

February 12, 2007

Mr. Steve Lawton  
Community Development Director  
City of Hercules  
111 Civic Drive  
Hercules, California 94547

Re: Task Two - Preliminary Alternatives Report - DRAFT

Dear Mr. Lawton,

In September 2006, the City of Hercules retained **Carl Walker, Inc. (Carl Walker)** to provide a parking management study for Central Hercules. This parking study was divided into six specific tasks, including a review of existing and future parking conditions, development of parking management strategies and parking standards, development of a parking demand management ordinance, and the organization of a Central Hercules Parking District. Background parking system data was provided by the City of Hercules, and additional input was provided during several stakeholder meetings.

This report represents the second deliverable for this project, and provides preliminary options for parking operations and management. These options will be refined during the stakeholder input session(s) in March 2007, when final recommendations and an action plan will be developed. This summary report addresses the scope items noted in Task 2 of the parking study, which included:

- Provide a review of study area parking supply, management, and operations alternatives to meet current and future parking needs.
  - Review options to improve the utilization and efficiency of existing parking supplies.
  - Review additional operational and management options based on twenty key characteristics of successful parking systems.
  - Review potential parking technologies and strategies that will support parking system goals and objectives.
- Assist the city with the development of parking system guiding principles.
- Determine the potential major functions of the Central Hercules Parking District.
- Develop short-term and long-term parking system improvement recommendations and an implementation plan (to be included in the final Task Two report).

### **Parking Supply Alternatives**

The overall development plan for Central Hercules consists of four primary development areas: the Waterfront Neighborhood, the Central Quarter, the Hill Town, and the Civic Center/Hospitality Corridor. These areas share a general vision of increased connectivity, improved land uses, and a vibrant mix of residential and commercial developments. Clearly, efficient and effective parking planning and management is needed to help support the city's overall development goals for Central Hercules.

The first step in addressing the parking needs for Central Hercules was a review of existing parking conditions. This was accomplished during Task 1 of this parking study. Based on the available parking supply in the study area (2,353 total parking spaces), and the observed level of peak parking occupancy (982 spaces at 12:00 p.m.), there is a significant amount of underutilized parking. The majority of the underutilized parking spaces were located on-street, primarily in neighborhood areas. The majority of the underutilized off-street spaces were located in private parking lots. Therefore, while there was a significant amount of underutilized parking, most of the available parking spaces were in areas that may limit shared parking opportunities.

To meet future parking demands, several parking supply alternatives are typically available to municipalities:

- The city could decide to improve the utilization of existing parking supplies. This could include working with parking lot owners within impact areas to better utilize private parking supplies. Using the concept of shared parking, existing resources could be effectively utilized to meet needs.
- The city could create additional parking spaces in existing unimproved areas (either on-street or off-street) to provide additional parking. Any land used for surface parking could be developed in the future to a higher and better use. If space is not available for surface parking, or surface parking cannot be located close enough to parking demand generators, structured parking could become a viable option. The cost for providing parking could be covered through parking user fees and/or fees charged to developers (e.g., in-lieu fees, special assessments, development fees).
- The city could require new downtown developments to provide sufficient parking. New developments would provide their own parking for employees and visitors. This could result in higher costs for developers and possibly the overdevelopment of parking supplies. An alternative could be charging in-lieu fees or development fees to require developers to help fund needed public parking resources.
- The city could work to reduce parking needs in the study area through the implementation of various transportation demand management and parking supply management strategies. These strategies would be geared toward reducing parking demands by encouraging the use of alternative modes of transportation and improving parking resource management.
- The city could utilize a combination of alternatives.

In the **First Alternative**, the city would attempt to better utilize available parking supplies. This would mitigate the need to construct additional parking. As sufficient parking is available in some areas where development is planned (based on the parking occupancy study), this alternative may have merit. Better utilization of the available supply would eliminate at least the need for near-term parking supply additions, maintain existing green space or future development space, encourage pedestrian movement through the downtown, and reduce city parking responsibilities (e.g., maintenance, signage).

The improved utilization of existing parking areas is substantially less costly than creating new spaces. Based on the observed occupancy in the downtown, several options are available to better utilize existing parking resources. For example, the parking spaces at the Creekside Center or the on-street parking spaces throughout the study area appear significantly underutilized. These parking supplies could be used to provide parking for specific developments, park and ride lots, and/or long-term public parking.

The use of some of the underutilized parking areas may require the approval of the various property owners. In order to encourage the shared use of private parking facilities, the city could use one or more of the following techniques/incentives:

- The city could communicate the positives of shared parking to the private parking lot owners. The positives include increased pedestrian traffic near their businesses, continued downtown development, maintaining green spaces and other non-parking land-uses, easier to use parking for downtown visitors, etc.
- Shared parking could be limited to daytime, evenings, weekends and/or special event days if land uses permit. Signage would need to convey the set parking requirements. This could help solve some parking demand problems around the downtown core.
- The city could provide periodic lot maintenance for private parking lot owners that agree to allow shared parking.
- The city could provide periodic trash pick-up for private parking lot owners that agree to allow the use of their lots for other visitors.
- The city could provide aesthetically improved signage for private parking lots. The signage could denote parking restrictions and periods of open public parking.
- The city could help care for parking lot landscaping in private parking lots for owners that permit shared parking.

In addition to the underutilized private parking supply, a significant amount of underutilized on-street parking exists on many streets. In order to better utilize the parking in these areas, all of the on-street parking in the study zone could be marked, and angled parking could be provided in all areas with sufficient dimensions. The on-street parking could be marked when needed, as the new developments are constructed.

However, this approach to dealing with future parking needs may not adequately meet projected parking deficits. First, the number of parking lot owners willing to cooperate may not be sufficient to provide the necessary parking. Second, the location of available parking supplies may not provide “acceptable” parking to future downtown developments. The available parking supplies may not be within an acceptable walking distance, lot conditions could be poor, etc. Third, some of the currently underutilized parking areas may be lost to future development projects. Finally, the available parking supply may be insufficient to meet anticipated parking demands.

The **Second Alternative** available to the city is to create additional parking spaces, or improve the capacities of existing lots to provide sufficient parking to meet future demands. Improving parking efficiency would involve an analysis of existing parking lot physical layouts to determine if improvements could be made to increase lot capacities. Theoretically, both public and private parking supplies could be included in this analysis with the consent of private parking owners. After reviewing existing conditions, few substantial opportunities for improving parking efficiencies appear available (outside of delineating all on-street parking spaces to minimize improper parking).

As sufficient parking would not be created through lot improvements, additional parking supplies could be constructed using available unimproved land. Currently, there are several locations within the downtown study area that could support new parking facilities, and some future developments are anticipated to include structured parking components. New parking facility opportunities could include surface parking lots or parking structures.

New surface parking lots are typically much less expensive to construct than parking structures. The cost of constructing surface parking is approximately one-tenth that of constructing parking structures. Also, surface lots are less expensive to maintain and operate. As the construction costs are so low, the newly created surface parking lots could be viewed as land banking for future development. If needed in the future, the surface parking lots could easily be developed to a higher and better use.

Another option for creating new parking would be the construction of parking structures. Parking structures can provide several advantages over surface parking. First, a parking structure could provide needed parking closer to the central core (or other parking demand generator). This will provide downtown visitors and employees with more reasonable walking distances between the parking supply and their destination. Second, a parking structure could consolidate parking into one location. This would free other nearby surface parking lots for future economic development. Finally, a downtown parking structure would provide a stable parking supply. Surface parking could be lost to development at any time, whereas it is unlikely that a downtown development would result in the removal of a parking structure.

Ideally, these possible off-street parking facilities would provide long-term parking to area visitors and employees, leaving the on-street parking spaces for short-term visitors. If multiple locations are designated for parking, the lots could be designated for a single user group or provide parking for both visitors and employees.

However, it is important to note the disadvantages to new parking facility construction. First, new surface parking lots may be constructed outside of the designated impact area of a development (based on

available land). This may mean that walking distances are not acceptable, and therefore the lots may be underutilized or the lots may not be utilized by the developments for which they were intended. Second, the city may have to pay for the construction of the new parking facilities, as well as annual maintenance and operating costs. Annual operating and maintenance cost could be between \$250 and \$600 per space, per year. Third, anticipated parking demands for known development projects may not be sufficient to warrant new structured parking supplies if other parking resources could be better utilized. Finally, locating additional surface parking lots in the downtown could impact future development goals while not providing enough parking.

