Appendix I

WSU Parking Management
Best Practices Tool Box
Introduction/Overview

This “Tool Box” of parking management and design best practices has been compiled over a number of years and continues to evolve as the parking industry evolves.

Our goals in the development and organization of this document were to provide a comprehensive categorization of parking planning, management and design areas to make finding specific best practices easier. As is often the case when trying to categorize a wide range of items there are instances where one item might legitimately be placed in multiple categories.

As this collection has grown, we have expanded our thinking on exactly what to include. For example, in the category of “Sustainable Parking Design & Management Strategies” we chose to include some concepts that speak more to potential future applications. While technically not “best practices”, they do illustrate new ideas and approaches that can inspire creative thinking.

We know of no parking/transportation program anywhere that has adopted all of these concepts and management strategies. It is our hope that this tool will provide the University with a wealth of ideas to stimulate program development as you tackle parking issues as a key transformative strategy within the context of your downtown revitalization and parking program enhancement plans.
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A Comprehensive Approach to Program Development
Guiding Principles

Creating a comprehensive set of “guiding principles” is the first step in creating a strategic parking plan for your organization.

- Guiding Principles form the strategic framework of a program
- Within a parking strategic plan, specific action items are organized by the larger “guiding principle categories”.
- In this way, by working the action plan, you will remain true to the vision, mission and core values of the strategic plan which was developed with significant stakeholder involvement.
Parking Strategic Plans

A characteristic of “Best in Class” parking programs is that they have developed a Parking Strategic Plan to define the program’s vision, mission and work plan.

One key to success is the degree to which programs actually “work the plan”.

- The strategic plan helps set program priorities
- Builds consensus on program direction
- Defines funding priorities
- Informs staffing development
- Connects the program of work with related community interests
- Provides a roadmap for future program development
20 Characteristics of Effective Parking Programs

The parking chapter of the book “Making Business Districts Work” reviews what the author considers to be the “20 Characteristics of Best-in-Class Parking Programs”. Taken as a whole these characteristics form the foundation for a comprehensive parking management program.
Program Organization
Vertical Integration

The single most important element of a parking program’s organizational structure is the principle of “vertical integration”.

» The most successful parking program organizational models include:
  » Parking Authorities
  » Vertically Integrated City Departments
  » Business Improvement Districts
  » Parking Management Districts
  » The Professional Services Model

» At a minimum the following three areas are essential for a vertically integrated parking program:
  » Off-Street Management
  » On-Street Management
  » Parking Enforcement

Beyond the three primary functional areas (on-street, off-street and enforcement), the other recommended primary areas include: administration, planning/development and community relations.

Other key areas might include: contract administration, finance/audit and special projects, depending on the program.
Non-Traditional Organizational Models

The City of Boulder has a unique combination of integrated municipal services within the Downtown and University Hill Management Division & Parking Services (DUHMD/PS).

» Beyond the basic parking program integration of off-street management, on-street management and parking enforcement, this program has a broader organizational mandate including urban space management, transportation and economic vitality.
“Dual Mission Philosophy”

Some of the most effective and progressive parking programs in operation today are those being managed by Business Improvement Districts, Downtown Development Authorities, Urban Renewal Agencies, etc.

» One of characteristics that helps make these organizations so successful is what we refer to as the “Dual Mission Philosophy”.

» The primary goal of the agency is to create a revitalized downtown. Because of this, parking is managed as a tool to support this primary goal.

» The result is that different decisions are made relative to parking than those made in traditional city parking departments.

Examples of high quality parking programs that fit into this category include:

» The City of Boulder, Boulder, CO

» The Capital City Development Corporation – Boise, ID

» The Ann Arbor Downtown Development Authority – Ann Arbor, MI

» The Anchorage Community Development Authority – Anchorage, AK

» Downtown Tempe Community, Inc. – Tempe, AZ

» The Cedar Rapids Downtown District – Cedar Rapids, IA

» Charlotte CENTER CITY Partners, - Charlotte, NC

» Missoula Parking Commission – Missoula, MT
The organizational development pyramid succinctly defines the major organizational issues that any program should consider.

» The primary questions to be answered include:
   » Where are we going?
   » Why are we here?
   » What do we believe in?
   » What do we need to accomplish?
   » Who does what?
   » How do we get things done?
   » How do we work together as a team?
Parking Planning
Alignment with Community Transportation and Strategic Plans

“Best in Class” programs typically have developed parking specific strategic or community access strategic plans that are aligned with larger community transportation planning initiatives.

» Strategic plan action items include:
  ▸ Exploration of alternative management methodologies to enhance customer service
  ▸ Evaluation of new parking technologies
  ▸ Forming of partnerships with community organizations
  ▸ Generating facilities development plans
  ▸ Evaluating the impact of related transportation resources
  ▸ Undertaking survey research to identify customers perceptions regarding parking availability and pricing
Guiding Principles

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

“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
Financial Plans

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

Sample Financial Plan Table of Contents

- 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 Inventories

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

- 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.
- It is extremely useful to also track land-uses and square footages.
- Parking supply should be subdivided by type of spaces.
  - On-Street vs. Off-Street
  - Public vs. Private
  - Surface lot vs. Structured
Supply/Demand Analysis

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

» 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.
Shared Parking Model

Shared parking can have a significant impact on mixed-use development parking requirements. Combining certain 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.

Having a community adopted shared parking model as part of the local parking requirements is a recommended best practice.

» 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.
On-Street Occupancy

Documenting on-street parking occupancy is another effective tool to help you better understand and manage your parking resources.

» Routinely tracking on-street parking occupancy and documenting the results graphically provides valuable management data.

» Often there is adequate parking supply despite a wide-spread 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 Demand Model

Kimley-Horn has developed a model to help our clients keep parking inventory, utilization, land-use and parking adequacy data up to date.

» This dynamic toll is linked to Arc/GIS systems to provide an even more effective tool for local governments and institutions.
Zoning and Parking Requirements

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.”

- 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.
- New concepts such as “Form-Based Codes” are rapidly gaining in acceptance.

![Summary Table of Uses and Space Requirements](image)
Flexible Parking Standards

More accurate and flexible standards means that the parking requirements at a particular location are adjusted to account for various factors. This approach reduces to potential for overbuilding parking supply thus contributing to a more sustainable overall parking and transportation program.

Examples of Adjustment Factors:
- Geographic Location
- Residential Density
- Employment Density
- Land-use Mix
- Transit Accessibility
- Car-Sharing
- Walkability

Sustainable Parking and Transportation Programs

Triple Bottom Line Approach
The Triple Bottom Line is a way of measuring an organization's impact on people and the environment as well as its finances.

- **PEOPLE**
  1. Improved Parking Technology Creating an Enhanced Customer Experience (Multiple Payment Options, etc.)
  2. Improved Wayfinding, Signage and Program Branding (Less VMT due to searching for parking, Less parking frustration)
  3. Improved Commute Options - “The Connected Traveler” (Greater mode choices, Enhanced quality of life for all citizens)
  4. Excellent Communications and Collaborative Public Processes (Greater diversity of opinion, A better informed/educated public, Enhanced societal sustainability)
  5. Improved Community “Quality of Life” (Cleaner Environment, Reduced Congestion, Promotion of Healthy Lifestyles, Reduced Environment Impacts)

- **PLANET**
  1. Improved Access with Reduced SOV mode share
  2. Increased 3Rs (reduce, reuse, recycle)
  3. Increased up-cycling (the process of converting waste materials or useless products into new materials or products of better quality or a higher environmental value)
  4. Reduced idle time/queuing time
  5. Increased use of alternative energy source

- **PROFIT**
  1. Balanced Perspective Regarding Operating Costs and Reduced Life-Cycle Cost
  2. Improved and Diversified Tax Base
  3. Reduced Vacancy Rates and Therefore Property Values
  4. Increased Business Activity and Growth
Form Based Codes

A form-based code is one that is based primarily on “form” - urban form, including the relationship of buildings to each other, to streets and to open space. This contrasted to codes that are based primarily on land use.

» A Form-Based Code is a development code that provides the developer / applicant greater flexibility in permitted land uses in exchange for more stringent regulations controlling urban form.

» These types of codes support mixed-use, pedestrian-friendly and mixed housing development more effectively than conventional codes.

» Form-Based Codes are becoming increasingly attractive to municipalities that want greater control over how buildings look and feel.
Parking Requirements for Transit Oriented Developments

The rise in popularity and success of “Transit Oriented Developments” or TODs is creating a need to reassess and redefine zoning and parking requirements for these districts.

» Specific development plans for TODs and “Transit Station Areas” has led to the development of specific station area typologies to support transit friendly development.
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.

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.
Time-Limit Maps

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

- 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.
Mapping Parking Permit Zones

Mapping parking permit zones provides an important tool to effectively communicate the permit zone rules and regulations as well as locations.

» This practical tool helps you better educate City Council members, other planning officials and citizens at large.
» It also provides a means of documenting changes to permit zones over time.
» It is also an important tool for training new parking enforcement officers.
Parking Rate Assessment Strategies

Assessing parking rates is something every parking program must do from time to time. A successful parking rate assessment strategy has two key elements:

• Defining the type and impact of rate increase options &

• Defining a program for how new revenues will be invested.

» Our recommended process includes the development of a parking rate modeling tool that can be used to project parking revenues by any incremental increase in transient, monthly and special event rates.

» The process also includes the development of “parking investment plan” which is essentially the program’s work plan for the defined planning horizon.
Retail Supportive Parking Strategies

Revitalizing retail in a downtown setting is one of the most difficult elements of downtown revitalization to get right. Convenient, plentiful and easily accessible parking is especially critical to the success of retail in a downtown area.

- What is often overlooked or underestimated in retail revitalization projects is a comprehensive “retail parking strategy”.
- In many cases this will involve significant investment in new parking infrastructure or at least a restructuring or reallocation of existing parking resources.
- Once the parking supply issues have been addressed, a wide range of parking management strategies should also be considered.

We recommend a three pronged approach to developing a retail parking strategy:

- **On-street Parking** – As the most conveniently located parking assets (and therefore the most valuable), effective management of on-street parking to promote turnover is critical.
- **Off-street Parking** – In a downtown environment the primary issues related to retail parking are to provide large, easy-to-find reservoirs of parking within close proximity to the retail cores or corridors.
- **Overall Parking Management** - From a management and operations perspective, there are many effective strategies that downtown parking programs can employ to better support retail and the larger community’s strategic goals.
Operational Peer Reviews

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

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.
Integrated Access Management Strategies
What is “Integrated Access Management”? 

“Integrated Access Management” is a term that refers to a more holistic approach to community or institutional planning relative to parking and transportation.

» Within the parking arena, this concept strives to promote a broader view of program scope and participation.

» It fights the tendency to place parking in a “silo”, divorced from the larger transportation equation.

» The primary intent of this approach is to get communities to focus on “access” incorporating the full range of parking, transportation and demand management strategies to improve not only access, but to also enhance and promote walkable urban environments.
Community Bike Rental Programs

Located at key locations in the central business district, the bikes provide a new way of discovering and moving around the city.

- The bike stations are modular and the bikes are ergonomic and light-weight in a distinct design.
- Bikes are parked at docking points which use a proprietary locking system to ensure that each bike is securely stored.

http://www.smartbikedc.com/
Bike Parking & Lockers

One more way for parking programs to support Transportation Demand Management (TDM) is through the provision of bike lockers in and around parking facilities. This is also a means of securing LEED credits in support of parking program sustainability goals.

» Bicycles chained haphazardly to railings, posts or lamp columns can be dangerous and inconvenient to pedestrians, particularly visually impaired people.

» Proper bicycle parking can reduce this risk, as well as removing unsightly clutter.

* CycleSafe® Unmatched Durability for your Facility
  Now with shorter lead times!
  Construction Process and Material Selection are key to product Quality and Durability
  - Price is not Cost

Click to learn more:
  KNOW THE DIFFERENCE

Key features include:
• SMC Molded, non-metallic construction
• Stainless steel hardware
• Reinforced ribbing throughout
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• Impervious to weather, age and vandalism
• Fire retardant and graffiti resistant
• Manufactured using environmentally friendly processes
• Space efficiency for small footprint
• Contributes to LEED Credits!

Contact us to secure your order and have your parking facilities ready for the riding season!
**Bike Racks on Busses – Practice Makes Perfect**

For those advanced parking systems that are part of the larger transportation solution, providing access to transportation options through the parking office is not uncommon.

» However, the University of Washington provides a “practice station” for those wishing to learn how to put their bike in the “on-bus bike racks”.

» This little extra effort is one of the many things that sets the UW program apart.
Be an Engaged Partner in Other Community Transportation Initiatives

As part of the commitment to a broader approach to community access strategies, the parking program should become an interested and engaged partner in other community transportation initiatives.

