

# Revenue Enhancement

## Through Site Planning and Design



There are a variety of ways that property owners can enhance parking-related revenues. Some are obvious, other strategies may be less obvious. This article will briefly discuss strategies that can increase an owner's revenues.

### Obvious methods of increasing revenue include:

- Increasing parking fees;
- Increasing parking enforcement;
- Changing the mix of parking;
- Providing value added features; and
- Improving visibility.

### Less obvious methods of increasing revenue include:

- Increasing non-parking revenues;
- Reducing costs; and
- Planning for the 'right' size parking supply.

## > Parking Fees

There are a variety of ways to increase fees, depending on the type of parking and the setting. Increasing the rates for hourly/daily/monthly parking will increase revenues as long as rates do not increase to the point of reducing demand. In some instances (e.g., in a university or hospital setting with staff agreements) this can be difficult and changes may require negotiations with staff associations and a gradual phase-in period.

Another option is to increase the rate for reserved spaces compared to scramble parking (at a minimum, by the percentage of pass over-sells possible with scramble spaces). Alternatively, converting reserved spaces to scramble parking to allow for over selling passes can increase revenue, and may reduce the required supply.

Oftentimes, casual rates are set at a fixed rate per hour. If the collection method is flexible (e.g., pay and display, pay on foot, etc.) variable rates can be programmed to increase the rate for short-term usage (e.g., \$2.00 for the first half-hour, \$1.00 per half hour after the first 30 minutes), or to penalize long-term parkers from areas to be allocated for short-term parkers (e.g., \$2.00 per hour for the first two hours, \$4.00 per hour after that period).

Partnerships with off-peak demand generators can also increase revenues. An example is the Winnipeg Parking Authority (WPA), and The Forks-North Portage Partnership, who both promote use of their parking facilities for events at the MTS Centre in downtown Winnipeg. The WPA has reported revenue increases of up to nine percent due to additional parking on event days, yielding around \$90,000 per year in new revenue. As expected, the closer the lot, the higher the usage during events and the higher the event fee. Another market for this type of arrangement can be at theatres and concert

halls, where venues could pre-sell parking spaces with event tickets. Pre-selling parking passes would offer patrons a guaranteed space in a specific location.

### ■ Parking Enforcement

Parking enforcement can improve compliance with parking regulations and payment of parking fees. In cities without regular enforcement, users quickly recognize whether they need to comply with parking regulations. Examples of poor compliance were clearly evidenced in cities that MMM has conducted parking studies. A community in southeast Manitoba employed part time parking enforcement staff who worked the same two days each week; regular downtown parkers knew when they needed to comply with time limits. In communities in the upper Midwest, one did no enforcement, with poor compliance of regulations. Another did very limited enforcement, often only if a complaint was filed with the City, also resulting in limited compliance.

Routine enforcement has three benefits; encouraging compliance of time limits, thereby improving turnover of spaces; encouraging parkers to pay for the time parked; and adding revenues through tickets for non-compliant parkers.

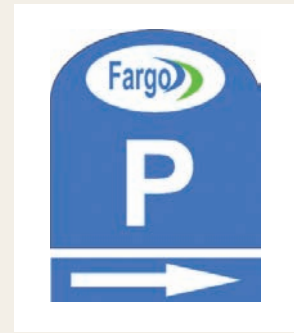
### ■ Parking Mix

Altering the allocation of parking within a lot can increase revenues due to turnover. In general, casual parking yields higher revenue due to higher hourly rates compared to monthly parking fees.

Altering parking mix was part of a recent parkade feasibility study of a proposed 400 space parking structure. In one scenario, three quarters of the spaces were allocated to monthly parking, the balance for casual use.



**Photo 1: Example of Poor Informational Signage**



**Photo 2: Parking Directional Signage**

When looking at the costs and revenues over a 20-year period, a net loss of \$560,000 was forecast. In another scenario, the monthly allocation was reduced to 60 percent; all other factors were left constant. The result was a net profit of \$600,000 over the 20-year period.

