

FRINGE PARKING IN RELATION TO TRANSIT OPERATIONS

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This discussion of the fringe parking lot as related to transit operations is complementary to the paper by Mr. F. W. Lovejoy, "Fringe Parking in Relation to Traffic Congestion" published in Vol. 27. Proceedings of the Highway Research Board. Actually, of course, the interest of transit operators in fringe parking is also in its effect on traffic congestion. With that understanding, it is the endeavor in this paper to deal particularly with the transit operators relation to the operation of fringe parking lots and garages, which is but one phase of the subject of "Fringe Parking".

The idea of fringe parking is a somewhat recent development in the efforts to solve the parking problem. The Baltimore Transit Company began the operation of a fringe parking lot with a shuttle bus line into the downtown shopping and business district on August 26, 1946. It was but a short time before we discovered that it was a matter of great interest to traffic engineers, city officials and transit operators everywhere. Operators of transit systems in a number of other cities have been considering some form of transit service in connection with fringe parking and some have such services in operation.

Every city, large or small, has its "parking problem", the problem of providing off-street terminal facilities for the many privately owned automobiles which are now in use for transporting people into and about the downtown business sections of our cities. Ever since the constantly growing use of automobiles

has clogged up our city streets, making it even more difficult and more dangerous for people to travel through the streets whether by transit, by automobile, or even on foot, the provision of off-street parking space in the congested areas has been considered one of the important remedies for traffic congestion. The extreme wastefulness of curb parking has become more widely recognized both because it is too expensive a space for storage of automobiles and because it interferes with the primary purposes of streets, the movement of vehicles, and is, therefore, one of the factors contributing to traffic congestion. It is this traffic congestion which is now generally ascribed as the cause of the economic and physical deterioration of the centers of our cities. You are all familiar with the results of this deterioration. The parking problem then is that of providing off-street storage for the automobiles, the drivers of whom need, or prefer, terminal facilities in the downtown business section.

One might ask, why should the operators of public transit service be interested in the parking problem, in the off-street parking of automobiles? As a matter of fact they are not interested in the parking problem as such. Storage facilities for transit vehicles at or near the destinations of transit passengers are not required. Transit operators are interested in relief of the traffic congestion resulting from the use of our city streets by so many automobiles. They are interested in the parking problem only

as its solution may help to solve the traffic problem. If the question of off-street parking is to be viewed in proper perspective shouldn't it be recognized as merely a means to an end, that end being to keep the flow of people through our streets moving with maximum efficiency? More vehicles are moving through the streets today than was ever dreamed of when they were laid out. But those streets are carrying fewer people to the downtown business districts, otherwise the property values would not have decreased and the taxable basis would not have shrunk so alarmingly.

It is now more generally realized that transit vehicles are the most efficient in the use of street space for moving people. One transit vehicle can carry as many people as 30 or 40 automobiles and requires only a small fraction of the street space. A transit vehicle is many times more efficient than an automobile for moving large numbers of people. An efficient transit system, used by a large portion of the people is essential to the continued existence of cities.

But transit service has become less attractive as traffic congestion has increased. The speed of transit vehicles has become slower and the regularity of their operation has been reduced. Slower speed and more irregularity adds to the cost of operation too. So transit operators see their service becoming both less attractive to their customers and more costly to operate. It is obvious to transit operators, as it is to other students of city traffic, that transit service will not move freely, with greater safety, speed and regularity unless all traffic moves more freely, unless there is some relief from traffic congestion.

This is sufficient explanation of the transit operators' interest in the parking problem. Now, what about their interest in the question

of fringe parking? The best way for me to give that explanation is to tell first how the company I am associated with, came to start the operation of a fringe parking lot and shuttle bus line in Baltimore.

Our venture into the operation of a fringe parking lot and shuttle bus line really came about as a result of, or at least it followed upon, the development of a rather ambitious postwar modernization program and the coordination of that program with the City's plans for traffic improvement.

