolve Parking Issues

- Money.
- Politics.
- Is the Parking Program limited in actively promoting parking?
- Financial.
- Political – “Tourism a dirty word.”
- Boulders’ idealism.
- Preserve Boulder for Boulderites.

What Do You Want This Study To Achieve?

- Improve public awareness of parking options.
- Simplify parking programs.
- Evaluate “First Hour Free Program” concept.
- Evaluate “Two Hour Free” – Santa Monica model.
WHAT WE HEARD….

What Do You Want This Study To Achieve? (continued)

- Improve perception of parking availability.
- Evaluate Public/Private Collaboration.
- Identify ineffective parking programs (if any).
- Compare Boulder’s parking rates to national averages.
- Find an affordable solution to employee parking issues.
- Keep businesses in Downtown Boulder.
- Get the message out about parking improvements – improve marketing.
- Open City’s eyes to larger big picture economic development issues.
- Appreciate the “real world” as opposed to the “Boulder Bubble.”
- Lay groundwork for long-term capital maintenance planning and provide models.
- Maximizing facility utilization – percentage of permits to sell, balance of long-term and short-term parkers.
- Solutions for pigeon problems.
- Ideas for special event rate structures.
- Potential safety improvements – especially in underground parking facilities.
IV. CURRENT PROGRAM OVERVIEW

Downtown and University Hill Management Division/Parking Services (DUHMD/PS) is a city department that provides a variety of services in the downtown and University Hill commercial areas, and citywide. DUHMD/PS manages two general improvement districts focused on parking operations - the Central Area General Improvement District (CAGID), a 35 block area in the downtown, and the University Hill General Improvement District (UHGID), a five block area in the commercial area adjacent to the University of Colorado. DUHMD/PS also manages eight neighborhood parking permits zones. Through this program they issue over 1900 residential permits per year and 145 commuter permits per quarter. DUHMD/PS also oversees parking enforcement throughout the downtown and on the Hill.

In addition, DUHMD/PS manages public spaces in the hill area and downtown including the Pearl Street Mall - vending carts, special events, patio extensions, etc. From parking revenues, DUHMD/PS funds a free bus pass program (Eco-Pass) for all downtown Boulder employees, a $610,000 investment that helps support travel demand management programs and reduces the demand for parking facilities. On the Hill, the department also provides street maintenance.

For both the downtown and the Hill DUHMD/PS provides economic vitality support including funding business improvement district studies, market demand analyses, economic strategic plans, and major public improvement projects. The city, through DUHMD/PS, works in partnership with both the Hill (Hill Alliance) and downtown business community (Downtown Boulder Inc. and the Downtown Boulder Business Improvement District) organizations in all areas and provides financial support in terms of event sponsorship and marketing.

Downtown Boulder, Inc. (DBI) is the local Business Improvement District (BID). Property owners tax themselves to promote a cleaner, safer and more vibrant community. The tax is used by the BID to purchase services that supplement those provided by the city and provide a comprehensive downtown marketing program. DBI's mission is to promote Downtown Boulder as the center of commerce, government, culture, and leisure. DBI's membership supports the overall vitality of downtown through public advocacy, political involvement, and by producing community events that
Current Program Overview – (continued)

enhance the Boulder experience for residents and visitors. Downtown Boulder Inc. is dedicated to the promotion and preservation of downtown as the heart of the community. We were pleased to see the degree to which the City and DBI communicate and interact on parking issues.

Located near the University of Colorado campus, University Hill is a business district featuring an eclectic mix of restaurants, shops and entertainment venues and businesses. The City of Boulder’s DUHMD/PS is responsible for parking operations, maintenance and enforcement and public space maintenance of the 4-block University Hill General Improvement District (UHGID), as well as supporting marketing, economic development and event sponsorship (working closely with the Hill Alliance).

This parking system “Best Practices” assessment is one of the selected strategic action items resulting from the February 2005, Downtown Boulder Strategic Plan prepared by Progressive Urban Management Associates, Inc. (PUMA) for The City of Boulder, the Downtown Management Commission, and the Downtown Boulder Business Improvement District.

The City, and Downtown Boulder in particular, is a nationally recognized and premier regional destination point closely associated with its Pearl Street Mall venue. City leadership is contemplating strategies to continue to attract new business, as well as retain existing businesses to sustain and enhance the Downtown Boulder experience.

Seamless transportation access and parking are deemed essential to Downtown Boulder’s overall strategic plans and this “Best Practice” study is intended to identify and provide practical recommendations to further advance the city’s parking/access programs and thereby enhance the overall Downtown Boulder experience.
Current Program Overview – (continued)

The DUHMD/PS operates under the following Mission Statement and operating Guiding Principles:

Mission Statement:
“We serve the downtown, University Hill and affected communities by providing quality programs, parking, enforcement, maintenance, and alternative modes of services through the highest level of customer services, efficient management and effective problem solving.”

Guiding Principles:
• Balanced access for all travel modes, including vehicular, pedestrian, bicycle, transit, to meet community-wide goals;
• Customer service orientation;
• Safe & well maintained facilities;
• Fiscal responsibility & accountability;
• Responsiveness to the needs of our diverse customer/citizen base;
• Fair and equitable management and enforcement;
• Education of the public regarding our principles, goals and mission;
• Coordination with economic vitality initiatives;
• Integration of facility design into the urban design context.

Parking System Inventory

The City of Boulder offers 3,778 downtown public parking spaces of which 59% are provided in structured parking facilities. Accessible Parking is provided in designated on street spaces as well as downtown CAGID parking garages and lots.

The parking supply is broken down as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Spaces</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structured Parking Facilities</td>
<td>2,209</td>
<td>59%</td>
</tr>
<tr>
<td>Metered Spaces</td>
<td>871</td>
<td>23%</td>
</tr>
<tr>
<td>OB meters</td>
<td>312</td>
<td>8%</td>
</tr>
<tr>
<td>Surface lots</td>
<td>203</td>
<td>5%</td>
</tr>
<tr>
<td>Library &amp; Park Central Surface lots</td>
<td>184</td>
<td>5%</td>
</tr>
<tr>
<td>Total CAGID Parking Spaces</td>
<td>3,778</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>UHGID Surface Lots</td>
<td>50</td>
</tr>
<tr>
<td>UHGID Metered Spaces</td>
<td>262</td>
</tr>
<tr>
<td>Total UHGID Parking Spaces</td>
<td>312</td>
</tr>
<tr>
<td>Total DUHMD/PS Parking Spaces</td>
<td>4,090</td>
</tr>
</tbody>
</table>
Current Program Overview – (continued)

The DUHMD/PS has a 2005 Operating Budget of $8,042,740. Approximately 84% of its funding is derived from the CAGID, and 12% comes from the City’s General Fund. The UHGID provides the balance (approximately 4%). DUHMD/PS currently has an annual debt service obligation of 59% of the operating budget from bonds for four parking structures.

System Operating/Management Structure

The City of Boulder’s Parking Services organization is vertically structured under the leadership of the DUHMD/PS Director. While the Director reports directly to the City Manager, the position also serves as Board liaison to, and also takes counsel and advisement from, the Downtown Management Commission and UHGID Advisory Committees. The Director also participates on the boards of the Hill Alliance, DBI and the Downtown Boulder Business Improvement District.

The DUHMD/PS is comprised of forty and one-half full-time equivalent employees under the following operating and service entities;

- Administrative Group
- Parking Enforcement Group
- Program Group
- Parking Operations/Maintenance Group

Each Group has clearly defined tasks and responsibilities under the leadership of a supervisor who reports to the Director, DUHMD/PS.

Parking Operations/Maintenance Group is the largest entity with about 42% of the staff, while the Enforcement Group comprises approximately 27%.

DBI provides important input and marketing assistance to the city. DBI has an established Parking Committee comprised of city staff, downtown stakeholders and others who provide input and marketing program support.
Current Program Overview – (continued)

Structured Parking Facilities

The public off-street structured parking system consists of five parking garages with a total of 2,209 spaces. All of these parking facilities are City owned, operated and maintained. The facility user mix varies by facility location and demand, and is detailed in the following table.

<table>
<thead>
<tr>
<th>Facility Location(s) (Operating hours requiring payment)</th>
<th># Spaces</th>
<th># Permits Issued*</th>
<th>% Permits</th>
</tr>
</thead>
<tbody>
<tr>
<td>15th &amp; Pearl Street (9:00am – 11:00pm, M-F)</td>
<td>686</td>
<td>655</td>
<td>95</td>
</tr>
<tr>
<td>10th &amp; Walnut Street (St. Julien Hotel) (9:00am – 11:00pm, M-F)</td>
<td>556</td>
<td>450</td>
<td>81</td>
</tr>
<tr>
<td>11th &amp; Spruce Street (9:00am – 11:00pm, M-W; 9:00am – 2am Th &amp; F)</td>
<td>392</td>
<td>331</td>
<td>84</td>
</tr>
<tr>
<td>14th &amp; Walnut Street (RTD) (9:00am – 7:00pm, M-F; 9:00am-10:00pm Th &amp; F)</td>
<td>302</td>
<td>294</td>
<td>97</td>
</tr>
<tr>
<td>11th Street &amp; Walnut Street (Randolph) (9:00am – 11:00pm M-F; 9:00am – 2:00am Th &amp; F)</td>
<td>273</td>
<td>215</td>
<td>79</td>
</tr>
<tr>
<td>Totals</td>
<td>2,209</td>
<td>1,945</td>
<td>88.05</td>
</tr>
</tbody>
</table>

*as reported 9/1/05

The City has sold 1,945 parking garage permits, or 88% of its supply capacity. As Table 1 indicates, permit issuance rates vary by location with the 15th & Pearl Street and 14th & Walnut Street parking facilities having the greatest percentage of parking permits issued.
Current Program Overview – (continued)

On-Street Metered Parking

On-street metered parking is available throughout the City of Boulder and University Hill area. There are 1,445 on-street metered parking spaces in Downtown Boulder (35% of the total parking inventory). These spaces are subdivided as follows:

- Metered Spaces - Downtown: 871
- Metered Spaces - Hill: 262
- OB meters: 312

Off-Street Parking Surface Lots

On-street parking is supplemented by off-street metered surface parking lots at the following locations (See Table 2).

<table>
<thead>
<tr>
<th>Surface Metered Parking Lot Location(s)</th>
<th># Spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Hill</td>
<td></td>
</tr>
<tr>
<td>1095 14th Street</td>
<td>53</td>
</tr>
<tr>
<td>12th &amp; Pleasant</td>
<td>19</td>
</tr>
<tr>
<td>13th &amp; Pennsylvania</td>
<td>38</td>
</tr>
</tbody>
</table>

Parking Programs & Rates

Parking Services provides a broad offering of parking programs suited to various constituents and user groups. These programs include garage/lot permits, meter key & garage cash pass, garage 20 day punch card, neighborhood residential parking permits (NPP), business permits, commuter permits, event meter hoods, tokens, validation stamps and construction meter hoods.

The Boulder Neighborhood Parking Permit program (NPP) is a citizen initiated program that places time-limit restrictions and permit requirements for on-street parking within a residential area, in order to manage parking and balance transportation demands while preserving the quality of life in Boulder. The NPP program was developed to meet the needs of multiple users - residents, visitors, commuters and businesses - within the zones. There are 8 NPP zones throughout the city of Boulder totalling 2,800 permit holders.
Current Program Overview – (continued)

Parking Services also offers a Prepaid Parking Coupon Program that allows disabled individuals with a valid handicap placard/plate to prepay for metered parking. These pre-paid coupons allow for up to four hours of parking without operating the meter. The coupons are sold in books of ten for $20.00. Each coupon is worth four hours of parking.

Parking rates for City of Boulder parking garages are:
- $1.00/hour for the first 3 hours increasing to $2.00/hour for each additional hour thereafter.
- Operating hours requiring payment vary per location.

All City of Boulder meters are currently $1.00 per hour, with enforcement, Monday through Saturday 9:00am – 6:00pm. On-street parking is free after 6:00 p.m. The City also provides free on-street parking on Sundays at all metered locations. University Hill metered surface lots offer extended times at certain locations.

Enforcement

The Parking Enforcement Group handles parking enforcement. The Division’s Parking Enforcement Group consists of a Group Supervisor and eleven enforcement personnel. The enforcement personnel execute the parking enforcement policies of the City of Boulder, DUHMD/PS, as described in the January 2005 policy and practice instructive statement. The parking enforcement group is responsible for monitoring and enforcing parking meter compliance, Neighborhood Parking Permit zone enforcement, scofflaw list, alleys within district boundaries, loading zones, vehicle relocations, parking complaints received from citizens, two elementary school crossings and the education of the public. In addition, parking enforcement officers work with special event coordinators to address parking issues associated with events.

The NPP enforcement effort is substantial; covering 8 eight zones and utilizing almost 60% of enforcement resources, but generating only a small percentage of revenue.

In 2004, the enforcement group issued an average of 9,884 parking ticket violations per month (over 118,600 per year) resulting in $2,401,839 in enforcement revenues. This equates to an average per ticket revenue of $20.25.

Special Events Parking

In addition to providing “free” parking for University of Colorado football games in city garages, parking services offers other special programs and accommodations including conference and special event programs that allow customized payments to meet the needs of the business or organization and special funeral service parking programs.
Current Program Overview – (continued)

Transportation Alternatives & Demand Management

Parking Services participates in a variety of community transportation initiatives along with RTD and GO Boulder. GO Boulder strives to develop a sustainable and balanced transportation system that supports the quality of life valued by Boulder’s residents, employees and visitors.

The Eco Pass program, an annual bus pass through the Regional Transportation District, has been the centerpiece of the alternative transportation mode in Boulder. In the downtown, DUHMD/PS provides free Eco Passes to all downtown employees at an annual cost of $615,000, paid by parking revenues. Approximately 42% of downtown employees use alternative modes of transportation to travel to work creating parking space equivalents (PSEs), thus freeing up parking spaces for visitors, clients and customers, and saving the parking district the costs of constructing and operating additional parking for employees. DUHMD/PS also funds an employee transportation coordinator who manages the downtown Eco Pass program, oversees free bike parking both on-street and in the garages and coordinates other programs, including the community, family-oriented Boulder Race Series in the downtown and on the Hill. DUHMD/PS takes a comprehensive approach in managing access to downtown of all modes of transportation - including vehicular, transit, bicycle and pedestrian.

