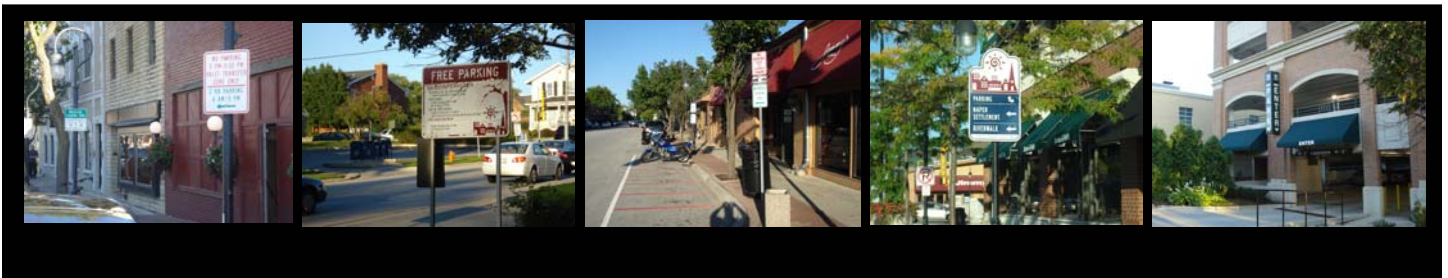


BEST PRACTICES AND RECOMMENDATIONS FOR NAPERVILLE



OVERVIEW OF ELEMENTS OF EXISTING PARKING MANAGEMENT, BEST PRACTICES AND RECOMMENDATIONS FOR NAPERVILLE

The following is an overview of different aspects of parking management and operations in Naperville followed by a review of Best Practices with respect to parking management and operations for the City of Naperville. Based on these Best Practices that come from municipalities in the Chicago region and ones established by Rich and Associates, we have developed recommendations specifically tailored for the City of Naperville.

A summary of the recommendations has been included in the Appendix.

A. PARKING OPERATION AND OVERSIGHT

1. Overview

Several staff in the TED Business Group and within other City departments have a role in parking, coordinated through TED. There are other stakeholders involved in the parking such as Downtown Naperville Alliance, Downtown Advisory Committee, and the Transportation Advisory Board.

Though not formally assigned to parking, the Transportation & Traffic Services Operations Manager in TED is involved in many parking issues and coordinates activities that involve parking.

2. Best Practice

Municipal parking systems should be under the direction of one person to create a single point of contact to coordinate planning efforts and to allow for a streamlining of the decision making process. The single point of contact may be a City staff person or one person in a downtown group such as a downtown merchant group.

In addition, successful parking systems utilize some type of parking advisory committee made up of City staff, representatives of downtown groups and stakeholders. The function of this parking advisory committee is to deal with all aspects of parking and then report back to City Council with recommendations.

3. Recommendations for Naperville

The TED Business Group is a good example of bringing together different departments for overall management and administration. We recommend that this structure remain since it effectively brings together the different departments that are concerned with parking.

Additionally, the existing Transportation Advisory Committee fulfills the other Best Practice element addressed in this section of involving stakeholders in the review process.

We recommend that one person within TED be assigned to oversee or manage parking. This person would be the point person responsible for parking. This will provided one staff person to deal with parking issues and provide a single point of contact with respect to parking for City departments, elected officials and the public.

The benefit to the City to formalize one person within the City responsible for parking issues will be that the public can have one person to contact for information on parking issues, concerns and requests. This person's name can be added to the website and the Downtown Naperville Alliance and the Downtown Advisory Board can publicize this person as the contact.

With respect to other communities in the area, the City of Evanston has a parking manager responsible for parking and enforcement. The situation in Evanston is a little different than Naperville though as they have paid parking both on and off-street, though they have an active downtown and a similar structure with respect to an advisory board.

From an implementation and cost standpoint, there will need to be an assessment to determine whether the role of parking manager can be integrated with the duties and responsibilities of an existing staff person within TED. The parking manager role should be established in the second quarter of 2009.

B. PARKING OWNERSHIP

1. Overview

The City of Naperville controls 2,694 spaces or 73 percent of the total parking in the SSA (our study area). The City controlled spaces include 436 on-street spaces and 2,258 off-street spaces in surface lots and three parking decks. The City's total spaces include the new parking spaces in the expanded Van Buren Parking Deck. There are a total of 3,682 public and private spaces in the study area.

2. Best Practice

Public parking has the greatest advantage in allowing more efficient use of land resources, greater use of transportation alternatives and a greater flexibility in addressing economic development and urban design goals.

Based on Rich and Associates experience and best practices, we have found that to successfully manage municipal parking it is desirable for the municipality to have control of at least 50 percent of the parking supply. This allows the municipality to effectively manage the parking in terms of allocation, reacting to changing demand, market pricing, and allows the parking to be enforced with greater efficiency. Naperville meets this criterion.

3. Recommendations for Naperville

The City should maintain the practice of working with businesses and property owners in the SSA and continue to provide parking within the study area. The City in partnership with the private sector set up Special Service Areas. The first one was established in 1976 and was established to remove on-street meters. Subsequent SSA's were approved to fund capital and maintenance costs in the downtown and marketing efforts for the downtown through the Downtown Naperville Alliance. The SSA's have allowed the City to develop, operate and maintain the parking system without charging for parking.

The City should maintain the current codes for parking requirements in the CBD. The code states that for specific properties in the downtown property owners are not required to provide private parking. In these cases the property owner pays into the parking system for the development and operation of parking. For other properties, they are required to provide 50 percent of the required parking on-site.

The City should continue to update the Continuous Improvement Model and review the need for additional parking in the downtown.

There are no additional costs associated with this recommendation.

C. PARKING ENFORCEMENT

1. Overview

Before discussing enforcement it is important to define several terms that are used.