The **Third Alternative** available to the city would be to require new downtown developments to provide their own parking resources. This would involve setting parking requirements for new developments, based on projected land uses, and enforcing parking zoning codes. The main advantage to this alternative is that the city would not be required to construct, maintain, and operate new parking supplies in the downtown. While some towns and cities require developments to provide their own parking supplies, the majority of downtowns that are encouraging development reduce or eliminate parking requirements. Instead, the city works with the development to provide sufficient parking. A variation of this alternative could be requiring developers to pay a fee to cover the construction of new public parking resources. This could be a specific development fee or an in-lieu fee. Also, special assessments could be levied to area commercial developments to help fund the construction and/or operation of parking supplies.

The **Fourth Alternative** involves encouraging the use of alternative modes of transportation and using parking demand management strategies to reduce parking demands. Encouraging the use of alternative modes of transportation could include providing adequate pedestrian and bicycle linkages, provide sufficient mass transit alternatives, encouraging the use of carpools/vanpools, guaranteed ride home programs, telecommuting, parking cash-out programs, etc. Many of these transportation options are already available in Hercules. Parking demand management strategies could include any of the following alternatives (but not limited to):

- using shared parking concepts;
- instituting and enforcing parking time limit and user group restrictions;
- providing flexibility in determining development parking needs;
- using parking maximums to limit parking development and/or unbundling parking;
- using car sharing programs to reduce or eliminate the need for some downtown residents to own vehicles;
- improved parking system information and marketing;
- charging for parking;
- improved parking enforcement.

The goal of each of the aforementioned parking demand management strategies is to spread parking demands to appropriate locations, improve the utilization of parking supplies, and/or reduce overall parking demand.

The **Final Alternative** is actually a combination of the previous four alternatives. This alternative would involve the city working with private parking lot owners to better utilize the existing parking surplus before adding additional parking supplies. If sufficient parking could not be secured using this approach, then the city would consider improving existing parking supplies and/or adding new supplies as appropriate. If new parking spaces were added, either through surface lots, on-street spaces, or parking structures, the city could look to developers to help defray a portion of the costs. Finally, the city would continue encouraging the use of alternative modes of transportation, as well as other parking demand management strategies, to reduce overall parking demands. *Carl Walker* recommends this alternative, as it provides a reasonable approach to dealing with future demands and should limit future parking expenses. Also, this approach will allow the city to show the community that all options were explored prior to expending any city funds for constructing parking facilities. The goal is to provide the “right” amount of parking; not too much or not enough.

### **Parking Management Alternatives**

Many parking systems, especially in municipal or district environments, have evolved over time into organizational structures that *Carl Walker* has termed “horizontally integrated”. This means that various parking system components are spread among multiple departments or entities. The following example illustrates how many municipal parking systems evolved:

- There was a need to establish a parking function. The initial need was to manage on-street parking supplies. Because the public works department already managed the streets, this function was located under the public works.
- When the need for an enforcement function achieved critical mass, this was logically assigned to the Police Department.
- Over time, off-street lots and parking structures were added. The management of these resources was placed under the Facilities Management Division, because they managed the city’s real estate assets and facilities.
- Soon there was enough revenue being generated that an audit/accounting function was established to ensure the accurate accounting of revenues and expenses. This function was placed under the Finance Division.

In a horizontally integrated parking program, where each department only manages one aspect of the parking system (such as on-street parking, enforcement, or parking structures), often times no one has responsibility, or the perspective, to manage all these interrelated components as a system. In one study completed by *Carl Walker*, where different departments each managed a small amount of the parking supply along with responsibilities for several other areas, the observation was made that “parking was everyone’s part-time job, but no one’s full-time job”.

While it may not be necessary, or even desirable, to completely integrate all parking and transportation functional under a single “vertically integrated department”, at least consolidating all parking functions under one governance structure is recommended for long-term system management.

As the parking profession has evolved, several very effective parking system organizational models have emerged. Each of these models has its own strengths and weakness depending on several factors including the parking system’s size, degree of development, programs offered, political landscape, community goals, etc. Four successful organizational models are:

- A Consolidated (“vertically integrated”) City/District Department model;
- The Parking Authority model;
- The “Contract” or Business District model;
- The Parking District model.

There are of course several variations and hybrids of these models, but these are the four primary alternatives. Each of these models will be detailed in more depth in the following sub-sections, but they all have one common factor that contributes to their success: They all address the major problem associated with the “horizontally integrated model” previously described.

When evaluating which organizational option will work best in a specific community, it is important to ask community stakeholders to create a prioritized set of evaluation criteria. A typical list of criteria would include determining which organizational option:

- best supports economic development;
- best reflects the image and personality of the community;
- is most efficient/cost effective;
- is most customer-friendly;
- is most politically feasible;
- is most focused on the vision;
- is easiest to achieve;
- is most responsive to businesses and stakeholders;
- is most financially viable;
- provides the most effective coordination?

The following is a brief description of parking system organizational models that have shown demonstrated success in recent years. Each description is illustrated by an example of a specific program based on that model.

**Consolidated (“Vertically Integrated”) City/District Department Model**

A Consolidated “Vertically Integrated” City/District Department Model is essentially a typical department – lead by a department head and a varying assortment of support staff. The defining characteristic of this model is that the Director has complete responsibility for the management of all parking related program elements. The primary elements of these being:

- off-street parking facilities;
- on-street parking resources;
- parking enforcement.

There are numerous other related areas that can become involved including (but not limited to):

- Transportation demand management (Trip Reduction Programs, Preferential Parking for Car/Van Pools, transit programs, etc.).
- Parking system branding, marketing, and community outreach.
- Implementation of new technologies.
- Parking system planning (e.g., zoning, financial planning).
- Residential permit parking programs.
- Interface with downtown development and economic development.

The City of Fort Collins, Colorado has a consolidated parking management program that incorporates off-street parking (parking structures and surface lots), on-street parking (time limited on-street spaces), and parking enforcement. The city’s Parking Manager also has developed a program to promote effective coordination and collaboration with the owners of private parking to better support evening restaurant parking demands and for special events. Another feature arising from this integrated approach is that the city is currently embarking on a parking technology assessment. A key feature of this assessment is to identify technology options that could link on-street/enforcement systems (Auto-Vu LPR enforcement technology/T-2 systems software) with the next generation of off-street parking equipment and potentially new on-street multi-space meters.) This type of creative and integrated thinking is more common in systems with a vertically integrated organizational structure.

**The Parking Authority Model**

The defining characteristics of a Parking Authority Model could include:

- It has a defined mission and vision.
- It is governed by a detailed management agreement.
- Often has bonding capability.
- Most often has responsibility for all aspects of parking operations (off-street, on-street and enforcement).
- It is typically headed by a President or Executive Director.

- Because of this they tend to attract the highest caliber parking management personnel.
- The Executive Director reports to a board (Typically 7 – 15 members).
- The board is comprised of influential and invested downtown stakeholders.
  - Board composition typically includes:
    - High level city staff.
      - Mayor or City Manager (or appointee).
      - Director of Finance.
      - Director of Public Works.
    - Property owners/developers.
    - Downtown association members.
    - Chamber of Commerce representative.
    - Large downtown employers.

Parking authorities typically operate with a small staff and engage a private parking operator to manage day-to-day operations. One advantage of the Parking Authority model, especially in a municipal setting, is that it puts all the major parties at the same table. This helps stakeholders gain a deeper appreciation for the competing agendas between constituents.

Although the authority may not control all of the parking in a downtown area, that does not mean they cannot affect the entire downtown. In Toledo, Ohio, the Downtown Toledo Parking Authority (DTPA) so dramatically transformed the operations in its three facilities that all the other private parking operations were forced to follow suit. Now virtually all downtown parking facilities have attendants in new uniforms, customer service training for front-line staff, parking structure interiors are painted white, new customer friendly parking technologies and programs are being installed/instituted – all following the DTPA's lead.

### **The “Contract” or Business District Model**

In a surprising number of communities across the United States, downtown business improvement districts or downtown associations are taking operational responsibility for parking. Similar to the Parking Authority Model, the Contract or Business District Model is governed by a well defined operating agreement that sets specific expectations and limits on the use of parking assets. These contracts or agreements must typically be reauthorized every 3 – 5 years based on whether the defined contract goals were met. If reauthorized, it is not uncommon for new goals and program objectives to be set for the next contract period.