■ **Value Added Features**

Value added features can increase the attractiveness of a particular parking facility compared to other competing locations. The result can be additional parkers, revenue from the value added feature, and the possibility of being able to increase rates compared to other facilities due to the attractiveness of the added feature. Examples include:

- **Car wash facility** – the WPA was able to increase revenues by one percent due to the car wash in one of their garages, as well as increase rates at a faster rate than expected; and

- **Valet services** – James Armstrong Richardson International Airport in Winnipeg found that valet parking is becoming very popular with users, having to continually add spaces assigned to the valet service when it was first introduced. Valet services can also help make use of what might otherwise be underutilized lots that may not be as conveniently located as other locations.

■ **Visibility**

Unfortunately, examples of poorly signed parking facilities are too easy to find, resulting in drivers either unsure if public parking is available or not even considering a particular lot.

Clearly defined signage is an important feature to maximize usage. An example of poor signage is shown in photo 1. The sign between the entry/exit for this new downtown parkade lets users know public parking is

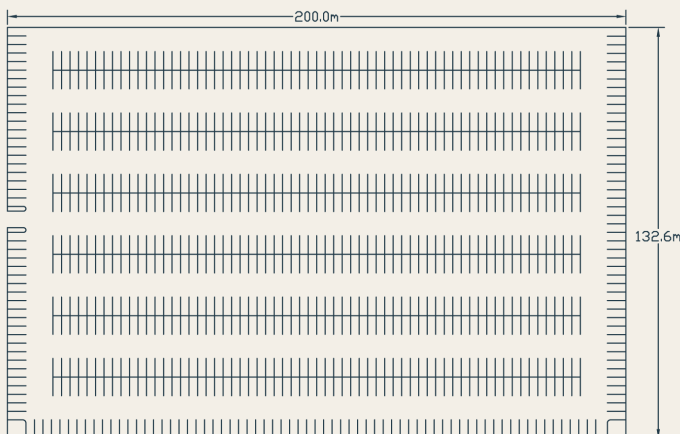
available, however, you have to be around a meter away to read it; a passing motorist would not be aware that the facility offered public parking.

An example of a parking sign to help direct drivers is shown in **Photo 2**. This sign is applied to all lots in downtown Fargo, whether publicly or privately owned, to inform drivers that public parking is available.

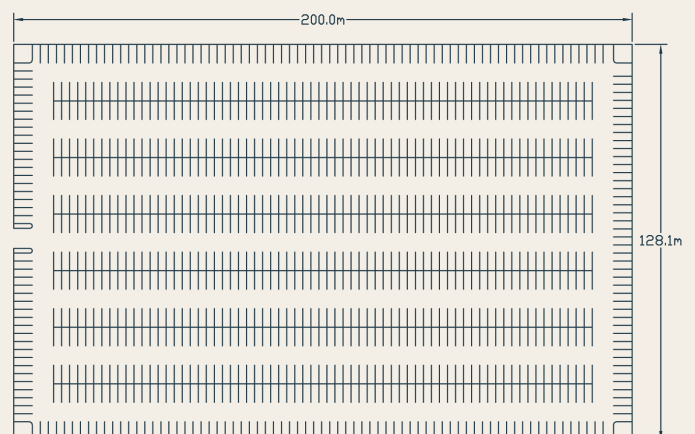
## > Parking Lot Layouts

To this point the discussion has centered on ways of increasing revenue through changes, likely in most parking operators/owners menu of options. Other methods of increasing net revenue may seem less obvious upon casual inspection. In this section, we will touch on parking lot layouts for surface lots, and the impact of ramp type on structures, and summarize some general rules of thumb.

**Lot 1: "Traditional" Space and Aisle Dimensions**



**Lot 2: Current Space and Aisle Dimensions**



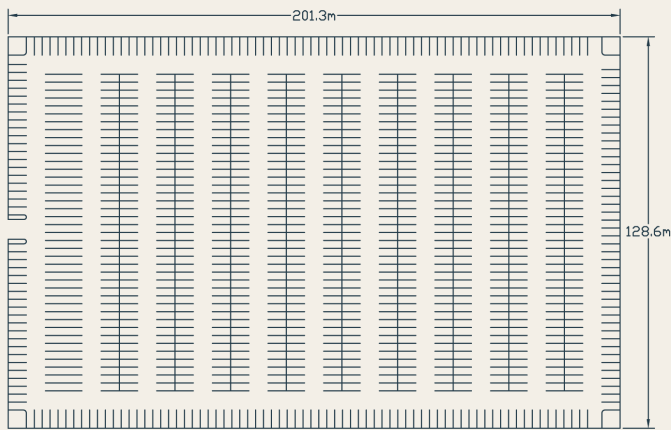
■ **Lot Layout**

Parking space dimensions have changed over the years. Where a 2.75m space with 7.8m aisle was common at one time, it has typically been replaced with narrower spaces such as 2.6m, and aisles of 6.3m.