Work on the Company's plan was started in the early part of 1945. While it was still underway, and before any public announcement of it had been made, the Chief Engineer of Baltimore published a report on May 21, 1945, entitled, "Analysis of Traffic Conditions And Present And Post-War Highway Requirements". It included not only plans for expressways and new highways in and around the city, but also plans for the improvement of existing streets and the designation of more streets for one-way operation. It was pointed out that a number of his recommendations would require changes by The Baltimore Transit Company in its routes and services.

After studying the City's report the Company offered it's cooperation in coordinating the two plans into a general plan for traffic and transit improvement in Baltimore. This offer was accepted and a revised transit plan was completed, which in general met with the approval of all. The capital expenditure estimated at that time was about \$8,000,000 for the purchase of about 500 new free wheel vehicles and other changes. It was expected that the entire transit plan could be completed in 2 years or less. Actually, the first of the buses were not received until May, 1947, and the plan will not be completed until some time in 1948.

Continued or increased traffic congestion would mean that despite all the money which the Company was going to spend for new equipment to modernize its system the operation of its vehicles, nevertheless, would become slower and slower, there would be more and more delays, more irregularity, and the service would continue to grow less attractive for riders and more costly. It is true the City was proposing expressways and new highways and additional off-street parking facilities, but these would cost many millions and take years to complete. Over a period of years millions of dollars has been spent in many of our cities for such things and yet traffic congestion has not been relieved, but has become worse.

Recognizing that traffic congestion simply is too many vehicles trying to use the streets, that is to say, too many automobiles, we began to search for something that could be done at once to reduce the number of automobiles in the downtown section. The simplest and cheapest thing would be abolish all curb parking. That should be done, but it cannot be accomplished quickly, nor can it be done without providing at least an equivalent amount of off-street space. But more off-street space in the downtown section, while a popular idea, might not reduce congestion on the streets, in fact, might even increase it. So this led to the idea of parking outside the congested area.

As there was no agency in the city which could function to provide fringe parking lots or any other parking facilities, it was evident that if the transit company wanted anything done quickly it would have to make the first move. It was decided, therefore, that the Company would try to find a lot which it would operate together with a shuttle bus line to the downtown

business district.

The greatest difficulty was to find a suitably located lot. The location is important. Preferably such lots should be on main highways and accessible by a right hand turn for inbound automobiles, if the highways carry traffic in both directions. They must be out-side of the congested district and yet close enough to be attractive to motorists and also to hold down competition with the regular transit lines at the regular rate of fare. It was desirable also for the first lot to be north of the downtown business district because 50 percent of the automobile traffic of Baltimore is from the North.

The only space that could be found was a small triangular shaped lot with a capacity of 206 spaces owned by the City, about $\frac{1}{4}$ mile from the main shopping district and about one mile from the financial and business section. Consequently a letter was written to the Mayor on February 7, 1946, stating that the only sure way to remedy the bad traffic situation downtown is to reduce the number of vehicles operating in it during rush hours, suggesting that parking lots be established on the fringe, probably a mile or a mile and a half from the center of congested area, operated in conjunction with bus lines, the fare for which would be included in the parking charge and offering as a beginning to lease and operate the City owned lot referred to above.

The operation was started on August 26, 1946, and in a few days the lot was being used to capacity. Last Spring we were parking an average of 270 automobiles a day and in addition to the drivers of the automobiles were carrying about 1800 cash fare riders each day. The bus line traverses the main shopping section, the financial section and the civic center, covering a one-way distance of about

1-1/3 miles. The buses run from 7:30 a. m. to 6:30 p. m. with a 5-minute headway during rush hours and a 7½-minute headway during the middle of the day.

The plan as operated in Baltimore appeals particularly to the all-day parker. The charge, including two tickets for the bus line is 25¢. Other passengers may board the bus in the lot or at any intersection and ride for 5¢, but without transfers.

Of course, such a small operation does not relieve traffic congestion, nor give a reliable indication of bus revenue and costs. If we had perimeter parking lots for 5000 or 6000 automobiles there might be some traffic relief, if other traffic plans were coordinated. Also it would then be possible for the shuttle bus lines to operate between several lots creating a better use factor.