UHGID provides matching funds for employers on the Hill who purchase Eco Passes for their employees.

Parking Marketing

The Parking Services Division has budgeted $30,000 for public information and marketing that equates to $7.94/space. Carl Walker's database of various municipal parking programs indicates that the City of Boulder’s marketing budget is slightly higher than the typical parking system marketing budget, which averages $7.00/space/year. In addition, DUHMD/PS provides the DBI with $38,000 per year to fund event sponsorships, marketing and map printing. We believe this investment in parking system marketing and promotion is well spent and is one of the program elements that sets the Boulder program apart from most others.

The DUHMD/PS utilizes a branded capital “P” on a green background to identify its Parking Services. The branded “P” is evidenced in all parking services programs and printed materials, and is prominently featured at surface and structured parking locations.
Current Program Overview – (continued)

Available Parking Programs & Marketing Collateral

DUHMD/PS PARKING PROGRAMS

- **Permit - Garage/Lot**, Downtown & University Hill, Information & Application
- **Wait List - Garage/Lot**, Downtown & University Hill, Information & Application
- **Meter Key & Garage Cash Pass** - Information & Application
- **Garage 20 Day Pass Parking Punch Card** – Available through Parking Services
- **Neighborhood Permit Parking (NPP) Program**
  - **Resident**, Information & Application
  - **Business**, Information & Application
  - **Commuter**, Information & Application
- **Work Program Signs**, Downtown & University Hill, Information & Application
- **Event Meter Hoods**, Downtown & University Hill, Information & Application
- **Construction Meter Hoods**, Downtown & University Hill, Information & Application
- **The “Best of Boulder Street & Area Map”**. A fold out street and area map featuring various sponsoring retail, restaurant, hospitality, business and other entities. Surface and structured parking is identified by location with the DUHMD/PS branded “P”, as well as, within an advertisement identifying structured street locations and City Garage Free program for Saturday and Sunday. Free meters on Sundays also featured. *Published by Resort Maps.*
- **“Boulder, Colorado”** A overview promotional guide of Boulder and its various attractions. Includes a Boulder area map with a Historic and Business District. Downtown parking locations identified with the DUHMD/PS branded “P”. *Published by Boulder Convention and Visitors Bureau.*
- **City Parking – Downtown Boulder Parking 4”x9” Card Location** Map with validation program description, parking rates, and city parking locations & hours. *Published by Downtown Boulder and the City of Boulder DUHMD/PS.*
Current Program Overview – (continued)

- **Common Parking Mistakes** – Avoid tickets by knowing the rules. A 5 ½” x 8 ½” flyer identifying eleven (11) common parking mistakes. Published by DUHMD/PS.

- **Meter Key Stickers on meters** – Promotes the availability and convenience of the “Meter Key” program.

- **Meter Key advertisements on Parking Citation Envelopes**

- **Parking 101 Ads and CU “Datebooks”** – University parking promotional initiatives.

- **Hit the Bricks Ads** – Series of six ads published in the Daily Camera.

- **Free Parking Coupons in newspapers**

- **Free Parking Coupons upon completion of a Downtown Survey**

- **Contributions of Free Meter Cash Keys and Cash Passes as prizes for Downtown Special Events**

- **Obtained easy to remember website address for easier access – www.BoulderParking.com**

- **Garage Signage** – Free Parking on Saturdays & Sundays

Parking Marketing Initiatives Published by Downtown Boulder Inc. and DUHMD/PS

- “**Plenty of Parking Downtown**” – Know the Numbers, 8 ½” x 11” advertisement/flyer. A descriptive representation of new spaces, total City of Boulder parking spaces, merchants that participate in the validation program and “free” covered spaces available downtown on Saturday & Sunday. Also, features “Park for Free” on Saturday & Sunday in city garages with location and numbers of spaces.

- “**Introducing Parking Validation Downtown**” with Win $150 Downtown Boulder Shopping Spree promotion.
Current Program Overview – (continued)

- **9 ½” x 1 ½” bookmark.** Features retail businesses participating in the validation program. Published by Downtown Boulder. Utilizes DUHMD/PS “P” brand parking logo.

- **“We Validate” sign** featuring the DUHMD & Parking Services “P” branding for use by retail, restaurant, and businesses; participating and promoting the downtown parking validation program. Published by Downtown Boulder and DUHMD/PS.

- **“Thanks for your Business - Parking Angel” Program.** 15-minute complimentary parking meter extension provided to expired meters. 2 ½” x 2 ½” card left with vehicle recipient. Program sponsored by Downtown Boulder.

- **“Plenty of Parking Downtown – Happy Holidays from Downtown Boulder”.** A 3 ¾” x 5” advertisement featuring downtown Boulder map with identified surface and structured parking locations. Seasonal parking promotion sponsored and published by Downtown Boulder.

- **“Your Lucky Day! Parking Ticket program.** A 3 ¾” x 5” advertisement providing ticketed parking patrons a “paid ticket” courtesy of Downtown Boulder, valid 12/18/04 only. Seasonal sponsored and published promotional event by Downtown Boulder.

- **Free Parking Advertised on DBI radio spots.**

It is our opinion that the City of Boulder has one of the best parking marketing and branding programs in the country. The marketing collateral materials do an excellent job of defining and promoting its varied programs and services.
V. PARKING SYSTEM SWOT ANALYSIS

This parking system assessment is based on the Carl Walker “20 Characteristics of Effective Parking Systems” and is summarized in the following “SWOT” analysis. This analysis identifies the “Strengths”, “Weaknesses”, “Opportunities” and “Threats” related to the City of Boulder Parking Services system.

**Strengths**

- **DUHMD/PS Organizational Structure, Leadership & Staff**
  Many city or municipal parking systems have fragmented or horizontally organized structures which tend to blur lines of authority, planning, operating practices, marketing, accountability and ultimately its effectiveness. The City of Boulder has established a more vertically integrated parking services management and operating structure under very capable leadership and staff, with a clearly defined mission, objectives, and tasks. Because on-street parking, parking enforcement and off-street parking are operated as an integrated system, the program effectively aligns its policies to support larger community goals and objectives, including economic development, downtown marketing, support of larger transportation policies, etc. It’s a tricky business, requiring a considerable amount of political savvy to accomplish successfully. For example, without an effective (and to some degree aggressive) enforcement component, on-street parking spaces would not have the turn-over needed to help local merchants succeed. The parking system, working closely with DBI, has implemented some very creative approaches that “take some of the edge” off of the enforcement program. It requires a delicate balancing of techniques and attitudes.

- **Integrated Community Alternative Transportation Plan**
  Another component that sets the Boulder program apart from most parking programs is its active support and participation in transit and alternative transportation programs. An example of this is the parking program’s financial support of the downtown Eco-Pass program. Another example is the integration of parking and transit programs within parking facilities. For example, Boulder was a leader in the development of intermodal parking facilities such as the RTD Walnut Parking Garage. The DUHMD/PS also provides bicycle parking and supports pedestrian amenities and other related improvements.

- **Community Relations & Support**
  Because the parking system is engaged with the larger community, and is aware of the larger economic development and political environment, the parking services unit enjoys significant support. The system has good working relationships with various civic entities, both public and private. This is, unfortunately, more the exception than the rule in most of the communities we work in. The credit for this rests, in part, in the organizational structure of the system in Boulder, but is primarily attributable to the leadership of Molly Winter and her staff. Of course, having good organizations such as DMC, DBI, DBBID, Chamber of Commerce, Go Boulder, etc. to work with cannot be underestimated.
SWOT Analysis – Strengths (continued)

- **Structured Parking Infrastructure/Locations**
  A major strength of the City of Boulder Parking System is the structured parking assets situated in strategic locations about the core of the City. There are four public parking garages offering a total of 1,653 parking spaces within two blocks of the Pearl Street Mall. These parking garages are strategically located at the East End of the Pearl Street Mall (1500 Pearl St Garage, 686 spaces), the West End (11th Street Parking Garage, 392 spaces & the Randolph Parking Garage, 273 spaces) and mid-central (1400 Walnut Street Parking Garage, 302 spaces). There is an additional 556 public parking spaces situated in the West End and within reasonable walking distance to the Pearl Street Mall with the recent opening of the St. Julien Hotel & Spa Parking Garage. The City of Boulder has a total inventory of 2,209 structured public parking spaces in the downtown area.

- **Urban Design Integration**
  Boulder is a national leader in the development of parking structures that are effectively integrated into the urban fabric of the community. The system has won numerous rewards for their facilities including the 15th and Pearl garage. In fact many of these urban design criteria have been codified into the local zoning code and building standards, such as the requirement for incorporating street-level retail.

- **Parking Supply Management/Planning**
  It is our impression that parking and transportation planning is an active function in Boulder and that the Parking System is an active participant in these processes. With the recent strategic addition of St. Julien Hotel Parking Garage, overall parking supply in Downtown Boulder is greater than it has ever been and is adequate to meet current and future needs. The ongoing support of the downtown Eco Pass program and other transportation alternatives is an integral component of downtown’s total access planning.

- **Parking Program Variety to Meet Needs of Diverse User Group**
  The City of Boulder offers a variety of parking programs to meet the specific needs of particular user groups. These programs are seen as a strength because they show a desire to be responsive to user/customer needs. Ironically, the breadth of programs and pricing options is perceived by some to be confusing and has lead to a call for program “simplification”, thus the interest in the “First Hour Free” concept. Some examples of the variety of program offerings include: permit programs for garages & lots in the Downtown...
SWOT Analysis – Strengths (continued)

& University Hill areas, waitlist applications, meter key & garage cash pass programs, resident/business/commuter, - Neighborhood Parking Permit (NPP) programs, event hoods information and applications, construction hoods information and applications, work program signs, garage 20 Day Pass programs, parking validation programs, Eco-Pass programs, tokens, etc.

• **Active Interaction with the Downtown and Hill Organizations**
  We applaud the degree of active engagement between the parking system, DBI (membership organization) and The Downtown Boulder Business Improvement District (DBBID). DBI and the DBBID are viewed as a creative partners and assets in addressing parking challenges and issues. A Parking Task Force was established in 2004 to address parking related issues and formulate executable solutions. The Parking Task Force is comprised of the DBBID, DBI, and the DUHMD/PS-City of Boulder. The Parking Task Force identified three strategic priorities for 2005: the “Big Ideas” program; complete & implement a parking marketing communications plan; and increase participation in the parking validation program.

• **Parking Program Marketing & Branding**
  The City of Boulder parking branding and marketing program is well established and recognizable. The white “P”, with its green background, is easily recognizable to most as a symbol of “parking” and it was found displayed at each structured parking garage and surface lot. It is used and featured in City Maps, all informational and application programs, and is an anchor display feature in the validation programs. The promotional maps and marketing collateral produced in concert with DBI, and others should be recognized and commended for its consistent quality and message.

• **DUHMD/PS Website & Links**
  We found the website easy to find and navigate. The information provided on the site is well organized and beyond that of a typical U.S. city of comparable size and population. The Green Transportation Links to Go Boulder and the RTD continue to relate the community’s alternative transportation programs to the public in a positive and effective fashion.

• **Clean Parking Structure Facilities**
  The program should be recognized for routine parking facility cleanliness and housekeeping. The facilities and surface lots were free of litter and debris.
SWOT Analysis – Strengths (continued)

• Creative Graphic and Wayfinding Aids
  The newer parking facilities incorporate creative and community based graphics, level identification and wayfinding aids in the parking facilities.

• Informational & Reporting Systems
  We were impressed with the promptness and relative ease that requested parking system information was provided during our evaluation. This includes not only general program information, but also detailed financial and operational data. This is not always the case during the assessment of parking systems and is another indication of overall good system management.

• Signage
  Overall, parking system signage and the prominence of garage entrances is a real strength of the system. There are some instances of signage clutter that will be addressed in the “weaknesses” section of this report.

• Preparation for Dealing with Snow
  The parking system is well prepared for dealing with snowfall within and around the parking structures and has the appropriate equipment to handle it.
SWOT Analysis – Strengths (continued)

- **Clear Presentation of Operating Hours and Cash-key Promotion**
  Meters have clear and easy-to-read stickers documenting operating hours, what to do in case of meter malfunction and prohibitions on meter feeding. Another sticker promotes the Cash-key alternative payment methodology.

- **Use of Time-limit Stickers**
  The use of stickers that clearly notify parkers of timelimits prior to parking is a simple but effective on-street parking best-practice.

- **Parking Facility Utilization is Well Documented**
  Parking facility utilization was well understood and documented. The parking access and revenue control system is effectively used to provide on-going parking utilization data.
Weaknesses

- **User/Customer Perception of Downtown Parking Availability**
  Real or perceived, we consistently heard from numerous sources that parking availability was a problem downtown. This issue is certainly not unique to downtown Boulder. Having a clear and accurate understanding of the perceptions of parking, combined with a multifaceted and on-going marketing and community education program, is the best way to combat this common problem (especially in the face of increasing competition). The “Know the Numbers” campaign developed by the Parking Task Force is an excellent example of how to combat this on-going issue.

- **Variety of Parking Programs Is Confusing to Users/Customers**
  This is a difficult issue because it appears to penalize the parking program for being so responsive to community needs. The sheer volume of parking programs has created a perception that the parking system is complicated and confusing. Too much detail is difficult to communicate to customers. Strategies that can produce desired customer benefits in simple to understand (and implement) formats should be considered. This is one of the attractive features of “First Hour Free” type programs, although even here, the devil is in the details. Even something as straightforward as “free parking on the weekends” gets complicated, for example: Parking is free in the structures, but is not free on-street, etc.

- **On-street Parking Preference**
  One of the comments we heard specific to Downtown Boulder was a strong preference for on-street parking, despite the availability of convenient and affordable off-street parking options. The comment was made many times that locals will often circle the streets hoping to find an on-street space rather than parking in a garage. This occurs even though the garages offer parking without the fear of overstaying time-limits and risking a parking ticket. This was sometimes related to the question: “Is Boulder a ‘large town’ or ‘small city’?” This peculiarity of Boulder needs to be incorporated in on-going parking marketing programs that promote the benefits of off-street parking.

- **Perception of Enforcement Practices & Tactics**
  Parking enforcement is a critical and necessary aspect of a successful downtown. Enforcement of the metered time limits promotes turn-over and therefore creates greater patron parking availability for the benefit of local businesses. On-street metered parking pricing should reflect the convenience and short-term nature of that parking choice and encourage those with longer term parking needs to choose less expensive structured parking options. On-street parking should be more expensive than off-street parking.