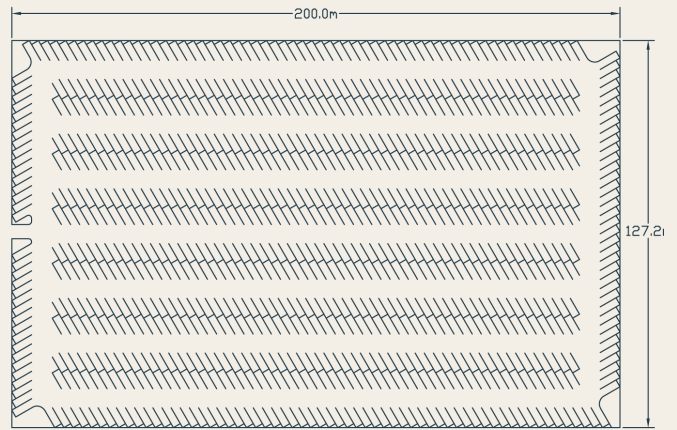
**Lot 1** illustrates the older standard yielding around 900 spaces for a lot of approximately 200 by 132 m. This increases to around 1030 spaces with the newer standards, **Lot 2** with a somewhat smaller lot (200 by 128 m). This increases the space efficiency by approximately 19 percent.

Other comparisons can be made with other layout styles: having parking aisles running in the “long” dimension vs. the shorter dimension of the lot (**Lot 3**) and 90 degree vs. angle parking (**Lot 4**). Table 1 summarizes the difference in space yield.

**Lot 3: Aisles in Short Lot Dimension**



**Lot 4: Angle Parking**



**Table 1 – Lot Efficiency Comparison**

Attribute	Lot 1	Lot 2	Lot 3	Lot 4
No. of Spaces	901	1033	985	877
Lot Dimensions (m)	200 x 133	200 x 128	201 x 128	222 x 127
Lot Area (sq. m)	26,520	25,620	25,786	25,440
Sq. m/Space	29.4	24.8	26.2	29.0
Space Width (m)	2.75	2.6	2.6	2.6
Aisle Width (m)	7.8	6.3	6.3	6.3
Space Direction	90 degree	90 degree	90 degree	angle

**Table 1** illustrates that the most efficient layout is one that uses 90 angle spaces with two-way aisles, with aisles running along the longest dimension of the lot. This type of layout would allow a property owner to use less land to provide the needed parking for a development, or to increase the size of the development without adding to the area of land devoted to parking. Both options increase net revenues for the property owner.

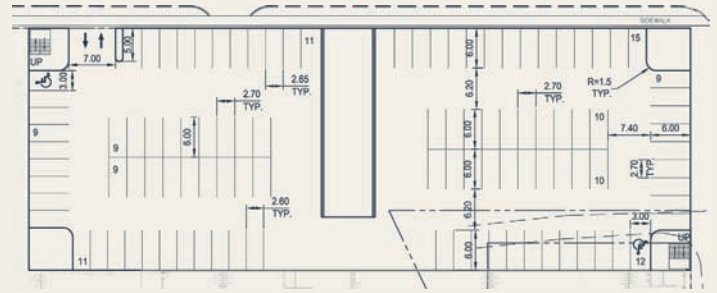
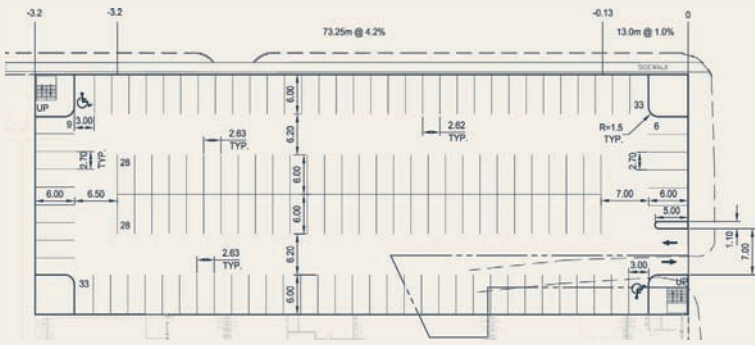