- a. *Handheld Ticket Writers* These are handheld devices that are used by parking enforcement officers to write parking tickets. There is a printer associated with the unit that allows the officer to write a ticket and place it on the vehicle. Additionally, the handheld ticket writers will store the information so that it can be downloaded into a computer and processed. In some models, the information can be wirelessly transmitted to a central office. The unit can also store plate numbers of repeat offenders as well as other information depending on the software.
- b. *Tire Chalking* In order to enforce time limited spaces such as two hour on-street parking, the enforcement officer will place a chalk mark on a particular part of the wheel of a vehicle. If on the next circuit the chalk mark is on a vehicle in the same spot, then the officer knows that the vehicle has stayed beyond the allowed time and can ticket the vehicle for overtime parking.

There are three types of chalking; manual chalking as described above, electronic chalking where the officer enters the license plate into a handheld ticket writer, and finally by using license plate recognition system. With the license plate recognition system, the camera is mounted to a vehicle which records the license plate and vehicle in each parking space. On the next and subsequent routes the license plate recognition system will alert the officer if the same vehicle is in the same parking space or if the vehicle has moved from one space to another (two-hour shuffle). The license plate recognition system is not used often due to costs and the reliability of the technology.

While manual chalking is more prevalent, electronic chalking using the handheld technology has become more accepted. When an enforcement officer uses the handheld to electronically chalk, the information on block faces and the number of spaces on that block face are pre-programmed in. The enforcement officer is prompted with the block face and space number which does not need to be physically marked on the space. The plate number is entered into the handheld on the first route. On subsequent routes the same procedure is used. Depending on the ordinance, the vehicle needs to move to an adjacent block face or outside a zone, if a vehicle is either found in the same space, adjacent space or within same zone they can be ticketed. All of the information is stored on the handheld if there is an issue with the owner afterwards.

- c. Courtesy Ticket This ticket is generally issued to a first time offender that has no fine associated with it. The ticket can be used as a reminder to the parker that they exceeded the posted time limit and to direct them to where longer term parking is available for their next visit. It can also be used as a marketing tool thanking the person for coming downtown. The use of courtesy tickets generally requires the use of handheld ticket writers which can store license plates of past offenders.

Parking enforcement in the City of Naperville is staffed and supervised by the Police Department. There are four PEO's (Parking Enforcement Officers) and two CSO's (Customer Service Officers) that can have responsibility for enforcement. Two of the PEO's are assigned to the commuter train stations and surrounding areas with one assigned to the CBD and the College District.

While the CSO's are able to write parking tickets, they are also assigned to other duties. The PEO's only use handheld ticket writers to issue parking tickets. The chalking of tires is done manually by the PEOs. They do not issue courtesy tickets, multiple tickets or tickets for moving a vehicle a few spaces every two hours (two hour shuffle).

In 2008 there were 3,098 parking tickets issued in the downtown. These did not include the tickets written at the commuter train stations. There were 143 chronic violators identified. Chronic violators are vehicles with 10 or more tickets issued in a 12 month period. Of the 143 chronic violators, the Police Department estimated that 20 percent were from vehicles with violations in the downtown area.

The typical enforcement officer based on our studies issues between 20 and 50 tickets per day. This range is dependent on a number of variables such as whether the officer is able to devote full time to enforcement, their routes, whether there are meters/paid parking or time restricted parking and if they are on foot or in a vehicle. Based on 2008 numbers, the PEOs are issuing approximately 60 tickets per week or about 12 tickets per officer per day in the downtown.

Finally, the posted hours in general for the two hour on-street spaces is from 6:00 A.M. to 6:00 P.M. with the exception of Washington Street as previously discussed. The parking lots do not have posted times for the three hour parking limit, only that there is no parking from 2:00 A.M. to 5:00 A.M. The parking decks have different posted times for different parking.

There are no signs that specifically state the hours that parking is enforced by the City. In general, when a sign reads two hour parking from 6:00 A.M. to 6:00 P.M., the assumption is that after 6:00 P.M. there is not a time restriction on the parking and that enforcement is occurring only during the posted times.

2. Best Practice

The key goal for parking enforcement is to promote compliance with parking regulations that are designed to maximize the efficiency of public parking utilization. Emerging best practices with enforcement include the dual role of enforcement combined with downtown ambassadors. Some guidelines on efficient and effective parking enforcement include:

- a. Routing of parking enforcement officers (PEO's) so that a complete circuit is followed every two hours in the downtown area for on-street spaces and three hours for the off-street locations.
- b. PEO's should use handheld parking ticket writers that track license plate numbers. Every parking stall, whether occupied or not, is then entered into the handheld. In general the parking spaces do not have to be physically numbered as described above.
- c. The handhelds should be programmed to issue tickets for overtime parking and vehicle shuffling (moving vehicle to a different on-street stall every two hours throughout the day to avoid a ticket).
- d. Generally, a PEO can cover or enforce between 600 and 800 spaces in a two hour route if they are not doing electronic chalking and about 400 to 500 spaces if they are doing electronic chalking.
- e. Parking enforcement officers should be dedicated to parking duties, only being re-assigned during emergencies or special circumstances that may arise.
- f. Street signs should indicate the hours of enforcement.
- g. Handheld units should store hot list information for stolen vehicles, warrants, shuffling and unpaid tickets.
- h. Use of a courtesy ticket in conjunction with the handheld units allows for a municipality to give one time offenders a gentle reminder that they have overextended the posted time limits and then give parking areas where longer parking times exist. Additionally, the courtesy ticket can act as a marketing piece to thank the parker for coming downtown etc.

3. Recommendations for Naperville

Based upon observations and survey responses from stakeholders, it did not appear that parking enforcement is perceived as harsh or unreasonable. In fact, based on Best

Practices, there is not enough coverage by enforcement officers of the CBD area if all the on and off-street parking is considered. There are a total of 2,733 public spaces which consist of 435 on-street spaces and 2,298 off-street spaces.