  Having accepted the need for fair and consistent parking enforcement, we heard loudly from stakeholders that the attitude of the enforcement staff was perceived as “overly aggressive”.

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**City of Boulder, Colorado**

*Parking System Best Practices Review*

*November 7, 2005*

*Final Report*

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SWOT Analysis – Weaknesses (continued)

Our opinion, after talking with the enforcement staff, was that they take their jobs seriously and may in fact need clearer direction regarding their attitude toward their jobs. They need to better understand that while there are specific rules and regulations that it is their job to enforce, the way they go about that job has a significant impact on the perception of the downtown as a preferred place to visit and shop.

We believe an enhanced training program that orients parking enforcement staff to be focused more on customer service and less on revenue or enforcement is needed to provide some balance. This needs to be driven from the “top down”. We understand that this is difficult to achieve but there are plenty of programs around the country that have made this happen. One of the best examples is the parking program shift of emphasis that occurred when Downtown Kalamazoo, Inc. took over the parking program in Kalamazoo, MI. A specific training program relative to this topic will be addressed in the Opportunities section of this report. This not so much an issue of what the enforcement staff are doing as how they relate to the public.

We also heard that parking enforcement was ticketing for expired vehicle inspection stickers in the downtown, and that this does not occur in other parts of the city. On the surface this was a concern, in that it made downtown appear less customer-friendly. However, after digging deeper, the regulations associated with this practice have plenty of warnings and other provisions that make this a non-issue in our opinion.

- Structure Maintenance Programs / Evaluations
  We did not see evidence of a well-defined and aggressive long-term capital maintenance program. The City of Boulder does have as-built drawing of their facilities and major component warranties. The development of long-term capital maintenance program is recommended to include periodic condition appraisals, inspections and preventive maintenance. The proposed facilities maintenance program would provide the means to document and budget for future repair and life-cycle maintenance planning.

- Specific Maintenance Issues
  The parking program is aware that they have been deferring certain maintenance issues related to several of the older parking structures. While the parking staff is well aware of these issues, for the sake of completeness, we will document several of these facility maintenance issues:
  - Several examples of signage or head-ache bar repairs/cleaning were noted.
  - Some stairwell railings need to be sanded and repainted.
**SWOT Analysis – Weaknesses (continued)**

- Parking stalls and centerlines need repainting (already addressed by DUHMD/PS since our last site visit).

- Old parking booths should be replaced. They are both unsightly and, in the case of the booth to the right, have maintenance issues, such as windows that can fall on cashier’s arms, risking potential workers compensation claims.

- There were several areas in multiple decks that had examples of concrete spalling or other deterioration.

- Some of the parking access and revenue control equipment is due for replacement.

- Repainting of interior garage walls is needed in some facilities.

- Painting exterior steel elevator chases.

- Refurbishing/upgrading interior elevator cabs.

- Repair/replace some aging fire sprinkler piping.

- Repair/upgrade interior structure lighting, as more efficient fixtures are now available.

- Replace worn traffic topping on decks.
**SWOT Analysis – Weaknesses (continued)**

- **Securing of Areas Below Stairwells**

Areas beside and below stairwells can become hiding places for criminal and other undesirable elements/activities in parking structures. These areas should be fenced off or secured in some fashion.

- **Signage**

While overall, parking system signage was a strength, there are instances of signage clutter, redundant messages and excessive legal notifications at certain garage entrances. A signage audit is recommended.
Opportunities

- **Training Opportunities**
  Overall the Boulder Parking System is one of the most advanced and progressive parking systems we have seen. There are, however, a few areas that could benefit from some specific and targeted training programs:

  - **Enforcement Customer Oriented Training**
    - *Carl Walker, Inc.* and the International Downtown Association have a joint training program aimed at shifting parking enforcement programs from being “violator focused” to “customer focused”. This one and a half day training session has an upper management component (1/2 day) and full day staff and supervisory level component.

  - **Parking Facility Maintenance Program Development Training**
    - *Carl Walker, Inc.* has one or two day training programs which provide detailed methodologies for developing improved and realistic parking facility maintenance programs.

- **Timing of the 29th Street “Life-Center” Development Parking Rates**
  Referring to the strategic planning work done with PUMA on this potential threat to Downtown, it was noted that a short-term parking rate increase has been planned to occur around the planned opening of the new mall. It may be a smart strategic move to accelerate this planned rate increase to occur prior to the planned opening so that the two events are not linked in the public’s mind.

- **Painting Garage Interiors**
  Painting garage interiors is one of the most effective ways to enhance the perception of cleanliness and safety of parking structures. The added reflectivity of the surfaces can effectively increase light levels.

- **Evaluate New Lighting and Energy Creation Technologies**
  New lighting fixture types, ballasts and energy conservation technologies have made significant advances in the past several years. Another interesting innovation is the creation of energy producing solar panels that can be added to parking structure roof tops to off-set energy costs or be sold back to the electrical grid in exchange for energy credits. An evaluation of these new technologies in conjunction with a planned capital maintenance program is recommended.
SWOT Analysis – Opportunities (continued)

- **Pigeon Mitigation**
  This is a tough problem. While the issue was raised during stakeholder interviews and we saw evidence of the problem ourselves, the City of Boulder has already tried all of the techniques that we are aware of from around the country. In fact they have begun testing a new strategy using fishing line that we have never seen and that is showing some promising results. Until a better solution is found, Boulder is doing as much as anyone to address the issue, including routine pressure washing.

- **Enhance Public Education About Parking Programs and Services**
  Because of the recent investments in parking structure development there is adequate visitor parking in the downtown. This “good news” should be strongly promoted and celebrated. As new programs and customer friendly services are enacted, get the word out through a coordinated public education and information campaign.

- **Explore New Customer Service and Parking Amenity Programs**
  To further enhance the image and customer friendly nature of the parking programs create and promote new customer service and parking amenity programs such as: vehicle location assistance, tire inflation services, vehicle lock-out assistance, etc. Having the programs in place is half the battle; the real benefit comes from effective promotion. Note: while these programs are all valuable to customers there are liability-limiting features that should be researched and enacted as part of the program implementation.

- **Expand Program For Regular Customer Feedback About Facilities, Programs and Service Levels.**
  The best customer service programs are those that regularly listen to their customers and develop specific programs based on elements that customers value. A regular program for customer feedback about facilities, programs and service levels is highly encouraged. This type of information can be a positive addition to an annual parking report.

- **Addition of Entry Canopies to Older Garages**
  One issue that comes from the effective integration of parking structures within an urban downtown is that often the integration of design is so successful that parking facility entrances can be hard to find. This has been effectively addressed in Boulder through the use of the dramatic entrance canopies. Consider adding these signature elements to older facilities where appropriate.
SWOT Analysis – Opportunities (continued)

• Evaluate Opportunities for Advertising in Parking Structures (Elevators, AdWalls, Tickets, etc)
Opportunities for additional parking facility revenues should be explored. Many cities realize additional revenues from advertising within the parking facilities. Aluminum and glass cases are used for advertisements within elevators and elevator lobbies. A concept called AdWalls can turn entire blank gray walls within a parking structure to an advertisement for local businesses or national companies such as Coca-Cola, Nike, etc. Another new product on the market is the use of colorful advertising banners within parking garages. They add color and interest, but have less maintenance issues than painting entire walls.

• Improve Internal Parking Structure Signage and Level Identification
Improving signage and level identification within the parking structures makes it easier for patrons to find their vehicles and negotiate the garages. Level identification, including the use of themed concepts can add color and fun to the parking experience.

• University of Colorado
Evaluate additional opportunities to partner with the University on parking solutions, especially related to the Hill district and for special events. It should be noted that DUHMD/PS already sponsors several university focused initiatives including their “Parking 101” joint ads, free parking for Saturday home football games, the “Student Date Book”, Homecoming parade sponsorship and the “Welcome Back” sponsorship.

• Annual Parking Report
Consider the development of an Annual Parking Report as a way to:
- Identify key parking issues and challenges
- Promotes parking system achievements
- Document the “state of parking”
- Build confidence in the system
- Create a historical record.
A comprehensive annual report template is provided in the appendix.
SWOT Analysis – Opportunities (continued)

- **Accept Credit Cards in Parking Structures as a customer payment option.**
  Many parking operations are beginning to accept credit card payments as an alternative to cash. Although there is a cost associated with this service option, it is a service that is increasingly becoming expected. It also has the advantage of reducing the number of “no pays” upon exit because it provides an alternative payment option. The DUHMD/PS is currently working on this issue.

- **Conduct Monthly Facility Walking Tours**
  Management should conduct facility walking tours on at least a monthly basis (if not more frequently). A checklist tool that can be modified to document these tours and to develop a historical record of action items and accomplishments is provided in the appendix.

- **Evaluate New Parking Technologies**
  The parking access and revenue control equipment is currently adequate to meet current needs, however technological advances are occurring frequently. At the recent International Parking Institute Conference and Exhibition we toured several of the exhibits with Molly Winter to discuss potential applications and benefits. New applications such as web-based parking management programs, pay-on-foot parking systems, integrated downtown/parking smartcards and multi-space on-street meter technologies (including pay-by-cell-phone options) have the potential to reduce operating expenses, enhance operating revenues and improve customer services.

- **Develop Program Criteria Documents for New Parking Structures**
  As part of an enhanced parking planning process, establishing a process to better integrate parking garage operational and program criteria early in the design process can be very beneficial. This is especially true if new technologies are being evaluated such as pay-on-foot, central cashiering, pay-by space, etc. Design criteria should also continually review functional design issues such as stall widths, turn radii, bay dimensions, pedestrian ways, facility lighting standards, accommodations for multi-modal options, skywalks, etc. to stay abreast on current trends related to vehicle size, new technologies, etc.

  An article outlining the benefits of a Program Criteria Document is provided in the appendix of this report. The article provides an outline for the development of a PCD.
SWOT Analysis – Opportunities (continued)

- **Consider On-Street Promotional Opportunities**

  A promotional opportunity we have seen in communities around the country is the use of triangular signs mounted to on-street meter poles. This is an effective way to promote specific local businesses, parking validation programs, downtown events, etc. Denver uses the top of the meter heads to promote local attractions such as the Denver Zoo, the Denver Art Museum, etc.

- **Examine Options To Be More Forgiving to First-Time Offenders and Provide Higher Penalties to Repeat Offenders.**

  A restructuring of the on-street fine system to be more forgiving to first-time offenders and provide higher penalties for repeat offenders is recommended. Stakeholder feedback was very critical of the perceived overly aggressive posture of parking enforcement personnel, especially as it relates to downtown visitors. However, there was also concern that employees were getting away with meter plugging, and taking up valuable on-street spaces most of the day, to the detriment of downtown merchants. This potential policy adjustment changes the parking enforcement rules to more effectively address these two key issues.

  A serious examination of the potential revenue impacts should be conducted prior to recommending such a policy change, although some programs have found that revenues actually increased, depending on exactly how the fine structure was redefined. The table below shows an example of this fine system restructuring.

<table>
<thead>
<tr>
<th>Overtime violation within 12-month period</th>
<th>Current Amount</th>
<th>Proposed Amount</th>
<th>After 8 days fine increases to</th>
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<td>$10 Warning</td>
<td>$20</td>
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<tr>
<td>5th overtime</td>
<td>N/A $75</td>
<td>N/A $100</td>
<td>N/A $150</td>
</tr>
<tr>
<td>6th or more…</td>
<td>N/A $100</td>
<td>N/A $150</td>
<td>N/A $200</td>
</tr>
</tbody>
</table>
**Threats**

- **Management/Operational Financial Obligations**
  This is a major issue. The parking program in Boulder is more than a typical parking program and although there is no shortage of potential program options that might be considered, balancing support for existing programs and city backed financial obligations cannot be underestimated. Examples of “non-traditional” existing programs and their financial obligations include:

  - Funding of the Eco-Pass Program - $700,000 for 2006
  - Repayment of a 3.4 million dollar Mall Improvement Bond - $500,000/yr.
  - BID funding and mall services program - $100,000
  - Parking structure debt service obligations

One of the major challenges facing the parking system is to continue to operate efficiently and effectively while balancing a desire to responsive to customer needs and continue to be supportive of community valued programs with meeting it’s financial obligations. The community must appreciate that new programs, such as a First Hour Free validation model, will have serious revenue consequences and to enact such a program will require changes/tradeoffs in other areas. These trade-offs might include such things as advancing planned parking rate increases, charging for off-street parking on weekends, extending parking meter enforcement later into the evening, etc.

The parking system needs to develop a long-term capital maintenance program to address deferred maintenance in the older structures. This is critical because failure to address these issues in the short term will inevitably lead to even higher costs in the long term. The parking system is aware of this and needs to balance these program needs against all the other program options. This issue is particularly important because this program has few, if any community advocates, but can directly impact the entire downtown if not effectively addressed.
SWOT Analysis – Threats (continued)

• **Structural Concerns**
  There was only one area that provoked any concern relative to structural conditions. This was in the Randolph parking garage. We feel the condition of this beam and column supports should be evaluated by a structural engineer/parking garage specialist as soon as possible.

• **Perception/Myth of Inadequate Downtown Parking**
  Perception can be reality to some and its takes great patience coupled with a well orchestrated and concerted marketing program to change public perceptions. As mentioned earlier, this issue is certainly not unique to downtown Boulder and Boulder actually has some of the better initiatives we have seen to address the issue, however it remains a potential threat.

• **29th Street “Life-Style” Shopping Development**
  The development of the 29th Street Shopping Mall certainly presents some level of threat to Downtown Boulder merchants and restaurants; however the unique aspects of the Pearl Street Mall and the City of Boulder “experience” cannot be duplicated through a shopping mall.
  As promotional strategies develop from Downtown Boulder retail, restaurant, entertainment and merchant interests to inspire its clientele to further partake of their services, parking will
**SWOT Analysis – Threats (continued)**

play a contributing role in offsetting negative myths and perceptions about parking. The Parking System should be virtually unseen and seamless as a means of allowing visitors/users to come, visit, entertain, shop and recreate. Key strategic parking initiatives to offset City venue challenges are:

- Expanded parking marketing/awareness programs
- Consider implementation of an alternative pricing strategy (such as the “first-hour free or other creative validation program options)
- Embrace an enforcement/ambassador/educator enforcement approach

**Competitive Positioning**

Because of Boulder’s support of an overall downtown access management strategy that emphasizes transit and transportation alternatives and understands the limitations of the existing street systems as it relates to traffic capacities, how much parking is “enough” is more politicized than in many communities. The impact of new competition to the downtown (e.g. 29th Street Mall), which uses abundant parking as a marketing strategy, continues to put pressure on the downtown. Providing a variety of cost effective transportation and parking options for visitors as well as downtown employees will be an on-going challenge.