In Boise, Idaho the off-street parking program is professionally managed by the Capital City Development Corporation – the city's urban renewal agency. Through the aggressive use of tax increment financing combined with a strategy of leading other desired development with parking infrastructure investment, downtown Boise has become a national model of downtown resurgence.

Another example of this model can be found in Tempe, Arizona. The City of Tempe does not own any significant parking facilities, only a few small surface parking lots. In Tempe, the need for a coordinated parking system solution to provide a more user friendly experience for visitors drove

the downtown organization – the Downtown Tempe Community, Inc. (DTC) – to create what amounts to a parking management overlay program. Working with the owners of the off-street parking assets, they created a parking system management plan. Through creative signage, a common parking validation program, and extensive marketing, they branded the parking system to such an extent that it appears that Tempe has a well managed and comprehensive parking program, although they do not own all of the individual assets. DTC acts, in essence, as a private parking management firm. They manage all parking staff and programs themselves, and return all profits to the facility owners (keeping a modest management fee). The DTC also manages the city’s on-street parking resources and reinvests on-street parking revenues back into the downtown.

**The Parking District Model**

The Parking District Model is slightly different than the previously defined model. The characteristics of a parking district include:

- They typically have a defined area with set boundaries.
- They may have a special assessment that applies to all properties within the district.
  - This revenue generally goes toward defined district improvements, but could be restricted to parking or transportation related projects.
- They are generally run by an Executive Director or President (although some are run by city department heads).
- All revenues are collected and managed by the district for reinvestment in the district.
  - In some cases, if revenues exceed operational or capital program needs, the additional funds are returned to the city’s general fund.
  - In other cases, the city assesses the district a fee based on a percentage of net revenues in-lieu of not assessing property taxes on the parking facilities. This money goes to the city’s general fund.
- Revenue sources typically include:
  - Special assessment revenue (if applicable).
  - Off-street parking revenue.
    - Could include miscellaneous revenue sources such as: advertising (in parking structures), vending machines or retail space rental (mixed-use parking facilities).
    - Could also include special event parking revenue.
  - On-street parking revenue.
  - Parking enforcement revenue.

Parking Districts have made some significant contributions to the communities they serve. For example, in Boulder, Colorado, the Downtown and University Hill Management District/Parking Services can boast the following list of accomplishments (all paid for with parking district revenues):

- Funding of the Eco-Pass Program - \$700,000 for 2006.

- This program gives all downtown employees a free bus pass and contributes to a 62% modal split among downtown employees (reducing parking demand).
- Repayment of a \$3.4 million Mall Improvement Bond - \$500,000/yr.
  - This is a good example of the parking program contributing to community economic development.
- Payment of Parking Structure Debt Service Obligations.
  - Parking district revenues fund the development costs of downtown public parking structures as well as all parking operating and maintenance costs.
  - One of the more impressive parts of this program has been the leadership in defining appropriate design guidelines for parking structures.
    - Only mixed-used structures are permitted.
    - They must incorporate street level retail and be architecturally consistent with the downtown fabric.
    - Some have been multi-modal in nature – integrating transit functions with parking.

### **Parking Operations Alternatives**

Once a management structure has been determined, operating strategies can be set. There are four primary methodologies for operating parking programs. These are:

1. **Self-Operation** – The managing entity or owner operates the parking program itself.
2. **Out-Sourced – Management Contract** – The facility owner contracts a private parking management firm to handle day-to-day operations and maintenance through a management contract. Through the management contract the private parking management firm is either paid a fixed management fee and/or a percentage of gross revenues, and is reimbursed by the owner for all costs incurred in the operation.
3. **Out-Sourced – Concession Agreement** - The facility owner contracts a private parking management firm to assume full responsibility for all aspects of the operation, including all expenses, and pays the owner a guaranteed minimum income and/or a percentage of gross revenues.
4. **Professional Service Model** – In this model a smaller, more professional operations group is developed in conjunction with the outsourcing of day-to-day operations.

A more detailed description of each option is provided in the following sub-sections.

#### **Self-Operation**

Self-operation of the parking system requires that the owning entity provide all the necessary employees (e.g., full or part-time staff and/or temporary employees), equipment, supplies, etc. With this method of operation, the owning entity receives all gross parking revenues and pays for all operating expenses. Self-operation requires internal administrative and managerial staff at a higher level than the management contract or concession style agreements.

Self-operation allows the owning entity to have complete control over the parking facilities and the level of service provided to its patrons. This requires a well-trained and experienced staff to effectively manage a large parking operation with significant daily cash revenues. Parking has become a highly specialized field and also requires good general and facility management skills. Without proper training and professional development, self-operation can result in a lower than desired level of service and revenue controls. This, in conjunction with the requirements for a high level of customer service and the specialized nature of parking, makes the idea of using a professional parking management firm a logical and attractive alternative for initial operations.

### **Management Agreement Operations**

This form of operation can give the owning entity complete control over staffing levels, validation policies, parking rates, and customer service policies. With a management agreement, the parking operator provides the necessary labor and services for the operation of the parking facilities in accordance with an agreed upon annual operating expense budget. The parking operator will then receive a monthly payment, either a lump sum amount or a percentage of the gross or net revenue. This monthly payment represents the fee to manage the facility.

The parking operator should provide the owning entity with a detailed monthly report package including: operating statistics, revenue summaries, expenses summaries, budget variance reports, etc. The management agreement still requires some additional personnel time for the owning entity's staff, since it is necessary to audit the gross parking revenues, as well as the monthly operating expenses. The preferred arrangement is that all reporting guidelines and accounting practices are determined up-front so that each party understands their responsibilities.

The owning entity's stakeholders and staff should have significant input into establishing the "level of service" for the parking system by deciding on the quantity of cashiers/customer service ambassadors, acceptable traffic queuing upon exit, lost ticket/insufficient funds policies, parking related services offered (lost vehicle assistance, dead battery assistance, vehicle lock-out assistance), etc.

### **Concession Agreement Operations**

With a concession agreement, the concessionaire will provide all necessary labor and services for the complete operation of parking facilities in return for a percentage of the gross parking revenues. The actual percentage varies from operation to operation based on the size, complexity, revenue potential, and perceived risk to the operator. There may be a guaranteed minimum annual payment to the owning entity.

In general, concession agreements work best in situations where the owning entity wishes to divest itself from the day-to-day parking operational concerns in order to better focus on its core business. With this type of agreement, a minimal amount of time is required by the owning entity's staff in the day-to-day operations of the parking program. The owning entity also gives up some level of control as it relates to defining day-to-day operations, as the concessionaire is responsible for all expenses and most liabilities. Typically, the owning entity receives a deposit

from monthly parking revenues within two weeks after the end of the each calendar month. Periodic conversations with the parking operator are necessary to discuss operational issues that affect the quality of service to owning entity's patrons.

The concession agreement is the simplest type of agreement for administrative purposes, in that only the gross parking revenue need be audited. All operational expenses are the responsibility of the concessionaire, thereby resulting in minimal control of this function by owning entity staff. Also, as with the management agreement, the parking operator serves as a buffer to the owning entity's management with respect to parking complaints and potential wrongdoing by those employed within the parking system.

### **Professional Services Model**

In this model, a smaller more professional level parking services group is developed in conjunction with the outsourcing of day-to-day operations. While there are many potential variations under this category, the most successful variation involves a group that is primarily administrative in nature. The group is responsible for program elements such as: creating the vision and mission of the program, community outreach and program development (including assessment of new technologies, etc.), parking system planning, interface with economic development programs, interface with transportation system functions (including alternative transportation programs), contract administration, parking facility long-term maintenance program development, system financial administration/audit functions, and special projects management.

Parking operations is outsourced to a qualified parking management firm. Their responsibilities would typically include: off-street parking facility operations (cashiering services, pay-on-foot operations, etc.), daily facilities maintenance, security, etc. Some communities have extended these contract services to include the operation of on-street parking and parking enforcement programs including citation collections and management.

Another feature often used in conjunction with the Professional Services Model is the development of "on-call services agreements" for various types of consulting and professional services such as: engineering facility condition appraisals, technology assessments, revenue control system assessment and audits, etc.