It would be difficult for one PEO to cover all of the two hour and 15/30 minute spaces on-street which should be a priority to ensure that people are not overstaying the parking limits and that employees are in fact getting permits and parking in the correct locations off-street. Therefore, we recommend that there be two PEO's assigned to the downtown area.

Based on the above, the following are the recommendations;

- a. There should be two PEOs assigned to the downtown. If it is not possible to have two PEO's at all times, then two PEO's should be patrolling the downtown during the peak times. Rich and Associates did not complete occupancy studies in the downtown, but based on studies in other communities the peak time begins around 11:00 A.M. and ends around 3:00 P.M.

This may require the reassigning current staff or the addition of one staff person. If this is difficult to do on a regular basis, then selective enforcement should be undertaken. Under this program, one or two days during the week there would be two PEO's in the downtown during peak times. These days should be rotated so that downtown employees do not know when the extra enforcement will be done.

From a cost standpoint, there should be an additional part-time enforcement person added to staff. This cost will need to be determined by the City. If this is not possible, then shift hours for enforcement in the commuter train station areas or the College area to allow the recommended coverage during peak time. This recommendation should be implemented in the third quarter of 2009 by the Police Department.

- b. Due to the large number of restaurants and bars in the downtown, we recommend that the enforcement hours for on-street and two hour parking be extended to at least 7:00 P.M. to make sure that bar and restaurant staff are not parking in two hour on-street spaces. This would reduce the number of restaurant staff that are parking on-street at 4:00 P.M. and being able to park the entire night there. This will require changing the on-street two hour signs to read 6:00 A.M. to 7:00 P.M.

Since enforcement staffing will be an issue, we also recommend that the evenings are selectively enforced and that selective enforcement occur one or two late afternoons and evenings every week. Like the daytime, these days should be rotated so that downtown employees do not know when the extra enforcement will be done.

For costs and implementation, there will be a change to the signage for the two hour spaces on-street with an estimated cost of approximately \$4,750. As with the daytime enforcement recommendation, there is additional late afternoon/early evening enforcement recommended. If this done five days a week, then a part-time staff person may be required. This cost will need to be determined by the City. It may be possible to reschedule existing staff to do selective enforcement which should not involve additional costs. This recommendation should be implemented in the second quarter of 2009 by the Police Department.

- c. In all cases, the enforcement hours are not posted. While many communities do not post their hours of enforcement, at a minimum the enforcement times should be included in the parking material that is in print and on-line. There are no added costs associated with changing the hours of enforcement in printed and on-line material.
- d. With respect to the number of tickets written every day by the PEOs, we believe that this number will increase with the added enforcement in the downtown. The City should undertake a turnover study of the two hour on-street spaces and the three hour off-street spaces at least once each year to determine how the time limited spaces are operating.

The goal of the study will be to track the license plates of vehicles and establish how long vehicles are staying beyond the posted time limits. If each PEO is able to write an additional 20 tickets per day, the result could be an increase of \$300,000 in fine revenue. This will be possible with the implementation of the previous recommendations and with the changes to use of the handhelds.

- e. We recommend that the existing handhelds either be upgraded or replaced to complete the following tasks;
 - 1) Handhelds should allow the PEO to electronically chalk the tires to take away the ambiguity of the regular chalk and to track vehicles who may do the two hour shuffle on-street.
 - 2) Consider enacting an ordinance that a vehicle must physically be moved to a different block face if it is moved every two hours (anti shuffling ordinance). The handhelds will track this and notify the PEO when a vehicle has shuffled. Signs that read "Two Hour Parking Only" are generally sufficient.



Picture 19: Sample parking ticket

- 3) Issue courtesy tickets to violators on their first offense within in set period of time (see marketing section for more information). For example, the City may want to set the period at six months. The handheld would store tickets written for six months and if someone has a second violation within this six month period a ticket would be issued.

Total replacement of the handhelds with the appropriate software and ancillary equipment such as docking stations and chargers is estimated to cost between \$75,000 and \$90,000 for eight handhelds, docking station and software to do chalking, ticket tracking and courtesy tickets as described above. Implementation should occur in the third quarter of 2009.

- f. We recommend keeping the fine rates at current levels. Rich and Associates' benchmarking found Naperville to have the highest fine rate. The current fine rate is \$15.00 if paid within 15 days and then it's \$30.00.

D. PARKING DURATIONS

1. Overview

There are seven different parking categories in the study area. For on-street there is;

- 30 minute parking,
- two hour parking,
- motorcycle spaces,
- 15/30 minute multi-use spaces,
- four hour parking,
- ADA and
- unmarked spaces (located Benton Avenue and Main Street).

Also for the on-street spaces, there are four-two hour spaces that are reserved for taxis from 10:00 P.M. to 3:00 A.M. and nine valet transfer zones spaces which are two hour spaces that are reserved for valet from 5:00 P.M. to 2:00 A.M.

For the off-street lots and parking decks there the following space types;

- 30 minute spaces,
- three hour spaces,
- 9:00 A.M. to 2:00 A.M. public spaces,

- public spaces that are not time restricted after 9:00 A.M.,
- permit spaces and
- reserved spaces.

All parking, with the exception of the employee (and resident) permit parking is free. Residents and employees (through property owners or employers) must apply for and receive a hang tag permit to park in specific locations in the parking decks. The fee is nominal (\$5.00 per year). Finally, there is no parking in the lots or decks from 2:00 A.M. to 5:00 A.M. (9:00 A.M. in level 3 of the Central Parking Deck) except for resident permits which are allowed to park during these times.

There have been issues with the multi-use spaces and loading and unloading of goods for businesses in the downtown. There have been instances where the delivery vehicle is not small enough to fit into the multi-use spaces, or there are not several spaces available for their vehicle to fit. In these instances the delivery vehicle double parks. When this happens, a delivery vehicle may block vacant two-hour spaces which removes parking supply for the duration that they are parked or in some cases delivery vehicles block a parked vehicle in their space.