All we have proven about the value of fringe parking for relieving congestion so far in Baltimore is that this particular fringe parking lot and bus line are popular with the motorists and that the idea of fringe parking seems to meet with general approval. There seems to be an interest in expanding the plan. It was the Transit Company's hope when the experiment was started that other locations would be made available soon. This can be done only as part of slum clearance projects. It is evident now that slum clearance will not be undertaken at least until the supply of housing has been increased and this all lies in the uncertain future.

The Operation of the lot and bus line by the transit company has not been profitable, the revenue has not even met the out-of-pocket costs. From so small a sample it is difficult to tell whether or not the expansion of the plan with more locations and larger lots, permitting

the bus line or lines to shuttle between such location, would be profitable to the company. Apparently that would help, but it might increase the demand for peak service which is relatively expensive and not produce any additional off-peak revenue from cash rides to help pay for the service during the mid-day period.

The charge of 25¢ for parking and a round trip bus ride is too low to meet expenses. Probably also it is too low in relation to parking rates charged in Baltimore for privately owned and operated lots and garages. With a rate of 35¢ or 40¢, the parking lot would be profitable, assuming there were no loss in patrons, but the parking lot comes close to meeting expenses now. The loss is on the operation of the bus line. The profit on the parking lot at 40¢, if applied against the cost of operating the bus line, would just about offset the out-of-pocket expenses, but to obtain this benefit the transit company has to continue the operation of the parking lot. It is doubtful if transit companies should operate parking lots.

If the rate of fare on the bus line were increased so that it represented a smaller reduction from the regular rate of fare, it would reduce the chance of obtaining additional revenue from cash riders. Such additional revenue can come only from people who otherwise would walk to and from their destination within the downtown business district.

This raises the question whether or not the mere convenience of special bus service from fringe parking lots to downtown would be sufficiently attractive for patrons of such parking lots if the regular rate of fare were charged, perhaps with a transfer to regular lines. Regular transit lines which pass by fringe parking lots would not be

attractive to motorists because at such points on the lines the vehicles would ordinarily be crowded in peak hours. A special service to assure quick transportation for the motorists is essential.

Is there any encouragement from experiences in other cities? In Boston and Philadelphia parking lots at the end of high-speed subway or elevated lines have attracted relatively large numbers of motorists who use the transit service to downtown at the regular fare. They have a quick trip and the lots being at termini assure room on the vehicles. This is not what we mean by fringe parking, but it does have possibilities as an adjunct in cities where express buses on a regular bus line might give an attractive service.

In several cities, notably, Cleveland and St. Louis, reduced fare downtown loop bus lines provide service to a number of fringe lots and garages privately or municipally operated. They enjoy a good volume of business throughout the day. It is my understanding they are not yet profitable, but they warrant future trial and study.

A different type of transit service to a fringe parking lot is that operated by the Connecticut Company in Hartford, Connecticut. There a bus line operating only between 9 a. m. to 4 p. m. serves an 800 car lot located at the State Armory, one-half mile from the center of the shopping district which is owned by the state. The charge is 20¢ including a round trip on the bus line. Cash passengers are carried also and transfers are issued to the regular transit lines.

The service started November 30, 1946. Two reasons were given for the limitation on hours of service; one, the company could not spare buses during peak hours; and two, the 9 to 4 service would get

shoppers out of the business district before the 5 p. m. rush developed. This kind of transit service can be operated at a profit.

There are also several experiments of fringe parking and shuttle bus lines with the expense met by the merchants. In Atlanta, Georgia, a department store operates a lot of 530 car capacity and charters two buses for 10 minute service. The rates are 25¢ for 3 hours to 35¢ for all day, including transportation to and from the store only. A free parking service with buses chartered from the transit company operating from two fringe parking lots to the shopping district from 9:15 a. m. to 3:30 p. m. was tried out in Richmond, Virginia, during the Christmas shopping period last year. A similar operation was tried for 90 days last spring from a 300 car city owned lot. It averaged only about 125 cars and was discontinued. The transit company is considering the possibilities of a loop bus line serving fringe parking lots and carrying also cash riders.