### **Parking Technology Alternatives**

Once parking management and operations alternatives have been decided, the city will need to determine what technologies will be implemented to ensure parking is efficient, effective, and accountable. Applicable parking technologies will depend on the user groups served, and where the parking spaces are located (e.g., on-street vs. off-street). The following technologies are used across the county by municipal parking systems, and can be successful depending on the specific operating requirements of the environment. Typical methods of operation are described below, along with significant pros and cons relevant to potential Central Hercules needs:

### **Off-Street Parking Facilities**

Most off-street parking technologies provide options for collecting and auditing revenues, tracking facility utilization data, and operating control equipment. The following technologies are used in larger off-street parking lots and parking structures:

#### *1. Traditional Exit Cashiering*

For cashiered exit lanes, a fee computer would be employed to compute parking fees and track transactions. A parking fee computer is a standard point of sale terminal that includes a ticket validator and printer. When a patron enters the parking facility, they would take a ticket from a ticket dispenser. The central computer system would then record the ticket number of the ticket issued for processing at exit (usually using a bar-code), or the data would be stored on the ticket's magnetic stripe. When the patron was ready to exit, they would first present their ticket to the cashier. The cashier would insert or swipe the ticket through a reader/verifier, at which point the system would compute the parking fee. The cashier would then collect the fee from the patron, and the exit gate would open after the fee is collected.

Advantages to traditional exit cashiering include:

- Familiar to most parkers.
- Human response to problems and equipment malfunctions.
- Person to answer questions and provide directions.
- Can provide a higher level of customer service.
- Typically lower initial equipment costs.
- Flexibility in dealing with special parking needs or other situations that may arise.
- Customers would be able to park as long as they like, without having to make another payment to a parking meter or similar device.
- Less parking enforcement would be required.

Disadvantages could include:

- Increased labor costs.
- Increased supervision required.
- Increased management and administrative costs.

#### *2. Central Cashiering*

The same type of equipment used for exit cashiering could be configured in a central cashier format. In this situation, instead of paying a cashier at exit, customers would pay at a central cashier point before walking to their vehicles. For this to work, parkers must keep their parking tickets with them so they will have them to pay at exit. This setup works similarly to a pay-on-foot machine setup, described later. At exit, the customer would insert their paid ticket into an exit verifier machine that would confirm the fee has been properly paid. If the fee has not been paid,

the customer would either be asked to pay at the central cashier or could be asked to insert a credit card for payment.

Central cashiering advantages include:

- Human response to problems and equipment malfunctions.
- Person to answer questions and provide directions.
- Can provide a higher level of customer service compared to automated equipment.
- Typically lower initial equipment costs than pay-on-foot machines.
- Flexibility in dealing with special parking needs or other situations that may arise.
- Customers would be able to park as long as they like, without having to make another payment to a parking meter or similar device.
- Less parking enforcement would be required.

Disadvantages to central cashiering could include:

- Increased labor costs.
- Increased supervision required.
- Increased management and administrative costs.
- No attendant presence on lanes (increased response time to lane equipment malfunctions)
- Requires customers to take tickets with them after they park.
- Additional signage is required to remind customers to take their tickets with them when after they park.

### 3. *Pay-on-Foot Machines*

Pay-on-foot machines can provide the quickest parker exit times, as payment is taken away from the exit lanes. This equipment allows patrons to pay for parking before they get to their vehicles and enter an exit lane. Patrons would take a parking ticket from a ticket dispenser as they enter the facility. Then, they would take the ticket with them, instead of leaving it in their vehicle. When they are ready to leave, they must first insert their parking ticket into an automated pay machine. The machine(s) would be located in the facility, adjacent to pedestrian entrances (e.g. stair entry points, elevator lobbies, etc.) The machine would compute the parking fee, collect payment from the parker and then return the ticket to the parker. The parker will then have a set amount of time to exit the parking facility before additional parking fees are assessed. At exit, the parker simply inserts their parking ticket into an exit verifier and they leave the facility. The exit verifier could also be configured to accept credit cards if the patron fails to pay at the pay-on-foot machine.

Advantages to pay-on-foot machines include:

- Reduced labor costs.
- Flexible payment options.
- 24-hour automated cashiering capability.

- Flexible parking fee programming.
- Faster vehicle exit times.
- As fee collection would be controlled by the system, cashier mistakes/theft less likely.
- Customers would be able to park as long as they like, without having to make another payment at a meter or similar device.

Disadvantages of pay-on-foot could include:

- Can be more difficult for customers to use. The implementation of pay-on-foot would require a significant customer education effort.
- Equipment is more expensive.
- Customers may forget to take their parking tickets with them, or lose their tickets.
- May require the creation of escape lanes at the exit of each facility, to provide a means for customers to clear exit lanes if they failed to pay their fee at the pay-on-foot station.
- If a machine fails, patrons could be severely inconvenienced.
- Lack of a direct human response to questions or concerns. This disadvantage could be reduced through the use of roaming “parking ambassadors”; however, labor expense savings would be reduced.
- Additional signage is required to remind customers to take their tickets with them when after they park.

#### 4. *Pay-in-Lane Machines*

Pay-in-lane machines can allow for the collection of parking fees without a cashier being present. The machine is placed in an exit lane, and would collect the parking fee from the parker directly. An exiting parker would insert their parking ticket into the machine, and the machine would compute the parking fee and collect the payment. While this equipment reduces the need for cashiers (saving payroll expenses), it increases parker exit times as each transaction takes longer to process.

Advantages to pay-in-lane machines include:

- Reduced labor costs.
- Flexible payment options.
- 24-hour automated exit lane coverage.
- Flexible parking fee programming.
- As fee collection would be controlled by the system, cashier mistakes/theft is less likely.
- Customers would be able to park as long as they like, without having to make another payment at a meter or similar device.
- As payment is made at exit, there is no worry of customers forgetting to pay their fee at a central point before exiting.

Pay-in-lane disadvantages could include:

- Can substantially increased exit times. This can be a significant concern during periods of high exiting traffic.
- More difficult for customers to use. The implementation of pay-in-lane would require a significant customer education effort.
- Equipment is more expensive.
- If a machine fails, customers could be stuck in exit lanes.
- Similar to the pay-on-foot option, there is a lack of direct human responses to questions or concerns. This disadvantage could be reduced through the use of roaming “parking ambassadors”; however, labor expense savings would be reduced.

#### 5. *Credit Card In and Out*

Credit card in – credit card out equipment allows parkers to use a credit card to enter a parking facility, and then use the same card at exit to pay for their parking fees. For example, at the facility entrance a parker would insert their credit card into a reader. The reader would record the credit card number for vehicle duration tracking. This system would not require the parker to pull a ticket from a ticket dispenser. Then, when the parker is ready to leave, they would insert the same credit card into a reader at exit. The credit card number would be retrieved from the system to determine how long the vehicle was parked, and the appropriate fee would be charged to the credit card. The system could also be configured to accept credit cards at exit only, using a parking ticket pulled by the customer at entry. This equipment is most popular in airport environments; however, they could provide a solution for municipal operations as well.

The credit card payment could be batched for nightly processing, or it could be processed while the vehicle is in the exit lane. Batched processing provides a quicker exit, although a small percentage of cards may be declined later. Batch processing can also lead to greater fees charged by the bank, as more risk is involved with processing credit cards after the sale has been completed.

Credit card in – credit card out advantages include:

- Reduced labor costs.
- 24-hour automated cashiering capability.
- Flexible parking fee programming.
- Faster vehicle exit times.
- As fee collection would be controlled by the system, cashier mistakes/theft is less likely.
- Using the option of accepting credit cards at exit could help augment traditional exit cashiering.
- Customers would be able to park as long as they like, without having to make another payment at a meter or similar device.

Disadvantages could include:

- A full card in and card out system would require parkers to use the same card at entry and exit. This can cause some confusion if the customer uses multiple credit/debit cards.
- The equipment can be more expensive in some cases.
- If a machine fails, patrons could be severely inconvenienced and stuck in an exit lane.
- If card processing is batched, some cards will be declined after customers have gone.
- This system cannot completely replace cash payment.
- Would require an escape lane and alternative payment strategy for patrons unable to use the equipment.
- Similar to the previous two options, there is a lack of direct human responses to questions or concerns. This disadvantage could be reduced through the use of roaming “parking ambassadors”; however, labor expense savings would be reduced.

#### 6. *Access Card Technology*

Access cards are used by monthly parking customers to gain access to the parking facility. There are several access card technologies typically utilized by municipalities. Typical access card technologies would include bar-code, magnetic stripe, proximity card, and automatic vehicle identification (AVI) tags.