One possible recommendation to address this issue is to develop a coordinated “Downtown Access” marketing program built around a “Commute Options” theme. It would promote parking availability as only one of a variety of access options making downtown an accessible and inviting destination. The whole range of transit and transportation alternatives would be promoted in conjunction with parking. Such a marketing program could be jointly funded through RTD, DUHMD/PS, Go-Boulder and the DBI.
VI. “FIRST HOUR FREE” CONCEPT EVALUATION

Currently, parking validations in the City of Boulder are provided to downtown businesses at a reduced price. The price charged to businesses for parking validations is $.38 per $.50 validation (or 75% of face value). The validations are accepted in all City operated facilities and are well promoted in cooperation with Downtown Boulder, Inc.

Carl Walker has worked with City parking staff to analyze alternatives to the existing parking validation program.

First-Hour Free Programs

An option that is gaining popularity in municipalities across the country is a system whereby a certain amount of “free parking” is provided in off-street parking facilities. These programs generally provide one or even two hours of parking at no charge. These programs may or may not provide the option of additional parking validations to local businesses. This type of program addresses some of the shortfalls of the existing validation program. For example, all local businesses are able to provide a certain amount of free parking to customers, not just those able to participate in a paid validation program. Also, the system is easier to use in that customers are not required to ask for validations from businesses. Ideally, this type of program would encourage more people to park in off-street parking facilities and ultimately encourage more people to visit downtown. In fact, in a couple of recent examples (Boise, ID and Fort Collins, CO), overall parking facility utilization has increased approximately 16% – 18% in the first year following the shift to a “first hour free” type program. These programs also give downtowns a simple, positive message to promote relative to parking: “Visit downtown – and the first hour is on us!”
Another example is Pasadena, California, where the first ninety minutes are free at City-owned garages in Old Pasadena. The Parking is managed for the City by the Old Pasadena Management District, which has fought hard to keep the 90 minutes free although it reduces the parking revenues by approximately 52%. They firmly believe this feature generates larger economic benefits for the district, such as dramatic positive increases in property tax and sales tax revenues created due to the desirability of being part of the very successful district. They believe the 90 minutes free helps in the initial attraction of customers. Parking costs in Old Pasadena begins at $2 per hour, up to $6 daily maximum. Parking is also available at hundreds of curbside on-street metered parking spaces throughout the district, as well as at privately operated surface parking lots.

It should be noted that all of these programs must be placed firmly into their full context for the complete picture to be appreciated. For example in Boise, the success of the program there must consider the fact that the parking system was heavily subsidizing the old validation program to the tune of approximately $600,000 per year. The elimination of this subsidy combined with a back-end rate increase which accompanied the First Hour Free initiative contributed to the success of the program for the parking system. In the case of Boulder, a First Hour Free model may in fact help generate more visits to the downtown and even stimulate additional sale tax revenues, but this will not necessarily benefit the parking program which has existing financial commitments that they are obligated to meet.

**Financial Impacts**

*To be finalized pending completion of City staff analysis.*

**First-Hour Free Recommendation:**

*To be finalized pending completion of City staff analysis.*
Municipal Parking Best Practices
Parking Management Best Practices

Add A Planter or Two

- It’s amazing the difference adding plants can make in the look and feel of parking structure, especially around elevator lobbies and exit plazas.

Example:

- At the Queensway Garage in Long Beach, planters are located at both entrance and exit plazas improving the look and feel of the parking environment.
Advertising on parking tickets, valet tickets and parking gates can effectively eliminate ticket expenses from your operating expense budget, as well as creating an opportunity to market downtown venues and attractions.

Example:

www.advertickets.com

The use of “Ad Walls” is a good example of finding creative alternative revenue sources. It also adds color and interest to typically dull garage environments.

Ad Walls offers advertising options for “standard walls” (6’ x 12’), “columns” (6’ x 2’), “overhead” (16” x 12”) and “entry booms” (4” x 4’).
Add Color!

The use of color is a tried and true mechanism for brightening drab concrete structures and aiding in wayfinding.

Example:

In this example, the colors are associated with different vertical elements and where they lead.

Alternative Revenue Sources

There are several sources of alternative revenue available in parking systems that most systems don’t take full advantage of. These options often provide additional value to clients.

Example:

Examples include advertising, drink and vending machines, ATM machines, etc.
Parking Management Best Practices

A Annual Parking Reports

- Developing an Annual Parking Report is an effective tool for communicating with both internal and external customer groups.

Example:

ANNUAL PARKING REPORT
City of Albuquerque
Albuquerque, New Mexico
Department of Parking
June 2002
Presented to:
Office of the Mayor
Office of the City Council
Prepared by:
City of Albuquerque
Department of Parking Services

Annual Parking Report benefits:
- Identifies key departmental issues and challenges.
- Promotes departmental achievements.
- Documents the “state of parking”.
- Builds confidence in the department.
- Creates a historical record.

Parking Management Best Practices

B Branding and Marketing

- Developing a parking system “Brand” is one trademark of “Best in Class” parking programs.

Example:

- The brand is more than just a logo.
- The brand should promote the image you want people to have of the system.
- It should reinforce the positive aspects of the system – “Free and Easy Parking”, “Visit Downtown and Parking Is On Us”, etc.
- Use consistent signage and other branding tools to “tie the system together”.

Parking Management Best Practices

Bollard Sleeves

- Eliminating unsightly rusted bollards used to require regular maintenance and even then was often unsuccessful.

**Example:**

- Bollard sleeves are an inexpensive and easy solution to the problem of rusted bollards. Low-density polyethylene thermoplastic sleeves slide over existing guard posts for quick and easy installation.
- They even offer yet another opportunity for advertising or facility promotion, if desired.

Parking Management Best Practices

Collaborative Promotions

- Marketing dollars can go further when parking programs collaborate and co-market with other downtown organizations.

**Example:**

- Examples include: adding parking system info to downtown maps & brochures, banners, wayfinding kiosks, print ads, etc.
Cashier Booths – Built In

- Integrating cashier booths into parking office space has several benefits.

**Benefits include:**
- Improved security.
- Improved comfort.
- ADA accommodation.
- More secure access to change funds.

Example:

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Connectivity

- The use of “ruggedized” hand-held devices has allowed parking field personnel to have access real-time information.

**Examples include:**
- Real-time scofflaw data for enforcement officers – If a vehicle owner has five outstanding citations and the sixth citation would result in the vehicle being “booted” - the officer in the field needs to know that this is the sixth citation.
- Roving maintenance staff can now be notified in the field via text message of “low tickets”, “ticket jams”, etc. before traffic backs up.
Parking Management Best Practices

Consolidated Parking Programs

- Ideally, the parking system should be vertically integrated with control of off-street, on-street and parking enforcement operations. The addition of transportation elements is another logical addition.

  Example:

  - Taking a systems approach to parking is an important dimension to creating a comprehensive and effective parking program.
  - Having control of all or most aspects of parking can contribute to a more effective operation, because of the interactive nature of parking as a system….
    - For example – having control of off-street, but not on-street parking can lead to problems if the rates for the various types of parking are not kept in the proper balance or relationship.

Parking Management Best Practices

Customer Education

- Best in Class parking systems take an active role in educating their customers on parking issues such as safety/security, how to use new technology, etc.

  Example:
Parking Management Best Practices

**Distinctive & Consistent Parking Signage**

- Once you have created a high standard of service in your facilities, you want your patrons to associate that level of excellence with your system — consistent and distinctive signage helps tie it all together.

**Example:**

- Kalamazoo, MI
- Boise, ID
- Boulder, CO
- Lincoln, NE

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**Discounted Parking to Attract Customers**

- If utilization of facilities is low, or if there is a desire to stimulate downtown activity, there are numerous ways in which parking can contribute to revitalization strategies.

**Examples:**

- Early Bird Specials
- Discounted Rates if in before 9:00 AM
Parking Management Best Practices

**Eliminate Blind Corners**

- Improving site lines is one of the most effective means of reducing vehicular accidents in a parking structure.

**Example:**

- The photo to the right shows an example of how a cut out in a sheer wall improves visibility at a blind turn.
- The use of convex mirrors to improve visibility in turns or along pedestrian paths is another good example.

**Energy Conservation**

- Having separate electrical circuits for parking facility lights on the exterior side of parking bays as well as the roof level can save thousands of dollars per year in energy costs.

**Example:**

- The photo to the right shows an example of this best practice. The circled lamp is off during the daytime hours while the interior row of lights in the same bay remain on.
- In this application the exterior row of lights are tied to photo cells. In the event light levels are reduced to a certain point such as during a thunder storm, the light will turn on.
**Enforcement Technology**

- The use of advanced parking enforcement technology can have a dramatic impact on the effectiveness and efficiency of your parking enforcement program.

  **Example:**

  - The use of License Plate Recognition (LPR) systems to automate the enforcement of time-limited areas through the use of efficient "electronic chalking" improves the accuracy and efficiency of enforcement efforts.
  - These systems utilize GPS locators and generate real-time scofflaw lists.

**Entrances – Don't Hide Them!**

- The trend towards wrapping parking structures with retail or office uses is a positive development, however, sometimes parking entrances can become hard to find.

  **Example:**

  - This photo shows that while the parking structure may be all but invisible, the entry way can be effectively highlighted.
  - The overhead signage is also supplemented with a curb mounted sign to further improve visibility.
Parking Management Best Practices

Financial Plans

- “Best in Class” programs typically have developed parking specific financial plans.

Example:

- Introduction
- Background
- Planning and Policy Framework
- Operational Objectives
- Fund Balance and Reserve Policy
- Policies Regarding Uses of Parking Revenues
- Debt Policy
- Rates Policies
- Annual Updates

Parking Management Best Practices

Fine Structures

- Parking fine structures should be developed to address the specific problems you are trying solve.

Example:

- In the example to the right, the fine structure was modified to be more forgiving to infrequent violators (typically visitors) and more punitive on repeat offenders (typically employees parking in short-term spaces).
- In addition, incentives are built into the fine structure to promote prompt payment and thereby improve the citation collection ratio.
Parking Management Best Practices

First Hour Free Programs

- First Hour Free programs are effective alternatives to traditional parking validation programs.

Example:
- In communities where we have assisted in implementing these programs we have seen increases in both revenue and facility utilization, as well as positive community support.
- A thorough revenue assessment is recommended before undertaking a first-hour free program.
- Implementation of these programs are often accompanied with other adjustments to back-end parking rates.

Fluorescent Lamp Recycling

- Spent fluorescent lamps must be properly handled and stored to limit mercury exposure.

Example:
- Energy efficient fluorescent lamps can contribute to a cleaner environment, but they must be managed properly. For most us, fluorescent lamps present the single greatest risk of mercury exposure in the work place. Protect the health and safety of your employees and customers.
- Reduce the soft costs of managing mercury waste.
- Reduce your company's risk and liability.
- Improve your regulatory compliance.
Parking Management Best Practices

**Good Communications**

- One common (and too often valid) complaint about parking systems is that they do not effectively communicate with their customer groups.

**Example:**

- “Best in Class” parking programs reach out to customer groups through a variety of programs to solicit input and engage and involve their communities in planning decision making processes.
- Parking taskforce groups, customer surveys, secret shopper programs, public forums, etc. are all tools used by effective parking operations.

**Guiding Principles**

- Development of a set of parking system “Guiding Principles” is a good tool for communicating program goals and objectives to both staff and community stakeholders.

**Example:**

- “Guiding Principles” are not intended to replace policies and procedures, rather they define the goals and objectives that ultimately define the character of the parking department.
- Guiding Principles typically cover:
  - Mission Statement / Statement of Purpose
  - Operations/Funding Strategies
  - Community Relationships
  - Responsibility for Parking Operations
  - Rate Setting Guidelines
  - Options for Allocating/Procuring Parking
  - Inclusion of Parking in Strategic and Master Planning Processes
  - Procedures for Managing Losses of Parking Supply (both temporary and long-term)
  - Definition and Communication of Parking Rules and Regulations
  - Enforcing and Adjudicating Parking Rules and Regulations
  - Defining Parking Facility Maintenance Responsibilities
  - Special Event Parking
  - Budgeting and Planning Cycles
Automatic Vehicle Identification (AVI) systems provide a more customer friendly system while improving security (no stopping, no rolling down windows and enhances driver safety by keeping their hand on the wheel and eyes on the road.) It also increases vehicle through-put during peak demand periods.

Example:
- Radio signal from reader activates tag.
- Transponder reflects data.
- Reader processes data and
  - Opens gate if valid
  - Sends data to host CPU
- Host processes data, and records transaction.

Parking structures have limited height restrictions. “Headache Bars” are the traditional solution. New electronic sensor systems detect over-height vehicles and activate flashing electronic signs to more effectively alert drivers.

Example:
- Electronic height detectors utilize an “electric eye” at a predefined height. If the sensor is tripped by an oversized vehicle a flashing over-height warning sign is activated.
Parking Management Best Practices

Illuminated Gate Arms

- Designed to provide exceptional visibility, particularly between dusk and dawn.

- Illuminated gate arms are a new feature, which offers safety advantages especially in areas with high pedestrian activity.

Example:

In-Car Meters

- In-Car Meters can be programmed for up to twenty time zones with different rates for each zone. They can be used with other systems or as a new “stand alone” system. Controlled parking areas can be increased by adding in-car meters only in fringe areas with no capital investment.

User Benefits –

- Convenience.
- No need to carry coins or tokens.
- System is fair - charging only for the actual time parked.
- Motorists receives receipt whenever parking time is purchased.
- Replaceable battery.

Example:
Parking Management Best Practices

Integrate Intermodal Options

- Installing bike lockers is just one example of incorporating multi-modal options into parking structures and contributing to a more balanced parking and transportation program.

Example:

- Other more aggressive strategies include integrating bus or shuttle transfer stations into parking garages.
- Creation of express park and ride lots, etc.

Parking Management Best Practices

Illuminated Entry/Exit Signs

- Illuminated entry/exit signs are important to ensure that customers know entrances from exits after dark.