In Paterson, New Jersey, a free service somewhat similar to the Richmond experiments was inaugurated last August by the Chamber of Commerce. Chartered buses operating from 9:30 a. m. to 6:30 p. m. over a 1.7 mile circuit pass municipal and private parking lots accommodating about 3000 cars, but reports of the patronage have been disappointing.

The interest in fringe parking both on the part of transit operators and communities is evident from the several examples recited here. With these and some dozen or more other transit operators taking part in a variety of experiments related to fringe parking a practicable basis for transit participation should develop. To study all of them would be a large project and the result probably inconclusive, because even the largest are on a relatively

small scale and the experience is quite limited.

Can any definite conclusions as to fringe parking in relation to transit operations be drawn from the information so far available? To attempt to do so certainly would be brash indeed on my part. However, before closing this discussion, the attempt will be made to set down a number of observations, most of which appear to be self-evident, for further consideration by the Committee on Parking of the Highway Research Board. Fringe parking does seem to hold promise as an important factor in remedying traffic congestion on downtown streets, the No. 1 Problem of all our cities. It would be helpful if we could establish some principles or guides which might encourage transit participation to the fullest extent possible and proper, or at least provoke further thought and study.

The following observations are submitted:

1. Just as all off-street parking is a means to an end, the purpose of fringe parking in particular has for its primary purpose the reduction of traffic congestion on the streets in the downtown business sections of our cities, by reducing the number of automobiles using those streets.

2. Generally, little physical change or improvement can be expected in the downtown streets.

3. The addition of off-street parking facilities within the congested area will not reduce congestion in the streets. A considerable quantity of off-street parking space has been provided (in Baltimore 9000 off-street spaces with 3000 still legal at the curbs) but traffic congestion steadily has become worse.

4. It is evident, therefore, that a large number of automobiles, the owners of which are destined for downtown, must be stopped at the

perimeter.

5. This requires a cordon of fringe parking facilities of large capacity operating under conditions that are convenient and attractive to motorists.

6. The reduction in automobiles downtown must be maintained by the coordination of plans and regulations.

7. Apparently many of the motorists destined for the downtown business district will use fringe parking.

8. Possibly some regulation or control to make it less convenient or more difficult to drive into the downtown area is necessary. In any event the quantity of off-street parking space should be related to street capacities.

9. This points to some form of governmental control over the location and design of all off-street parking facilities.

10. The assembly of land and possibly the provision of the parking facilities will have to be accomplished through a governmental agency.

11. A frequent, fast and convenient public transit service into the business district is essential to fringe parking. Usually this will require a special bus service.

12. Special bus lines serving fringe parking probably will have to carry cash riders also to help support them.

13. Cooperation and participation by the transit system operator is, therefore, necessary to the success of fringe parking.

14. It is to the interest of the transit operator to encourage the development of fringe parking because of the indirect benefits to the regular transit riders.

15. The transit operation whether transit lines only, or lines and lots, should be profitable. There is no more reason for transit systems to contribute financially

to a service primarily for autoists, than for a paving contractor to construct public streets and highways without a profit.

16. It is doubtful whether public utility commissions or other transit regulatory authorities will approve transit lines for fringe parking if the lines operate at a loss.

17. Even though it is to the interest of the transit operator to encourage and participate in the development of fringe parking because of the indirect benefits to the regular transit riders, the riders should not be burdened to provide a convenience for those who can or will use a more expensive form of transportation and one which, because of its inefficiency in use of street space, is costly to communities in

other respects.

18. The proper relationship among the city, the downtown business interests and the transit agency will need to be developed.

It is hoped that from consideration of these observations there can be found a sound, acceptable basis for the coordination of plans and procedures which will clear the way for a rapid development of fringe parking, followed by a prompt improvement in street traffic. In closing may I say that if we really want to reduce traffic congestion and save our downtown business sections, then everyone, business men, transit riders, autoists, citizens generally, must be willing to take the measures necessary to that end.