» Getting involved in the Dallas Bike Plan is a good example of this type of recommended strategy.
Bike Parking
As Public Art!

Bike racks have become a favorite medium for creating practical and engaging community public art.
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.

» Other more aggressive strategies include integrating bus or shuttle transfer stations into parking garages.
» Creation of express park and ride lots, etc.
The TransLoc Transit Visualization System shows buses moving in real-time live on the internet, making it easier for riders to use transit.

» North Carolina State University in Raleigh, NC was the first transit system in NC to broadcast its bus locations live over the internet.

» Since then, many other transit systems have added the TransLoc Transit Visualization System.

» You can view the live, interactive system at: [http://live.transloc.com](http://live.transloc.com)
Effective Communications & Community Engagement
A Strategic Communications Plan has the power to transform an organization:

- Both in terms of your credibility and status in your community
- And in terms of the way you work together as a team to achieve your mission and vision

**The Communications Plan Pyramid**

- Assess your communications infrastructure
- Establish your goals
- Who is your target?
- Who is your audience?
- How to frame your issues?
- What is your message?
Parking Information Clearinghouse

An important role your organization can play is to become THE parking information clearinghouse for your community.

» If you become the “go to source” for all parking info, you will not be providing a needed service, but you will enhance your program’s value and reputation in the community.

» (You may actually learn as much as you inform!)

» Developing a web-based program is one effective way of serving multiple goals in this type of endeavor.
Keep In Touch... Parking E-Newsletters

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.

» Promote parking validations.
» Links to parking info/websites.
» Promote merchants that participate in validation programs.
» Promote parking availability.
» Promote alternative transportation options.
Parking Meets Social Media

Get the word out! Stay in Touch!

• Develop your own communities of users
• Advertise directly
• Celebrate accomplishments
• Highlight staff
• Offer Facebook only coupons
• Get program feedback
• Solicit testimonials
• Provide event notifications
• Broadcast construction updates

Find us on Facebook

Follow us on: Twitter
Parking Meets Mobile Apps

Connecting with a world on the move!
• Availability
• Rates
• Services
• Proximity to key destinations

Mobile Parking Apps
Mobile Parking Apps will help you find the cheapest parking rates anywhere in Chicago, San Francisco, San Diego, Seattle, LA, and New York. More cities are coming soon... Avoid overpaying for parking by comparing rates from neighborhood garages. Ability to search by an address.

Features:
• Search over 300+ Parking Garages to find the best rates (by hour, daily, weekend, monthly)
• Map showing all Meters, Zones, Rates, and Paybox locations
• List showing all the Early Bird Specials in the city
• Search for local parking spots for rent and sale
• Save yourself a parking ticket with the built in parking timer.
• Remember where you parked with turn by turn directions back to your car. Ability to leave voice memo
• Real-Time updates, Reservations, public transportation schedule
Developing Smart Parking & Development Educational Tools

Being a leader in the development of planning and development toolkits can improve the image and reputation of your organization (as well as advancing your planning goals)!
Enter the Blogosphere!

- Do you really want to know what people think? (Are you sure???)
- Have a couple hundred opinions you’d like to share?
- Want to get YOUR version of things expressed?

Then Blogging may be just your thing!

» To start your own blog visit: http://parkingpress.com/

» Other parking blogs:

Parking Blogs
- Grush Hour
- MoBlog
- Parking By Design
- ParkingCarma
- ParkWhiz Blog
- PT's Parking Blog
- Airport Parking Connection
Customer Alerts - Parking E-Notifications

The evolution of technology, especially in the area of mobile devices is transforming our customer service options. Now we can send out customer notifications in real-time through a variety of channels.

» Reduces parking patron frustration
» Improves the image of the downtown or institution
» Can be very useful in snow closings, or to alert a campus community of on-going construction activities.
“Fast Facts” – Program Summary

What is your program really all about? How do you inform your stakeholders of your mission, key program goals, funding sources, key staff, staff roles, organizational structure, policy positions, budget highlights, accomplishments, etc.

The “Fast Facts” mini brochure covers all these topics and more in a succinct and meaningful way.

Using a creative 3.5" x 17" double-sided layout, this info packed mini-brochure is filled with valuable information and manages to capture the scope, mission and accomplishments of the organization in a positive way.

Specific section headers include:

- Cover – Fiscal 2007 Edition
- Founded/Mission/# Focus Areas/Slogan
- Strategic Goals
- Redevelopment Districts – Central/River Myrtle/Westside/Total
- Urban Renewal Districts
- Whose Job Is It?
- Budget
- Top 10 Cost Issues FY07
- Top 10 Policy Positions
- FY 07 Budget highlights
- Selected Boise Rankings
Know the Numbers – “Combating Misperception”

More often than not, parking problems are more perceived than real. The Boulder & Lincoln parking programs addressed this issue through a “Know the Numbers” campaign.

- 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.
Multi-Language Signage

Increasingly, dual or multi-language signage is becoming more important.

Electronic signage can be useful in providing flexibility.

Pictograms or universal symbologies are becoming the norm.
Parking News & FAQs
In Related Communications Resources

Tapping into other community communication resources is a great way to educate the community on new parking programs and to promote parking program contributions.

Parking Paystation Q & A
Q: What do I do with my old meter key?
A: Parking Services is working diligently to implement a prepay card to replace the meter keys. The City intends to trade balances on the keys to these new cards.

If you have a specific question you would like answered send an email to parking@dbi.org.

Parking Paystation Q & A
Now that the solar powered pay stations are up and running there are a few questions that people have. This section addresses these questions.

Q: Can I take my bike with me?
A: Yes! Once you have your printed receipt displayed on your dashboard, you may move your vehicle to another metered spot until your original time is up.

If you have a specific question you would like answered send an email to parking@dbi.org.

Parking Paystation Q & A
Now that the solar powered pay stations are up and running there are a few questions that people have. This section addresses these questions.

Q: What are the enforced hours?
A: Pay stations are enforced - Monday through Saturday 9am to 7pm. Pay stations are FREE on Sunday and on city holidays. Please go to www.boulderparking.com to verify the holidays the city observes.

If you have a specific question you would like answered send an email to parking@dbi.org.
Stakeholder Forums and Workshops

Combine community education and stakeholder input into a community workshop!

Park Smart
A Forum to Raise the Bar on Good Parking Policy

Parking has been a hot topic in the news over the last year. Reading the headlines and blogs you’d think there were just two points of view: those who think free parking Downtown is an inalienable right, and those who want to force everyone out of their cars onto transit or bicycles. We think it’s time to elevate the discussion about parking in Seattle and assess what we can learn from other cities to better manage the parking we have so that it supports a healthy, vibrant urban core. We’ve assembled a terrific panel that includes policy makers, national experts, transportation officials and a UW researcher to lead an informed discussion about the best approaches to manage.

Featured Panelists:

L. Dennis Burns, CAPP, Kimley-Horn and Associates, Inc.
Dennis Burns is a senior practice builder and regional vice president for Kimley-Horn and Associates, Inc. Burns is a certified administrator of public parking and has nearly 30 years of parking operations, management and consulting experience. His focus in recent years includes parking and transportation strategic planning, ‘smart parking’ system development and urban space management concepts. In 2010, Mr. Burns was the recipient of International Parking Institute’s “Parking Professional of the Year,” and was a featured speaker at the first-ever Green Gov Symposium in Washington, DC.

Rick Williams, BPM Development Company
Rick Williams is a transportation demand management expert from Portland, OR with more than 20 years of experience. From 1988-1994, he managed Portland’s 3,500-stall Smart Park system and its 208-block downtown business improvement district. In 1995, Mr. Williams helped establish the Lloyd Transportation Management Association, and currently works both as its executive director and as an independent transportation management consultant for clients throughout North America.

This is also a great opportunity for collaborating with other community partners.
Keeping Your Customers Informed During Renovations / Repairs

Keeping customers informed, especially during significant garage repair and renovation projects, is important.

Developing a flexible format for information sharing on a regular basis is a preferred approach.

Key Elements for a Garage Repair Update include:

- Names & locations of affected facilities
- Dates & times of impacts
- Duration & nature of impacts
- Alternative locations during construction/repair work
  - Provide different instructions for employees / contract parkers & visitors/short-term parkers if appropriate
- Where to go to get additional information
Parking orientation tools are very helpful in large parking garages especially if the customer is unfamiliar with the facility.
Parking Branding & Marketing
“Comes of Age”
Branding and Marketing

Developing a parking system “Brand” is one trademark of “Best in Class” parking programs. Ultimately, a positive patron experience should be your brand.

» The brand is more than just a logo.
» The brand should promote the image you want people to have of the system.
» It should be something you can say, such as “Easy Park” or “Park Smart”
» 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”.

[Image of a branded truck and signage]
Branded Programs

Branding all aspects of your program into a unified whole makes your program look and feel more professional.

» The EasyPark program from Vancouver is a great example of this approach.
Parking Offices as a Retail Storefront?

As the parking industry matures, our interface with our customers is evolving.

Most parking offices had a distinctly “back office” feel to them in the past.

But some programs are beginning to change everything!

» The examples to the right are:
  A. The Winnipeg Parking Authority
  B. The Calgary Parking Authority
**Map It!**

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

- There are many examples of quality parking maps available.
- These maps from Downtown San Jose and New Haven Conn. have detailed information about parking facilities, downtown destinations, transit alternatives etc.
- The maps can also distinguish between public and private parking facilities and provide a useful orientation to the one-way streets.
The 30’ Rule for Garage Entry Points

First impressions mean a lot and you never get a second chance to make one! So, what you see within the first 30’ of a facility entrance sets the tone. Make sure the first 30’ creates a positive experience!

Typical issues at facility entrances include:

» Too much or poor quality signage
» Signage and equipment in poor condition
» Inadequate lighting
» Dirty walls and curbs
» Trash and debris

“Where would you rather park?”
Parking Receipt & Merchant Coupon!

Multi-space meters in “Pay & Display Mode” can print a 2-part receipt ticket. One part is displayed in the vehicle and the second part can be used as a merchant coupon or to receive a parking validation.

» This innovation is a good one for municipalities and merchants concerned about implementing paid parking.
Integrated Access and Downtown Marketing

Downtown Long Beach Associates (always at the cutting edge!) have integrated Parking, Transportation and Downtown Management in their new “Ride-Park-Play” web page.

» The Innovative site features an interactive parking and route planning map as well as special links to:
  ▶ Downtown Long Beach Transportation
  ▶ Downtown Dining
  ▶ Downtown Shopping
  ▶ Downtown Attractions
  ▶ Downtown Calendar of Events
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.
Collaborative Promotions

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

» Examples include: adding parking system info to downtown maps & brochures, banners, wayfinding kiosks, print ads, etc.
Program Marketing

Parking marketing programs that promote not only services, but their staff can be very effective. Happy and satisfied employees provide better service. Companies that provide high quality work environments provide better employees and thus better service.

» This message is not lost of Fortune 500 companies, nor on the parking industry customer service leaders.

» American Valet, based in Phoenix, AZ, has built their reputation on a strong commitment to both employee satisfaction/recognition and exemplary customer service.
Promote Local Attractions on Meter Heads

If you still have traditional single space meters, why not make the most of them?
Advertise local attractions on the meter heads.

» Free on-street parking on Sundays is also promoted.
Attention Grabbers

OK, now really, who wouldn’t want to park in the “Rockstar Parking Lot”?

» “Cityplace” is located in downtown Winnipeg near the new MTA Center which hosts a variety of events including hockey, concerts, etc.
» “Rockstar Parking” is a creative, attention getting marketing strategy for their closest surface parking lot.
Bollard Sleeves

Question: What is at the entrance to almost every parking area?

Answer: Bollards!
Why not turn these ubiquitous elements into an opportunity for advertising or facility promotion?

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

» 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.

» A new product (pictured above) includes solar powered lights.
Celebrating Accomplishments
Annual Parking Reports

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

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
Celebrating Program Accomplishments

The University of Washington created the piece below as part of a “strategic communications initiative”. They were facing great financial pressure and had an urgent need to raise parking rates to be able to pay for dramatic fare increases from the local transit agency.

The summary of program successes and accomplishments helped garner needed administrative support for an unpopular, but essential rate increase.

“U-PASS: 17 Years of Success - Almost 80% of the campus population -approximately 52,000 people - commutes to campus using a greener transportation mode than driving alone. One third chooses biking or walking - emissions-free commute options.”
New Facility Openings

Make Your New Facility Grand Opening An Event!

Few parking program activities are PR opportunities of this magnitude. Make the most of it!