The first two alternatives (bar-code and magnetic stripe) function in a similar fashion relative to the parking customer. The customer pulls into an entry/exit lane and swipes their access card through a card reader. The reader then reads the bar-code or magnetic stripe and determines if the card is valid. Both card technologies can provide both general card access and parking debit card capabilities. A significant advantage to these technologies is that they can provide an extra level of flexibility in providing low cost parking management options. For example, each system could allow for preprinted paper parking passes for special events, valet parking, special parking passes, etc. Some disadvantages to these technologies are that they require a card swipe at the reader, bar-code cards can be duplicated, the action of swiping a card can wear readers and dirty reading surfaces, and they can take longer to process at entry/exit points.

Another technology is based on proximity access cards. This technology requires parking patrons to present their parking access cards to a card reader, but not swipe them through the reader. Once a card is presented to a reader, the system will determine the validity of the card. Like the first two technologies, proximity cards can provide standard parking access and parking debit cards.

The final access card technology is AVI, and uses radio frequency identification tags. As the monthly parker approaches the entry/exit lane, the AVI reader sends a signal that detects the tag (typically placed on the lower driver-side portion of the vehicle windshield), with the tag responding with the necessary identifying information. The system then determines the validity of the tag and performs the necessary functions. The main advantages of AVI technology are increased entry/exit throughput and better customer service (e.g. customers don't have to roll

down their windows and present a card, faster entry/exit, etc.) However, the installation of an AVI system can be more costly than the other access card technologies, and the cost of access tags can be higher.

### **On-Street Parking Spaces**

The following technologies are used to collect fees for on-street parking spaces, but can also be used in smaller off-street parking lots:

#### *1. Traditional Parking Meters*

Parking meters are very common, and most customers will find them easy to use. Electronic meters are now available that almost never jam and can alert parking enforcement when overtime parking has occurred. These parking meters are relatively inexpensive and easy to maintain. Also, they can now provide additional customer conveniences such as payment using smartcards and prepaid cash keys. However, they are prone to vandalism and can detract from the aesthetics of the downtown. Also, as they rely on the honor of customers paying them, the installation of parking meters will require sufficient parking enforcement to encourage people to pay to park.

Traditional parking meter advantages include:

- Ease of use.
- Simple setup and management.
- Can be less expensive to purchase and install than multi-space meters, depending on the number of spaces covered.
- Software is available to improve the auditing of funds and help provide additional utilization data.
- Can accept coins, smart cards, and “meter keys”.

Disadvantages include:

- Limited to the types of payment accepted.
- Requires coin collection and counting time.
- Less esthetically appealing than other options.
- Requires sufficient parking enforcement.
- Mentally limits customer stays, as they have to either leave or continue feeding a parking meter.

#### *2. In-Vehicle Parking Meters*

An in-vehicle parking meter is a small electronic device that parking customers can purchase or rent from the municipality to use in designated on-street parking spaces. The customer pre-pays for parking, and the time-value is loaded into the in-vehicle meter. When the user parks in a designated area, they turn on the meter and typically hang it from the vehicles rearview mirror. The appropriate amount of time is deducted by the parking meter until the customer returns to

their vehicle and turns the meter off. Parking enforcement officers can see the meter as they patrol the area and determine if the vehicle is parking appropriately.

In-vehicle parking meter advantages include:

- Relatively easy to use, although some time is spent monitoring use and purchasing more time.
- Relatively simple to setup and management.
- Reduces coin counting and revenue auditing.
- Software is available to improve the auditing of funds and help provide additional utilization data.
- No need for the user to carry change.
- Reduces the impact of stay limits, as the unit will deduct time until all time has been exhausted (although parking time limits could also limit stays).

Disadvantages include:

- Used primarily by frequent downtown visitors or employees, not periodic visitors.
- Units can be lost or stolen, and can be costly to replace.
- Requires sufficient parking enforcement.

### 3. *Pay-by-Space or Pay-and-Display*

Pay-and-display and pay-by-space machines can be used in situations where the visitor parking area consists of on-street spaces or a set number of parking spaces in a lot. These machines are placed on block faces (typically mid-block), and customers pay their fees to the machine after parking their vehicles. For example, after a customer has parked his/her vehicle, they walk up to a pay machine. They pay for the amount of parking they think they will need by inserting the payment into the machine. Payment could be accepted using cash, debit, credit, or some other prepaid card.

The difference between the two machine types is simple. Pay-and-display machines require parkers to take a receipt from the machine after making payment and put it on the dashboard of their vehicle to prove they paid. Pay-by-space machines require parkers to note which space number they parked in before reaching the pay machine. They then enter the space number into the machine and pay their fee. Parkers using a pay by space machine are not required to display a receipt in their vehicle.

Additional parking meter technologies could include cell phone payment options and warning notices before overtime parking occurs.

Pay-and-display and pay-by-space machine advantages include:

- Simple setup and management (although enforcement is needed).

- They can accept multiple forms of payment.
- Flexible in setting parking rates.
- Can be less expensive than other parking equipment options (depending on the number of spaces covered).
- They can be more aesthetically pleasing than traditional parking meters.
- They can incorporate other features, such as pay-by-cell phone.

Disadvantages include:

- Requires sufficient parking enforcement.
- Mentally limits customer stays, as they have to either leave or pay at the machine again.
- Slightly more difficult to use than traditional parking meters.
- Pay-and-display machines require patrons to go back to their vehicles to display receipts.
- Pay-by-space machine could result in patrons having to go back to their vehicles if they did not note their space number.
- Additional signage would be required to help patrons park properly.
- The use of these technologies may prove cumbersome for large visitor areas.
- If a machine malfunctions, the revenue for an entire block face can be lost.
- There is a lack of direct human responses to questions or concerns. This disadvantage could be reduced through the use of roaming “parking ambassadors”; however, labor expense savings would be reduced.

#### 4. *Parking by Cell Phone*

This technology would work similarly to a pay-by-space machine, but instead of paying the fee at a nearby machine, the customer would call a phone number using their cell phone. After calling the number, the customer would enter the space number on the space/meter, and the parking fee would be billed to an associated credit card. A sensor could even be located in the space that would determine when the vehicle has left, and the proper fee would be charged. This technology can eliminate some of the negatives of meter and multi-space meter technology, such as returning to meters to pay for more time, machine malfunctions, and displaying receipts. Also, the costs to implement a pay-by-cell system can be very low. However, payment options could be significantly reduced, depending on the set-up of the system.

#### **Other Possible Parking Technologies**

In addition to the typical parking access and revenue control systems previously noted, additional systems are available to help make parking more efficient and customer friendly:

- **Mobile License Plate Recognition Systems** – These systems provide a means to track vehicle occupancy and duration statistics and/or monitor parking space time limits. These systems use vehicle mounted cameras and sophisticated software to capture images of vehicle license plates and recognize the individual plate characters. The information can be used to

count vehicles, determine parking durations, and notify parking enforcement officers when vehicles exceed time limits.

- **Parking Enforcement Systems** – Electronic enforcement systems are available that eliminate the need to issue paper tickets. Most systems involve the use of handheld computers, with the enforcement officer entering citation related information and printing individual parking tickets using a small printer. The ticket information is entered into an enforcement database (in either real-time or when the officer returns to the office), eliminating the need for manual citation entry and tracking. A system is now available that uses specially coded paper for citations and a special pen (with a camera) to write paper tickets, and send the citation information in real-time to a central computer using cellular phone technology.
- **Wireless Parking Space Sensor Systems** – Small sensors can be embedded in parking spaces (or mounted to parking surfaces) that can detect when a vehicle is parked in the space. These sensors can then record how long the vehicle is parked, and can also alert parking enforcement if the vehicle has not paid for parking. These systems can reduce parking enforcement demands (helping officers go directly to vehicles in violation), as well as monitor parking space utilization and duration.
- **Variable Message Signs** – Variable message signs can be used to direct patrons to available parking supplies, or even available supplies within individual parking facilities. These signs would be controlled using a comprehensive parking management system, and could display parking space counts, lot closed/open text, and/or other directional information.