Example:

- Whether illuminated from within or from external sources, this is an important safety and traffic control feature that is sometimes overlooked.
Parking Management Best Practices

I Inventory

- A basic element of effective parking program management is maintaining an up-to-date parking inventory.

Example:

- Parking inventories should be kept up to date on an on-going basis. Supply additions and losses should be tracked along with the dates spaces come into or out of service.
- Parking supply should be subdivided by type of spaces. On-Street vs. Off-Street, Public vs. Private, Surface lot vs. Structured, etc.

Parking Management Best Practices

J Jazz it Up!

- In addition to visual clues, some parking structures are also using music to remind patrons where they parked. A different style of music is used on each floor.

Example:

- O'Hare airport in Chicago (Standard Parking) was one of the first to use this wayfinding enhancement strategy.
- The music is reinforced on each floor by dramatic graphics—distinctive to the specific song being played on that floor—displayed in the elevator vestibules and throughout that level's parking bays.
Parking Management Best Practices

Keep In Touch...

- Even if you don’t have your own parking “E-Newsletter (and why not?), see if you can tag a message onto other appropriate E-venues.

Example:

- Promote parking validations.
- Links to parking info/ websites.
- Promote merchants that participate in validation programs.
- Promote parking availability.
- Promote alternative transportation options.

Know the Numbers

- More often than not, parking problems are more perceived than real. The Boulder Parking program attempted to address this issue through a “Know the Numbers” campaign.

Example:

- 34% more downtown spaces with the opening of 10th & Walnut garage.
- 3,778 City parking spaces in Downtown Boulder.
- 93 merchants that reimburse customer’s parking.
- 2,209 Free covered downtown parking spaces on Saturday & Sunday.
Level Identification - Theming

- Wayfinding aids such as “level theming” have helped make the parking environment more pleasant and interesting while providing the benefit of helping patrons remember where they parked their car.

Example:

Map It!

- Having an effective and easy to read parking map is a basic asset for effectively communicating with customers.

Example:

- There are many examples of quality parking maps available.
- This map from Downtown Lincoln Nebraska has detailed information about parking facilities, downtown destinations, University of Nebraska – Lincoln destinations, etc.
- It also distinguishes between public and private parking facilities and provides a useful orientation to the one-way streets.
Parking Management Best Practices

Meters as Advertising Space

- Advertise local attractions or parking program elements on meter tops.

Example:

- Free on-street parking on Sundays is also promoted.

Meter Heads

- Use of different colored meter heads to differentiate different parking classifications.

Example:

Gray parking meters are $1.00 per hour and must be paid from 7:30 am to 5:30 pm, seven days a week.

Red meters are for service and delivery parking and are $3.00 per hour. Service meters must be paid 24 hours a day, seven days a week.

Blue meters are for disabled parking patrons. The rate is $1.00 per hour and the meters must be paid from 7:30 am to 5:30 pm seven days a week.

20
For situations where there are only a limited number of transient spaces within a facility, controlling/charging for those spaces with meters can be a cost effective alternative to traditional exit cashiering.

Example:

In the facility to the right there were just over a hundred transient spaces available, the rest were reserved for monthly parkers. The revenue stream from the transient spaces would not have justified two shifts of exit cashiers, plus supervision, fee computers, booths and other capital items.

Note that there are still staffing costs with this option as the meters need to be enforced.

The simple addition of meter time limit stickers can greatly improve the user friendliness of your on-street system, especially for the occasional user.

Example:

Some systems use colored meter polls to indicate time limits, however, this assumes the customers are familiar with the color-coding system.

The meter time limit stickers are more easily understood by first time visitors.
Nested Parking Areas

- With the trend toward more mixed-uses in parking structures, the need to create segregated parking areas within garages is becoming more common. One effective tool in accomplishing this is through the use of “nested parking areas”.

- The photo to the right shows a “secured and segregated” parking area for condo owners within a larger monthly parking structure used primarily by a large downtown technology center.

- In this case, separate AVI readers were installed and the readers programmed for residents.

- A separate pedestrian access gate and “California Style” swinging gates were installed to meet security requirements.

Neighborhood Parking Permit Programs

- A Neighborhood Permit Parking zone is a residential area where on-street parking is restricted. NPP programs are developed as a tool to balance the needs of all who park on these streets, including residents, visitors and commuters.

- To be considered for an NPP zone, neighborhood residents assess their parking needs by working with the City to determine the feasibility of a potential parking permit zone.

- After at least 25 neighbors have applied by petition, the City initiates a multi-step process for development and approval of a new zone.
Parking Management Best Practices

On-Line Parking Coupons

- Looking for a way to attract new customers, consider the time-tested use of coupons with an on-line spin - printed from a website.

Example:

- Placing coupons on your website or on the websites of related groups can be a positive way to invite new customers to your facilities.
- The coupons can also be used to promote new services.

On-Street Occupancy

- Documenting on-street parking occupancy is another effective tool to understanding and managing your parking resources.

Example:

- Routinely tracking on-street parking occupancy and documenting the results graphically provides valuable management data.
- Often there is adequate parking supply despite a widespread perception that the parking supply is inadequate. Documenting the true occupancy rates are the first step to effectively resolving parking problems (real or perceived).
Parking Management Best Practices

On-Street Management Information

- Wireless information systems are now available for electronic parking meters that provide system managers with real-time information related to on-street system resource utilization.

  Example:

  - The systems feature accurate vehicle detection, combined with advanced web-based software, and provides parking operators with up-to-the-minute status of on-street parking operations.
  - Combining robust wireless technologies with the latest in internet technology, these systems give parking operators a seamless interface to their operations.

Operational Peer Reviews

- This is a low cost initiative that can be set up through local, regional or national parking associations.

  Example:

  - The scope of peer reviews vary, but are generally focused on operational elements and might include maintenance practices, staffing and staff training, the use of technology, customer services practices, etc.
  - Peer reviews are often reciprocated.
  - The ASU External Peer Review brought in four other university parking system administrators from across the country and generated a very professional and objective system assessment.
Parking Management Best Practices

Parking Count and Guidance Systems

- Signal Park has developed a system that identifies which spaces are available and lights above the spaces are either red or green guiding patrons to the available spaces.

Example:

- This application is also very accurate in identifying the number of available spaces.
- These systems are most applicable in large, multi-bay parking facilities, such as airports or sports arenas.

Parking Orientation Tools

- Many facilities place “You parked on Level ___” cards at the elevator lobbies for patrons to take with them.

Example:

- Other systems have developed “Parking Pocket Pal” mini-brochures to provide orientation and parking services information to customers.
Passive Security

- Investing in “passive security” features pays dividends in the long run.

Example:

- Passive security is defined as any device or technique not requiring a human response, such as lighting, fencing, glass-backed elevators and stairwells, etc.
- Passive security is more cost effective, and if done well, contributes to a patron’s feeling of safety and comfort within a facility.

Pay-By-Cell Phone

- No coins to feed the meter? Your time is expiring, but your 3 blocks away? No problem – Pay with your cell phone!

Example:

How Pay-By Cell Phone Works:

- Once an account is set up, a motorist finds a spot, parks the car, calls a toll-free number and keys in the spot’s number.
- If a person is running late, he can remotely buy more parking time with another phone call (assuming it does not exceed the time limit).
- The bill is typically sent to a credit card.
- Customers receive a text message on their phones, warning them five minutes before their time is about to expire.
Parking Management Best Practices

Pedestrian Safety

- Flashing signs with audible signals activated by exit lane loop detectors alert pedestrians of on-coming vehicular traffic.

Example:

- Lighted crosswalks activated by push button or microwave sensor enhances pedestrian safety.

Example:
Program Criteria Documents

- Program Criteria Documents are a tool to help ensure that institutional goals, objectives and standards are incorporated during the early phases of project planning and development.

**Example:**

**Program Criteria Document benefits:**
- Development of a more comprehensive understanding of the project impacts and scope.
- Build or strengthen project momentum and acceptance.
- Promote parking-specific areas of concern that are often overlooked without direct and early involvement by parking professionals, such as:
  - designing for operational flexibility
  - planning for alternative payment technologies
  - designing to maximize passive security, user comfort, etc.

Public Relations

- Sometimes called the “Meter Angels” program, the Business Improvement District in Boulder will add 15 minutes of time to customer meters and leave the note below on the vehicle’s windshield.

**Example:**

- On one hand, local businesses directly benefit from the parking space turn-over that an effective enforcement program helps provide.
- On the other hand, no one likes to receive a parking ticket.
- This program aims at taking the edge off by providing a cushion for those who may be running just a little late.
- Even if the patron still receives a ticket, the effort by the BID is still appreciated.
“Best in Class” parking programs have well defined customer service programs that typically include vehicle lock out assistance, dead battery assistance and vehicle location assistance at a minimum.

Other key customer service areas include:
- Focus on employee training and hiring practices.
- Develop friendly, attentive, outgoing knowledgeable attendants.
- Increase personal contact between parking system manager, stakeholders & customers.
- Institute performance measurements and utilize for company and employee incentives.
- Develop customer friendly payment options.

The use of reflective lettering materials on internal parking directional signage improves readability, especially in below grade facilities.
Start creating a library of parking reference materials for staff training and development.

Example:

- Slowly, the parking industry is beginning to build up a good selection of textbooks in a variety of areas.
- Both the IPI and the NPA have some excellent publications on parking design, maintenance and management.
- Other groups such as the Urban Land Institute, the American Planning Association, the Eno Foundation and the Transportation Research Board also have a variety of parking and transportation offerings.

Creating separated pedestrian walk-ways within parking structures can enhance public safety.

Example:

- Although this option adds cost, it is an extremely positive customer amenity and an effective safety enhancement.
- Care must be taken to ensure that ADA design parameters are taken into consideration.
- A 44” minimum is required if the access aisle is used as a “means of egress”, 36” if not.
Shared Parking

Shared parking can have a significant impact on mixed-use development parking requirements. Combining land uses results in a demand for parking spaces that is less than the demand generated by separate, freestanding developments of similar size and character.

- Shared parking is defined as parking space that can be used to serve two or more individual land uses, without conflict or encroachment.
- The opportunity to implement shared parking is the result of two conditions:
  - Variations in the peak accumulation of parked vehicles as a result of different activity patterns of adjacent or nearby land uses (by hour, by day, by season).
  - Relationships among land use activities that result in people’s attraction to two or more land uses on a single auto trip to a given area or development.

**Example:**

<table>
<thead>
<tr>
<th>Usage Patterns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office</td>
</tr>
</tbody>
</table>

Smart Gates

“Smart Gate Technology” incorporates non-contact safety sensors with parking barrier gates.

**Example:**

- This technology places protection in front of moving doors or gates by providing a non-contact safety field that moves with and precedes a gate arm or door to sense potential contact before it happens and prevent it.
- This technology can reduce damage claims due to alleged gate malfunctions.
Parking Management Best Practices

**Strategic Plan**

- “Best in Class” programs typically have developed parking specific or community access strategic plans.

**Example:**

**Strategic Plan action items include:**
- Explore alternative management methodologies to enhance customer service.
- Evaluate new parking technologies.
- Form partnerships with community organizations.
- Facilities development plans.
- Evaluate impact of light rail on short-term parking supply.
- Undertake survey research to identify customers perceptions regarding parking availability and pricing.

**Striping Removal**

- Occasionally, due to operational changes, old parking stripes need to be removed. After trying several removal strategies, the use of a 3M product called “Peel Away” proved most effective.

**Example:**

- Removal of the existing paint was initially attempted using high pressure water treatment alone.
- Chemical removal of the existing striping with MEK (Methyl Ethyl Ketone) proved ineffective and raised environmental/disposal concerns.
- Another option attempted was to try and paint over the stripes attempting to match the color of the concrete.
Parking Management Best Practices

**S** Supply/Demand Analysis

- Periodic assessments of parking supply/demand are critical to effective parking system planning.

**Example:**

- Documenting current parking adequacy, typically on a zoned basis, is the first task in this process.
- This is followed by analyzing potential changes in parking supply conditions and future development projects.
- Projections of future parking demand and adequacy are typically developed based on proposed land-use changes or by analyzing specific development initiatives.

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Parking Management Best Practices

**T** Ticketless Parking

- Ticketless parking provides several advantages to customers and parking systems – this strategy is also known as Credit Card In/Out. It can work in conjunction with other systems, such as pay-on-foot.

**Example:**

- This operational model offers customers the benefits of quick in and out and easy payment.
- The operational benefits are that it is attendantless, and therefore lowers operating costs and it is cashless, thereby reducing the potential for theft.
- The reduction in operating costs more than makes up for the minimal credit card fees.
Parking Management Best Practices

**Time-Limit Maps**

- On-street parking time-limits should be mapped and changes tracked over time.

  Example:

  - Mapping on-street time-limits is an important tool for staff education and communicating with the public.
  - It is a fundamental tool for documenting resource usage, facilitates the analysis of trends and is an effective planning tool.
  - Tracking changes over time creates a record of management strategies that have been used in the past.

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Parking Management Best Practices

**Traffic Calming (Raised Crosswalk/Speedhump)**

- Raised crosswalks or “speedhumps” can enhance pedestrian safety in pedestrian/vehicular conflict areas.

  Example:

  - 22 Feet
  - 6’ - 8”
  - Concrete Block
  - Asphalt
Parking Management Best Practices

Transit Visualization System

- Campus transit systems can now broadcast their bus locations live over the internet.

Example:

- North Carolina State University in Raleigh, NC is the first transit system in NC to broadcast its bus locations live over the internet.
- You can view the live, interactive system at: http://ncsu.transloc-inc.com/

Transitional Lighting

- Transitional lighting (additional lighting provided at facility entrances) is both practical and an important safety feature in parking structures.

Example:

- The Illuminating Engineering Society of North America recommends a minimum of 50 foot candles for transitional lighting at parking facility entrances.
- Transitional lighting helps drivers eyes adjust from bright exterior conditions when entering the relatively dark conditions within a parking deck.
Universal Design

- Universal design practices strive to eliminate accessibility issues through the incorporation of barrier free design strategies.

Example:

- Hands free parking through AVI systems is a non-traditional example of a universal design application.
- Other examples include, pay-by cell phone for on-street parking, audible cross-walk signals, voice activated elevator cabs, etc.

Valet Liability Limiting Practices

- Borrowing a page from a casino play book, valet operations are now video taping vehicles from multiple angles before parking them to record pre-existing damage and thereby limit false damage claims.