It should be noted that the ordinance allows for double parked delivery vehicles for up to 15 minutes during the hours of 7:00 A.M. and 10:00 A.M. and no more than 10 minutes from the hours of 10:00 A.M. to 6:00 P.M.

Finally, the City has different parking allocations for the parking decks. In the Municipal Center Parking Deck, there is visitor parking and permit parking on the upper and lower levels during the day. After 5:00 P.M., customer/visitor parking is allowed on all but the reserved spaces on the upper and lower levels. Also, valet parking is allowed in the three parking decks on specific floors.

2. Best Practice

In general, on-street parking should be reserved for customers and visitors. In areas that have little commercial activity, the on-street spaces can have longer durations of stay allowed. There is a body of information that has been prepared by Donald Shoop from UCLA that suggests that on-street parking should be metered and a parking rate charged for parking. The rationale simply put is that on-street parking is the most sought after parking and therefore the most valuable parking. Therefore there should be a charge for parking that places a premium on this type of parking.

Further, Donald Shoop suggests that revenue from this parking go to cover operating expenses and any net revenue then go back into the downtown area for such things as sidewalk cleaning, banners etc. Parking revenue is then helping to pay for the upkeep of the downtown.

Best Practices also include that the shorter stay spaces be on-street and that longer stay spaces be off-street, that loading zone spaces be located at the ends of blocks, and that handicapped parking spaces though not required on-street, be located at the ends of blocks as well when they are requested. Finally, motorcycle spaces should be provided where possible so that they do not reduce the number of on-street spaces. When this is not possible, the motorcycle spaces should be designed so that that space can be converted to regular passenger vehicles when the winter season comes.

For handicapped accessible stalls, Best Practice is to not provide these spaces on-street unless specifically requested. See Item I to follow for further explanation.

3. Recommendations for Naperville

- a. Two hour on-street parking suits the needs of the majority of customers and visitors. Individuals requiring more than two hours for parking should be directed to off-street parking areas where there is three hour or longer duration parking available. This will be reinforced through marketing and through the courtesy tickets identified above.
- b. Three hour parking is sufficient in the parking lots and should be maintained.
- c. The cost of the employee permit is reasonable, especially considering that all the other parking is free. Maintain the existing charge of \$5.00 per year.
- d. There is an overall need to “get the word out” about parking in general, but the employee permit is not well understood. This issue is addressed in the Marketing section.
- e. The City should maintain the unwritten policy of not allowing employee permits to be valid for on-street parking. There is no need to formalize the policy since it is not common practice to issue permits for on-street spaces.
- f. Continue the 15/30 minute multi-use spaces for use as pick-up and drop off stalls, very short-term parking and for loading. The 15/30 minute parking should be located as either the first or last stall(s) on the ends of the block face where needed. In general locating one 15/30 minute multi-use space at the beginning of a block face is sufficient. Since these types of spaces are not necessarily needed on every block face, it should be up to the businesses on the block face to petition for the need for these spaces at the beginning and end of their block face.

To implement this recommendation may require relocation of the 15/30 minute multi-use spaces which may cost between \$2,500 and \$5,000 depending on the block faces that would need 15/30 minute multi-use spaces or need them relocated. This recommendation should be implemented in the second quarter of 2009.

- g. While the ordinance allows double parking for delivery vehicles for as long as 15 minutes, this appears to be regularly violated. As a result, the PEO's need to monitor streets where this occurs (like Chicago Avenue) and ticket those vehicles that are violating the ordinance. There will be no added costs. PEOs need to monitor the double parking of delivery vehicles better. This recommendation should be implemented in the third quarter of 2009.
- h. Consider the possibility of creating truck delivery loading areas that would not allow any other vehicle type except delivery trucks in the space for certain hours in the morning (7:00 AM to 11:00 A.M.). The City would have to enact an ordinance that would not allow other vehicles in these spaces during the specified times. It would also require businesses to schedule their deliveries to match the time set. Finally, there would then be a need to restrict double parking for delivery vehicles.

The recommendation to establish loading zones for larger delivery vehicles needs to be discussed with the business community and if this recommendation is accepted then locations need to be found and then an ordinance passed to establish the zones. There would be a cost for the signage but this should be minimal. This recommendation should be implemented in the third quarter of 2009.

- i. Handicapped parking stalls are not required under ADA for on-street parking. Therefore, there is no correct or incorrect number of on-street handicapped accessible spaces. The parking inventory found five on-street handicapped stalls in the study area. Like the 15/30 minute multi-use spaces, the handicapped accessible spaces when installed should be located at the ends of blocks. If there are already 15/30 minute multi-use spaces at the end(s) of a block face, the handicapped accessible space should be located as the first or last space on the block face to ensure that they are accessible to the sidewalk corners.

Providing handicapped accessible spaces on-street should be based first on requests by businesses but also on the already available off-street spaces that contain handicapped accessible stalls, especially as it may relate to employees needing handicapped parking and when there is no viable off-street location. In two existing instances handicapped accessible spaces on-street are not located at either end of the block face. If this policy is adopted, these spaces need to be relocated. Any additional handicapped accessible spaces provided on-street will follow the policy.

- j. Valet spaces are covered in more detail in the next section. The signage for valet spaces and the restrictions is consistent with Best Practices.

- k. With the number of residents in the downtown, it would be beneficial to encourage overnight parking (resident parking) in the Van Buren Parking Deck on levels 3 and 4, Central Parking Deck on level 3, Court Place/Concert lane Lot and in the Paw Paw Lot. The permit holder would agree that their vehicle must be moved out of the parking deck or lot by 9:00 A.M. on weekdays and they would not be allowed to store a vehicle (unless prior arrangements had been made for a vacation for example). Resident permit spaces should be identified in the parking decks and signed for example "Residents Permit Parking from 5:00 P.M. until 9:00 A.M".
- l. In addition to the resident's own parking, there is the need for overnight guest parking. The City should develop a system where a resident can purchase for a nominal daily charge a dashboard placard or mirror tag that would allow an overnight guest to park in a resident permit parking space. The guest would have the same restrictions as the resident with a permit. The permit will be valid for a day and will be dated by the resident. The City could place a nominal charge for these permits, such as \$1.00 each to cover the cost of administration and the cost of the permit itself.