### Twenty Characteristics of Effective Parking Systems

Whichever management and operations alternatives are selected, there are significant functions that must be addressed to ensure the parking system is efficient and effective. Based on evaluating numerous municipal parking systems of various sizes and complexities, we have identified a set of twenty characteristics, that when combined into an integrated, programmatic approach provides the foundation for a sound and well managed parking system. These characteristics include:

- |   |   |
|---|---|
| 1. Clear Vision, Mission and Guiding Principles | 11. Creative, Flexible and Accountable Parking Management |
| 2. Parking Philosophy                           | 12. Operational Efficiency                                |
| 3. Strong Planning                              | 13. Comprehensive Facilities Maintenance Programs         |
| 4. Community Involvement                        | 14. Effective Use of Technology                           |
| 5. Organization                                 | 15. Parking System Marketing and Promotion                |
| 6. Staff Development                            | 16. Positive Customer Service Programs                    |
| 7. Safety, Security, and Risk Management        | 17. Special Events Parking Programs                       |
| 8. Effective Communications                     | 18. Effective Enforcement                                 |
| 9. Consolidated Parking Programs                | 19. Parking and Transportation Demand Management          |
| 10. Strong Financial Planning                   | 20. Awareness of Competitive Environment                  |

The ultimate goal is to create a parking system that provides professional management, understands the role it plays in contributing to the larger objectives of its environment, and is responsive to the community to which it serves. The following sub-sections define each of the twenty characteristics.

**Characteristic # 1: Clear Vision, Mission and Guiding Principles**

Truly effective parking systems have a clear vision and well-defined mission. The development or periodic reassessment of the parking system vision/mission statements should be undertaken as an open and inclusive process involving a wide range of community stakeholders. In a municipal setting, it is recommended that the following groups be included in the public input process:

- city officials (including elected officials, planning staff, transit agencies, etc.);
- downtown development agencies;
- downtown business associations;
- downtown property owners;
- downtown merchants;
- downtown residents;
- downtown employees.

The development of a parking system's vision and mission statements should have one overriding goal; to see that the parking system's purpose and direction are tied to, and supportive, of the larger community's strategic development plan. There are a variety of ways that parking can support the health, vitality, and development of the environment it serves. Having a professionally managed parking program that presents clean, safe, attractive, and well-maintained facilities is perhaps the most visible dimension. Other attributes include providing an adequate supply of overall parking and ensuring appropriate allocation and management of those resources. The parking system exists to support the businesses that depend on convenient, well-managed parking for their success. Successfully meeting these goals promotes business success, retention, and attraction.

A best practice related to having a clearly defined vision/mission is the development of a set of parking system "Guiding Principles". In general, the guiding principles should be short and concise, a maximum of one or two typed pages. Some of the elements typically incorporated in such a document include:

Mission Statement/Statement of Purpose – Describes how the parking operation contributes to the success or mission of the larger organization.

Operations/Funding Strategies – Describes how operations are to be funded and also whether the operation is intended to be a self-supporting entity, a profit/revenue center, or a support service sustained through other primary revenue sources.

Interdepartmental Relationships – Defines relationships between various departments, especially other support departments such as maintenance, security, communications, facilities management, etc.

Responsibility for Parking Operations – Is parking to be managed in-house? Will it be outsourced? Will a combination of management/operations strategies be used? Are all parking operations to be managed through a centralized operation or can other departments get involved in limited parking operations?

Rate Setting Guidelines – Defining guidelines for reviewing and setting parking rates can be important because it provides a formalized process for review of parking rates. This is generally done in conjunction with the annual budget planning cycle.

Options for Allocating/Procuring Parking – Defining how parking is allocated goes to the heart of the department’s mission because of the prioritization process that is required. How parking is sold, and to whom, has a direct impact on customer service, operational efficiency, funding, staffing, etc.

Parking Planning – Many parking programs have an active and comprehensive planning function. The parking program should be included in all long-range strategic and transportation planning. Other efforts such as on-going facility utilization review, periodic supply/demand studies, site feasibility studies, the development of parking structure design guidelines, etc. should also be considered. Also, the system should have procedures/guidelines in place for the coordination and replacement of parking spaces lost due to new development.

Definition and Communication of Parking Rules and Regulations – Having clearly defined parking rules and regulations is essential to any parking operation. How these rules and regulations are communicated can vary widely depending on the customer groups served and the environment. Having an effective communications plan can also keep your customers informed of changes brought on by construction and maintenance projects, implementation of new technologies, rate changes, new policies, etc. Additionally, a good communications plan can act as a marketing and public relations tool for the parking department.

Enforcing and Adjudicating Parking Rules and Regulations – Defining who is responsible for day-to-day parking enforcement and adjudication is an important operational decision. This decision can influence how revenues generated by parking enforcement are used. Other key parking enforcement issues that should be defined include: Who defines parking enforcement policies? Who administers the adjudication process? Who sets the rates for parking fines? Who has authorization for towing, booting, or other enforcement practices?

Defining Parking Facility Maintenance Responsibilities – Parking facility maintenance is something that is too often cut from capital budgets. The result is often a larger price tag at a later date and can involve significant operational disruptions. Identification of parking facility maintenance as an important parking management principle should not be overlooked. Maintenance reserves should

be set aside out of parking revenues and be considered a basic expense along with funding of parking operations and debt service.

Budgeting and Planning Cycles – Because of the high costs associated with the development of new parking and the lead-time required for design and construction of new facilities, parking systems can benefit greatly by the development of extended budgeting and planning cycles. Extended budgeting cycles better illustrate the needs for retaining revenues to cover periodic and long term maintenance, debt service, equipment replacement etc.

### **CHARACTERISTIC # 2: Parking Philosophy**

A succinct statement (or series of statements) reflecting your philosophical approach to parking can be a valuable tool for communicating to your patrons, stakeholders and staff.

#### *Parking Isn't About Cars . . . It's About People*

This statement reflects an understanding that parking is not simply the act of temporarily warehousing cars. It is, in fact, more about addressing people's needs during the transition from the vehicular to the pedestrian experience. Under this philosophy, issues such as facility cleanliness, safety, lighting, wayfinding and customer service move to the forefront. Functional design elements that directly impact user comfort such as stall widths, turn radii, walking distances, etc. also take on special importance.

#### *People Don't Come Downtown to Park*

This concept reinforces the reality that parking, while an important support function and critical infrastructure element, is not the reason people visit downtown. For the downtown to be successful there must be good restaurants, interesting retail, and other special attractions. Even the best-run parking system with state-of-the-art facilities will not "attract" people to come downtown. However, poorly-run operations, lack of convenient parking or dysfunctional facilities can definitely be excuses for people to avoid downtown. The fundamental principles behind this philosophy are three-fold: (1) The role of parking is to support other downtown activities; (2) Eliminate parking as a "reason not to come downtown;" (3) Recognize what parking is not, e.g., an attraction.

#### *Parking Is the First and Last Experience*

A customer's first and last impressions of any venue really begin and end with their parking experience. A customer might enjoy a great meal followed by a fabulous evening of entertainment, but their whole experience will be tainted if they had to search for extended periods for parking or if they encountered difficulties trying to leave a facility.

#### *Parking Should Be Friendly, Not Free*

There is no such thing as "free parking". One of the ongoing challenges that downtowns face when it comes to parking is cost. Because of land values, densities, and walking distance issues, parking structures are here to stay in the downtown environment and with them is the need to charge for parking in one form or another. The perception that parking is "free" at suburban malls doesn't help (even though it's not true). Even if you promote "free parking" as a marketing

concept, someone is paying for that parking. This philosophy recognizes this reality and focuses instead on providing a friendly, well-managed parking experience.

*Parking Is a Component of the Larger Transportation System*

By considering parking in the larger context of a broad range of transit and transportation alternatives, demand management and shared parking strategies can be developed that help reduce the amount of parking required. This is especially true in urban areas where good bus transit, light-rail, taxi service, and increasingly popular urban residential developments can be found.

Developing programs that integrate complementary parking and transportation strategies is a hallmark of this philosophy.

By adopting one or more of these (or other) overall parking philosophies, the parking system can be more effective in addressing one of its key roles: community education. This educational process begins with staff and extends to the community in one-on-one meetings with customers and stakeholders. The goal of educational outreach is to help the community better understand the contributions of the parking program with respect to supporting larger community goals and objectives.

