

Demand-Based Parking Meter Rate Adjustments

Central Business District

Spring 2019

The goal of parking meters is to create on-street parking availability so that patrons of shops, restaurants, and attractions, and short-term visitors to offices, can quickly and easily find a parking space within a reasonable distance to their destination. To function effectively parking meters must have the correct rates – rates that will regularly produce one or two available parking spaces on each block face (about 15% - 25% availability, or about 75% - 85% utilization).

To determine the correct rates the Parking Authority of Baltimore City (PABC) collects and analyzes parking utilization data every six months to determine the average occupancy on each block face in Baltimore’s central business district (CBD). Meter rates are adjusted incrementally over time. Rates are adjusted up or down in \$0.25 increments no more than once every six months. If on-street parking occupancy is higher than 85% on a block face the rate generally increases. If on-street parking occupancy is lower than 75% on a block face the rate generally decreases. If on-street parking occupancy is between 75% and 85% on a block face the rate generally is maintained. As more data is collected over time it informs the model to ensure it considers seasonal fluctuations and variations throughout the days of the week.

CBD Meter Rate Adjustments Study, Round 5, Spring 2019

Data for Round 5 of the PABC’s meter rate adjustments study in the CBD was collected from April-May 2019. Detailed findings are below, followed by a table of rate changes for each block face and CBD parking meter rate adjustments maps.

New Meter Rates

- Of the 217 block faces studied with meters, 87 block faces (40%) will increase by \$0.25; 61 block faces (28%) will maintain their current rate; and 69 block faces (32%) will decrease by \$0.25. Overall, 60% of the block faces will either maintain or decrease their current rate.
- There are now 11 meter rates throughout the CBD: \$3.25, \$3.00, \$2.75, \$2.50, \$2.25, \$2.00, \$1.75, \$1.50, \$1.25, \$1.00, and \$0.75. As seen in the table on the following page, 39 block faces (18%) will have a rate of \$3.25 per hour; 27 block faces (12%) will have a rate of \$3.00 per hour; 18 block faces (8%) will have a rate of \$2.75 per hour; 12 block faces (6%) will have a rate of \$2.50 per hour; 11 block faces (5%) will have a rate of \$2.25 per hour; 12 block faces (6%) will have a rate of \$2.00 per hour; 24 block faces

Increase: 87 block faces (40%)
Maintain: 61 block faces (28%)
Decrease: 69 block faces (32%)

(11%) will have a rate of \$1.75 an hour; 10 block faces (5%) will have a rate of \$1.50 per hour; 22 block faces (10%) will have a rate of \$1.25 per hour; 18 block faces (8%) will have a rate of \$1.00 per hour; and 24 block faces (11%) will have a rate of \$0.75 per hour.

- 39 block faces (18%) have had rate increases in all five rounds of the study and will now have a rate of \$3.25 per hour. For Round 2 there were 61 block faces (28%) that had increased in all rounds; for Round 3 there were 53 block faces (24%); and for Round 4 there were 41 block faces (19%).
- 24 block faces (11%) have had rate decreases in all five rounds of the study and will now have a rate of \$0.75 per hour. For Round 2 there were 38 block faces (18%) that had decreased in all rounds; for Round 3 there were 33 block faces (15%); and for Round 4 there were 26 block faces (12%).
- This data shows that with each round of the study more block faces are reaching their correct rates. However, because the rates are being adjusted incrementally, it is likely that over 20% of the block faces have not yet reached their correct rate (above \$3.25 or below \$0.75).
- 31 block faces (14%) have experienced rate oscillation (at least one increase and one decrease) throughout the five rounds of the study.
- 3 block faces (1%) have a rate increase for Round 5 after having a rate decrease for Round 4.
- 0 block faces (0%) have a rate decrease for Round 5 after having a rate increase for Round 4.