There will be a small cost to develop the resident visitor permits and to disseminate the information that they are available. The residential visitor permits will be sold by the Finance Department. This recommendation should be implemented in the third quarter of 2009.

E. SIGNAGE AND WAY FINDING

1. Overview

There are several sign types for parking used by the City in the downtown as both way finding for vehicles and pedestrians and for internal signs in parking decks and lots. Much of the existing signage in Naperville conforms to Best Practices as discussed below. As discussed in the introduction there are issues with several of the signs with respect to there being too much information on the signs and the font or letter size.

There was concern expressed by some stakeholders about the inability to determine if a parking deck was full before entering it. Similarly, several stakeholders expressed a desire to be able to direct a motorist to a parking deck or lot using signage on the main streets that could alert the motorist as to which parking areas had available spaces and possibly even the number of spaces available.

2. Best Practice

As a best practice the following are four types of parking signs that increases drivers' way finding experience as they maneuver around the downtown looking for a place to park.

- **Introduction:** Introduction parking signage alerts drivers approaching the downtown of the locations of the publicly owned, off-street parking lots. This type of signage is distinctive in color and size, and it can be characterized by unique logos. The signs display the names of the off-street parking lots and the names of their streets. The signs are located on the street, and are mounted on poles of standard heights.



Picture 20: Introduction Sign

- **Directional/Location:** Directional and location parking signage is distinct in color, size and logo and directs drivers to off-street parking areas. The signs have arrows pointing to the off-street lots. The signs are mounted on poles at standard heights, on the streets.



Picture 21: Directional/locational sign

- **Identification:** Identification signage is placed at the entry of each parking lot. The name of the parking area is identified and the type of parking available at the parking area is listed on the signage. The identification signage is distinctive in color and size, and it is located on a pole at a lower height.



Picture 22: Identification sign

- **Way Finding:** Way finding signs are placed at the points of pedestrian entry/exit to parking lots and decks. The sign is a map illustrating the downtown area that points out the various shops or attractions that can be found. These types of signs are placed at locations easily found by a pedestrian and are intended to help that person orient themselves to the downtown area such that they can locate their destination and then be able to return to where they parked.



Picture 23: Wayfinding sign

The general qualities of good signage include the following aspects:

- a. Use of common logos and colors. The colors should make the sign stand out from the background of buildings and vegetation. White lettering on a dark background is effective.
- b. In general, sign lettering should be four inches in height. Smaller lettering may be difficult to see and cause traffic slow-downs as drivers read signs before entering a parking area.
- c. Use of reflective, durable material.
- d. All four sign types used in conjunction to guide motorist and pedestrian activity.
- e. All entrances to the downtown need to have introduction signage.
- f. All surface and parking deck areas need to have identification signage.
- g. All routes through the downtown need to have directional and location signage.
- h. All pedestrian routes to and from major customer/visitor parking areas need to have way finding signs.
- i. The identification signs located at parking areas need to convey parking rates, hours of operation, maximum durations, and validation availability.
- j. Vehicular way-finding should include direction arrows to key destination places such as theaters, museums, shopping districts, etc., used in conjunction with the parking direction signs to allow a driver to quickly orient themselves to their destination and best parking options. Arrows should always be oriented to indicate forward, left or right movement. Reverse arrows or arrows indicating that a destination has been passed should be avoided to reduce confusion
- k. Sign programs are usually best undertaken at a City-wide level and include all the City's signs. The comprehensive nature of a large scale sign program helps ensure that all forms of way-finding signs (vehicular and pedestrian) are taken into account.
- l. Vehicular way-finding needs to be laid out initially in a coordinated fashion to determine what the preferred entry points to the community should be. Often directed traffic flow is a more efficient option that allows the community to take advantage of planned vehicle routes and entry points. A key 'rule of thumb' is that fewer, well thought out and well placed signs are far better than too many signs scattered randomly throughout a community.

- m. For parking lots and parking decks, color coding of parking areas (customer/visitor areas by length of stay restrictions, employee parking etc) is a good visual reminder for parkers and can be used on signage.
- n. Color coding of parking floors with level number designations. Consider naming floors instead of numbering them to help parkers remember where they parked.
- o. Candy stripe columns at the end of aisles (yellow and black) to further indicate where aisles are located (*below*).



Picture 24: Signage/color coding around



Picture 25: Floor color /



Picture 26: Level indicator on column/
candy striped column

Best Practice with respect to displaying parking facility occupancy is to provide “Full” signs at the entries. Recently, there have been technological advances that allow individual parking spaces such as on-street spaces to be monitored. Parking guidance systems can now be used to inform a driver before they arrive at the parking location the occupancies of parking areas.



Picture 27: Floor occupancy sign

3. Recommendations for Naperville

Overall, the City of Naperville has done an excellent job with signage. Based on our review and Best Practices, the following are our recommendations:

- a. Reduce the amount of information on the parking deck identification signage in front of the parking decks. The name of the parking deck should be larger and more prominent. Specific information should only be where customer/visitor parking is available and that the parking is “public”. All of the information on this sign with respect to where people may park and when should be included inside the parking deck.



Picture 28: Parking identification sign for Van Buren Parking Deck

In addition to the above, consider having colors for the different parking types. Use these colors on signage within the parking decks or lots and then use them on signage as the driver enters the parking area to alert them to the different parking types and what signs/colors to look for.

An example is shown to the right. The yellow in this sign refers to short term visitor parking, the red refers to resident/permit parking and the blue refers to all day parking.