***CHARACTERISTIC # 3: Strong Planning***

One of the most important characteristics of well-managed and forward thinking parking programs is strong planning. The first step in developing a well-managed parking planning function is to have a solid understanding of, and excellent documentation for, existing parking resources. Documenting the basics is fundamental. Some basic planning elements that should be in place are:

- Parking inventory is complete and up-to-date (including both public and private parking).
- Parking inventories are sub-divided by type and use of space.
- Parking utilization and duration by type of space or user group is known, and trends tracked.
- Changes in supply are documented.
- Overall changes in utilization are tracked and understood.
- Periodic parking supply/demand studies are completed.
- Quality parking maps are available and up-to-date.

One of the key planning tools that parking departments often overlook is land-use data. Successful parking systems develop relationships with city or regional planning agencies so that valuable land-use data, information on proposed developments, downtown planning maps, etc., can be obtained and used in crafting parking planning strategies.

Having a strong planning function is a key to developing a superior parking program. The degree to which parking is involved in larger community strategic and master planning processes is a good indication of the strength of the parking planning function.

**CHARACTERISTIC # 4: Community Involvement**

Successful parking programs understand that their larger purpose is to support the larger environment they serve. In a municipal environment, this means the businesses and residents that create and sustain downtown vitality. Parking systems should develop close and cooperative working relationships with other community groups such as economic development agencies, downtown business associations, planning and facilities departments, residents, etc.

This does not mean that the parking system exists simply as a tool to be manipulated by these organizations. The parking operation has its own goals and objectives. For example, if the parking system is operating under a mandate to be self-supporting, it may not be able to subsidize a downtown validation program, even though the local downtown business associations might desire this. However, acting as partners, mutually beneficial solutions can be devised to meet the overall objectives of both organizations whereby costs are shared or alternative funding sources are obtained.

Successful parking operations actively solicit public input in a variety of ways including: promotion of public forums, use of parking task force groups, and the development of a group of “parking advisors” – people who have demonstrated an interest in parking issues. The key to success is listening to the concerns of downtown stakeholders, act promptly to resolve the issues, and then follow up to make sure their needs have been satisfactorily met.

**CHARACTERISTIC # 5: Organization**

When a parking program is started, it is usually a small function that is located within an area of an existing organization. As the parking program matures and is responsible for a larger number of capital assets and increasing revenue streams, a reassessment of how the program is organized and managed is a logical step in its evolution.

Some basic questions to ask related to the issue of organizational structure include:

- Will all parking operations to be managed through a centralized operation or can other departments or agencies get involved in limited parking operations?
- Will parking be managed in-house?
- Should certain functions be out-sourced?
- Are there advantages to a hybrid approach?
- Does the anticipated organization/staffing plan provide the right mix of skills, talents and abilities?
- Is staffing as efficient as possible? Are there tools in place to evaluate staffing adequacy? Efficiency? Program effectiveness?

**CHARACTERISTIC # 6: Staff Development**

Unlike other related disciplines, such as property management, public administration, etc., there are no formal educational programs related to parking. However, this is beginning to change. The International Parking Institute and the National Parking Association have developed parking

professional certification programs that provide opportunities for people to broaden their parking knowledge.

One characteristic of successful parking programs is a recognition of the unique knowledge, complexity, and broad skill sets required to be successful in parking. These programs invest in the parking-specific training, networking, and educational opportunities to develop their staff into “parking professionals.”

**CHARACTERISTIC # 7: Safety, Security and Risk Management**

The importance of providing a safe environment in parking facilities cannot be overestimated. The actual and perceived security within parking facilities impacts the success not only of the parking operation, but also the businesses supported by those facilities.

The security planning process should begin during the design of new facilities. The concept of “Crime Prevention Through Environmental Design” (CPTED) provides useful tenets for architects, facility planners, designers, and law enforcement/security and parking professionals. Utilizing CPTED concepts helps create a climate of safety in a parking facility by designing a physical environment that positively influences human behavior. These concepts can also be used to retrofit environments to address specific security issues as they develop, or to address emerging concerns as conditions change.

CPTED design alternatives could include (but are not limited to):

- Higher floor-to-floor heights to improve openness.
- Glass backed elevators and glass enclosed or open elevator lobbies.
- Glass enclosed stairwells, perhaps open to the interior.
- “Blue Light” (or similar) security phones.
- Security screening on the ground level.
- Limit access at the parking facility perimeter to locations where patrons pass by the office or cashier booths.
- Eliminate potential hiding places (e.g., under stairs, within storage areas).
- Maintain low level landscaping.
- Insure that all your facilities are well lighted and meet or exceed the recommended minimums for parking facility lighting as established by the Illuminating Engineering Society of North America (IESNA).
- Integrate security offices, parking offices, retail shops, etc. into parking facilities to provide increased activity levels.
- Provide security patrols.

**CHARACTERISTIC # 8: Effective Communications**

It is not uncommon to find the parking system at odds with various stakeholder groups. Although there may be as many reasons for this “disconnect” as there are personalities involved, there appear to be at least two primary underlying reasons:

- Other groups are focused on their own specific goals such as downtown revitalization, business recruitment or retention, leasing office or retail space, etc. They see parking costs as one element that places them at a competitive disadvantage with suburban competition. At the same time parking system managers are being pushed to increase revenues and decrease operating expenses. They lack a shared vision, and therefore are pulling in opposite directions.
- The second major issue typically has to do with service level expectations. For example, downtown associations tend to have higher expectations in the areas of customer service, facility cleanliness, security, etc. It is not that the parking system administrators do not value these same qualities, but there is a cost associated with providing these programs and limited budgets to support them.

The first step towards resolving this problem is improved communications and the definition of a shared vision/mission. A clear understanding of the issues and potential solutions is the kick-off point for developing the needed mutually beneficial approach. Developing a set of “Guiding Principles” for the parking system (discussed earlier) is a good starting point for crafting a successful collaborative relationship. Successful programs also have well-defined relationships between various departments, key stakeholders, and parking customers.

#### **CHARACTERISTIC # 9: Consolidated Parking Programs**

Taking a systems approach to parking is an important dimension to creating a comprehensive and effective parking program. Having control of all or most aspects of parking can contribute to a more effective operation, because of the interactive nature of parking as a system. For example, controlling off-street, but not on-street parking, can lead to problems if the rates for the various types of parking are not kept in the proper balance or relationship. Another example might be not having control over parking enforcement practices. This can hamper efforts to promote or improve turnover to support downtown retail or support special downtown events.

Ideally, the parking system should control all aspects of a parking system, including off-street, on-street and parking enforcement operations. In many cases parking systems also operate components of a complementary transportation program as well such as the downtown parking shuttle. All parking related revenues should first go to fund parking programs, including preventative maintenance, maintenance reserves, parking system marketing, planning and new parking resource development.

#### **CHARACTERISTIC # 10: Strong Financial Planning**

The parking system’s financial expectations should be well-defined and clearly understood. For example, is the parking system expected to be a self-supporting entity, a profit/revenue center or a support service sustained by other primary revenue sources?

With the exception of airports, some university systems and some very large municipalities, most parking programs are not self supporting. Many factors, including market rates for parking, parking mix (percentage of transient vs. monthly parkers), availability of on-street parking revenues, availability of parking enforcement revenues, politics, economic development policies, etc. have an impact on

whether a parking program can be self-supporting. For systems that cannot achieve true financial self sufficiency, a common goal is for the parking system to cover all operational costs, excluding debt service costs. Debt service costs are typically subsidized by the general fund, tax increment financing revenues, in-lieu parking fees, or other sources.

**CHARACTERISTIC # 11: Creative, Flexible and Accountable Parking Management**

A one-size-fits-all approach to parking management rarely works. A variety of parking management strategies are required to address different needs, such as:

- visitor parking;
- employee parking;
- on-street parking;
- reserved parking;
- residential parking;
- special use permits;
- event parking;
- accessible parking (ADA);
- shared parking;
- parking allocation plans;
- loading/unloading zone parking.

It is important to understand all the components of the parking access and revenue control system and utilize them to their full potential. Many parking systems purchase expensive systems and use less than 10% of the system’s capabilities. Using standard parking access and revenue control system reports, and creating customized reports, can provide enhanced management information. This information can improve the understanding of operational dynamics, and ultimately, increase system utilization and efficiency. An emphasis on training is a key to unlocking the system’s capabilities.

Another characteristic of effective parking programs is that they have well-defined audit trails and processes to provide acceptable levels of control and accountability. Because of the large revenues generated, revenue control and accountability are key parking management issues.