Spring 2019 Meter Rates		
Rate per Hour	# of Block Faces	% of Total
\$3.25	39	18%
\$3.00	27	12%
\$2.75	18	8%
\$2.50	12	6%
\$2.25	11	5%
\$2.00	12	6%
\$1.75	24	11%
\$1.50	10	5%
\$1.25	22	10%
\$1.00	18	8%
\$0.75	24	11%

49% of block faces will have a rate higher than, 6% of block faces will have a rate equal to, and 45% of block faces will have a rate lower than the original rate of \$2.00 per hour.

Evenings and Saturdays Utilization

The PABC has collected and analyzed parking utilization data for weekday evenings and Saturdays throughout all five rounds of the study. The following 11 block faces (near City Hall) will increase to \$3.25 per hour due to consistently high weekday daytime utilization. However, these block faces have significantly lower utilization during weekday evenings and Saturdays (all other \$3.25 block faces have high weekday evening and Saturday utilization). Therefore, the PABC will introduce tiered pricing on these block faces by lowering the meter rate to \$2.75 per hour during weekday evenings and Saturdays. These block faces will be analyzed closely for the next two rounds of the study to determine if tiered pricing is working (by increasing weekday evening and Saturday utilization) and should be expanded to additional block faces.

Block	Street	Side	Avg. Utilization Weekday Daytime	Avg. Utilization Weekday Evenings/Saturdays
Unit	Commerce	ES	105%	52%
Unit	Commerce	WS	114%	60%
400	E Baltimore	NS	124%	44%
400	E Fayette	SS	197%	64%
400	E Lexington	NS	148%	45%
400	E Lexington	SS	239%	45%
200	Guilford	ES	250%	67%
200	Guilford	WS	23%	9%
Unit	Holliday	ES	109%	57%
300	N Calvert	ES	139%	63%
100	N Gay	WS	105%	27%

Target Utilization

Round 4 resulted in 77 “maintain” block faces (35%) within the target utilization range. Round 5 resulted in 61 “maintain” block faces (28%) within the target utilization range, a decrease of 16 block faces (7%). However, as seen below, Round 4 had a relatively low number of block faces just outside the target utilization range (70%-74% and 86%-90%):

- For Round 3, 29 block faces (13%) were within 5% of the target utilization range, meaning about 39% of the block faces were between 70%-90% utilization.
- For Round 4, 16 block faces (7%) were within 5% of the target utilization range, meaning about 42% of the block faces were between 70%-90% utilization.
- For Round 5, 24 block faces (11%) were within 5% of the target utilization range, meaning about 39% of the block faces were between 70%-90% utilization.

This data shows that the program is effectively setting the correct rates and creating parking availability on approximately 40% of the block faces in the CBD. However, the exact number of block faces within the target utilization range is fluctuating with each round. If the previously mentioned 20% (approximately) of block faces that have not yet been able to reach their correct rate are added, the program is working effectively for approximately 60% of the block faces in the CBD.

Another consideration for why the number of block faces in or near the target utilization range is remaining near 40% includes:

- The parking capacity for the block faces studied ranges from 1 space to 32 spaces, and it is mathematically impossible to have a utilization of 75%-85% for a block face with less than 4 spaces.
- The Planning Division will study this in more detail before Round 6 in the fall.

It is anticipated that the percentage of block faces achieving the target utilization will increase with future rounds of the study. This would signify improvement in parking availability and a more even distribution of on-street parking utilization throughout Baltimore's CBD. The PABC has entered into an agreement with the app SpotAngels, "the Waze of parking". This is a new tool that will allow the PABC to communicate its demand-based meter pricing to a wider audience. SpotAngels is now up and running in Baltimore and its map displays the demand-based meter rates throughout the CBD. The PABC has also begun the process of installing new meter kiosks throughout the CBD and implementing Pay-by-Plate and Pay-by-Phone technology. Once implemented, these new technologies will also help communicate the demand-based meter pricing to a wider audience and should lead to improved enforcement and meter payment.