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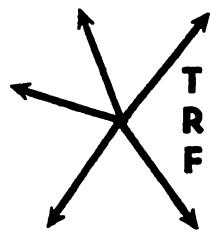
Papers —

Eleventh Annual Meeting

“Tackling the Problems of the 1970's”

**October 22-23-24, 1970**

**Roosevelt Hotel**  
**New Orleans, Louisiana**



TRANSPORTATION RESEARCH FORUM

# Concentric Zone Pricing Policy at Downtown Parking Meters

by Hugo O. Liem, Jr.\*

## Background

CURRENTLY THERE ARE A TOTAL of 8,557 parking meters in service in downtown Baltimore. The growth in the number of parking meters installed, since their introduction in Baltimore in 1955 is illustrated in Graph I on the next page.

Baltimore's present parking meter pricing policy, based on concentric price zones, has been adopted as the result of a series of pricing experiments carried out during a 10 year period. In the center of the downtown area, meters are now pegged at 40 cents per hour (10 cents for 15 minutes). Surrounding this area are concentric zones priced at 20¢, 10¢ and 5¢ per hour respectively. Since adoption of this pricing policy in Baltimore in November 1968, the practice of "meter feeding" has been substantially curtailed and the rate of turnover (the number of cars utilizing each space in a day) has increased sharply. Meter receipts have increased by 20% overall and the "parking problem" in the downtown section of Baltimore has been substantially alleviated. Now that meters are not occupied by all-day parkers it is once again possible for shoppers to drive downtown with reasonable certainty of finding short-term parking at a metered space.

## Pricing Experiments

When the first meters were installed in Baltimore in 1955, a uniform rate of 5¢ per hour (or 1¢ for 12 minutes) was established throughout the city both at curb-side parking spaces and in metered off-street parking lots. This low rate meant that metered parking spaces filled up fast and were fed frequently. Collection costs to the City were high (because of the prevalence of pennies), revenue was low, and too few meter spaces were available for short term business use.

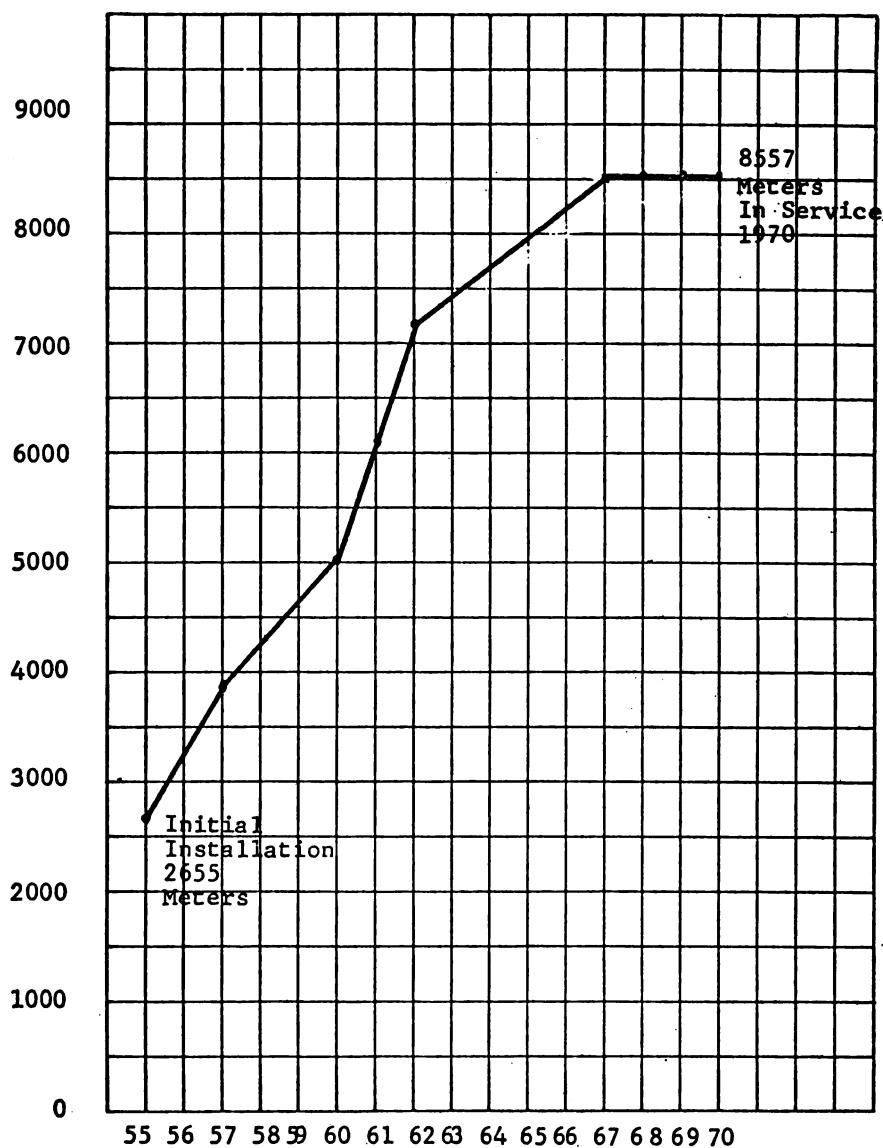
To encourage more turnover in parking and to provide the City with additional revenue, the meter rate throughout the City was raised in 1958 to 10¢ per hour and the use of pennies was eliminated. As a result, coin boxes did not fill up as fast, collection times were cut approximately 40%, thereby reducing collection costs, and revenues to the City from the 5,800 meters doubled from \$30,000 to \$60,000 on a monthly basis.