Example:

- Valet drivers must stop at the white line for only a few seconds before proceeding down the ramp to the valet storage area.
- Multiple cameras record the image of the vehicle from various angles documenting pre-existing damage.
- More traditional damage reporting forms are still more widely used.
Parking Management Best Practices

Value Cards

- Multi-purpose payment cards make paying for a variety of services easy – including parking and transit services.

Example:

- Essentially debit cards - these multi-purpose cards make paying for parking (both on-street and off-street), transit fares, restaurants, retail shops, etc. easy and convenient.

V.I.P. Service Programs

- Some parking systems have developed service programs through local vendors to provide “VIP” services for monthly customers. Examples of VIP services include: Vehicle Washing/Detailing, Oil Changes, Dry Cleaning, etc.

Example:

- The Downtown Toledo Parking Authority’s VIP program directs customers to a specific area within their facilities and to a VIP Services Kiosk.
- A form is completed for the requested service and the vehicle keys are deposited in a security envelope.
- The requested service is completed while the customer is at work and the vehicle returned to the VIP area by a specified time.
Parking Management Best Practices

Validation Program Promotions

- Many communities have parking validation programs that are only honored by a handful of merchants. Like everything else, these programs need to be promoted to extend their reach and success.

Example:

- The development of validation program promotions supports participating merchants, increases awareness of the program and educates patrons as to program specifics.
- The promotion noted below placed bookmarks on customers' windshields and offered a chance to win a $150 Downtown Shopping Spree.

Introducing Parking Validation Downtown

Parking Management Best Practices

Wi-Fi

- Investing in Wi-Fi for your downtown or campus can provide tremendous advantages through the use of real-time information, on-line payment options, etc.

Example:

- Vivato delivers a complete family of innovative Wi-Fi infrastructure products, featuring Wi-Fi Base Stations, for both indoor and outdoor applications.
- Vivato's base stations are packaged as a single integrated unit, including the planar phased array antenna and all of the electronics needed to run the Base Station. Supply Ethernet and power, and the Base Station delivers beams of Wi-Fi to a large area.
All aspects of parking management can now be integrated into a web-based management system. Consistent management can be achieved regardless of the type of parker (transient, monthly, residential, etc.)

- Management information at a glance: vehicles, citations, names, addresses, etc. on a single, clean, easy-to-read page.
- Open architecture allows sales/payment from anywhere.

Example:

I tried and tried, but couldn’t come up with a parking best practice that started with X! 

Example:
Parking Management Best Practices

Your Lucky Day!

- Holiday parking ticket amnesties and other forgiveness programs are tools to balance the need for parking enforcement with business encouragement through customer appreciation.

Example:

- The Downtown Association paid over $6,000 in customer's parking tickets over the Christmas holidays in Boulder last year.
- In other communities, the parking system simply suspends parking enforcement or replaces citations with holiday notices.

Zoning – Update Your Parking Regs!

- Zoning is the means by which cities and other local governmental agencies ensure that development projects meet the community’s standards. It has been termed “a preventative” approach for achieving planned and orderly development.

Example:

- With respect to parking, zoning standards typically lay out formulas for determining how many parking spaces must be provided for specific types of land uses.
- Design standards are often included. The layout of parking, particularly the size of parking spaces and aisles, is frequently covered.
- There will always be variations in demand within a community, so that a single rigid formula may not adequately cover all situations for each land use category. Reviewing zoning requirements on a regular basis is recommended.
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Annual Parking Report Template
Facility Inspection Checklist
Cashier Training Checklist
IPI Maintenance Article
Parking Garage Operating Manual Outline
Program Criteria Documents Article
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   - Clergy
   - Special Event
   - Volunteer
   - Physician
   - Residential
   - Medical Office Building
   - Valet
   - Off-Site Shuttle Parking
   - Leased
   - Etc.

d. Accessible (ADA) Parking

3.3 On-Street Parking

a. Timelimited

b. Metered

c. Special Use
   - Official Vehicles
   - Utility Carts
   - Reserved
   - Patient Pick-up
   - Radiation Oncology
   - Police / Emergency Vehicle
   - Etc.

3.4 Maintenance, Loading or Other Utility Space

4.0 DOCUMENTING PARKING UTILIZATION

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c. Oversell Percentage (by Deck/Lot)

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   c. Guaranteed Ride Home Program
<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>n/a</th>
<th>Surface &amp; Paving</th>
<th>Striping</th>
<th>Lot Layout</th>
<th>Structure</th>
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<tr>
<td></td>
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<td></td>
<td>Surface is free of unfilled potholes and unrepaired broken pavement.</td>
<td>Lines are clear.</td>
<td>Layout is appropriate and efficient for the market area.</td>
<td>Painting is in good condition.</td>
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<td>Patching is well done and presents no tripping hazard.</td>
<td>Numbers are clearly readable.</td>
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<td>No leaching or other residue dripping on cars.</td>
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<td></td>
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<td></td>
<td>No weeds growing through cracks.</td>
<td>Striping is well done; nearly all lines are straight and ends are even.</td>
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<td>Drains are clean.</td>
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<tr>
<td></td>
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<td></td>
<td>All major longitudinal cracks filled.</td>
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<td>Fire extinguishers in place, secured &amp; inspection is current.</td>
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<td>Areas will alligator cracking sealed.</td>
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<td>No correctable tripping hazards on steps or stairs.</td>
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<td>Wheel stops are intact (not broken up).</td>
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<td>All driving hazards and obstructions into parking spaces are prominently marked for caution.</td>
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<td>Wheel stops are in proper position (not loose and turned).</td>
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<td>Exit &amp; other traffic routing signs are adequate.</td>
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<td>Garage levels are clearly identified.</td>
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<td>Pedestrian access restrictions are properly installed and working (stairwell door &quot;out only&quot; locks, card access gates, etc.).</td>
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<td>Yes</td>
<td>No</td>
<td>n/a</td>
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<td>CCTV and/or alarm systems are working.</td>
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**Other Safety & Hazard Items**

**Elevators / Stairways**

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<th>No</th>
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<td></td>
<td></td>
<td>Railings in place on all levels.</td>
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<tr>
<td></td>
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<td>Pull-stop works consistently on first pull.</td>
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<td>Last Floor - &quot;GET OFF&quot; sign in place across rails 4 ft. above last floor level.</td>
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<td>Emergency trip at top of lift &amp; working or grab handle &amp; escape platform in place.</td>
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<td></td>
<td>Escape cavity located in pit or at bottom floor platform (if no pit).</td>
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<td></td>
<td>Escape cavity equipped with emergency cut-off switch.</td>
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**Other**

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<th>Yes</th>
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<tr>
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<td>Sidewalks and pedestrian walkways clear of wheel stops or other obstructions.</td>
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<td>Unsafe pedestrian &quot;short-cuts&quot; blocked (by safe means).</td>
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<td>No low hanging chains, wires, or other such pedestrian tripping hazards.</td>
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<td>No eye hazards in pedestrian walking area.</td>
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<td>No sharp corners or edges on signs at pedestrian level.</td>
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<td>Lighted &quot;EXIT&quot; signs at stairwells working and visible from area covered.</td>
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<td>Emergency lighting installed in stairwells.</td>
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<td>Emergency lighting is operational (test or check test certificate/record).</td>
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<td>Stairwell door closure mechanisms working properly to prevent it from slamming.</td>
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<td>No doors open in a way that would knock someone down a stair or off of ledge.</td>
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<td>Elevator door obstruction edge stops closing action.</td>
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<td>Elevator stops flush with floor.</td>
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<td>Elevator emergency phone and/or alarm works.</td>
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<td>No dangerous pipes or other obstructions protruding into pedestrian paths.</td>
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<td>If structural obstructions exist, they are marked and or padded.</td>
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<td>Yes</td>
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**Cleanliness**

Ramp is free of any debris. "Not so obvious" areas behind wheel stops, around edged and in corners are clean. No glass. No overflowing trash cans. No gum. No graffiti.

Large trash is picked up, but small, less noticeable debris such as cigarette butts, etc. still present.

No untrimmed weeds or bushes.

No dirt or sand accumulations on the lot.

No unnecessary accumulation of leaves.

No dirty walls.

Light fixtures are clean.

Steps and pedestrian walking paths are free from grease and oil.

**Signs**

Permanent signs installed properly - solid and vertical.

Temporary signs in good condition.

Painting and lettering is in good physical condition. No peeling.

Signs and lettering are visible and unobscured (unless otherwise intended - requires explanation).

Signs are free from "re-lettering, re-rating" residue.

**Attendant Booth**

Structurally in good condition - sound, no leaks.

Doors & windows work properly.

Paint in good condition - no peeling.

Interior shelving & hardware in good condition.

Heater or A/C working properly.

No apparent electrical hazards.

No broken windows.

Booth exterior is clean.

Booth interior is clean.

Windows are clean.

Trash can available.

Cashier terminal/register and/or time clock in good
__  ___  ___  

condition.

____  ____  ____  Copy of SOP's for that location in the booth, readily accessible and attendant knows where they are located.

____  ____  ____  Emergency procedures and contact numbers prominently posted.

____  ____  ____  Stool is in good condition - safe.

**Lighting & Electrical**

____  ____  ____  All general lighting for the lot is working - no light out.

____  ____  ____  Entrance lighting is bright for transition from sunlight.

____  ____  ____  Elevator & stairwell areas are well lit.

____  ____  ____  Elevator lights are working & light is adequate.

____  ____  ____  Special lights for signs working.

____  ____  ____  No lights on during the day that should be off (timers or photocells working properly).

____  ____  ____  Night lighting is adequate.

____  ____  ____  No significant dark spots.

____  ____  ____  No exposed wiring or open junction boxes.

____  ____  ____  No overloaded circuits.

____  ____  ____  Emergency power shut-off is accessible and attendant knows where it is.

____  ____  ____  No fuse jumps or exposed wiring in electrical panel.

**Revenue Control System (RCS) Equipment - Condition & Appearance**

____  ____  ____  All outside RCS equipment (gates, etc.) is clean.

____  ____  ____  Outside RCS equipment paint in good condition & free from rust.

____  ____  ____  Gate arms painted neatly, look fresh, padded on bottom, level.

____  ____  ____  Meter box(es) installed properly - solid and vertical.

____  ____  ____  Numbers on meter box are correct and clear.

**Revenue Control Equipment**

____  ____  ____  Attendant provided adequate controls to prevent runoffs.

____  ____  ____  Attendant has good visibility of the lot if needed for access control.

____  ____  ____  Perimeter free from escape routes (equipment controlled
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Yes

- Entrance gates are locked & attendant does NOT have key.
- Entrance gates equipped with 3rd loop to prevent dispensing of multiple tickets.
- Gate arm is long enough to prevent "drive-around."
- Pay in Lane Terminal is locked - no access by attendant.
- Cashier Terminal tied to arming loop (if capable) & detector is working.
- Cashier Terminal - journal tape system working properly and producing legible print.
- Meter is difficult to pick.
- Meter back lock is secure and operates "freely."
- Meter vault mechanism working properly and freely.
- Interior of meter box is in good condition & prevents checker access to $.
- "Bill pusher" in place where appropriate.

Short Audit

- Is attendant clocked in?
- Tickets on all cars that are not monthly parkers (or special pass).
- Tickets placed so all information is visible for audit.
- All monthly permits are current.
- Cash collected = Ticket Revenue at time of arrival on lot.
- Has attendant's entry ticket voided (gate controlled lots)?

Personnel Appearance

- Attendant is in full uniform.
- Uniform is in good condition.
- Uniform is clean.
- PCA patch is place.
- Name badge worn.
- Attendant is well-groomed (clean-shaven, hair groomed, nails, jewelry appropriate).
- Hands are clean.
- Shoes are appropriate and look good.
<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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Uniform is not covered except by uniform jacket with logo & name badge.
CUSTOMER SERVICE EVALUATION
Attendant Customer Service Preparedness Questions

Scoring Key: Do they have an answer and is it correct?

______  ______  ______ How do you deal with a customer who has no money?
______  ______  ______ What do you do when a monthly permit parker cannot find a space on the lot?
______  ______  ______ What do you do if a customer asks your name?
______  ______  ______ What do you do if a customer asks for your home office number?
______  ______  ______ Are you allowed to jump-start a customer's car? (Correct answer per SOP's?)
______  ______  ______ What do you do if a customer needs mechanical assistance with their car? Can you get help for them quickly? How?
______  ______  ______ What do you do if a customer refuses to pay?
______  ______  ______ What do you do if a customer says their vehicle was damaged on our lot?
______  ______  ______ Who is your direct supervisor and do you know how to reach them?
______  ______  ______ What is our office telephone number?

Customer Service Observations

______  ______  ______ Every customer was greeted.
______  ______  ______ Attendant smiled when dealing with each customer.
______  ______  ______ Attendant stayed focused on each customer for the duration of the interaction.
______  ______  ______ Good eye contact.
______  ______  ______ Attendant "listened" carefully whenever customer talked to them and pursued any comments that may have related to customer.
______  ______  ______ "Thank you" given upon collection every time.
______  ______  ______ Attendant's overall manner made customers feel welcome.
______  ______  ______ Attendant's comments and actions indicated a positive attitude toward customers and service vs. tolerance of "aggravations" created by customers.
EMPLOYEE SATISFACTION SURVEY

Do you feel that the company keeps you informed about policies, procedures and other areas important to you?  

Do you feel that company policies are fair?  

Is your immediate supervisor fair with you?  

Does your immediate supervisor listen to your suggestions and concerns?  

Do you feel the Manager cares about how well you carry out your responsibilities?  

Do you feel that you are sufficiently trained to do your job well?  

Would you suggest employment with _____ to a friend?  

Do you get answers to your questions?  

Are you provided with the materials to perform your job well?  

Do you feel good about working with _____?  

Do you feel the company has a good image in the community?  

Does _____ compare favorably with other companies you have worked with?  

Do you feel that you have a real opportunity to advance within _____?  

Are you gaining useful and valuable job skills through your employment with _____?  

Do you feel that how well you perform affects the growth of the company?
POLICIES & PROCEDURES
Attended Lot Procedures and Lot Audit

Operational Review

______ ______ ______ A copy of SOP’s for the location in the booth.
______ ______ ______ They are up-to-date.
______ ______ ______ They include all of the essential elements of standard company procedures for that area of operation.
______ ______ ______ The attendant is following the procedures for that location.
______ ______ ______ The attendant is clocked in.