To redo the existing signs for the Central and Van Buren Parking Decks, the costs are estimated to be approximately \$600. To provide signs on the floors that are colored coded for the type of parking, the estimated cost is approximately \$4,000. For the surface lots, changes are only needed to the main lot signage that uses the color for three hour parking. The costs for these sign changes are estimated at \$600. This recommendation should be implemented in the third quarter of 2009.



Picture 29: Example of sign at entry with color coding for different parking areas

- b. With the parking decks there needs to be more signage that tells people where there parking is available. The sign at the right shows good signage in the Central Parking Deck on the ground floor. This is not consistent in the Van Buren Parking Deck. Note that this sign could be enhanced with a color that corresponded to three hour parking as discussed above. The costs for this are included in "a." above.



Picture 30: Parking restriction sign in Central parking deck

- c. Signage needs to be placed where it is not covered by trees or other vegetation. Examples of this are shown below. The City needs to maintain signage and trim vegetation. Implement this recommendation in the second and third quarters 2009 and on-going. No costs were estimated.



Picture 31: Parking sign to Municipal Center Parking Deck

- d. Consider painting end columns at the ends of aisles at the crossovers candy stripe black and yellow to enhance driver visibility as they drive to and around the ends of the aisles. The candy stripe helps the driver discern where the end columns are and it highlights the aisles and the columns on the end which can be difficult to see.

Painting of the end columns is estimated to cost between \$6,600 and \$7,500. This recommendation should be implemented in the third quarter of 2009.

- e. For the parking decks, we recommend the installation of a PGS (parking guidance system) system that will count the inbound vehicles and outbound vehicles and develop a differential count that can be feed into system of VMS (variable message signs). The counts would be made using loop counters or other sensor types. It will be difficult to count the different type of users in the decks since there is no revenue control system, but the overall number of vehicles that are parked within the deck can be counted. This information can be transmitted to a VMS that would tell drivers the number of parking spaces available in any of the decks.

At a minimum, the variable message signs should be located at the entrance to the parking decks. The City has a CIP project for the 2009 fiscal year to install parking guidance system at the Van Buren and Central Parking Decks. Eventually the occupancies for the parking decks can be included in a messaging system on the main streets leading into the downtown to indicate the number of spaces available in each of the parking decks.

We do not recommend going to a system of space identification for the parking structure. This system counts the occupancy of every space in the deck and then provides a count of the spaces available by level and also will indicate for the driver where there is a vacant space by turning a light on above a space. This system is not appropriate in this application because there is no reason to alert a driver what floor parking may be available on for the Van Buren Deck and would have limited benefit for the Central Parking Deck. In both cases there is no need to identify a vacant space for a driver. More importantly, the costs for a system like this may run as much as \$300 to \$400 per parking space installed.

- f. For the off-street lots, it would be difficult to count the inbound and outbound vehicles that are moving in and out of the lot since there are not defined entry and exit lanes. For the lots, in-ground sensors could be placed within each parking space. If a vehicle is in the space the sensor would record the space as occupied. This technology is available, but we have not seen it applied in a winter climate in asphalt paving. This system is not recommended at this time.
- g. While the on-street spaces could also be included in this system we do not recommend it. In-ground sensors could record the occupancy or vacancy of an on-street space. The issue with the on-street system is how to alert a driver with a VMS that a space is available on a specific block. In the event that only one space is available on a block face for example, by the time a driver that has read the VMS and gets to that block face the space may be occupied. If this would occur, the result will be to frustrate the driver and be a detriment to the downtown.

Instead of giving the message to the driver that a specific block face or street may have spaces available, the VMS may tell the driver that a zone may “x” number of available spaces. Applying PGS to on-street spaces is more problematic we believe because the VMS needed to accomplish this may require more verbiage and be too confusing for drivers that are already bombarded with signage on the street. This system is not recommended at this time

F. VALET PARKING

1. Overview

The City of Naperville allows businesses to offer valet parking. The City issues permits to licensed valet companies. The valet companies must identify where they will store vehicles and location of transfer zone as well as provide evidence of insurance. The permits can be purchased for Friday and Saturday only (currently \$100 per year) and seven days a week (\$250 per year).

The transfer zone can consist of three on-street spaces and there can only be one transfer zone per block face. The proposed location is subject to approval by the City Engineer, the Transportation Advisory Board and the City Council. The on-street spaces that are to be used for transfer can be reserved from 11:00 A.M. to 2:00 A.M. per the code. The current signage states that the valet use of the on-street spaces starts at 5:00P.M.

As discussed earlier, the City actively monitors and audits the valet operations. It has been noted that some valet operators have been setting up there transfer stations prior to 5:00 P.M.

2. Best Practice

Best practice for valet include using public parking areas and private off-street lots as valet parking storage and on-street spaces for vehicle drop off and pick up. The policy should usually specify a rental charge for on-street parking spaces used for pick-up and drop-off (transfer area) by valet operators and state that the operator should only be allowed a minimal number of on-street spaces for their transfer operation. The charge for the spaces used for the transfer area should reflect that the valet is taking away the most convenient spaces for customers and visitors. In downtowns without paid parking, the charge may be minimal, but where there is paid on-street parking the charge will help to off-set the loss of revenue to the city.

Also, if the valet operator is using municipal spaces for vehicle storage, there should be a charge for those spaces. In a system where there is parking and revenue control (such as barrier gates and ticket dispensers or parking meters) this can be a per-vehicle charge and where there is no charge for parking an overall space charge can be considered.

Overall, the policy should specify valet operation standards, performance standards, the use of and design of permissible signs, on-street parking space rental charges (as discussed above) and the necessary parking area lease agreements with private parking owners or with the City to provide the valet with evening parking privileges. Furthermore, the policy and agreement should specify penalties, and/or the revocation of the valet operator's license for violation of the policy regulations.

