

# Planning and Implementing Bus Route Changes To Serve New Rapid Transit Lines: The Archer Avenue Experience in New York

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On December 11, 1988, the New York City Transit Authority opened the Archer Avenue Rapid Transit Line in Jamaica, Queens. Along with this subway extension, bus routes from Southeastern Queens were rerouted to serve the new rapid transit line. The planning process and ultimate bus service plan for Archer Avenue are described. Elements of the marketing effort are presented, and the actual operation of the bus routes in the first 6 months following the change is analyzed. The conclusions address factors that either contributed to, or detracted from, the overall success of this project. Negative factors included legal issues with the Jamaica Chamber of Commerce and delays in construction of the bus canopy at Archer Avenue. Factors contributing to the success of the project were innovations in providing limited-stop bus service in the Merrick Boulevard corridor, establishment of convenient intermodal transfer facilities, and aggressive marketing of service changes.

Over the past 15 years several cities have constructed new rail rapid transit lines, which involved the restructuring of bus systems. Previously the major transit link to downtown, buses within the rail rapid transit corridor will assume the function of feeder service to the rapid transit line. The potential market for rail rapid transit service can be maximized while vehicle congestion on downtown streets is reduced and passengers are provided with a faster ride.

In the 1970s, the Jamaica Avenue elevated structure was torn down in downtown Jamaica. On December 11, 1988, the New York City Transit Authority (NYCTA) opened the Archer Avenue Rapid Transit Line in Jamaica, Queens. This new two-level, three-station, four-track subway extension restored J line service between Jamaica and lower Manhattan. It also shifted E line express service to midtown and lower Manhattan from Hillside Avenue to Archer Avenue (Figure 1). Originally, the extension was to continue into southeastern Queens, an area without rapid transit service, but the fiscal crisis in the previous decade forced a cutback in the scope of the project. The terminus of the Archer Avenue line was only ½ mi from the existing Hillside Avenue line and did not have a great deal of residential density nearby. An essential to the success of the project was feeder bus service. However, the restructuring of bus service did not involve the conversion of radial routes to feeder routes, but rather, the shift of feeder routes from one rapid transit line on Hillside Avenue to a

new location on Archer Avenue. These two avenues form the northern and southern boundaries of the Jamaica central business district (CBD), which is one of the two major commercial areas in Queens.

The change in bus service created by the opening of the Archer Avenue line is described. The planning process, ultimate bus service plan, and constraints are noted. Elements of the marketing effort are presented. Actual operation of the bus routes in the first 6 months after the change is also discussed. The conclusions focus on important points contributing to, or detracting from, the overall success of the bus system revisions.

## BUS SERVICE AREA

The NYCTA bus service from Jamaica is oriented toward the east and southeast, which is the origin for trips into Jamaica. There are two main corridors by which buses enter and leave the Jamaica CBD—Hillside Avenue from the east, and Merrick Boulevard from the south (Figure 1). Before the opening of the Archer Avenue line, passengers in the Hillside Avenue corridor gained access to the E and F Queens Boulevard express trains at 179th Street, which was the first stop on both lines. Passengers in the Merrick Boulevard corridor entered at the 169th Street station, where only the E train stopped during peak hours. On leaving Jamaica, the bus routes serve the various communities of eastern and southeastern Queens. The six Merrick Boulevard corridor routes are of primary interest in terms of service planning for Archer Avenue.

Local bus service is also provided by four private bus companies in Queens, three of which also serve Jamaica. Only Jamaica Bus Corporation, which enters Jamaica from the south via Guy R. Brewer Boulevard and 160th Street, made any changes to their route structure as a result of the opening of the Archer Avenue line. The changes were relatively minor. The Metropolitan Suburban Bus Authority (MSBA), a public authority and Metropolitan Transit Authority (MTA) subsidiary that operates buses in Nassau County, has several routes connecting with the subway in Jamaica. Most of these routes enter Jamaica via Hillside Avenue. Only one enters Jamaica via Merrick Boulevard.