Prepare 5 questions in advance pertaining to general operating procedures or procedures specific to this location. Ask the attendant the 5 questions and score the results:

Satis. Unsatis.
______ ______ 1. __________________________________________________
                                           __________________________________________________
______ ______ 2. __________________________________________________
                                           __________________________________________________
______ ______ 3. __________________________________________________
                                           __________________________________________________
______ ______ 4. __________________________________________________
                                           __________________________________________________
______ ______ 5. __________________________________________________
                                           __________________________________________________

Audit

Record the number of the next unissued ticket upon arrival at the lot.

______ ______ ______ The list of "cars on the lot at start" is completed & done properly.
______ ______ ______ The starting ticket numbers is the nest in sequence from the ending ticket number of the previous shift.
______ ______ ______ The starting ticket number is already recorded on the Shift Report.
______ ______ ______ The starting Violation Ticket number is the next in sequence from the ending ticket number of the previous shift.
Yes  No  n/a

_____  _____  _____  The starting Violation Ticket number is already recorded on the Shift Report.

_____  _____  _____  There are no missing ticket numbers in the booth stack.

_____  _____  _____  There are no missing Violation Ticket numbers in the booth stack.

- Record the starting ticket and Violation Ticket numbers on the AUDIT FORM.
- Inventory All Tickets on the Lot using the AUDIT FORM.
- Feel each hood and check the entry time for any cars with warm hoods. (CONCERN: Re-use of ticket or unauthorized in & out).

_____  _____  _____  All cars have one of the following:
  - Current monthly permit.
  - Ticket within that day's sequence.
  - Violation Notices from that day's sequence.
  - Special authorized pass (e.g. VIP pass).

_____  _____  _____  All cars listed in the booth as "cars on lot at start" have Violation Tickets on their windshield with copies in the booth.

_____  _____  _____  Every issued ticket has the license plate number of the vehicles recorded on it.

_____  _____  _____  All ticket entries are in ink.

_____  _____  _____  No "Customer Section" tickets appear on the lot in place of the proper ticket section.

- Signs for and take all of the tickets already processed before leaving the lot.
- Obtain all of the tickets and paperwork at the end of the shift for review.
- Place all processed tickets in ticket number order.

_____  _____  _____  All tickets are accounted for based on staring and ending tickets verified during the audit and from shift paperwork.

_____  _____  _____  The entry times are in consistent sequence with no times out of sequence (evidence of late clock-in).

- Compare ticket exit times to tickets inventoried on the lot during the audit.

_____  _____  _____  None of the tickets on the lot had been already clocked out when the inventory was taken (evidence of early clock-out or re-used ticket).

- Check the status of violation tickets issued.

_____  _____  _____  All violation tickets are accounted form.

_____  _____  _____  Out of a sample 30 tickets which has been processed before the time of the audit, all were priced correctly.

_____  _____  _____  The Shift Report is computed accurately.
<table>
<thead>
<tr>
<th>Yes</th>
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|     |    |     | The Shift Report is complete.
ACCOUNTING & REPORTING

Key Financial Controls

Management Cash Fund balances.

There is a permanent record of monthly management fund balances.

Revenue Deposits for the month balance to transient and permit parker revenue. All revenue is reported in its proper accounting period.

Deposits are being made daily or per SOP set for that city of PCA Accounting.

Monthly billings for monthly permits and validation accounts have been sent out on time for the past 3 months (per SOP submission dates set for that City).

There are written procedures for issuing and accounting for monthly parker cards.

Accurate monthly cards inventory is maintained & current.

Monthly permit sales balance to permit numbers sold for the month. Includes audit of monthly permit inventory.

Monthly parker receivables records are up-to-date.

Monthly parker receivables are current (97%).

There are written procedures for check acceptance.

There are written control and collection procedures for bad checks.

Bad check collection action is current.

Changes in back check receivables balance during the month match the monthly revenue summary.

Casualty/Claims

The filing system for claims provides for complete information and status tracking.

All claims in the past 6 months have been submitted to Cincinnati within 48 hours of occurrence or notification.

All First Report of Injury forms have been filed within 24 hours of the injury.

Other

Lease info and revenue/expense records are kept under lock and key.
<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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Used time cards are packaged by pay period and neatly stored.
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<tr>
<th>Yes</th>
<th>No</th>
<th>n/a</th>
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</table>

**TRAINING**

A training plan is in place for line employees.
The training plan includes a specific schedule for ????
The training plan is being followed and is on schedule.
There is a current record of training for each employee.
Training includes at least one formal training setting per month.
Training checklist is available and used for initial employee training.
The training checklist provides for and has completion of each training item initialed by both the trainee and the trainer.
An employee handbook and all pertinent policies and procedures are provided to each new employee.
There is an employee signature on file verifying receipt of the employee handbook and policies/procedures information by the employee.
A formal progress review is performed before the end of the initial probationary period.
There is a written test at the conclusion of the training period.
The test is in multiple-choice format.
There is follow-up training scheduled within 90 days of the initial training period with equivalent documentation using a training checklist.
A training plan is in place for manager.
A manager's training checklist is used for the initial training of new managers.
A follow-up mechanism is built in to each training session or process to reinforce the training and evaluate retention.
OFFICE PERSONNEL

Questions

Key = Do they have an answer and is it correct?

______ ______ ______ What do you do when a monthly parker calls because they could not find a space on our lot?
______ ______ ______ How do you answer when a prospective customer asks if our lot is safe?
______ ______ ______ How do you respond when a customer says that their vehicle was damaged on our lot?
______ ______ ______ How do you respond when a customer says that their vehicle was broken into on our lot?
______ ______ ______ How do you respond when a customer says that their vehicle was damaged on our lot.
______ ______ ______ When a customer calls for a monthly permit and we are sold out on that lot, what do you do?
______ ______ ______ If a customer wants the home office number what do you do?
______ ______ ______ If a customer comes into the office with his wife and wants to know why you towed her car when she says she paid, what do you do?
______ ______ ______ If a customer calls to complain that they were not able to buy a monthly permit because the attendant on the lot ran out that morning, what do you do? (There is still monthly space available.)
______ ______ ______ If a customer says that she paid the man on the lot on a lot that is meter only, what do you do?

Observations

______ ______ ______ All office personnel are dressed professionally - appropriate for the work assigned that day.
______ ______ ______ Telephone properly answered "Company Name", can I help you?" Company name NOT abbreviated to "Parking Company."
______ ______ ______ Smiled when answering the phone.
______ ______ ______ Focused attention on any customers who came into the office vs. treating with less than top priority.
______ ______ ______ Overall manner made customer feel welcome.
______ ______ ______ "Thank you" given on any payments or permit sales.
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<tr>
<th>Yes</th>
<th>No</th>
<th>n/a</th>
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CUSTOMER SURVEY
Based on spot interview of 5 to 10 customers.

   Yes   No   n/a

Is the facility always open on time?
Are the personnel always friendly and courteous?
(Valet) Do the attendants handle your vehicle carefully?
(Valet) Is the radio still on the same station as you left it?
(Valet) Did you have to adjust your seat and mirror position when your car was returned?
Are the personnel responsive to any concerns you may have?
Is the overall service you receive at this location as good or better than the service you received at the place you parked before?
## CASHIER TRAINING CHECK-OFF LIST

<table>
<thead>
<tr>
<th>Item</th>
<th>Understood</th>
<th>Not Understood</th>
<th>Date</th>
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<tbody>
<tr>
<td>Keyboard</td>
<td>Lost Ticket</td>
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<tr>
<td>Transport</td>
<td>VIN Numbers</td>
<td></td>
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<tr>
<td>Cash Drawer</td>
<td>Stickers</td>
<td></td>
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<tr>
<td>Monitor</td>
<td>Hold Card Call</td>
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<tr>
<td>Inserting Ticket</td>
<td>Personal Checks</td>
<td></td>
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<tr>
<td>Reading CT Screen</td>
<td>P.O. Box Non-acceptance</td>
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<tr>
<td>Transport Type</td>
<td>Credit Cards</td>
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<tr>
<td>Time and Date Display</td>
<td>Traveler’s Checks</td>
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<tr>
<td>Remove Ticket from Reader</td>
<td>Veriphone</td>
<td></td>
<td></td>
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<tr>
<td>Receipt</td>
<td>Merchant Number</td>
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<tr>
<td>Wait for Ticket</td>
<td>Wait for Authorization</td>
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<tr>
<td>Amount Tendered</td>
<td>Card Denied</td>
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<tr>
<td>Multilated Ticket</td>
<td>Transport Down</td>
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<tr>
<td>Jammed Ticket</td>
<td>Com Busy</td>
<td></td>
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<tr>
<td>Blank Ticket</td>
<td>Station Number</td>
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<tr>
<td>Canceled Ticket</td>
<td>Force</td>
<td></td>
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<tr>
<td>Unreadable Ticket</td>
<td>Unreadable Credit Card</td>
<td></td>
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<tr>
<td>Disabled Ticket</td>
<td>Promissory Note</td>
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<tr>
<td>Used Ticket</td>
<td>Special Keys</td>
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<tr>
<td>Stolen Ticket</td>
<td>Validations</td>
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<tr>
<td>Foreign Ticket</td>
<td>Non-revenue Badges</td>
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<tr>
<td>Not Hourly Ticket</td>
<td>Lost Tickets</td>
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<td>Recalculating Ticket</td>
<td>Voids</td>
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<tr>
<td>Limousine Transaction</td>
<td>Code not Validated</td>
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<tr>
<td>Over-height w/ Taxi Ticket</td>
<td>Breaks</td>
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<tr>
<td>Swapped Ticket</td>
<td>Beginning of Shift</td>
<td></td>
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<tr>
<td>Wrong Way Entry</td>
<td>Partial End of Shift</td>
<td></td>
<td></td>
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<tr>
<td>Taxi 7 (Cabs Circling)</td>
<td>Total End of Shift</td>
<td></td>
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<tr>
<td>Foreign Plates</td>
<td>Shift Already Open</td>
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<tr>
<td>Government Plates</td>
<td>Invalid Badge</td>
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<tr>
<td>Over-ring/Under-ring</td>
<td>Secret Code</td>
<td></td>
<td></td>
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<tr>
<td>Vehicle Backing up</td>
<td>Secret Code - 2nd Attemp</td>
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<tr>
<td>Exception Ticket Backout</td>
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<tr>
<td>Emergency Keyboard Alarm</td>
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<td>Eye Contact</td>
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<tr>
<td>Greeting Customer</td>
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<tr>
<td>Responsive Attitude</td>
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<tr>
<td>Patience</td>
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<tr>
<td>Listening</td>
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<tr>
<td>Informing</td>
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<tr>
<td>Empathy vs. Apathy</td>
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<td>Options/Alternatives</td>
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<tr>
<td>Being Helpful</td>
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<tr>
<td>Stay Courteous</td>
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How to Implement an Effective Parking Facility Maintenance Program – Really!

Charlie is hard at work sweeping the walkway leading to the elevator lobby in your main parking garage. That’s were you walk every day on the way to your office and it’s as clean as a whistle. It always is and that gives you a sense of comfort that your facility is in great shape, something to be proud of. The trash can never overflows. The floor in the elevator always looks fresh. It seems that Charlie is doing a great job … until a heavy drop of water hits your glasses so hard that they tip up on your nose.

Looking up, you see more drips forming, waiting for the next target. “That’s new.” you think to yourself and start walking up the nearest ramp. As you walk, your eyes look up, rather than ahead, scanning the ceiling for other drip problems. You notice that the horizontal run of 8” PVC drain pipe is two-toned. That’s odd. Then you realize that the dark area on the upper side is an accumulation of black dust and grime. More surprises greet you along the way. The ramp area seems darker than normal and you notice that the light fixtures all seem to have a dull film on the outside. Haven’t noticed that before. A glance behind the wheel stops and a quick wipe of your fingers over the nearest sign doesn’t help matters.

When you reach the water problem, you find a shallow pool where you haven’t seen water accumulate before. The nearby drain is clogged by trash that appears to have been there for a while. “What’s going on?” you say out loud. All of your confidence in Charlie has gone out the window and you are just thankful that you came to your senses before the Regent’s tour next week.

Any of this sound familiar? If not, go take a walk through one of your facilities and come back to finish the article. Perhaps your experience is bit simpler, summed up by “Where’s Charlie? Anyone seen him?”

Maintaining active parking facilities represents a major challenge for most parking managers. Responsibility for multiple facilities compounds the challenge. But, wait. What’s so hard about maintaining a parking facility? There are lists and guidelines offered by the IPI and other industry associations that address what should be done and how often it should be done. What can be so hard?

The challenge is not so much WHAT to do, but HOW to do it. A maintenance program for parking facilities requires good planning, execution and follow-up just as much as managing the monthly parker accounts. Because facility maintenance may not be as interesting as a new computer tool, or as pressing as an upcoming special event, it often does not get the same level of attention.

How do you implement an effective maintenance program, whether dealing with a single facility or several hospital campuses? Well, what would you like to accomplish with your system? If you had a wish list, you might want to:

1) know that all maintenance tasks are covered.
2) include tasks that are not a part of the daily or weekly routine.
3) be able to deal with unexpected maintenance needs.
4) establish performance expectations with your client (or boss).
5) be able to show your client that maintenance is meeting expectations.
6) know that current staffing is adequate.
7) have a way to develop a realistic budget for both staffing and materials.
8) have an efficient, workable schedule that maximizes your resources.
9) have a way to monitor and evaluate staff performance.
10) have documentation of maintenance work that has been done.
11) be able to demonstrate to the client that the program is meeting expectations
12) know when you need more staff or resources and be able to substantiate it.

That may sound like a tall order, but it is more “doable” than you might think.

The system described here is one that was developed for parking facilities after a long series of failed attempts. It is not a revolutionary concept, nor is it rocket science. Those who have served in the military will recognize some elements that are still used to keep ships afloat and aircraft in the sky.

The description will assume that you are managing a facility for a client that is paying all expenses, but the process applies to nearly any situation.

Step 1 - Define the area of responsibility

It is essential that you and your client understand the extent of your responsibility. This is important, not only for the purposes of developing a maintenance program, but for identifying the limits of your liability.