In late 1961, businessmen in some sections of the City began to complain that the higher meter rates were having an adverse effect on their businesses. An ordinance was passed providing that meter rates in certain areas could be reduced to 5¢ per hour by the Commissioner of Transit and Traffic with the approval of the Board of Estimates. Furthermore, requests for reduction of

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\*Commissioner, Baltimore Department of Transit and Traffic

GRAPH I  
CITY OF BALTIMORE  
Number of Parking Meters in Service  
1955-1970



meter rates in certain areas had to be initiated by the Mayor's Committee on Small Businesses. However, many businessmen felt the ordinance was discriminatory and individual City Councilmen introduced other separate ordinances to reduce meter rates in their respective jurisdictions. Finally, 3,320 meters or 55% of those installed were covered under special ordinances requiring reduced rates.

Studies as to the percentage of meter use and amount of meter feeding were made by the Meter Division in an effort to determine the turnover in parking which resulted from the lower meter rates. The curb space in and adjacent to the Central Business District has always been considered prime parking space. This is an area where a rapid turnover is needed to give everyone an equal opportunity to obtain a parking space. The Parking Meter Division studies indicated fairly conclusively that the lower rates did not provide the turnover in parking which was intended.

Because this pricing policy did not result in an equitable allocation of parking spaces, the Commissioner of Transit and Traffic proposed in October 1968 that rates on the 1,431 meters within the greater Central Business District (Figure 1) be raised to 40¢ per hour. The 40¢ rate was subsequently put into effect on a temporary basis.

Meter revenues in the first month after the 40¢ rate was initiated showed a gain of \$19,000 over the previous month. However, studies indicated that, as a result of the increase, the percentage of time that the meters were in use declined slightly and the percentage of time that the meters were fed over their legal time limit fell substantially.

Even though the 40¢ per hour rate did accomplish the purpose for which it was intended (equitable allocation of the scarce number of available parking spaces), merchants in some areas of the City were dissatisfied.

On November 8, 1968, the size of the Central Business District, where parking space cost 40¢ per hour, was reduced (Figure 2). Those parking spaces close to the circumference of the Central Business District which previously had been included in the 40¢ zone, were reduced to 10¢ an hour. The area outside the 10¢ zone was rated at 5¢ per hour.

### The Present Plan

This arrangement, like earlier arrangements, failed to meet with the approval of all merchants. Another plan was proposed. Meters within the core Central Business District were to remain at 40¢ per hour, parking spaces in heavily used areas adjacent to this core cost 20¢ an hour, and an area surrounding the Central Business District and the 20¢ zone cost 10¢ an hour. All meters outside these limits were set at 5¢ an hour. (Figure 3). The rates in each zone are comparable to the hourly cost of monthly parking stickers at adjacent privately operated off-street parking facilities. This system, tailor-made to the needs of each downtown zone has proved workable and is in effect in Baltimore today.