Figure 5: Structure multi-étagé sans rampe d'accès dédiée

Figure 6: Parkade With Dedicated Ramps

### ■ Parkade Ramps

Parking structures (parkades) are influenced by the same items as surface lots in terms of efficiency, and hence cost per space. However, parkades are also influenced by ramp types. In general, parkades without dedicated ramping offer a lower cost per space compared to those with dedicated ramps. As an example, looking at a two level parking deck, one concept that can be considered is an up/down deck without any ramps (although this means there is no direct connection between levels) or sloped floors to get from floor to floor if a length of at least 90 m is available. Another concept would be to provide a ramp to the second level.

Figures 5 and 6 illustrate the difference in concepts. The first option features 274 spaces, with 26.4 sq. m. per space; the second option, with a dedicated ramp, has 228 spaces, with 31.7 sq. m. per space. Efficiency decreases by 17 percent with the second option, which will result in a higher capital cost.

From a purely efficiency and cost perspective, the first option is superior, however, other consideration may also influence the selected option. The second option offers "flat" floors, which allows for a different design perspective compared to the view of sloped floors when looking at the structure. This can be an issue where residential uses are adjacent to the facility.

### ■ Parking Rules of Thumb

General rules of thumb when developing parking lot or structure plans to maximize efficiency and minimize costs include:

- Provide perimeter parking;
- Layout aisles in the "long" dimension;
- Use 90 degree parking when feasible;
- Use two-way aisles when feasible;
- Use sloped floors as opposed to dedicated ramps in a parkade when feasible;

In conclusion, net revenues for a property owner/developer can be increased with proper parking planning due to:

■ Reduced capital cost by minimizing the number of spaces that are provided;

■ Reduced maintenance costs for parking if fewer spaces are provided; and

■ Increased building lease revenues for the same amount of parking.

- Consider an up/down vs. ramp arrangement for a single level deck;
- Increase the percentage of casual parking; and,
- Meet site-specific parking needs.

What not to do when developing parking facilities includes:

- Spaces under 2.6 m (more difficult for users, once one driver parks over the line, the ripple effect can eliminate the extra space or two per row);
- End islands longer than 4.5 m as this makes it more difficult for drivers to enter/exit the end spaces;
- Angle parking, although it can be easier for drivers to enter/exit the spaces, 90 degree parking offers greater space efficiency;
- One-way aisles;
- Dedicated ramps in a parking structure;
- Monthly spaces only if casual demand exists;
- Reserved parking without a premium rate; and,
- Overbuilding parking.

### ■ Parking Planning

Oftentimes property owners automatically provide the amount of parking specified in the local jurisdiction's parking bylaw for new or expansion development projects. It can be

beneficial to identify the "correct" amount of parking needed for a particular use through the use of a parking utilization study. This measures the actual usage of a lot over a specified time; the survey results are typically adjusted to reflect time of year based on activity data for the use, and a practical capacity factor applied to that level.

An example is the expansion of a big box centre in Ontario that met the bylaw requirement of 5.3 spaces per 1000 square feet. A utilization study found that a supply of 4.0 spaces per 1000 square feet would meet the centre's needs, allowing the centre to expand without adding any additional parking.

Another technique to optimize parking supply is to consider shared use for multi-use centres. Peak parking demand can vary by land use; as an example, office parking demand peaks during the day, retail demand in the late afternoon and early evening, theatres in the evening, hotels in the late evening/overnight, etc. If a mix of uses is located within the same site, the actual parking demand will generally be less than adding the peak demand for each land use. ■

Photo 3: Addition of a Pad Site to Increase Revenue