» HOLLYWOOD - Parking at the Seminole Hard Rock Hotel & Casino in Hollywood is about to become a bit easier after the “smashing” grand opening of its brand new Winner’s Way Parking Garage.

» In celebration of Wednesday’s grand opening, the Seminole Hard Rock set the record for the “World’s Largest Guitar Smash,”.

» The 9-story “Winner’s Way” garage provides an additional 2,400 covered parking spaces. It has 14 elevators, six escalators, a 351-foot-tall pedestrian bridge, a 164-foot-tall Casino bridge, and a car count system, all in a brightly lit environment.

“Parking Is A Winner At Seminole Hard Rock Hotel & Casino!”
Awards and Recognition

Been recognized for your program excellence?

Well, don’t keep it a secret!

» Issue Press Releases
» Put out Banners
» Develop a Presentation
» Hold a Press Conference
» Write an Article

The International Parking Institute Announces Winners of 2010 Awards of Excellence Competition

AWARDS RECOGNIZE UNIVERSITY OF COLORADO, BANDERA – DOCUMENTARY PARKING & TRANSPORTATION
University of Colorado at Boulder, Parking and Transportation Services

Project Team:
- University of Colorado, Boulder, Parking & Transportation Services, Boulder, Colo
- University of Colorado, Boulder, Environmental Center, Boulder, Colo

The University of Colorado, Boulder, is frequently recognized as one of the nation’s greenest, in large part due to its Parking and Transportation Services. Despite a growing number of commuters, the campus continues to reduce its carbon impact through better use of scarce parking resources. Its Ecolope program provides free public transportation for employees, freeing over 1,000 parking spaces. The addition of more than 1,100 bike parking spaces in the past two years means that bike parking and vehicle parking spaces have reached parity. Two existing garages were renovated to reduce energy consumption; a third garage under construction will include electric vehicle charging stations.
Worst Parking Awards?

Looking for a little attention?

People love to talk and complain about parking.

Tap into our natural fascination with parking by creating your own local awards program! (Something tells me there is no shortage of potential entries!)

Maybe the:
“Worst Parking Award” or “Most Creative Parking Award”.

» You might even celebrate diversity with a “Multi-Cultural Parking Award” – (Here’s my entry!)
Conference Presentations

Giving back…

Share your successes and innovative ideas with your peers and in the process enhance your reputation and the prestige of your program and institution.

» The 6 Benefits of Conference Presenting

1. Recognition as an expert
2. Time away from the office
3. Acknowledgement of your accomplishments
4. Collaboration with your peers
5. Hone your communications skills and
6. Overcome your fear of public speaking!
Media Relations/ Media Kit

One benefit of doing an Annual Parking Report is that it can be a great start on developing your parking program “media kit”.

Parking Media Kits might include:
» System/Facility fact sheets
» Statistical Info
» Comparative Info
» Photos
» Video Footage
  » Facilities, staff doing their jobs, etc.
» Bios of Key Staff

Develop the Media Kit “before a crisis”
» On your time table

Media Relations Tips:
» Make friends with local Media
» Keep your message simple
» Provide resources – visuals, photos, plans, stats
» If hosting a press event – keep presentation short
» No more than 5 minutes
» Then open it up for questions
» Have a written “press release”
» Have a copy available for reporters
Anniversaries

Don’t Forget Your Anniversary!

Program anniversaries are a natural opportunity to reflect back on your progress and celebrate your accomplishments!

» 3 Ideas for your celebration:

1. Offer “free parking for a year” to one lucky person
2. Have a water balloon accuracy dropping contest from the roof of the garage
3. Bake a cake in the shape of parking deck!

Happy 75th Anniversary Parking Meter!
The Virtual Environment
The Virtual Environment

Let’s face it, the internet has changed everything! (and mostly for the good!)

This has forced us to come to terms with the fact that we have a new “virtual environment” that needs to be carefully designed, managed and maintained.

» Our “Web Presence” says a lot about our organization
» It is often the first point of contact with our programs
» It can be an incredibly valuable tool for information dissemination, but it must be kept current
» Parking is typically not “front and center” on institutional home pages. How easy is it to find your program information?
» One of favorite sites from a transportation perspective the “go DC go.com” site
Flash Based Mapping Programs

Flash based mapping programs provide the ability to map out walking routes from parking locations on campus to specific destinations and could also be translated to walking times.

» Visit [www.wisc.edu](http://www.wisc.edu) to see an example of this technology application.
  ▶ Click on the “Campus Map”
    – Ruler feature.
Recommended Website Elements

Website development has come a long way!

We now have a wide variety of tools and other webpage elements to choose from.

Some parking specialty items include:

- Carbon reduction calculators
- Parking facility construction cost estimator
- Ask the consultants

Some other favorites to consider include:

- News & Events
- Maps
- Events Calendars
- Construction Updates
- Did You Know?
- Weekly Polls
- Program FAQs
- Links to other sites/resources
- Job postings
Best Parking Website Features – Interactive Maps

On the “Go DC Go.com” interactive web-site map, by turning on the parking “layer” you can not only identify the location of various parking facilities, but also drill down to very detailed information about facility management, services offered, hours of operation, rates, etc.

» At the most detailed level, the data is just a link and detailed info is managed by the site owner, such as Central Parking in this example.
Best Parking Website Features – Parking Locators

Interactive web-site maps that allow you to turn on “layers” to relate various features is a very valuable parking and downtown web-site feature.

Examples of specialty transportation related layers include:

• Parking
• Bike Share Stations
• Transit Stops
• Circulator Stops and Routes
• Car Share Locations

Some other “layers could include:

» Attractions
» Major Buildings
» ATMs
» Restaurants
» Retail
» Government Facilities
» Art Galleries
» Coffee Shops
Best Parking Website Features – Parking Conditions Updates

The San Jose parking website offers a page that keeps customers informed of “current conditions” related to city operated parking facilities.

» You can even sign up to get “parking condition updates” sent directly to your cell phone via text message.

» San Jose is also on the leading edge with parking guidance signage systems with real-time information.
Many websites recognize that there are a variety of “commonly asked questions”.

An FAQ (Frequently Asked Questions) section can be a helpful addition to many customers and reduce the number of phone calls your office staff has to answer.
Web-based Parking Locators

Searchable Parking Locator Map features on websites allow customers to zoom in on their areas of interest and get detailed parking location, contact info, maps, cost and sometimes parking availability information.

» Visit www.greenP.com to see an example of this website feature.
Improving Customer Service
Quality Customer Service Programs

“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.
Quality Customer Service Programs Begin with Training

Excellent customer service is never an accident. It is a result of a defined prioritization by management, a dedication to making guests feel special and an investment in training.
Customer Service Amenities –
A Requirement for Canadian Parking Association Certification

Customer amenities provided by the Winnipeg Parking Authority.
Specialized Reserve Spaces for Retail Customers

Understanding the special needs of your customers and providing for their special needs can boost sales of specialty programs.

Examples include:

» Short-term spaces for quick turn-over customers such as “Coffee Customers”
» Quick and convenient “run-in / run-out” spaces for pre-prepared meal customers.
» Close-in, convenient spaces (generally next to accessible spaces) reserved for “Expectant Mothers”.
Lincoln’s “Shopper Zones”

Reserving the most convenient off-street parking spaces for retail customers, Lincoln’s new “Shopper Zones”, takes this best practice to a new level!
Parking Orientation Tools

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

» London’s Heathrow Airport uses LPR technology to make finding your car even easier!

» Other systems have developed “Parking Pocket Pal” mini-brochures to provide orientation and parking services information to customers.
Enhanced Payment Options

One area that we can use to improve customer service in the parking world is to make “paying for parking” as easy and painless as possible. Because, let’s face it, nobody LIKES to pay for parking. But if it is difficult to pay, that just makes it worse!

Improved payment options include:

» Cash/Coin
» Credit/Debit Card Acceptance
» Community Cards (Debit)
» Cash-Key
» Pay-By-Cell Phone
» Pay-Pal (On-Line)
» Toll Tags
» “Sky Meter”

If accepting credit or debit card payments, be sure your systems are PCI certified!
Customer & Community Education
“Coffee with the Parking Guy”

The Winnipeg Downtown BIZ sponsored “Coffee with the Parking Guy”!
As a service to its membership the BIZ would host monthly meetings connecting retailers, restaurateurs and other downtown business owners at a local coffee shop to the Winnipeg Parking Authority’s chief administrator (& IPI’s Parking Professional of the Year in 2010!).

» This simple, but effective outreach strategy worked well in Winnipeg because of their smart and savvy parking administrator.
» Discussion were lively and sometimes a little intense. People can get passionate over parking.
» But in the end, it was a valuable learning experience and the educational benefits went in both directions.

Mr. David Hill, CAPP
IPI’s 2010 “Parking Professional of the Year”
How To Park in Any City, USA

Having a succinct and accessible document that informs your customers “How to Park” is just good basic management.

**PARKING TICKETS**

**COUNTRY TICKET**

Under one country ticket system, fine-time parking of those who receive tickets for an amount of time is permitted by those who receive tickets (paid). The goal of the country ticket program is to ensure that the downtown is available to visitors and businesses.

**PARKING FEES**

- **Expire on** .......................... $0
- **Parking time expired** .......... $100
- **Parking in a time zone** ......... $500
- **Parking within 15 feet of food/drink** .......... $200
- **Parking within 5 feet of food/drink** $200
- **Other violations** .................. $300

Late fees are $74/day per space and an additional $50 for each subsequent 24-hour period, up to $200.

**PAYING YOUR TICKET**

resolve the citation with a personal check/money order or cashier’s check (no cash or coins). Make checks payable to Town of Chapel Hill. Mail to Town of Chapel Hill Parking Office 190 N. Rosenwald St. Chapel Hill, NC 27516. Payments are accepted from 8am to 5pm, Monday to Friday. Parking citations are subject to the Fine Hearing process. The vehicle is not released for 2-3 hours after the ticket is paid.

**TOWED OR IMMOBILIZED?**

**IMMOBILIZED VEHICLES**

- Vehicles illegally parked within the Town that have four or more outstanding parking citations are subject to having an immobilization device (commonly referred to as a “boot”) attached to their vehicle.

**REMOVING THE IMMOBILIZATION DEVICE**

- In order to remove the device, payment must be posted in full. Payment must be made by 5:30pm, Monday to Friday. Parking citations are subject to the Fine Hearing process. The vehicle is not released for 2-3 hours after the ticket is paid.

**TOWED VEHICLES**

- Vehicles are removed from the streets.
- Vehicles are parked in designated locations.
- Vehicles are parked for more than 24 hours in a Torso area.
- Vehicles have been towed and have not been released before 6:00 pm.
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**RETREIVING YOUR VEHICLE**

- Vehicle may be retrieved from the storage by paying the fee. Payment must be made by 5:30pm, Monday to Friday. Parking citations are subject to the Fine Hearing process. The vehicle is not released for 2-3 hours after the ticket is paid.
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**TYPICAL CONTENTS MIGHT INCLUDE INFORMATION ON:**

- Office Location/Contact Info
- Parking locations
- Rates
- On-Street Parking
- Enforcement/Adjudication
- Towed/Immobilized Vehicles

**DOWNTOWN CHAPEL HILL PARKING**

**PUBLIC PARKING LOTS**

- There are 695 off-street parking spaces in town-maintained lots.
- Rosemary/Columbia Parking Lot (formerly Lot 2)
- West Rosemary Lot (formerly Lot 4)
- 346 W. Rosemary St.
- 127 W. Rosemary Lot
- Rosemary/Church Street Parking Lot (formerly Lot 5)
- 150 Church St. & 141 W. Rosemary St.
- West Franklin/Parking Lot (formerly Lot 3)
- 401 W. Franklin St.
- West Franklin/On-street Parking Lot
- 121 S. Franklin St.

**LEASED PARKING**

- Town leases counting space for 965/965. For more information, call (919) 968-2758.

**ON-STREET PARKING**

- Over 200 on-street metered parking spaces within Chapel Hill. Most spaces are in the central business district, with 24-hour parking for 15 minutes with a 2-hour limit. Meters accept quarters and coins only.
- Meters are placed at 8 a.m. to 6 p.m. Monday through Saturday.
- Meters in the Center are free but require a 2-hour limit. Meters in the Central Business District are free but require a 2-hour limit.
- Prices in the Center are $1.50 per hour. Times in the Central Business District are $1.50 per hour.