### Conclusion

The City of Baltimore, in a span of 10 years, experimented with various pricing policies at downtown parking meters. Initially, a uniform rate of 5¢ an

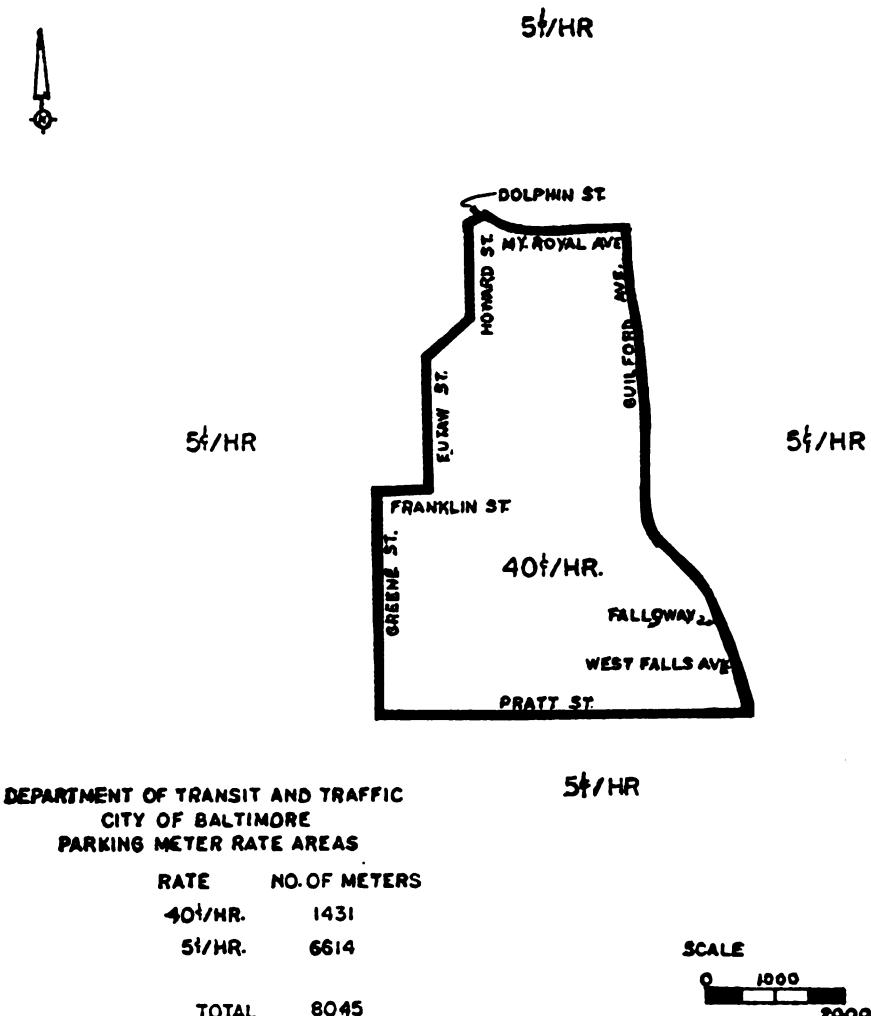
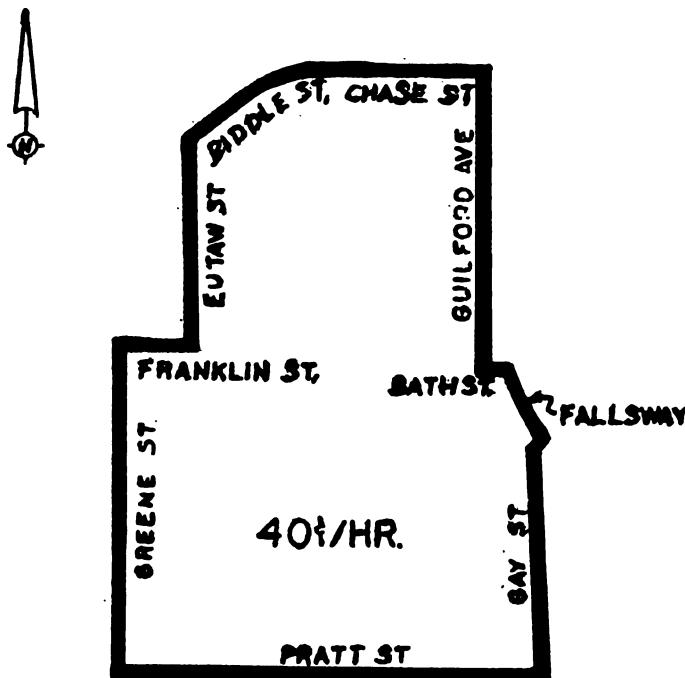


FIGURE 1

hour was established throughout the city. High costs, low revenues, and inefficient allocation of parking space finally led to the establishment of a 40¢ zone in the Central Business District of the City, a 10¢ zone surrounding the core, and a 5¢ per hour outlying district. As a result of this plan, annual revenues increased, collection costs fell, and space was allocated more efficiently. Some businessmen still felt, however, that parking space in their district was not priced fairly.