3. Recommendations for Naperville

The current system has typical issues with valet staff closing off parking early. A potentially larger issue is when more than one business on a block face wants valet parking. The ordinance does address this by stating that the City reserves the right to have businesses share a valet transfer zone. Additionally the City has the right to determine a sole vendor to offer valet parking. The recommendations are;

- a. When multiple businesses request a valet operation, the shared valet transfer zone should be located mid-block and the City must regulate the signage for the valet since there may be more than one valet operator sharing the transfer zone. There should be one sign that states the businesses that are sponsoring the valet and then the applicable charges (especially if different for the different businesses that are sharing the zone).

There are no costs associated with this recommendation except for the possible relocation of valet transfer stations. This recommendation should be implemented as needed when multiple requests are made for valet on the same block face.

- b. If there are additional requests for valet parking, especially where existing service already exists on a block face, the City should consider selecting a sole vendor for providing valet services in the downtown. The benefits of one valet operator for the downtown are;
 - 1) The sole vendor for valet services will make management of the system easier for the City and will allow multiple businesses on a block face to have the ability utilize valet parking without removing more on-street spaces for valet transfer locations.
 - 2) The sole vendor service can allow the City to market valet services more effectively. There would be one uniform valet charge, one operator and one system.

Examples of municipalities that operate or contract valet service are; Sarasota, FL, New Haven, CT, and Chapel Hill, NC. Chapel Hill Downtown Partnership contracts out and pays for the valet service in the downtown, where New Haven and Sarasota both contract through the City.

Valet parking in Chapel Hill is \$5.00 unless validated by a local business. New Haven charges \$5.00 per hour or a maximum of \$10.00 per stay, coupons are also offered on the City website discounting the price up to \$2.00. The valet parking in Sarasota is \$3.00 per day.

This recommendation is for the City to consider going to a single vendor for valet services. At this time there is no need to proceed with this recommendation as there have been little or no issues with multiple valet providers.

- c. When a valet operation is found to be violating the ordinance with respect to the start time of valet or the number of spaces used for the transfer zone, the valet service should be cited and a fine assessed. The fine rate could be similar to a parking infraction, \$30.00 with no deduction for early payment. This system will require that PEOs are monitoring the valet a part of their enforcement route. There is no cost for this recommendation. This recommendation should be implemented in the third quarter of 2009 as recommendations for enforcement are implemented.

G. MARKETING/BRANDING OF PARKING IN NAPERVILLE

1. Overview

The City of Naperville does an above average job in their general communications with the public on parking issues. There are brochures produced by the City that locate parking areas that can be found on-line and in print form. These include top eight parking tips, downtown visitors parking guide, downtown handicapped parking guide and parking restrictions. Additionally, the City communicates on-line and in print form what is new with parking and transportation. In addition, the Naperville Chamber of Commerce and the Downtown Naperville Alliance have parking maps on their web sites.

2. Best Practice

Marketing is one of the most important aspects of a successful parking system. Parking can be a vital marketing tool for a downtown, but to do so, the parking itself must be marketed. Marketing should be used every time there is a change to the parking system and should be directed towards downtown employers, employees and customers/visitors. It is very important to help encourage downtown employees to park in the long-term parking areas to preserve the on-street parking for customers and visitors. Additionally, an individual's perception of Naperville is greatly enhanced if they know ahead of time where they can park.

Marketing materials can include direct mailings, brochures, maps, kiosks, on-line web pages or articles in magazines. Information contained in the marketing material should include location, up-coming changes, regulations, fine payment options and any other information relating to the parking system.

Where possible, the parking should be branded specific to the community. This branding should appear on all promotional material, signs etc. The branding can be a name or logo either associated directly with the city or specific to parking.

Signs are a useful way to market parking. Catchy phrases such as “park once...shop twice” can be used in both print material and signs such as banners throughout the downtown. Banners can also be used to identify parking areas according to color schemes, letting customers/visitors know where they parked.

The parking system should have a web site that shows the location of public parking, the time restrictions and information about special event parking. This could also include private parking areas that the City contract with for use as public parking at night or for special events. Most importantly, the web site should be linked to the event sites so that the public can see where they should park for an event.

3. Recommendations for Naperville

There needs to be an active marketing campaign for parking in Naperville. This should involve the City, Downtown Naperville Alliance and the Chamber of Commerce. The following are specific recommendations;

- a. The City should coordinate with the DNA and have parking articles or notices in every piece that is prepared by DNA. If it is a monthly newsletter, reminders about parking restrictions should be included as well as information regarding the employee permit system. The parking manager to coordinate implementation and coordinate with DNA, Chamber and other groups. This should be started in the second quarter of 2009.
- b. Any marketing piece used to advertize real estate and Naperville in general should describe the parking downtown, highlighting that it is free and how the employee parking permit system works. The parking manager will coordinate implementation with DNA, Chamber and other groups.
- c. On the City’s web site, it may be more helpful to have the map of parking come up when the Parking button is hit. It is not as straight forward in the current web site. Additionally, have a parking button on the main City page. Web site modification costs should be covered by internal staff therefore, no added costs. This recommendation should be implemented in the second quarter of 2009.
- d. The DNA web site should include a link to the City’s parking web site so that when an event is posted, a person can hit the parking link and see where available parking may be. There would be no costs to the City. Parking manager to assist groups with implementation. Ideally start in second quarter of 2009.
- e. Businesses, especially restaurants should be encouraged to have a link to the City’s parking page. In addition, if the City determines that there will be a sole vendor for valet parking, valet transfer locations could be included on the City’s parking site. There would be no costs to the City. Parking manager to assist businesses with implementation. Ideally start in second quarter of 2009.

H. SECURITY

1. Overview

There are 16 CCTV cameras on the parking floors and in the elevators of the Van Buren Parking Deck and CCTV cameras in the Municipal Center Parking Deck but not within the Central Parking Deck. The cameras are linked back to a DVR that records the images coming from the cameras that can be reviewed for about 30 days to assist in the event of an incident that may have been recorded. The cameras can be monitored live through an internet portal if the Police Department desires.