**PARKING LOT RATES**

- 401 W. Franklin St.
- Rates: $5.00/hour for 0-4 hours
- $10.00/hour for 5-12 hours
- $15.00/hour for 13+ hours

**On-street parking at Rosemary/Columbia Parking Lot:**

- 346 W. Rosemary St.
- Rates: $5.00/hour for 0-4 hours
- $10.00/hour for 5-12 hours
- $15.00/hour for 13+ hours

**PARKING SERVICES OFFICE**

- 101 E. Rosemary St.
- Chapel Hill, NC 27514
- Information: (919) 968-2758
- Parking Services Manager: (919) 968-2758
- Fax: (919) 968-2758
- E-mail: parking@townofchapelhill.org

**PARKING DOWNTOWN**

- Parking Services office is located in the Wallace Parking Deck.
- Open 8:30 am - 5:00 pm, Monday to Friday.
- Cash or checks.

**FREE PARKING**

- After 8 p.m. Saturday parking is free at the West Franklin Lot (415 W. Franklin St.) and Rosemary/Church Street Lot (141 W. Rosemary St.).
- Also you are not required to pay for parking permits after 6 p.m. Monday through Saturday. Parking permits are available at the Rosemary/Columbia Lot and the Wallace Deck.
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**FREE PARKING PROMO**

- Parking permits are free for parking permit holders after 6 p.m. Monday through Saturday. Parking permits are available at the Rosemary/Columbia Lot and the Wallace Deck.
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- Enforcement/Adjudication
- Towed/Immobilized Vehicles

**Kimley-Horn**

**WASHINGTON STATE UNIVERSITY**

**PARKING MANAGEMENT BEST PRACTICES**

**Customer Education**
Howdy Pardner!

The “real problem” from a parking management perspective re: on-street parking is repeat offenders trying to take up what should be a short-term space for their longer term needs.

If this is true, why not make the penalty for occasional or first-time violators less harsh to mitigate the inherent negativity of parking enforcement.

- Why not take it one step further and let the first parking citation be an educational opportunity?
- That’s what they did in Cheyenne, WY with their innovative “Howdy Pardner!” program.
- This is one strategy to better align parking policy with the goals of creating a vital downtown.

Using creative marketing Cheyenne crafted a parking citation envelope to be an educational piece that led off with the phrase “Howdy Pardner”.

» Message #1: Welcome and Thanks for Shopping Downtown!
» Message # 2: Need more than 2 hrs.? Here are some longer term parking options and other tips on how to parking legally in Downtown Cheyenne.
Secrets to Parking Success!

The collaborative effort between the Downtown Winnipeg Business Improvement Zone (BIZ) and the Winnipeg Parking Authority is aimed at helping you get around downtown easily by car, bike, bus and on foot.

» Getting around downtown and parking is easy with 32,000 parking spots, the free Downtown Spirit shuttle bus, 2 kilometres of indoor walkways, dozens of bus stops, and many bike racks.
Trends in Parking & Transportation

Taking a page from our Downtown Management professional’s play book, tracking trends and program performance is a good way to keep our customers educated and aware.

Trends to track might include:

» Community demographics
» Changes in land-use
» Parking supply & utilization
» Parking rates
» Community Investment/New Development
» Economic data
» Program financial performance
» Parking services, accomplishments and community reinvestment
New Technology Introduction – On-Street Meter Upgrades

Once the decision has been made to upgrade the on-street meter system (or any other parking technology that the public will have direct interface with) it is important to develop a detailed implementation timeline including a public relations strategy.

» A typical implementation timeline would start early and would be structured with major milestone dates and specific action items.

» A sample implementation timeline is provided to the right:
On-Street Parking Management Strategies
On-Street Parking - Policy Basics

There are a few basic principles related to on-street parking that most parking consultants, urban planners and downtown management professionals agree on. These include:

- On-street parking is a valuable, limited resource due to its convenience and proximity to businesses, therefore the primary management objective to promote space turnover for the benefit of the local merchants and the public.
- If you are going to have paid parking, charge for the on-street spaces first to promote turnover.
- If you have both on-street and off-street paid parking, the on-street rates should be higher than the off-street.
- Set on-street parking rates to a achieve a 15% vacancy per block face.
- Adopt the philosophy that parking should be “Friendly, not free”

» The application of parking management “rules and regulations” mandates a need for an enforcement function.

» The primary goals of an enforcement program should be:
  - Have a well-defined set of policies and procedures
  - Promote general (not absolute) compliance
  - Be consistent, but “unpredictable” in enforcement routes and times.
  - Leverage new technology to improve efficiency, effectiveness and productivity.
The following are a listing of major components of an effective on-street parking program:

» Legislative framework
» Regulations/Fines
» On-Street ADA Issues
» Enforcement staffing and deployment
» Citation Processing
» Adjudication
» Collections
» Scofflaw strategies
» Residential Permits
Mapping On-Street Parking Time Limits

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

» 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.
Monitor and Document On-Street Parking Utilization

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

- Routinely tracking on-street parking occupancy and documenting the results graphically provides valuable management data.
- Often there is adequate parking supply despite a wide-spread perception that the parking supply is inadequate.
- Documenting the true occupancy rates are the first step to effectively resolving parking problems (real or perceived) and can be an effective community educational tool.
On-Street Parking Utilization Data Analysis

When designing parking utilization data surveys consider the following:

» What are you really trying to find out?
» Do you need to survey all the spaces or can you use limited area sampling?
  » If sampling, what percent is adequate for statistically valid results?
» How survey many passes are needed?
» How frequently?
» What data do we need to collect?
On-Street Parking Utilization Data Analysis

On-Street Parking Surveys: What data can a parking space yield? (First Pass)

- Regulation in effect
- Occupied? (Y/N)
- Vehicle category
- Legal status
- If illegal, ticketed? (Y/N)
- Residency of occupant (requires full plate - optional)
On-Street Parking Utilization Data Analysis

What data can a parking space yield? (2nd, 3rd, 4th Pass)

» Occupied? (Y/N)
» Occupied by same vehicle?
» Legal status (including overtime)
» If illegal, ticketed? (Y/N)
» Duration of occupancy
The High Cost of Employee Parking in Short-term Spaces

The following is one approach to quantifying the financial impact of employees taking up on-street spaces.

Fort Collins, CO Case Study

- There are approximately 8,400 employees in downtown Fort Collins.
- If only 5% of those workers use customer parking spaces, 420 spaces would be unavailable to shoppers.
- If each space turned over four times per day, they would accommodate 1,680 shopper trips.
- If each car carried 1.5 customers, there would be 2,520 customers.
- If a quarter those customers went elsewhere to shop and each customer spent $10.00, the total loss per day would be $6,300.

- Annualized at six shopping days each week, the total loss would amount to nearly $2 million in Downtown revenue.
- Obviously this impacts the merchants, but it also impacts the municipality in terms of lost sales tax revenues.
Determining Appropriate Regulations

The following are factors to consider in developing on-street parking regulations and policies:

- Area density
- Area parking mix
- Transportation environment
- Adjacent land uses
- Types of businesses
- Is there a need for:
  - Meters (and what time restrictions and cost)
  - Loading zones
  - Valet zones
  - Permit parking in nearby residential areas
On-Street Parking Utilization Data Analysis

When analyzing parking utilization data the following are the key metrics to evaluate:

» Occupancy Rate
» Turnover Rate
» Average Duration
» Violation rate
» Capture rate (% ticketed)
» Average time to ticket/unticketed
» Disabled Placard usage
» Impact of non-residents

### Standard Turnover Rate Analysis Output

<table>
<thead>
<tr>
<th>Parking Space Type</th>
<th>Average Turnover</th>
<th>Average Duration</th>
<th>Number of Time Violations</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-Minute</td>
<td>6.39</td>
<td>43 Mins.</td>
<td>35</td>
</tr>
<tr>
<td>1-Hour</td>
<td>5.71</td>
<td>1 hr. 8 Mins.</td>
<td>63</td>
</tr>
<tr>
<td>2-Hour</td>
<td>4.17</td>
<td>1 hr. 10 Mins.</td>
<td>59</td>
</tr>
<tr>
<td>Disabled</td>
<td>2.00</td>
<td>1 hr. 7 Mins.</td>
<td>NA</td>
</tr>
<tr>
<td>Unlimited</td>
<td>3.23</td>
<td>1 hr. 52 Mins.</td>
<td>NA</td>
</tr>
</tbody>
</table>
On-Street Parking Utilization Data Analysis

Central Business District - Acceptable Survey Metric Result Ranges

» Unpaid Legal Meter Occupancy Up to 15%

» Meter Violations Capture Rate – 33% overall and up to 40% in core areas

» Duration, or average length of Stay – 67% to 140% of the regulated duration
Central Business District - Acceptable Survey Metric Result Ranges

- Total Meter Occupancy –
  - Ideal = 85% average per block face
  - Upper limit: not above 93% to 95%
- Illegal Meter Occupancy – 5-7%
- Paid Meter Occupancy – 60-85%
On-Street Parking Holiday Shopping Program

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

» 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.
Wireless Hand-held Citation Issuance

The next generation of 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 should generate vehicle “booting” - 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.
Wireless Hand-held Citation Issuance

The next generation of hand-held devices has allowed parking field personnel to have access real-time information.

> Examples include: Real-time scofflaw data for enforcement officers –

On-Street Parking Enforcement

Program Components

> Legislative framework
> Regulations/Fines
> On-Street ADA Issues
> Enforcement staffing and deployment
> Citation Processing
> Adjudication
> Collections
> Scofflaw strategies
On-Street Parking – Demand-Based Pricing

Best-in-Class parking programs strive to understand the dynamics of parking utilization within a district, neighborhood or even on a block face level. They invest the time and energy to generate reliable data on which to base policy decisions. This “data-driven” approach benefits everyone from politicians/policy makers to parking management staff and ultimately to customers and residents.

- The goals are to effectively manage a valuable and limited resource to achieve pre-defined goals.
- With more data available than ever before, parking professionals are in a better position to apply basic economic principles (supply/demand) to achieve targeted results.
- This “demand-based pricing” is being used to create better parking availability and reduce congestion during peak demand periods.

» New wireless technologies hold great promise in making these approaches to even effective and responsive.

» Linking on-street rates to off-street rates and options is the next critical step.
Real Time On-Street Management Information

San Francisco is implementing a federally funded pilot program of new on-street parking management technologies and approaches.

Benefits include:

- Find parking faster
- Pay more easily
- Avoid tickets
- Less circling and fewer double-parked cars give us cleaner air and safer streets for bicyclists and pedestrians
- With less traffic, public transit and emergency vehicles move more easily

SFpark - Overview:

- Using sensors, new meters, and real-time parking data to take the guesswork out of parking in the City.
- Makes parking easier to find and more convenient.
- Benefits will accrue to drivers, Muni riders, bicyclists, pedestrians, visitors, merchants and more.
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!

» 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.
In-Car Meters

In-Car Meters can be programming 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.

A new version adds time wirelessly via cell phone purchases.

» 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
Meter Time Limit Stickers

If you still have traditional parking meters, the simple addition of meter time limit stickers can greatly improve the user friendliness of your on-street system, especially for the occasional user.

» 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.
Public Relations – “Meter Angels”

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

» 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.
Creating a Friendly “On-Street Personality”

If we think beyond the job of monitoring on-street parking and issuing citations to vehicles that are in violation of the rules, what else comes to mind?

» Many communities, in an attempt to create an enhanced sense of place and to make downtown a more desirable destination, are transforming “parking enforcement officers” into “Downtown Ambassadors”.

» This expanded (and more positive role) can be very successful when a focus on creating a friendlier “On-Street Personality” is prioritized.

» This goes beyond the attitude of the ambassadors; it includes streetscape design, retail enhancements, pedestrian amenities, etc.
Progressive On-Street Parking Pricing

Progressive Pricing in Combination with the Elimination (or Extension) of Time Limits

» This strategy merges two cutting-edge on-street parking management strategies to provide more flexibility for a variety of trip purposes with different time limits while maintaining turnover.

» This strategy uses standard rates from one hour to two hours, and rates that increase for any period over two hours.

» The elimination of time limits could be used to increase utilization in under-performing areas by essentially changing the type of parking use permitted in an area.

» A modified approach could be to not fully eliminate time limits, but expand the time limits to allow longer stays (for example, from two hours to four hours).
Effective Parking Enforcement Strategies
Enforcement Technology

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

- 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.
On-Line, Real-time Citation Management Systems

The use of advanced parking enforcement citation management systems provide on-line, real-time information to parking enforcement officers on the street.

- This is critical to effective program implementation.
- It tells the officers which vehicles have previous citations and the status of their accounts.
- If the vehicle is “boot or tow eligible” due to its “scofflaw status”, the officer will know it in real time and be able to take the appropriate action based on departmental policy.
Fine Structures

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

» 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”, a key program effectiveness benchmark.