The NYCTA and private bus companies operate a few bus routes that enter Jamaica from the north. However, travel volume into Jamaica from northern areas is relatively low

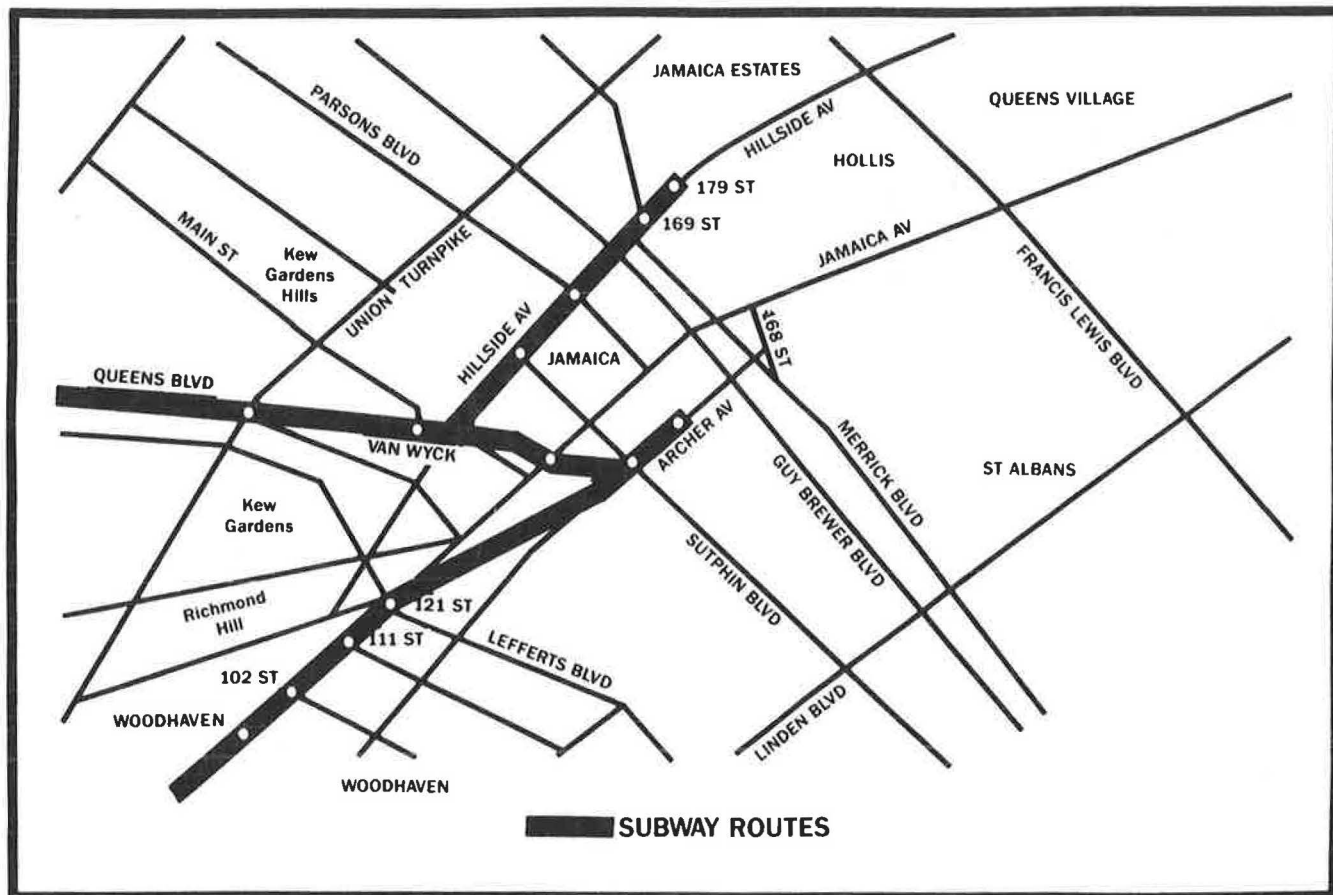


FIGURE 1 Archer Avenue and Hillside Avenue subway routes.

because there are more convenient ways to travel either to the Queens Boulevard subway or directly into Manhattan using private express bus routes. Competing commercial areas are also within easy reach.