• Advise your client of your maintenance initiative.
• Clearly define the areas you are responsible for maintaining.
  o Check the operating contract.
  o Walk the perimeter with the client and identify the boundaries where your responsibility begins.
  o Document your understanding of those boundaries and get the client to sign off, clarifying any details that aren’t clear in the contract. This protects both of you.

Step 2 - Identify tasks to be performed

This step will involve the greatest commitment of time. You should participate in the process as much as possible, at least during the first runs. A supervisor may be able to continue until all areas have been covered.

• Develop a comprehensive list of tasks
  o Walk through every area of your facilities and list each maintenance task that you can identify.
  o You can have a consultant examine your facilities and recommend long-term maintenance items related to your specific construction methods and conditions. (This is optional but can pay for itself many times over.)
  o Use industry maintenance checklists to supplement what you see.
  o Identify each type of task.
  o Group tasks by location.
• Quantify the tasks in each area based on:
  o Size of the task or area (e.g. 70 ft. of curb face per exit island)
  o Determine the number of repetitions (e.g. number of exit islands, light fixtures, stairwells,
landings or linear feet of drain pipe). Estimates are O.K. Don’t waste time measuring.

Step 3 - Determine the time needed for each task

This step can be very productive in terms of increasing the actual efficiency of your maintenance methods. As you examine each task, you can evaluate the techniques already in use. That examination may produce more effective methods that will save time or produce better results. You may discover minor investments in equipment or tools that will cut work time dramatically. These process improvements may never have been identified or implemented without your involvement. Work methods will also be identified for new tasks.

• Determine the best way to accomplish each task, including both methods and equipment.

• Determine the time needed to complete one task repetition (wash windows in one cashier booth).

• Determine the total time needed for the task area (time per booth X number of booths).

• Include set-up time for equipment changes, lane closing, positioning of safety barricades, etc.

• Be reasonable. Consider the pace that has to be maintained for the full day. Consider the effect of weather conditions and interference from customers and traffic.

Step 4 - Assign a frequency to each task

• Start with standard maintenance schedules provided by industry sources and equipment suppliers.

• Include recommendations from your parking consultant related to long-term durability items.

Step 5 - Compute total task hours

• Time required for each task item X Quantity X Frequency for each task

• Group tasks by area for an overview of requirements (See table 1)

• Add time for:
  o Daily start-up
  o Travel time to and from work areas

• Add 15% contingency in developing the initial estimate of total staff hours.

Step 6 - Balance total to available staff hours

This is actually the key to the system. You are likely to find that the number of hours required to accomplish all tasks at the frequency that you have set, is greater than the staff time available. If you are comfortable that you have not overestimated the time needed for individual tasks, your next job is to reduce the frequencies for select tasks until your task hours are within your available staff hours.

• Compare total task hours to available staff hours

• Reduce task frequencies, if necessary, until the total time requirement is within your staff capacity.

• Identify any unacceptable shortfalls.

• Quantify any additional staffing hours needed to do all of the work that you believe is necessary.
• Reduce staffing hours if current hours exceed what is needed.

**Step 7 - Present the plan to the client**

By presenting the tasks and frequencies to the client, you establish actual needs in a very concrete way. The client can see exactly what will be done and how often. If the client is not satisfied with the frequencies, then the additional staffing needed to satisfy the client’s expectations is evident. If the client is not willing to provide funding for the additional staff, then you work out a reduction in frequencies or tasks until your obligations and your resources match. Perhaps the client will take on some of the tasks with personnel in other areas that are underutilized. The important thing is that you and the client have established a clear basis for resources and performance expectations.

• Get “buy in” on the initial set of tasks and frequencies.

• Protect your 15% contingency because it will be needed for non-routine tasks that have not been identified in your task list. These are the “special projects” and may not even be related to maintenance.

• Identify any additional staffing or equipment needs.

• Jointly adjust task frequencies if staffing hours are not sufficient.

• Get the client to “sign off” on the final set of tasks, frequencies and staffing requirements.

**Step 8 - Develop a schedule**

Once you have established tasks and frequencies, prepare an actual schedule. This process will may take some creativity and will show your organizational skills (or your maintenance supervisor’s) in considering a number of factors that affect efficient scheduling.

• Base the schedule on a 4-week cycle.

• Organize tasks by type and location to minimize:
  o Travel time between tasks.
  o Time taken, and frequency, for equipment changes.

• Distribute tasks from the Master list to individual staff schedules.

• Schedule to avoid interference. Don’t schedule tasks at entrance or exit areas during heavy activity periods.

• Include:
  o 15 minutes of daily start-up time.
  o 30 minutes (minimum) of “unscheduled” tasks each day.
  o Include Special Projects time each week (2-4 hours per person)
    ▪ Include Special Project time in each person’s schedule.
    ▪ Make it the same day and time each week for everyone on the staff so that they can be assembled as a team if necessary.

• Distribute “periodic tasks” that are done infrequently. Periodic tasks would normally be assigned to the Special Projects time slot.

• Group related tasks into Time Blocks that include several tasks and give the staff discretion in how to best accomplish the work within these Time Blocks.
  o This provides them with some needed freedom within a fairly structured system.
IPI Maintenance Article
How to Implement an Effective Parking Facility Maintenance Program – Really!

- It allows them to work around interferences.
- It also can result in process improvements.

- Develop individual staff schedules that also serve as checklists to document completion of tasks. These should be turned in at the end of each work day, checked and retained as documentation of completed tasks.

Step 9 - Develop an Equipment and Materials List

Some of this probably took place during Step 3.

- Identify the materials and equipment needed for each task.

- Link the equipment and materials needs to the work schedules that are provided to the maintenance staff. This tool helps ensure that each person leaves the shop with the materials and equipment needed for that period’s work. It can also be used to determine if equipment needs to be delivered to the work area by someone else (e.g. ladder, chemicals, etc. by truck). This coordination would normally take place during the morning start-up and possibly after the lunch break.

- Use the list to develop budget estimates. (This may have been done prior to presenting the initial program and program requirements to the client.)

- Use the list as a basis for ordering and monitoring the use of supplies.

Step 10 - Implement the Program

Do it with confidence and enthusiasm!

- Conduct a formal orientation and training workshop with the maintenance staff so that everyone understands the program, its benefits and your expectations.

- If you have a maintenance manager who is supervising the program, schedule a 30 minute meeting at least once a week during the first 3 months to monitor implementation and necessary program adjustments.

- Visit the staff at work in their assigned areas. Do it regularly.

  - Inspect their work. They will appreciate the attention and recognition. It will affect their performance.

  - Discuss any of their ideas for process or schedule improvements.

  - Identify any special challenges that may require a team effort.

Program Spreadsheets

Initially, the task lists, frequencies, and schedules were assembled using stacks of index cards. The process has been greatly streamlined by using spreadsheets as shown in figures ___ and ___. The spreadsheets allow repetitive task information to be copied and pasted into schedules. For example, all of the tasks for maintaining a stairwell can be pasted into the set of spreadsheets for additional identical stairwells.

Using spreadsheets also allows for task times and frequencies to be posted beside each task, with formulas to produce the resulting staff time required for that task. The time requirements can be totaled as needed for each facility or for the entire system. This is done to determine and refine the initial staffing requirements, but it is also the tool for quickly determining the effect of changes in task hours or frequencies that can serve as the basis for future budgets.
Additional refinements can be added over time, such as linking usage rates for materials to tasks. Those links make it easier to monitor usage and project how changes in maintenance requirements will affect the supplies budget.

Program Benefits

What are the benefits of the program? There are more than will fit into what’s left of this article. But, here are a few:

- All necessary tasks are included in the maintenance program. (Isn’t that alone enough to justify the effort!)
- The time actually required to perform maintenance tasks is more clearly identified and verified.
- Methods are reviewed and refined during the initial assessment of tasks.
- Staff training is facilitated by the clear definition of tasks and methods. Things can be done right the first time.
- Maintenance requirements are balanced with staff and materials resources.
- It provides a basis for the client to clearly understand and “buy in” to the maintenance budget and performance expectations.
- It substantiates the sufficiency of resources or the need for additional resources.
- It provides a means for both managers and the client to evaluate staff and program performance, through the daily documentation of completed tasks.
- Documentation may be critical in defending against a liability claim.
- Provision is made within the schedule for “unplanned” assignments.
- The schedule accommodates the assembly of teams for larger periodic tasks.
- Staff morale is higher because:
  - The work is organized.
  - They know what is expected and that those expectations are reasonable.
  - They are more likely to receive praise for work well done.
  - There is greater variety in the work because more tasks are included in the schedule rather than falling into a “rut.”
  - The staff can work with more confidence because they know what to do, how to do it, and have the materials needed to get it done.
  - They have less guilt about wasting time because they “forgot” needed materials or equipment. Those needs are listed as part of the daily schedules.
- Individual accountability and pride is balanced with a mix of teamwork on a regular basis (special project time).
- The maintenance supervisor can better monitor staff activity, evaluate performance, and identify additional training needs.
- Periodic tasks can be better planned so that the work area can be cleared of cars or the work performed when other interference is minimal.
- Materials management is improved so that the supervisor can make sure that sufficient supplies are on hand.
- The client has greater confidence that the investment in staff and resources is being used effectively.
• The program may actually lower maintenance costs.

AND … by the way

• The facilities are cleaner and will last longer - protecting the client’s investment and pushing you toward a promotion.

Happy client … happy boss … happy staff … and happy you!
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Garage Operations Manual

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Program Criteria Documents
A new tool for validating program assumptions and establishing preliminary design guidelines

A comprehensive Program Criteria Document is a tool to help assure that institutional goals, objectives and standards are incorporated during the early phases of project planning and development. The development of a Program Criteria Document, whether done completely by in-house staff or with the assistance of a consultant, creates a superior understanding of the scope and impacts of a specific project.

This article focuses specifically on developing a Program Criteria Document for a new parking structure. Parking Program Criteria Documents are a mechanism for validating project program assumptions and establishing preliminary design guidelines with respect to a proposed parking structure. Often times preliminary studies have been performed to justify or facilitate the development of a new parking structure. These planning initiatives might include campus master plans, parking supply/demand or site feasibility studies and can even be as site-specific as geotechnical investigations. A Program Criteria Document incorporates and summarizes the information from these preliminary planning efforts.

The Program Criteria Document provides architects, developers, engineers and planners with a better understanding of institutional expectations, requirements and long-term needs. Sections from this document can be incorporated into the Request for Proposals (RFP) or Request for Qualifications (RFQ) documents to give the proposers submitting on the project better information and guidance from which to prepare their proposals. This improved project understanding provides greater project clarity and definition, and improved project definition contributes to more cost effective projects.

By following the organized approach outlined in a Program Criteria Document, institutions themselves must consider larger planning issues such as planning guidelines, standards development, interdepartmental relationships, capital project financing, etc. This methodology can help strengthen the institution’s overall planning efforts.

If you are responsible for parking operations or parking development, initiating the use of the Program Criteria Document approach can help assure that your concerns are considered early in the planning process. Issues such as operational flexibility, special systems, incorporation of new technologies, promotion of new parking facility standards, etc., often have a greater chance of being integrated in the project if evaluated early in the planning process.

The following outline defines the various sections and subsections that are included in a typical Carl Walker, Inc. Parking Structure Program Criteria Document.
PARKING STRUCTURE PROGRAM
CRITERIA DOCUMENT - OUTLINE

A. General
   1. Introduction
   2. Objectives
   3. Background
   4. Historical/Master Plan Context
   5. Parking Demand Forecast
   6. Project Schedule

B. Site Evaluation
   1. Site Characteristics
   2. Existing Conditions
   3. Soils and Geotechnical Conditions
   4. Topography
   5. Other Planned Construction
   6. Site Access and Circulation

C. Building Design
   1. General
   2. Architectural Context
   3. Property Set-backs
   4. Mass/Height Guidelines and Constraints
   5. Vertical Clearances
   6. Ground-Level Requirements
   7. Open/Enclosed Facilities
   8. Exterior Facility Appearance
   9. Programmed Space

D. Functional Design
   1. Parking Structure Footprint
   2. Parking Structure Preliminary Layout and Geometrics
   3. Vehicular Entry/Exit Areas
   4. Vertical Circulation
   5. Projected Vehicle and Pedestrian Volumes
   6. Pedestrian Entrances and Exits
   7. Pedestrian Circulation
   8. Accessibility Requirements
  10. Pedestrian Wayfinding – Signage and Graphics
  11. Provisions for Other Modes of Transportation
  12. Traffic Control Devices
  13. Painting and Striping Standards
  14. Special Conditions

E. Structural Design
   1. Construction Type
      a. Pre Cast Concrete
      b. Cast-In-Place Concrete
      c. Steel
      d. Mechanical (Automatic)
   2. Durability Modeling
   3. Special Conditions
   4. Deck Drainage
   5. Design Loads

F. Mechanical Systems
   1. Systems and Materials Description
   2. Ventilation Requirements

G. Electrical Systems
   3. Site and Exterior Electrical
   4. Emergency Power

H. Lighting
   1. Lighting Type (Typical & Roof)
   2. Lighting Standard / Illumination Levels
   3. Transitional Lighting at Entry/Exits
   4. Elevator/Stair Tower Lighting
   5. Lighting Circuitry and Control
   6. Special Lighting

I. Fire Protection
   1. System Requirements

J. Security
   1. Passive Security Features
   2. Active Security Systems
   3. System Requirements

K. Special Systems
   1. Parking Access and Revenue Control System
      a. Hardware
      b. Software
      c. Parking Count Systems
   2. Waterproofing Systems
   3. Parking Guidance Systems
   4. Elevators

L. Landscaping

M. Cost Estimating
In summary, by customizing and evaluating the elements outlined above to your specific parking project, you can achieve the following objectives:

1. Development of a more comprehensive understanding of the project impacts and scope.
2. Build or strengthen project momentum and acceptance.
3. Promote parking-specific areas of concern that are often overlooked without direct and early involvement by parking professionals, such as designing for operational flexibility, planning for alternative payment technologies, designing to maximize passive security and user comfort, etc.
4. Create buy-in from other departments and project team members by including them in project pre-planning processes.
5. Identify areas of concern or deficiency early in the planning process.
6. Improve project definition and clarity.
7. Provide the Facilities Management or Procurement departments with improved project information for use in creating more detailed or focused RFP or RFQ documents.
8. Contribute to a successful project completion that meets or exceeds expectations.

If you would like more information on this proactive planning approach, please feel free to contact the nearest office of Carl Walker, Inc.