<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>
</tr>
</thead>
<tbody>
<tr>
<td>1st overtime</td>
<td>$10 Warning</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>2nd overtime</td>
<td>$20 $10</td>
<td>$20</td>
<td></td>
</tr>
<tr>
<td>3rd overtime</td>
<td>$40 $25</td>
<td>$50</td>
<td></td>
</tr>
<tr>
<td>4th overtime</td>
<td>N/A $50</td>
<td>$75</td>
<td></td>
</tr>
<tr>
<td>5th overtime</td>
<td>N/A $75</td>
<td>$100</td>
<td></td>
</tr>
<tr>
<td>6th or more…</td>
<td>N/A $100</td>
<td>$150</td>
<td></td>
</tr>
</tbody>
</table>
On-Line Citation Payment Options

Allowing the payment of non-contested parking citations on-line improves customer service, increases your citation collection ratio (and therefore revenue) and improves collections processing efficiency.

» Helps meet goals of providing timely, customer oriented services.
» Accepts multiple payment options including credit cards.
» Simple, straightforward processing.
Separation of Duties in Parking Citation Adjudication

Just as the concept of “separation of duties” is a key auditing principle when evaluating program financial accounting, the same concept applies to parking citation adjudication (appeals processes).

» The agency/department that issues parking citations should not be the same entity that reviews and processes contested citations.
Effective Facility Maintenance Practices
Hinged Light Poles

Many times parking systems know they have a few lights out, but it is expensive to bring in a bucket truck to change just one light, so they live with the liability until we have more than one light to replace better justifying the expense.

» Hinged light poles make it possible for two men to change out light bulbs without the expense of a bucket truck.

» This approach reduces liability, improves safety and reduces cost.
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.

- 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.
Invest in Maintenance Free Infrastructure

Traditional metal stair railings and other metal parking garage elements eventually rust and need to be painted.

An initial investment in stainless steel or galvanized metal elements can pay big dividends in the long run on maintenance savings and a better looking facility.

» Elimination of this type of maintenance headache is estimated to save a minimum of 80 maintenance man-hours per year per garage.
Bird Management

Avipel is a nuisance bird repellent. The cost of Avipel is less expensive than other mechanical options. It also is easier to apply and more economical to the end user.

Endorsed by PITA and the American Human Society

» The material is applied to surfaces where birds land. The birds will then walk, stand, or roost on the material. As the bird preens it is inevitable that the bird will ingest the anthraquinone (referred to as AQ). This will cause a short-lived gut reaction that lasts for a short time. The bird will then realize that the AQ is noticeable through the UV light spectrum and associate the ill feeling with the UV sight and refrain from going to that area.
Environmental Responsibility

Mobile Parking Garage Cleaning Systems are designed for specific types of pressure washing or water jetting activities, designed to provide an affordable, safe method for quick, simple on-site treatment of the wastewater generated to remove contaminants, such as oil, grease, hydraulic fluids, trace metals, PCBs or paints.

» The basic components of these mobile systems include a pressure washer or water jetting equipment
  ▸ Heater (optional)
  ▸ Vacuum/Recovery System
  ▸ Waste Water Processor

Budget:
$0.05 – $0.12 per square ft.
Fluorescent Lamp Recycling

Spent Fluorescent Lamps Must be Properly Handled and Stored to Limit Mercury Exposure.

» 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
Facility and Equipment Protection Systems
Automated Pay Station Shelters

With the recent rapid growth of automated pay stations, shelter providers have begun developing special products to protect your investment and minimize repair expenses.

» These shelters are designed to increase equipment longevity by protecting them from rain and snow.

» Features include:
  ▸ Translucent fiberglass roof
  ▸ Tempered safety glass
  ▸ Aluminum kick panels
  ▸ Elevated wall panels to facilitate ventilation and drainage
  ▸ Options to accommodate graphics and signage.
Collision Avoidance Alarms

Collision avoidance alarm systems help prevent costly repairs and injuries caused by collisions between oversized vehicles in parking garages and other facilities.

» When installed in front of (and slightly below) roll up doors and overhead objects, any contact with the Watchman triggers a 120db siren and flashing red lights, warning forklift drivers and warehouse management before a collision occurs.

» In addition to overhead doors, the Watchman can be used to protect conveyor systems, canopies, walls, pipes, sprinklers, ducts and other overhead fixtures.

» The patented* Watchman can be purchased for a fraction of the average repair bill for a damaged overhead door, making it practical to equip your entire facility with this unique safety device.

» [Website URL]

*Patent pending.
Column & Vehicle Protection Systems

Products such as “Park Sentry” provide flexible and cost effective options to protect customer vehicles and concrete columns in parking structures.

» Protect square or rectangular concrete columns in parking garages without adding bulk to the column.

» Park Sentry creates a safe zone around the column, protecting both the column and vehicles from collision damage.

» It is scratch, abrasion and collision-resistant, and can be installed quickly without tools for immediate protection.

» [Website URL: www.sentrypro.com]
Flex Posts

Flex post signs spring back to their original position after being hit. No sign, pavement or vehicle damage. No replacement required.

- Signs get hit.
- They bend. They break. They require replacement.
- They cost more than their purchase price.
- Their appearance impacts your professional image.

www.flexpost.net
Height Clearance

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.

» 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.
Valet Parking
Best Practices
Centralized Downtown Valet Parking Programs

Park your car at any location, pick it up at any number of other locations. This best practice encourages downtown patrons to walk, shop and explore.

Successful programs have several elements in common:

» A consolidated, single-operator parking management agreement.

» The operator is selected via a competitive process.

» A detailed management agreement specifies City approved terms and service criteria.

» Supported by a well-defined Valet Parking Ordinance.

» Has well-defined valet station and signage standards.

» Leverages state-of-the-art valet management technology.
Centralized Downtown Valet Parking Programs

CASE STUDY: Coral Gables, FL
Miracle Mile Shopping District

Webpage Introduction:

» Don’t worry about looking for parking or looking for spare change and best of all, don’t worry about parking tickets.

» Parking on Miracle Mile has become easier then ever. How you ask? It’s simple, use the Centralized Valet Parking System on Miracle Mile. Drop off your car at any valet station below and pick it up at the nearest valet station.

Valet Stations:

» Between Houston’s & JohnMartin’s
» In front of Tarpon Bend
» Between Benihana & Ortanique
» Next to Morton’s
» In front of Seasons 52

CASE STUDY: Coral Gables, FL
Miracle Mile Shopping District

Price:
11am – 6pm: $7
After 6pm: $8

Valet Parking is free for disabled patrons with permits.
Valet Express Program

Call ahead service for Valet operations to reduce waiting times for vehicle retrieval.

» Preprinted cards handed out upon arrival with local phone number to call 10-minutes prior to departure.

Please call our Valet Express hotline no more than 5 minutes before you are ready to leave. Your vehicle will be waiting for you when you reach the valet desk.
Advanced Valet Parking Management Practices

Self-serve Request Kiosks

The most popular casino valet systems are equipped with high definition digital camera lane technology, VIP Request kiosks, valet management software and even a mobile PC interface to keep management informed – real time!

» Self-serve Request Kiosks allow departing customer to initiate their vehicle retrieval simply by scanning their bar coded valet parking ticket at the built-in reader.

» Customers may wait inside a climate controlled space in view of the staging area until their vehicle is retrieved.

» A dial-up request module allows visitors to request vehicles by cell phone or text message.
Advanced Valet Parking Management Practices

HDIP Digital Camera Interface

One of the more popular system modules is the HDIP Digital Camera Interface. It provides the comfort of knowing whether or not an alleged damage liability was incurred while the vehicle was in your care.

» No more guess work, irate customers and time consuming case building. Here, a picture is worth a thousand words.
Advanced Valet Parking Management Practices

HDIP Digital Camera Interface

Wireless Mobile Technology has become another popular tool and can be very effective in the right application.

- Hardware options range from a compact blue-tooth wireless scanner designed primarily to ‘time-stamp’ newly issued tickets in the lane, to full featured mobile PPT’s with built-in license plate recognition.
Advanced Valet Parking Management Practices

Valet Parking Management iPhone App

The new iValetParc.net could be a game-changer. It is a powerful, visually appealing and user-friendly valet parking management application.

» In addition to its wireless mobility, it also features an intelligent data management solution called ICDataFlow™ and revolutionary new VisualValet™ concept (patent pending).
Parking Facility
Safety & Security
Passive Security Design Features

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

» 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.
Parking Safety Escorts

Parking escorts for employees and downtown patrons is a much valued service in many communities.

» These programs are often done in collaboration with a Business Improvement District, a large downtown employer or with a consortium of downtown restaurants.

» In some cases, off-duty police are engaged to provide this service.
Secure Parking Deck Stairwells!

Eliminate potential “hiding places”.

Secure areas below stairwells for safety and to create additional secure storage area.

» Wire Mesh Protection Door with automatic closure and lock will limit access to roofs, basements and behind stairwells.

» It eliminates possible hiding areas and improves parking facility security.

» It also creates additional on-site secured storage areas.
Under Vehicle Monitoring Systems

In today’s ever changing world, Security is on the minds of Industry Professionals.

In response to the security challenges in the parking environment, under vehicle monitoring systems are a new option to consider.

» BENEFITS

▸ Highly mobile for temporary applications with speeds up to 35 mph
▸ High resolution imagery with tremendous "zoom" capabilities
▸ Automated license plate capture with underside vehicle "matching"
▸ Extensive statistical analysis on collected vehicle data.
Risk Reduction and Liability Limitation
Parking Lot Safety Products

1 in 5 accidents occur in parking lots!

» One way to defend against this is to provide devices help to enforce safer driving behavior, ensuring pedestrians and drivers are protected from the dangers often found in these areas.

» By using recycled materials, we can contribute to our program sustainability goals and enhance the longevity of these products.

» PARK –IT CAR STOPS
- Year Installed: 1998
- Year Photo Was Taken: August 2008
- Installation Location: Owensboro, KY
  - This is a photo of the Park-It Car Stops installed at a beauty salon in Owensboro, KY in 1998. Used to help guide vehicles when pulling into a parking stall, this installation was done on asphalt using rebar spikes and is 11 years old!
Smart Gates

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

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

- This traffic calming strategy is primarily used in residential areas.
- One key to a successful “speedhump” is a large enough “table” for a full-size vehicle to fit on to reduce excessive vehicle bouncing.
Pedestrian Safety Options

Flashing Signs with audible signals activated by exit lane loop detectors alert pedestrians on the sidewalks approaching parking garage portals of on-coming vehicular traffic.

» Other pedestrian safety elements include signage and convex mirrors.
Pedestrian Safety

Lighted crosswalks activated by push button or microwave sensor enhances pedestrian safety.
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.
The idea of documenting the physical condition of a vehicle in order to ascertain the origin of damage liability has become a valet industry best practice.

» However, the use of new Hi Definition IP Digital Camera Modules has taken this standard to the next level.

» In this case, a picture really is worth a thousand words!
Residential Parking Permit Programs
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 our 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.
Staff Development and Training
Library of Parking Reference Materials

Create a library of parking reference materials for staff training and development.

- Slowly the parking industry is beginning to build up a good selection of text books 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, the International Downtown Association and the Transportation Research Board also have a variety of parking and transportation offerings.

**Recommended Parking Planning and Management Resource Library**

- **Parking Planning**
  1. *Parking: A Parking Primer* - International Parking Institute, Fredericksburg, VA, 2002
  2. *Parking: The Next Level* - International Parking Institute, Fredericksburg, VA, 2004

- **Parking Management**

- **Parking Operations**

- **Parking Technology**

**Parking Assessment**

- **Parking Assessment**

**Parking Design**

- **Parking Design**

**Parking Management**

- **Parking Management**

**Parking Operations**

- **Parking Operations**

**Parking Technology**

- **Parking Technology**
Certified Administrator of Public Parking

The Certified Administrator of Public Parking program offered by the International Parking Institute is the most respected certification program in the parking industry.

Why CAPP Certification?

Parking and transportation services have become a major element affecting the lives and activities of millions of citizens in the United States, Canada and around the world. As an industry, parking now accounts for billions of dollars and more than a million jobs each year, and as a profession, it is now a serious career choice. As such, it demands continuous information and specialized training.

The International Parking Institute, and the University of Virginia, have combined their resources to create a rigorous program of professional training and examination culminating in the awarding of the designation, Certified Administration of Public Parking (CAPP).
Parking Access & Revenue Control Systems
Hands Free Access

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.

- Radio signal from reader activates tag
- Transponder reflects data
- Reader processes data and
  a. Opens gate if valid
  b. Sends data to host CPU
- Host processes data, and records transaction
Metered Transient Parking

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.

» 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.
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.

» 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 Accounting and Auditing
Patron Fee Displays

While not new, patron fee displays remain an important customer service and revenue control feature in a cashiered facility.