#### PLANNING PROCESS FOR ARCHER AVENUE BUS SERVICE

Once an opening date was established, the NYCTA accelerated the process of planning bus service to the new Archer Avenue line. The operations planning department of the Authority was tasked with planning service for both the rapid and surface transit. The operations planning department was also responsible for the coordination of bus and rail planning. At the outset of this process, attention was focused on the Merrick Boulevard corridor routes. These routes were located closest to the first station on the Archer Avenue line, and could easily be rerouted without increasing mileage. In addition, experience elsewhere in New York City indicated that the majority of riders transfer from bus to rapid transit at the first available opportunity. However, even if Hillside Avenue routes were extended to Archer Avenue, it was considered unlikely that any significant number of riders would opt for a longer bus ride to reach the new station. Southeastern Queens, which the Archer Avenue line in its original form was intended to serve directly, seemed the most logical source of ridership

for the new line. A preliminary decision was made to focus on the Merrick Boulevard corridor buses as candidates to be rerouted to Archer Avenue.

Before completing this choice, an origin-destination survey of Merrick Boulevard corridor bus passengers was undertaken. Riders were counted and received a survey card as they departed one of the six Merrick Boulevard corridor routes in Jamaica between the hours of 5:30 a.m. and 3:30 p.m. on Monday, June 1, 1987. Jamaica-bound riders boarding Merrick Boulevard corridor buses during these hours were also counted and surveyed. Survey cards were distributed to 54 percent of the 21,500 passengers, and 1,020 usable surveys were returned, representing 8.8 percent of the total number of surveys distributed.

Survey results showed that 68 percent of Merrick Boulevard corridor bus passengers boarded the subway in Jamaica, whereas 23 percent transferred to another bus and 9 percent walked to their final destination (1). The percentage of bus passengers bound for the subway was fairly constant at all times of the survey and slightly higher in the midday period than in the peak period. This emphasized the importance of quick, direct access to the subway throughout the day for Merrick Boulevard corridor bus riders. However, in providing subway access it was also vital to maintain transfer connections for the 23 percent of passengers who took another bus once they arrived in Jamaica. Any service plan needed to take into consideration the convenience of these riders because Jamaica

was the final destination of only 9 percent of the Merrick Boulevard corridor bus riders.

The parameters of the service plan emerged from the results of the origin-destination survey. Direct access to the subway, maintenance of the connectivity of the existing bus route system, and continued access to the Jamaica CBD were primary goals. Three proposals incorporating various options to meet these goals were drawn up and presented at a public hearing in February 1988. The proposals differed primarily in how bus connections in the Hillside Avenue corridor were maintained. One proposal called for the continuation of one Merrick Boulevard corridor route along its current path to Hillside Avenue, a second for the extension of selected routes from Hillside Avenue to Archer Avenue, and a third for a new route connecting the two corridors and traversing the Jamaica CBD.

Because of the magnitude of the Archer Avenue project, the public hearing process was modified to permit greater community input. Usually, a specific proposal is presented at a single public hearing and is then forwarded, along with oral and written public comments, to the MTA Board for a vote. In this case, the first public hearing presented options under consideration. After public comment was received, a proposed service plan was presented at a second public hearing in June 1988. The service plan was presented in two phases to ensure maximum opportunity for community participation. This proposal was then further modified and finalized in August 1988.

In addition to the public hearings, an extensive community outreach effort was carried out throughout 1988. Members of the NYCTA government relations unit met informally with local politicians, community board members, and community groups to explain the rationale for the proposed changes.