Other parking management elements include:

- Well defined parking policies and procedures
- Development and maintenance of parking facility operations manuals
- Well defined and implemented facility maintenance programs
- Parking system marketing/branding programs
- Effective parking and wayfinding and signage programs

**CHARACTERISTIC # 12: Operational Efficiency**

Parking system efficiency has several dimensions, depending on how the system is managed. The first area to be scrutinized is the management responsibilities of the system (e.g., what programs is the department or organization responsible for implementing). Once this has been defined, organizational structure and staffing plans will be determined.

Other operational areas can also yield significant savings in terms of reducing costs. For example, by placing the exterior bay and roof top lights on separate circuits with photo-cells, 25 – 35% of the facility's lights can be turned off during the day – saving significant amounts of electricity on an annual basis. Another area worthy of investigation is staffing costs in the late evening hours when the income generated is less than the staffing costs incurred. In these situations, the use of pay-on-foot applications or automated cashier units can be effective alternatives.

**CHARACTERISTIC # 13: Comprehensive Facilities Maintenance Program**

Few things make a greater impression on first time visitors than the cleanliness and maintenance of your parking facilities. Beyond first impressions, however, few areas provide a greater potential return on investment than a comprehensive parking system maintenance program.

A few best practices related to parking facility appearance and maintenance are noted below.

- Completion of basic “housekeeping” duties (e.g., trash removal, sweeping).
- Adequate maintenance of parking facility systems, signage, landscaping, etc.
- Paint interior surfaces white to enhance the perception of cleanliness and safety and to improve lighting levels.
- Develop a comprehensive preventative maintenance program for all essential systems.
- Clean, well maintained elevators.
- Organize and track parking facility warranties in a binder. Schedule warranty inspections six months prior to warranty expiration. Document inspections with digital photos (ideally with time/date stamps) and written reports.
- Regularly schedule facility condition appraisals by an experienced parking consultant and develop a prioritized program of facility maintenance repairs.
- Set aside adequate maintenance reserve funds based on a prioritized facility maintenance action plan developed as part of a regular condition appraisal assessment.

**CHARACTERISTIC # 14: Effective Use of Technology**

Successful parking operations almost always have a comprehensive and integrated parking access and revenue control system that offers the following benefits:

- Consistent operations and features for customers.
- Simplified/consistent training for staff and auditors.

- Similar equipment and models that provide for simplified maintenance and less costly parts stocking.
- Consolidated system-wide reporting and management information.

Staying informed of new technologies can help provide the parking system with the best tools available to achieve its specific goals. Customer service levels can also be enhanced through the use of AVI systems, web-based permit renewal programs, pay-on-foot payment stations, etc.

**CHARACTERISTIC # 15: Parking System Marketing, Branding and Promotion**

In general, this is one of the most neglected and under-valued aspects of parking system management. The following is a list of potential action items that can help launch a new parking program:

- Develop a consistent parking system brand.
  - The brand should promote the image you want people to have of the system.
  - A “brand” is more than a logo or tag-line.
  - The brand should reinforce the positive aspects of the system.
- Use consistent external signage to tie the system together.
- Have a parking tie-in to most promotional materials.
- Develop new employee/tenant parking brochures or information packets.
- Develop parking “E-Bulletins” to be distributed to monthly/contract parkers.
- Develop strategies for regular contact with customers.
- Look for practical opportunities to connect the parking program to community initiatives, for example: develop parking deck floor identification (themed graphics, music, etc.) as an extension of a local public arts program.
- Use your monthly parking billing system to distribute system info and promotional materials.

**CHARACTERISTIC # 16: Positive Customer Service Programs**

All communities and organizations benefit when the parking system functions at a high level and contributes to positive customer experiences. Because parking is often the first and last impression customers have of a downtown, providing a high level of customer service is important not only to the parking program, but also to the business interests it serves.

Recommended customer service strategies can include (but not be limited to):

- Focus on employee training and good hiring practices.
- Institute performance measurements and utilize the results for company and employee incentives.
- Create and implement a parking services program (battery jumps, lock-outs, flat-tires, safety escorts, audio book check-out, etc.)
- Improve website and links (e.g., provide opportunities to pay fines, obtain information such as downloadable maps, rate schedules, and special event info).

- Measure program effectiveness (customer surveys, etc.)
- Implement a secret shopper program to evaluate customer service.

**CHARACTERISTIC # 17: Special Events Parking**

Coordinating parking for special events, almost more than any other parking management activity, requires a coordinated and cooperative effort with the larger community. Some of the keys to success in this area include the development of a well-defined special events policy and detailed systems for the coordination of special events.

An important dimension is the development of strong relationships with key stakeholder groups that are active in the downtown. Providing practical incentives for other groups to communicate with the parking system in their planning processes is critical. Also, be consistent in providing those that work with the parking system a high level of service. Conversely, provide disincentives for those that ignore the special events parking policy or chose to not include parking in their planning.

**CHARACTERISTIC # 18: Effective Enforcement**

Having an effective parking management program requires that the rules and regulations be enforced. The key to an effective parking enforcement program is clearly defined and communicated regulations, attitude, consistency, and fairness. Successful parking operations have adopted the philosophy of being customer focused, not revenue or violator focused.

The following are enforcement program elements that help assure that the program avoids some common challenges.

- Define who sets enforcement policies, and have an approved process for occasional review of assessment of enforcement policies.
- Make sure your parking enforcement policies are developed to achieve the specific issues that need to be addressed.
- Evaluate the legal issues and specific laws or ordinances that support your enforcement policies.
- Define who is responsible for day-to-day parking enforcement. Have a central number that all customers and affected parties know to call for info regarding parking enforcement.
- Assure that parking rules, regulations, and consequences are clearly posted.
- Assure that staff understands, and can articulate, the intent behind enforcement policies and regulations.
- Clearly define and communicate how enforcement revenues are to be collected and used.
- Have a clearly stated process for adjudicating parking citations.
- Make paying for parking citations as easy as possible.
- Provide incentives for early citation payment and disincentives for late or non-payment.

***CHARACTERISTIC # 19: Parking and Transportation Demand Management***

Because the cost of providing parking can be very high, strategies to manage parking demand are an important consideration in parking system planning. Incorporating parking and transportation demand management also ties into environmental goals and objectives such as the desire to reduce pollution, decrease traffic congestion, reduce reliance on single occupant vehicles, etc.

When evaluating options to reduce parking demand, one effective strategy is to integrate transportation/parking demand management strategies into your parking program philosophy. A few best practices in this area include:

- Use parking rates as a tool to promote desired behaviors.
- Take advantage of employer-paid and employee-paid pre-tax benefit options.
- Promote carpool/vanpool programs.
- Provide preferential parking for carpools/vanpools.
- Subsidize transit passes for downtown employees.
- Provide a guaranteed ride home program for those who participate in transportation alternative programs.
- Integrate bicycle racks and storage lockers in parking facilities.
- Show transit stops on parking maps.
- Provide remote parking options and promote park and ride alternatives.

***CHARACTERISTIC # 20: Awareness of the Competitive Environment***

Another characteristic of effective parking programs is that they are aware of their competitive environment. One of the most fundamental practices that all parking programs should engage in is a formalized process for evaluating parking market rates. It is recommended that parking market rate surveys be conducted annually to help maintain an awareness of the competitive climate. This information can also be valuable during annual budget planning.

Another dimension to staying competitive is being aware of what parking systems in other municipalities are doing. What has been tried? What has worked? What hasn't? Participating in national, regional, and state parking associations, as well as sending key staff to parking conferences, earlier are good ways of developing a network of contacts to help you stay up-to-date on the latest technologies and management practices.

The importance of parking as one of the most visible and often controversial elements of a downtown's infrastructure is often underestimated. Parking, when well managed, can be a key component in attracting and supporting new development, and is essential to sustaining a wide range of healthy and vibrant environments. Future parking system strategies and guiding principles must address each of the primary needs addressed in this report (parking supply, management, and operations issues) in order to provide an effective parking program. The final version of this report will include a set of guiding principles for Central Hercules, as well as a description of parking district functions and an implementation plan, after the stakeholder meeting(s) in March 2007.

Thank you very much for providing *Carl Walker* with this opportunity to be of service.

Sincerely,

A handwritten signature in black ink on a light pink rectangular background. The signature appears to be 'M. Inman'.

Matthew Q. Inman  
Senior Planner