It is important in locating the fee display that the cashiers cannot conceal the display, a factor that is often overlooked.

» BENEFITS
  - An important revenue control feature
  - Large, easy to read displays
  - Custom messaging possible
Successful Revenue Control
is Partly a Matter of Organization
and Detail Orientation

Effective auditing relies on detailed reviews of individual transactions.

» A systems based approach to auditing leads to program success and a culture of accountability.
» Increasingly, these processes are becoming more computerized, relying on programming audits and video license plate audits, etc.
Securing Access Control Equipment

Your parking equipment can be secured with electronic access controls without the need for on-site power. These controls can be installed in virtually any parking equipment, anywhere enhancing system security and providing improved audit capabilities.

» BENEFITS:

▸ Know and control who accesses or tries to access your equipment
  – Know how much cash was removed, by who and when
  – Easy online management, including reports
  – Minimize shrinkage
  – Eliminate the problem of lost or stolen keys
  – Minimize vandalism of locks
  – Compelling ROI—typically 30%+
Leveraging New Technologies
Web-Based Management Platforms

Consistent management regardless of the type of parker (transient, monthly, residential, etc.) All aspects of parking management can now be integrated into a web-based management system.

» 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.
Video Based Car Counting Systems

At SeaTac international Airport, just after the Daily Parking entrances, drivers see an electronic sign that tells them how many spaces are available on each floor. Once you get to a floor, a sign will tell you how many spaces are open to the left or right. Within each floor, more signs will tell you how many spaces are available in each four-row section.

» BENEFITS

▸ Reduced customer complaints
▸ Highly improved count accuracy
▸ Significant reduction in greenhouse gas emissions
▸ Extensive statistical analysis on collected vehicle data
Video Based Car Counting Systems

Utilizing video analytics as a vehicle count mechanism provides more data than simple loop detectors or other sensors. This new application has great potential going forward.

» Just after the Daily Parking entrances, drivers see an electronic sign that tells them how many spaces are available on each floor.

» Once you get to a floor, a sign will tell you how many spaces are open to the left or right.

» Finally, once you get an a floor, more signs will tell you how many spaces are available within each four-row section.

BENEFITS

▸ Reduced customer complaints
▸ Highly improved count accuracy
▸ Significant reduction in greenhouse gas emissions
▸ Extensive statistical analysis on collected vehicle data
Parking Management Control Centers

As parking management programs get larger and more complex, communications, security and active systems monitoring becomes more important.

Many of the more sophisticated programs have created central dispatch and systems monitoring “control centers”.

Signage and Wayfinding
Don’t Forget Your Manners?

Someone once said, “everything we really need to know, we learned in Kindergarten”

» Remember to welcome your guests and to always say “thank you”!

ex.
When It Comes to Signage, Less is Often More!

Contrast the two approaches below:
Where Did I Park?

Finding your car in a large parking facility is a common problem.

Signage and wayfinding are important, but for those that don’t read signs, here’s an App for you!
Parking Guidance Systems

The downtown wayfinding and signage program in Burbank, CA are designed to read by motorists. Font sizes are calculated to be read based on driving speeds.

- The variable message signs are internally illuminated for high visibility at night.
- Burbank chose to only display “open” and “full” messages instead of specific space availability numbers.
- They also have the capability of being updated from remote locations.
Parking Guidance Systems

The downtown wayfinding and signage program in San Jose uses a combination of static elements with variable message components to display space availability.

» The signs also provide full panel variable message components to accommodate new destinations or special functions that may only occur on an occasional basis.
Integrating with Downtown Wayfinding

The downtown wayfinding and signage program in Tucson, AZ is organized by downtown districts.

Each district has its own unique icon, colors and graphics.

» Downtown merchants and related agencies were given a “graphics CD” so that they could integrate the wayfinding graphics into their marketing and advertising.

» This approach helps keep the graphic colors, fonts, icons, etc. consistent.
Integrating with Downtown Wayfinding

The downtown wayfinding and signage program in Fort Wayne, IN is organized by downtown districts and then by major activity centers/destinations.

Parking is addressed by a Green P with directional arrows that can be applied to specific destinations of district identifiers.

This approach keeps the primary intent of the signage focused on primary destinations and allows for flexibility as parking options are added or change over time.
Parking Spaces Available Signage

Seattle’s new “E-Park” program provides wayfinding and space availability information for a combined system of public and private short-term parking options in the downtown area.

The signage is a combination of static and variable message signs.
Super Graphics

Using “Super Graphics” to indicate garage level, elevator and stair locations, etc. is a fairly common, but very effective best practice.

» Using these graphics to orient parkers to surrounding streets is another recommended practice.
Color Banding and Consistency

Combining crisp, clean graphics, bright colors and “color bands” to indicate garage level, elevator and stair locations, is another effective best practice.

- Color banding can tie sometimes confusing three dimensional environments together graphically.
- They can more exactly differentiate where on level stops and another begins.
- They can also “lead” patrons directly to destinations such as elevators.
Garage Signage Principle # 1: I am parked on______.

Fundamental parking signage principle # 1 is simple: When you step out of your vehicle in any space, You should be able to look around and be able to identify where you are parked (i.e., Level 4, Row A).

» This applies to parking lots as well as garages.
» The more creative and memorable the signage clues provided, the better.
2 Dimensional Art – 3-D Effects

Parking garages have many large blank walls.

Consider this your “Canvas” for creating new and dramatic focal points using 2-Dimensional painted images with 3-D impacts.

Before:

After:
Effective Use of Symbols and Pictograms

From the basic “Parking P Symbol” to international symbols to the creation of new pictograms to keep up with evolving technologies, graphics symbols have become an important part of how we communicate.
Reflective Text

The use of reflective lettering materials on internal parking directional signage improves readability, especially in below grade facilities.
Parking Signage

Can’t get anyone to take your “No Parking” signage seriously?

Try a modest exaggeration.

» This sign caught my attention? (And no, I didn’t park there.)
Well Designed Parking Signage and Graphics

Good design matters! What more is there to say?

Quality design and graphics speak for themselves and reflect positively on the program that made such a wise investment.
Enhancing the “Parking Experience”
Unique Touches!

Reminiscent of Luke Stairwalker, I mean Skywalker, here’s a futuristic staircase handrail for the Jedi Master in all of us.

» The super cool LED-lit handrail by Croatia-based Zoran Sunjic is **perfect** for modern homes, restaurants and hot night clubs – even parking garages!

» Multifunctional, the rail lights the way, makes the passage safe, and adds a touch of fantasy.

» You can even color code to match your floors (OK, maybe not.)
Special Touches!

Understanding the needs of your customers and implementing services to meet their special needs is always a winning strategy.

» Reserving convenient spaces for specialty groups can help promote customer loyalty and appreciation.

» It's all about knowing your clientele!
Green It Up!
Add a planter or two. It’s amazing the difference adding plants can make in the look and feel of a parking structure, especially around elevator lobbies and entry/exit plazas.

Green the whole roof if you really want to make an impact!

» 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. (Top left)

» Attention to little details at a City Parking Garage in Ottawa. (Top)

» If you do add significant landscaping above parking, be sure to hire a parking consultant to engineer it properly!
Add Color

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

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

Customer amenities in a parking structure can include a variety of offerings including drink machines, water fountains, snack machines, etc.

» It can also include special services such as dry cleaning drop-off, auto washing and detailing services, state vehicle inspection services, loaner “audio books”, etc.
Brighten it Up! Creative Level Theming and Wayfinding

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.
Music In Your Parking Lots?

Some upscale shopping centers are keeping shoppers dancing all the way into the stores by providing music in the parking lots.

» Mall owners site a desire to “set a certain mood for their shoppers” and to put them in a positive state of mind.
Banners Can Add Color, Communications and Ad Revenues!

Some developers, hospitals and airports are taking advantage of high visibility space and cashing in on advertising potential.

» How many views per year do you think these locations generate?
Engaging Local Artists

Charlotte, NC (and Bank of America in particular) has been a leader in investing in creative level theming and wayfinding as well as engaging local artists.
If we can do this for roadways, why not parking garages! Concrete can be a great creative medium.
Art as Urban Utilities
Camouflage

The writing’s on the wall…or, in this case, the utility box. Graffiti art replaces gang graffiti and provides “street-art” for passersby.

- Urban art in the form of buildings is stenciled onto telecommunication power boxes and concrete surfaces throughout the streets of German cities. (Top 2)
- Stacked Lemon crates. (Middle)
- Musician’s adorn a utility box in downtown Winnipeg. (Bottom)
Got a Blank Wall? – Add a Mural!

Parking programs can place a greater emphasis on public art. Blank walls can be an opportunity to showcase local artists, add a splash of color and interest and enliven dull parking environments.

» My favorite wall mural of all time is the girl I met on my first trip to Manhattan. I still think of her when I think of New York City (Left).

» There are too many great examples to show, but here are a few.
“Jazzed up” Pedestrian Pathways

Sometimes we have long corridors or tunnels connecting parking to it’s primary demand generators. Problem? No, an Opportunity!

- Tunnels and connectors need not be dull or dark.
- These airport examples use dramatic and changing lighting, people movers, art, music or interesting “soundscapes” to create an interesting and positive experience.
Creative Level Theming as a Wayfinding Strategy

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.

» 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.
Shade, Protect and Even Generate Power and Increased Revenue

Adding shade structures to surface lots parking or deck rooftop spaces to enhance customer service and increase utilization and parking revenues.

» The initial investment varies based on type of product, but generally runs in the $700 - $1,500 per space range with an average ROI in ranging from 1.5 – 2.8 years.

» Parking shade structures can also have integrated photovoltaic panels to generate solar power.
Dramatic Lighting – Now that makes a statement!

Lighting can set your facility apart from the background and create dramatic affects.

» Indirect lighting in parking facilities and be very effective and attractive. (Right – Parking Garage at the Museum of Art in Milwaukee, WI.)
Happy Holidays!

Nobody wants this experience at Christmas! (Especially Santa)

» Now this is a little more like it!

» And if you’re really in the spirit!

Find out about High Street opening times and free Christmas parking.
Revenue Enhancement Strategies
Advertise On Your Tickets

Advertising on parking tickets, valet tickets and parking “booms” can effectively eliminate tickets expenses from your operating expense budget, as well as creating an opportunity to market downtown venues and attractions.

www.advertickets.com
Advertise In Your Facilities

Advertising in elevator lobbies, skybridges and other areas with high levels of pedestrian traffic can generate additional parking program revenues. This can also be an effective way to promote parking programs and services.
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.

» Examples include advertising, drink and vending machines, ATM machines, etc.

» Another example is the provision of bike lockers, bike tire pumps, etc.
Parking Brokerage Services

Parkingspots.com connects those needing a parking spot with those renting parking spots. The service allows you to find parking close to downtown, the airport, your office, your home or wherever else you need it. Easy, affordable monthly rentals where you want, when you want!

» Primarily focused on the US and Canadian markets Parkingspots.com is a virtual parking marketplace.

» Locate your ideal parking spot by city, by postal or zip or using Google maps.
Ad Walls

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.

- This strategy can make use of a variety of surfaces including columns, beams and even gate arms.
Expense Reduction Strategies
Automated Parking Systems

Labor Expenses

- Parking facility staffing can be the single largest expense item (ranging from 50% to 70%)

- This expense typically includes payroll, taxes, benefits, training, recruitment, etc.

  - Winnipeg reduced labor by ~25% using pay-in-lane off peak

  - Texas Medical Center reduced labor by more 35% using pay-on-foot

Opportunities to reduce labor expenses

- Use automated parking technologies
- Review lane activity to ensure efficient coverage
- Improve employee retention
- Review market pay rates
- Consider outsourcing
- Encourage cross-training
- Regularly review insurance/benefits costs
- Improve passive security
  - Reduce staff needs and reduce liability

Winnipeg reduced labor by ~25% using pay-in-lane off peak

Texas Medical Center reduced labor by more 35% using pay-on-foot
New High Efficiency Lighting Products

Recently, there have been significant improvements in the cost, performance, and application of LEDs for a variety of lighting applications. The energy saving potential of LED lighting, as compared with conventional lighting, ranges from 50 to 90 percent.

Additionally, LED lighting technology offers benefits of extended operating lifetime (up to 100,000 operating hours), small sizes to expand fixture design options, and improved optical quality and control.
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.

» 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.

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

» In a facility with less than 100 transient spaces (the rest were reserved for monthly parkers) the revenue stream from the transient spaces would not justify two shifts of exit cashiers, plus supervision, fee computers, booths and other capital items.

» In this case, installing meters was a more cost effective option.

» Note that there are still staffing costs with this option as the meters need to be enforced and the revenue collected.
Track Warranty Expiration Dates

Review equipment and facility related warranties

» Ensure necessary work is completed before warranties expire.