Picture 32: CCTV warning sign in Van Buren parking deck

From a general security standpoint the parking decks are designed to minimize hiding places and include many Best Practice design components. Lighting in the Central Parking Deck appears to be below Best Practices and recommendations from the IESNA (Illuminating Engineering Society of North America).

The surface parking lots are designed and maintained to minimize hiding places and the lighting in general appeared to be well placed and provides lighting that appears to meet City Code, IESNA recommendations and Best Practices.

2. Best Practice

Security Best Practice consists of active and passive elements. From a parking lot/deck standpoint the following are best practice;

- a. State of the art is CCTV cameras and sound activated monitoring systems. If either is provided in one facility, all facilities should be equipped with the same system. It is important that the system is monitored full time and that there is a plan of action if there is an event.
- b. The parking deck and site design should take the principles of CPTED (Crime Prevention Through Environmental Design) into account. CPTED in a parking deck and parking lots involves the following.
 - Limits hiding places in parking decks and lots: for parking lots, manage landscaping so that it cannot conceal a person, avoid decorative walls and provide additional lighting around dumpsters and enclosures.
 - Use glass elevator cabs, shafts and glass enclosed stairways in decks wherever possible.

- Provide appropriate outdoor/indoor lighting as identified below.
 - Make way finding easy so that a parker transitioning to or from their vehicle does not get lost or look lost.
- c. Lighting levels should follow the Illuminating Engineering Society of North America (IESNA) recommendations for parking lot lighting.
- Parking lot lighting should be illuminated to a minimum horizontal luminance of 0.5 foot candles maintained as measured horizontally on the pavement surface without any shadowing effect from parked cars or columns.
 - A minimum maintained vertical illuminance of 0.25 foot candles should be achieved as measured 5 feet above the parking surface at the point of lowest horizontal illuminance.
 - Maximum of minimum uniformity ratio should be 15:1.
 - An average horizontal illuminance level for an open parking lot should be 1.5 to 5 foot candles.

d. Rich and Associates Best Practice for lighting in a parking deck is:

- Light levels on parking floors have a minimum of six foot candles.
- Light levels at vertical cores and at entry and exit have a minimum of 20 foot candles.
- Lighting on the roof level must take into account lighting effects on surrounding buildings.



Picture 33: Example of a well lit stair/ elevator tower (Opera House garage in Detroit)

e. Provide emergency phones within parking decks and lots that are identified (generally by a colored light) that are a direct link to the Police Department.

f. Provide a “people presence” with parking decks and lots. Generally this is accomplished by police patrols on foot or in a police vehicle making runs through the parking areas on a random basis.



Picture 34: Emergency phone identified with blue light

3. Recommendations for Naperville

The City of Naperville already meets many of our best practice recommendations.

- CPTED elements are incorporated such as lighting (for the most part), glass backed elevators and stair towers and limiting hiding places,
- City provides CCTV within two of the parking decks, though the system is not monitored real-time.
- Pedestrian way finding is good (though as described in Section L, certain improvements should be made).
- Emergency phones are provided in the parking decks.
- Police patrols are made within the parking decks and lots.

The following are recommendations for security in the City's parking areas.

- a. There is an issue with having a CCTV system in two of parking decks and not the Central Parking Deck. Additionally, there is an implied expectation that when CCTV cameras provided that they are being monitored at all times and not only recorded. It is a problem in the case of an incident to explain in court that the event was only taped, especially if the event was an assault. Also, there is an issue when two of the parking decks have CCTV and the other doesn't. Therefore the Central Parking Deck should have CCTV cameras installed.

Installation of CCTV system in the Central Parking Deck is estimated at approximately \$100,000. Implementation should occur after a review by the Police Department and the City's risk manager. This should occur immediately.

- b. If the CCTV cameras are not monitored on a full time basis, then that fact needs to be disclosed in signage. This item should be reviewed with the Police Department, Legal Department and the City's risk manager.

Full time monitoring may cost upwards of \$120,000 annually. The need to monitor the cameras should be reviewed by the Police Department and the City's risk manager before implementation. This recommendation needs to be investigated immediately.

- c. The lighting in the surface lots appears to meet City code (which is based on IESNA as referenced above). The City should verify that this is the case. No costs or implementation schedule associated with this recommendation. City should review light levels in each lot to determine if they meet IESNA standards and Rich and

Associates best practices. The costs for the review and any upgrades to lighted need to be determined when the work is planned. Proceed with the review in the second quarter of 2009.

- d. Lighting levels in the Central Parking Deck appear to be below Best Practice and should be reviewed by the City. If the lighting levels are below Best Practice, the lighting should be upgraded. No immediate costs and the review should occur in the second quarter of 2009.

I. EVENTS MANAGEMENT

1. Overview

There is a Special Events Committee within the City. The committee and was set up so that City departments and staff were coordinated with respect to all aspects of a special event in the downtown. The TED Business Group is represented on committee.

The committee coordinates the closing of streets, temporary closure of parking spaces and the temporary signage required for specific events. With respect to parking, this signage directs parkers to available parking and to temporary parking that may be provided.

2. Best Practice

Best Practice for event parking typically involves a parking manager that coordinates special parking needs with downtown groups and other stakeholders. A plan is usually developed that identifies where remote parking may be located and the appropriate means and methods to alert visitors where this parking is located, how they can get from the parking to their destination and any restrictions that may be in place.

Where possible, event parking is located outside of the downtown and visitors are either shuttled into the downtown or they walk. It is not typical for a city to provide parking supply for an events or events that occur only once per year. The use of shopping center parking, church parking or other properties that do not have heavy use at the same time allows for shared use.

3. Recommendations for Naperville

The City's current procedures for handling event parking is working well with the exception of having a parking manager, which is a recommendation