A new plan which established a small 40¢ core area, surrounding 20¢ and 10¢ areas, and a large outlying 5¢ district was finally adopted in Novem-



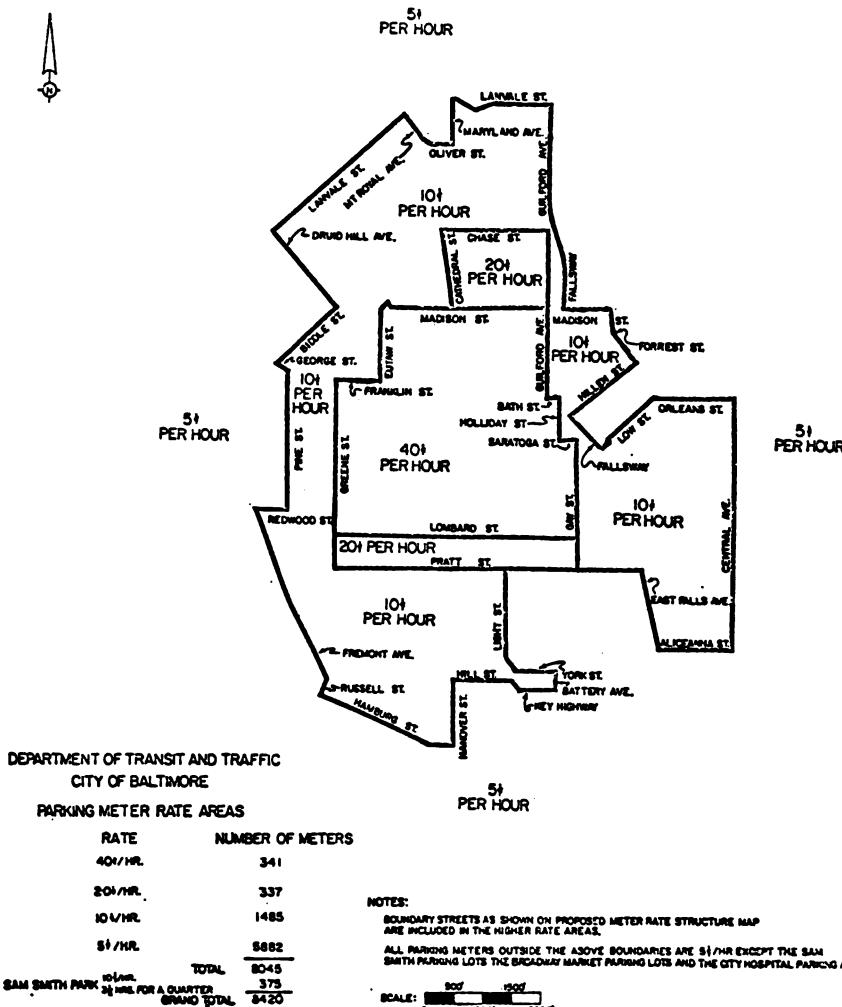
**DEPARTMENT OF TRANSIT AND TRAFFIC  
CITY OF BALTIMORE  
PARKING METER RATE AREAS**

<b>RATE</b>	<b>NO. OF METERS</b>
<b>40¢/HR</b>	<b>862</b>

**SCALE**

**FIGURE 2**

ber 1968. The total number of parking meters changed very little, but the size of each of the zones changed considerably. The new system, which established meter rates in the four zones based on off-street rates, encourages a turnover in parking commensurate with the needs of a given area—within the core Central Business District a rapid turnover is desirable while, in the outlying 5¢ area, the main function of the meter is to discourage all-day parking.



**FIGURE 3**

This new concentric zone pricing policy has met with little opposition from the business world, has resulted in a reduction in meter feeding, and increase in the turnover rate, and has produced additional revenue in the range of more than \$150,000.

## A Lesson Learned

The City of Baltimore learned that it is possible to find a parking space pricing policy which meets the needs of the people. They also learned that integrity on the part of Meter Division personnel, safety precautions in the handling of meter money, fairness in the treatment of parking violators (when

the violation is the result of a malfunctioning meter), an efficient meter repair system which provides for immediate response to complaints and routine repair procedures, accurate and comprehensive records, flexible time limits on meters based on demand requirements and clear definitions of holiday parking policies are all essential if a metered parking system is to be effective.

Indifference and lack of enterprise on the part of those charged with the care and administration of the meter system can only result in the slow strangulation of that system. Police enforcement of time limit parking is possible only through the use of parking meters. Therefore, in view of the tremendous and heavily increasing use of the automobile with the resultant desire for parking spaces, a carefully planned and tested parking meter pricing policy has become a proven necessity and is now an integral part of the traffic system of the City of Baltimore.