» Carolinas Medical Center saved $15,000 by scheduling a tour of parking deck expansion joints (with the expansion joint company representative) 6 months prior to warranty expiration.

» Damaged joints were documented with time/date stamped digital photos in a letter to the company.
Equipment Maintenance Contracts

Consider using equipment maintenance contracts only for more sophisticated equipment (fee computers, ticket issuing machines, count systems, etc.)

» For less complex equipment (gates, etc.) train staff in-house and create a separate budget area for “equipment maintenance non-contract” for problems your staff can’t resolve.

» One hospital parking operation saved ~ $5,000 - $8,000 annually using this approach.
The Value of Preventative Maintenance

Don’t forget about the value of and long-term savings associated with preventative maintenance...

» Structural
» Mechanical systems
» Electrical systems
» Parking equipment

» Conduct periodic wash downs to remove chlorides and dirt/debris
Regular Facility Structural Condition Appraisals
- a Good Long-term Investment

Invest in regular parking facility condition appraisals.

» These relatively inexpensive facility reviews can identify structural problems in advance of major problems that might impact operations (and therefore facility revenue or damage to customer vehicles).
Special Programs and Promotions
Parking Coupons “Re-imagined”

Chinook Book – the popular green resource guide and coupon book – now has a high-tech sister: Chinook Book for iPhone, the world’s first mobile coupon book.

For the first time ever, Chinook Book owners can now use their iPhone®, iPod touch® or iPad™ to save thousands of dollars at hundreds of local green businesses in the Seattle metro area.

» These e-coupons can even be used for parking and car share services at the University of Washington.
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.
Who Deserves A Little Something Extra?

It is a documented fact that women control the purse strings and account for the majority of consumer spending, so this practice can be made on the grounds of sound business philosophy.

» But perhaps more importantly, your own mother would approve of this policy (just ask her).
A Little Reminder Never Hurts!

Sure, we all know we should lock our car and take our keys, but …

- “I was just running in for a minute”.
- “I was just picking up a prescription and was worried about my dad?.
- “I looked and there was no one around…”
- “It seemed like such a safe neighborhood”.

» A little reminder might make all the difference.
First Hour Free Programs

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

» 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.
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.

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.
Sponsorships/Fund Raising

Did you know that a parking lot, parking structure and/or light pole banner program could be a fundraiser for your parking system or downtown?

» Project Graphics assists municipalities, institutions and various civic organizations in developing or establishing parking structure and/or light pole banner displays as a repetitive source of revenue.

» Reviewing zoning requirements is recommended.

» www.projectgraphics.com

Contact Sylvia Klein
klein@projectgraphics.com
ph: 800-655-7311 x 314
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.

» 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.
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.

- 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

Visit These New Program Members:
- 8th Street Salon
- April Cornell
- Art Source Inc.
- Bloomaphous
- Body Balance
- Botanical Cafe
- Boulder Bookstore
- Boulder Army Store
- Boulder Art & Crafts
- Boulder Bookstore
- Boulder Realty Brokers
- Boulder School of Music
- Camelot Inn
- Colorado Canines
- Coats Room Conn.
- CTA Mortgage
- DecorAsian
- Designers Acupuncture
- Elena Clocloise
- En Vision
- Express Press
- Feather Thy Nest
- Fort Flowers
- Freez Fred Sports
- Fresh Produce
- Fr ans Shears for Hair
- Galvaning Enchant
- Gala Mommy
- Heritage Bank
- High Crimes Books
- Hildy's Jewelry
- Hillary
- Joie Design
- John Amico Jewelers
- Juventas
- Little Mountain
- Lula Artes
- Millenium
- Millstone Events
- Montana's
- Morning Star
- Paul Mason Culture
- Peppercorn
- Perry's Shoe Shop
- Punchers
- Ramsdell
- Rio Grande
- Rocky Mtn. Joe's
- Smith & Klein
- Sorel Clothing
- The Parlor
- Tom's Tavern
- Walnut Street
- Weekend
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.

» The Downtown Association paid over $6,000 in customer’s parking tickets over the Christmas holidays in Boulder.

» In other communities, the parking system simply suspends parking enforcement or replaces citations with holiday notices.
Family Friendly Parking!

If you are a parent with small children, you will love this idea!

IKEA located and designed a special parking area out of the main traffic flow especially for family parking.

» The “Family Friendly Parking” area is near the entrance and also near children’s play area that is just inside the door adjacent to this lot.

» The lot is essentially a cul-de-sac which also helps minimize traffic and eliminates cut-through traffic.
Mall of America Lets Shoppers Find Parking by Phone

While shoppers might still hunt fruitlessly for a parking space during the holidays, Minnesota's Mall of America is trying to minimize the hassle with parking updates on its website, Twitter feed and interactive road signs. Since Black Friday, the mall has offered a Web-based, color-coded map of its parking lots that shows how congested they are.
Sustainable Parking Design & Management Strategies
Demand Responsive Parking Pricing

Why it is Important?

• Circling for parking accounts for approximately 30 percent of city driving.
• Reducing this traffic by helping drivers find parking benefits everyone.
• More parking availability makes streets less congested and safer.
• Meters that accept credit cards reduce frustration and the need for parking citations.
• Public transit riders, bicyclists, pedestrians, business owners, residents and visitors can all expect this application of progressive parking management policy to improve their quality of life in tangible ways.

» This approach optimizes the use of existing parking resources in a way that benefits both drivers as well as everyone who spends time in our great urban areas.

The Ultimate Goal:
Circle Less, Live Better, Safe the Earth!
Car Sharing meets Fleet Operations

The UCAR car sharing program provides faculty, staff and students instant access to a fleet of vehicles within walking distance from campus offices.

» The UCAR is a conveniently located and economically priced Fleet Services rental vehicle available for hourly rentals. The UCAR program is dedicated to supporting the short term transportation needs of the UW community for education, research, outreach and business.

» Trip tracking occurs automatically and billing is charged directly to a UW budget number. A copy of the receipt is sent to the reservation contact and department billing contact via email.
Recycled Rubber Products

24 million tires are being recycled per year through the creation of recycled rubber molded products. The great thing about this technology is that it not only helps to recycle and eliminate millions of scrap tires annually; products can be manufactured to fit various industries, some of which include: flooring, mats, playground surfaces, track and field footing, parking lot safety products & landscape mulch (pictured above).

» 100% recycled rubber wheel stops are a durable, reliable, long-lasting alternative to traditional concrete stops. Studies have shown that over a 10-year period, concrete wheel stops could cost six times more than recycled rubber models due to cracking & maintenance issues.
Green Roofs

Boston’s Prudential Center has been transformed in recent decades with the construction of new buildings, shopping arcades, and landscapes.

The most recent addition, the Mandarin Oriental Hotel, includes a public garden built in 2008 on the roof of a 1964 parking garage.

» To reduce loads on the existing structure, the soil rests on lightweight fills that include expanded shale and, in especially sensitive areas, stacked foam insulation panels.

» The half-acre garden stands in deliberate contrast to the buildings around it. Its native stone walls, reused brick pavement, and lush plantings give shoppers and hotel guests a chance to step outdoors and experience a taste of the New England landscape beyond the city.
Green Roofs (Sort of)

• Don’t have the budget for a “true green roof”?  
• No ability to support the extra weight?  
• No ability to detain water?  
• An inhospitable climate?  
• No funds for the long-term maintenance of a traditional green roof?  
  » No Problem! – Schwartz made a plastic fantastic half Japanese Zen, half French Renaissance garden.

http://www.marthaschwartz.com/
Xeriscape

Xeriscaping is the practice of water conservation through creative landscaping.

» Benefits of Xeriscaping:
  ▸ Low water consumption
  ▸ Low maintenance
  ▸ Protects water quality
  ▸ Increases health and beauty of surroundings
  ▸ Decreases pest control needs
Solar Powered Parking Lot

A relatively new addition to our sustainable parking strategies is the introduction of individually powered solar parking lot lights.

Each light pole/fixture is fed by an individual solar panel as pictured above.

Solar Parking Lot Light (S-SL27), from Greenshine has three solar panels and stronger light power, is a good solution for illumination of large areas.

» Each light pole/fixture is fed by an individual solar panel as pictured above.
The Eco Parking Lot

Bringing environmental technologies and green design practices under one roof is the Eco Parking Lot. The stylish design will incorporate green plantation and storm water remediation technology making it more efficient while maximizing greening potential.

» This visual treat with special student parking will benefit the Community and city of Windsor.

Design: Green Corridor

More info: www.greendiary.com
The Solar Forest Concept

As the name suggests, this concept brings trees like structures into action. The **Solar Forest Concept** consists of trees that are made up of photovoltaic leaves, whose sole purpose is to collect solar power.

- At the “trunk” of each tree is a power outlet that is used to charge up electric vehicles.
- Apart from providing charge, the photovoltaic “leaves” also gives shade to the cars.

**Designer:** Neville Mars

**More info:**
[www.greendiary.com](http://www.greendiary.com)
The Solar Parking Concept

Offering a dual solution to parking and charging of electric vehicles as well, the design proposes the wireless transmission of charge from the solar canopy to the charging coil embedded in the asphalt and later, to the car battery.

Designer: Nejur Andrei

More info: www.greendiary.com
The Solasis Light Tower:

Here is a concept offshore parking area that generates solar energy to recharge electric cars and add valuable juice to the grid.

Designer: Klaud Wasiak and Yongbang Ho

More info: www.greendiary.com

» This proposed renewable energy generating parking lot is equipped with a solar power concentrating tower that uses the windshields and hoods of cars as sun tracking and concentrating mirrors.
90 Degrees Vertical Parking System:
The 90 degrees vertical parking system, one-of-a-kind parking concept parks your car vertically.

» While you tuck your vehicles into the parking lot, the panels on the flip-side use solar panels to energize electric vehicle batteries.

» Along with power generation, the unique system allows three cars to park vertically where normally a single car is parked.

Designer: Baita Bueno

More info: www.greendiary.com
Green P Parking System:
The concept is based on the decentralization of parking systems into many smaller spots that can be placed in unused spaces such as under flyovers and bridges.

The Green P system also includes a lighting system that can replace or supplement ordinary road lights by charging them with solar energy generated by panels installed on the Green P’s roof.

Designers: Algis Berziunas and Laima Rimkute
More info: www.greendiary.com
Energy Efficient Vehicle – Parking Perks

Some municipalities are offering free metered parking to residents whose vehicles get 50 miles per gallon, have low emissions or are powered by an alternative fuel.

Utah already offers an income tax credit of up to $3,000 for residents who buy clean fuel vehicles and some electric hybrids.

- Salt Lake City joins New Haven, CT; Fresno, CA, Boulder & Manitou Springs, CO and Albuquerque, NM, in the free parking meter program. In the last year, Austin, Texas, also approved a green vehicle incentive that provides $100 in free parking.
- Commuters in Baltimore who use low-emissions vehicles can also buy parking passes at city-owned garages at a discounted rate.
Electric Vehicle Recharging

Electric vehicle charging stations in parking facilities is coming. Also coming is a new concept of “Networked Charging Stations” that provides unique benefits when compared to non-networked charging stations.

Benefits include:

- A revenue stream to pay for electricity, capital equipment and maintenance
- Ability for drivers to find unoccupied charging stations via web-enabled cell phones
- Notification by SMS or email when charging is complete
- Authenticated access to eliminate energy theft
- Green House Gas savings calculation per driver and per fleet
- Authorized energizing for safety
- Remote monitoring and diagnostics for superior quality of service
- Fleet vehicle management
- Smart Grid load management
Monthly Parking – Unbundled!

Boulder’s 20 Day Punch Card is…

- Convenient: Valid in all 5 City of Boulder parking garages.
- Affordable: 20 days of parking for only $200 ($10/day).
- Available: No wait list!

Flexible: Only pay for days you drive! Great option for anyone who works in downtown a few days a week, utilizes alternative commuting modes or who is on the wait list for a garage permit.

- Intent: Options, options, options! Our intent is to offer more options. It was designed for long term parking (parking all day not leaving, maybe 8-10 hours) in our garages for people who do not have a long term permit.
- Purchase: The purchaser pays $200 and receives a plastic day pass.
- Usage: The buyer takes a ticket at the entrance gate as a normal short term parker would and upon exit gives the entrance gate ticket and punch card to the booth attendant. The booth attendant punches the card, returns it to the customer and opens the gate for the customer to exit. The booth attendant uses a pre-programmed register key and runs the ticket through.
Hotel Parking Perk for Hybrids

Hotels are beginning to offer parking perks for guests parking hybrids or electric vehicles.

» FREE PARKING FOR HYBRID CARS IN NEW YORK CITY

- Your stay in the heart of Times Square and the Broadway theater district will be exciting and relaxing knowing your parking is free. So bring your hybrid to our front door and receive complimentary parking during your stay.

Parking charges are $33 for Valet Parking or $25 for Self Parking, prices effective June 1st.

As part of commitment to the environment, the Fairmont Banff Springs is pleased to offer complimentary parking to guests bringing a hybrid or electric vehicle.
Parking Guidance Systems

In today’s complex marketplace, it’s highly desirable to have all available parking spaces utilized in order to maximize driver satisfaction, enhance revenues and minimize greenhouse gas emissions.

» BENEFITS

▸ Parking Guidance Systems Provide:
  – Assured Parking Availability
  – Reduced Pollution and Congestion
  – Advanced Notification to Drivers
  – Control Parking Occupancy by Facility, Level, Zone or Individual Parking Space
  – Economic, Environmental & Customer Friendly
Car Share Programs

Moving downtown?
Don’t need two cars any more?
Can’t afford a car, but need one from time to time?

Car Sharing may be just what the doctor ordered!

» With Car Sharing you can rent a car for a designated period.
» Pick it up at a designated spot.
» Return it to a designated spot.
» Your access car opens & starts the car.
» Your credit card is billed.
» (No don’t even have to fill it back up!)
Portable Bike Racks

How do you handle seasonal demand peaks for bike parking?
The creative folks at the Winnipeg Parking Authority created this “portable bike rack platform”.

- The base can be picked up by fork lift.
- The bike rack proper is protected by sturdy, high visibility bollards
- It can accommodate 6 – 8 bikes in a single on-street parking space.
Parking Day is Catching On!

Park[ing] Day is a grassroots movement that is gaining momentum around the country!

Once a year, urban activists around the country convert a public parking space to a “mini park” for the day.

Organizers call it “an opportunity for community members to engage passers-by, motorists, members of the press, city leadership and yes, even the authorities, in a rational and respectful dialogue of everything from our city’s parks and public space to the environment and allocation of land to mobility issues and local beautification projects.”
Parking Facility Design and Construction
LEED Certified Parking

Yes, a parking garage can achieve a LEED Platinum certification! The University of Florida's new Southwest Parking Garage Complex includes a two story building made up of transportation, parking service, public safety offices and retail.

The University of Florida’s (UF) new $20 million Southwest Parking Garage Complex opened in September 2010.

Designed and built by the architectural firm Pierce, Goodwin, Alexander & Linville, the parking facility, which consists of a six-level, 313,000 square-foot parking garage that can accommodate up to 950 cars, along with an attached 52,000 square foot, two story building. A 12,000 square foot office building for the University is also included.
Decorative Asphalt Treatments

Traditional asphalt is popular for its practicality, efficiency and low cost, but some find it boring and unattractive. Decorative asphalt has all the benefits, but adds the design potential of more expensive products.

» The shopping experience doesn’t start at the front door, it starts in the parking lots.
» Extend branding into the parking lot.
» Create positive 1st impressions

http://www.integratedpaving.com/
Eliminate Blind Corners

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

- The photos to the right shows examples 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.
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.

» 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 perpendicular to traffic flow to further improve visibility and wayfinding.
Illuminated Entry/Exit Signs

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

» Whether illuminated from within or from external sources, this is an important safety and traffic control feature that is sometimes overlooked.

» Lighted entry/exit signs should also include illumination of clearance height information.
Lighten up!

Painting or staining the interior of parking structures is one of the best ways to improve the perception of customer safety and facility cleanliness.

Painting the underside of parking levels as well as vertical elements such as wall and columns increases lighting levels through improved reflectivity.

» Except from Paint/Stain Specification:
» Provide paint system consisting of two coats of a (white) water-base penetrating stain in accordance with Manufacturers recommendations.

» Approved stain systems are as follows:
  ▸ H & C Concrete Stain AC1W, Glidden
  ▸ W-1, Okon Inc.
  ▸ Canyon Tone Stain “W”, United Coatings
  ▸ Aquastain, Tamms Industries Co.
  ▸ Or Approved Equivalent
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 left 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.
Parking Structure Pedestrian Safety

Areas that are adjacent to high volume traffic areas or entry/exit areas sometimes need special attention to protect pedestrians.

» The glass and metal gate system pictured here is one creative and effective option to consider.
Pedestrian Ways

In areas with high level of pedestrian traffic with parking garages, created protected pedestrian ways is a parking structure design best practice.

» 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.
Maximizing Parking Capacity

In some environments there are peak parking demand periods that will require special efforts to accommodate all your customers.

» At the Hotel Del Coronado, a special parking row behind the standard parking configuration allows them to add an additional 10% capacity to the normal self parking lot.

» During peak demand periods, they will shift to a valet stack operations mode.
Transitional Lighting

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

The Illuminating Engineering Society of North America recommends a minimum of 50 foot candles for transitional lighting at parking facility entrances.

Transitional lighting helps driver’s 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.

- 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.
Parking Space Availability Signage

Single space monitoring systems with parking guidance signage make parking in large complex parking garages more user friendly. These systems are being deployed in retail, airport, theme park and university environments.

» Baltimore Washington and Seatac International Airports were among the pioneers of this technology.
» Westfield mall at Century City installed an advanced parking guidance system in their large 2000 space below grade garage.
Creative External Architectural Treatments

To reinvigorate urban environments, some old parking garages are getting some interesting face-lifts!
Creative External Architectural Treatments

This award winning design shows just how far some architects will go in adapting their design to nature of the larger project.

This “Library Parking Garage” in Kansa City won an IPI Award of Excellence”
Securing Ground Level

Restricting the number of access points is a parking facility design security best practice.

This photo shows that the goal of securing the ground floor can be done in an tasteful and attractive manner.
Alternative Garage “Skin Treatments”

One alternative to traditional pre-cast concrete panels are metal panels.

Potential Advantages Include:

» Greater openness
» Cost savings
» Attractive look
Specialized Parking Facility Types
Consolidated Rental Car Facilities

Some of the largest, most advanced and well designed parking facilities in the country today are Consolidate Rental Car Facilities supporting major airports.

» These facilities are multi-modal hubs, many are integrated with light rail or monorail systems.

» These facilities often times show the true potential for parking facilities “interior environment enhancements” as illustrated in the photo below.
Specialized Canopy Structures

While technically not a parking facility, the Helios House in LA is a great example of creative architectural treatments for canopies covering automobile related uses.

This structure’s visually arresting geometric construct is largely maintenance free non-rusting aluminum alloy.
Intermodal Parking and Transportation Facilities

These facilities are typically hubs for multiple forms of transportation including rail, bus, taxi and parking. By centralizing these services to one location, passengers are able to access their preferred means of transportation more easily. Passenger comfort and safety is also with the construction of an interior lobby and designated pick-up/drop-off areas out of the way of traffic.

In addition, businesses located near these facilities are more visible and accessible to customers. This facility will also help make downtown more pedestrian-friendly and increase foot traffic to local businesses.
Airport Parking Garages

While airport parking garages come in many forms, there are some basic design criteria that tend to show up in airport parking facilities due to their basic functional needs.

» Some of these features include”

- Helical ramps to move large volumes of vehicles in short periods of time.
- A predominance of flat floors to better serve customers with luggage.
- Large facilities requiring good wayfinding.
- Integration of light wells or other features to break up large facilities and provide orientation.
- External exit toll plazas
- Integrated multi-modal transportation elements
- Advanced access and revenue control systems
Mixed-Use Facilities

What is a mixed use facility? Simply a building or group of buildings in which you can work, shop and live. The integration of parking either in a “wrapped”, “stacked” or below grade fashion (or some combination) is common.

» Of course you’ll still want to get away from time to time to visit friends, explore cultural venues and take vacations but for these a rental through a “car sharing” system might make more sense. Proximity to transit and the addition of community bicycle programs is increasing commute options.
Event Parking Facilities

Some parking facilities may be designed primarily for office parking, but with an awareness that they will be used for special events as well.

Event parking requires a another level of planning and design to accommodate the acceptance of up-front payment and peak egress traffic flow.

» Double-threaded helix circulation systems with separate up-bound and down-bound traffic patterns are common to expedite the high traffic volumes.
Transit Oriented Development Parking Facilities

The "new urban village" concepts designed around a rail/transit stop offers a picture of the emerging preferred urban development land-use type of the near future.

These “transit oriented developments” are characterized by relatively dense development patterns, strong permanent transportation elements that will support a “live/work/learn/play” environment.

While some parking is generally provided in tends to be less in overall numbers, provided in structures and supported by multiple transport options.
Temporary Parking Structures

There are temporary, modular, one deck car park systems designed to virtually double the capacity of an existing or new surface area, by use of a free-standing deck installed in the short amount of time with minimal site disruption. Pre-fabricated elements are installed on the surface without traditionally excavated foundations. The finished structure can be disassembled and 100% re-assembled on another site in different configurations. In many cases installation can be phased to retain spaces for an ongoing parking operation and its revenue stream.

» For environments where major design decisions are in flux, or an immediate loss of existing parking needs to be mitigated this temporary modular parking deck option has distinct advantages.
Automated Parking Facilities
High Density Vehicle Storage

There are products designed to meet higher-density parking requirements by providing more efficient space utilization through a variety of vehicle storage and retrieval options, from attended systems (valet) to fully automatic systems that require no human intervention.

» BENEFITS

▸ Designed or retrofitted in accordance with client specifications
▸ Cost-effective and can be installed with little to no site preparation; standard garage doors, facade siding and roofs can be used to enclose all systems
▸ Construction periods and costs are minimized - require no ramps or drive aisles
▸ Beneficial floor area ratio (FAR) – Systems regarded as one level in many cities
**Mechanical Parking Structures – “Tray Systems”**

**Benefits of Automated Parking**

- **Automated Parking Saves Space**
- **Automated Parking systems allow vehicles to be stored without human intervention and allow for much greater vehicle density within a parking facility.**
- **By consuming roughly half the space of a conventional parking garage, automated parking brings value to real estate development projects in any of the following four ways:**
  - Saves Valuable Air Rights
  - Reduces Expensive Excavation
  - Fits More Cars
  - Conserves Open Space

**Unique Capabilities of the RoboticValet™**

- Robot lifts only the tray - nothing touches the vehicle
- Rolls on solid concrete decks (new or retrofit)
- Easy to maintain over long lifecycle
- Moves underneath vehicles from any side
- Transports vehicles in any direction
- Rotates vehicles without a turntable
- Lifts payloads up to ~7,000 lbs
- Battery operated
Mechanical Parking Lift—Slide Systems”

Benefits of Automated Parking

• More efficient use of land
• Improved user security
• LEED credits available

Lift-Slide Systems

» 2-15 levels, using hydraulic system
» 5 level using electric
» Suitable for all personal vehicles, SUVs, mini-vans, etc.
» Semi-automatic operations
» Access card or PIN code
» Stand-alone structure or integrated into another structure
» Relocatable
» Can be configured with electric vehicle charging stations
» ISO 9001 Certified, LEED Credits and Innovative Design credits are available.
Parking and Economic Development
Develop a Parking Policy Geared to Support Economic Development

Some innovative parking programs that consider themselves as integral partners in overall downtown revitalization efforts have developed their overall parking policy framework to be geared toward support community and economic development.

Tempe, AZ is one such City. To the right is the overall policy framework they adopted.

Parking/Economic development Principles

» Consider Parking as One Element of a Larger Transportation System
» Effective Parking Resource Management
» Define “Parking Adequacy” within the Transportation Context of Downtown
» Create a “Proposed Development Parking Assessment Tool”
» Maintain Shared Parking as a Core Parking Planning Element
» Integrate Parking Planning Into the Larger “Downtown Business Strategy” Context
» Long-Term - Build Toward a “Self-Supporting Parking Enterprise Program
» Define a Specific Targeted “Return on Parking Investment Ratio”
Parking Benefit Districts

The establishment of "parking benefit districts" can serve as a financing tool to support improvements in downtown areas while also addressing traffic congestion and parking constraints. Within a parking benefit district, public parking spaces (both on and off-street) are charged an hourly rate designed to keep approximately 15 percent of parking spaces vacant.

Other Key Parking District Attributes

» Funds collected from parking charges are poured directly into improvements that make the district more attractive, such as sidewalks, landscaping, and other amenities or aesthetic improvements.

» New parking meter technologies have improved customer convenience (customers can pay remotely by credit card or cell phone), increased pricing flexibility (rates can be changed in real-time based on location, time of day, day of week, or level of occupancy), reduced streetscape clutter, and reduced operating costs.
This just in….Congress has approved a new funding source for NASA.

Discussion