The planning process also addressed the operational needs of the project, including passenger drop-off and boarding areas, and a staging area for buses. An entire block along Archer Avenue, adjacent to the main station entrance, was designated as the drop-off area. On the opposite side of the street, where passengers would exit the subway and board the buses, a canopy was designed to extend the length of the sidewalk between the two station exits. Exclusive bus lanes alongside the canopy were planned to allow buses to enter and leave the boarding area quickly. Beyond the station, a narrow roadway, separated from Archer Avenue by an island, was widened to be used as a staging area for buses. This area is called a teardrop and allows most buses to avoid a loop around the block in turning around. Finally, to maximize subway-bus coordination during peak hours, a holding light was planned for the canopy to enable buses to meet arriving trains.

#### **THE ARCHER AVENUE BUS SERVICE PLAN**

The Archer Avenue bus service plan was prepared at the conclusion of the public hearing process. The plan called for the rerouting of the six Merrick Boulevard corridor bus routes to serve the Archer Avenue line (Figure 2). Three routes operating along or across Hillside Avenue were extended to Archer Avenue (Figures 3 and 4), and walking transfers were provided to other Hillside Avenue routes. The decision of what routes to extend was guided by the results of the origin-

destination survey, which indicated the routes Merrick Boulevard corridor riders transferred to most frequently. Two of the extended routes were continued past the first stop of the new Archer Avenue line to connect with the Long Island Rail Road Jamaica station. The walking transfers to other Hillside Avenue routes involved a two-block walk from Archer Avenue to the 165th Street bus terminal, where most of the Hillside Avenue corridor bus routes originate. The combination of rerouting, route extensions, and walking transfer privileges met the goals of subway access and connectivity. An analysis of the destinations of Merrick Boulevard corridor bus passengers that did not transfer to the subway or another bus revealed that the majority would not be adversely affected by the rerouting.

The service plan was not without opposition. Community members and local politicians called for a choice of destinations between Archer and Hillside Avenues for Merrick Boulevard corridor passengers, either by rerouting some routes in the corridor or by establishing multiple destinations for each route. Some also called for Hillside Avenue corridor bus routes to serve the new Archer Avenue line. The Jamaica Chamber of Commerce argued that the plan would take potential customers farther away from their stores. Speakers at the public hearings also expressed views that rerouting certain routes did not take advantage of the opportunity to make more dramatic improvements in service.

In its final bus service plan (2), the NYCTA responded to some of the community proposals but disagreed with others. Public demand for a choice of destinations in Jamaica appeared reasonable; however, the Authority was opposed to split destinations for any route. Confusion and inefficient operation would result in rerouting some Merrick Boulevard corridor routes to Archer Avenue while leaving others at Hillside Avenue. The Authority also considered this demand to be prompted by existing conditions. Archer Avenue was perceived as desolate and forbidding whereas Hillside Avenue was more familiar. In addition, the Hillside Avenue and 169th Street station had express service at the time, but would have only local service under the rapid transit portion of the Archer Avenue service plan. There were no intermodal facilities at Hillside Avenue, not even shelter from inclement weather, and the subway station itself had narrow platforms. At Archer Avenue, on the other hand, an extensive bus canopy was planned, and station amenities were superior. The final bus service plan rerouted all Merrick Boulevard corridor bus service to Archer Avenue to conform with the goals of providing direct access to the new subway station and expediting subway service.

The Jamaica Chamber of Commerce argued to route the subway via Jamaica Avenue in off-peak hours. Jamaica Avenue is the spine of the CBD and one block north of Archer Avenue. However, congestion along Jamaica Avenue, additional distance and travel time required, and the 70 percent of Merrick Boulevard corridor bus passengers bound for the subway in the midday period led the NYCTA to change the more direct route via Archer Avenue at all times of the day. One bus route entering Jamaica from the west via Jamaica Avenue was extended to the eastern end of the CBD and increased the number of bus routes to four along Jamaica Avenue in the CBD. To meet the concern that the NYCTA was abandoning the northern half of the CBD, a Hillside Avenue corridor bus route that had previously terminated at

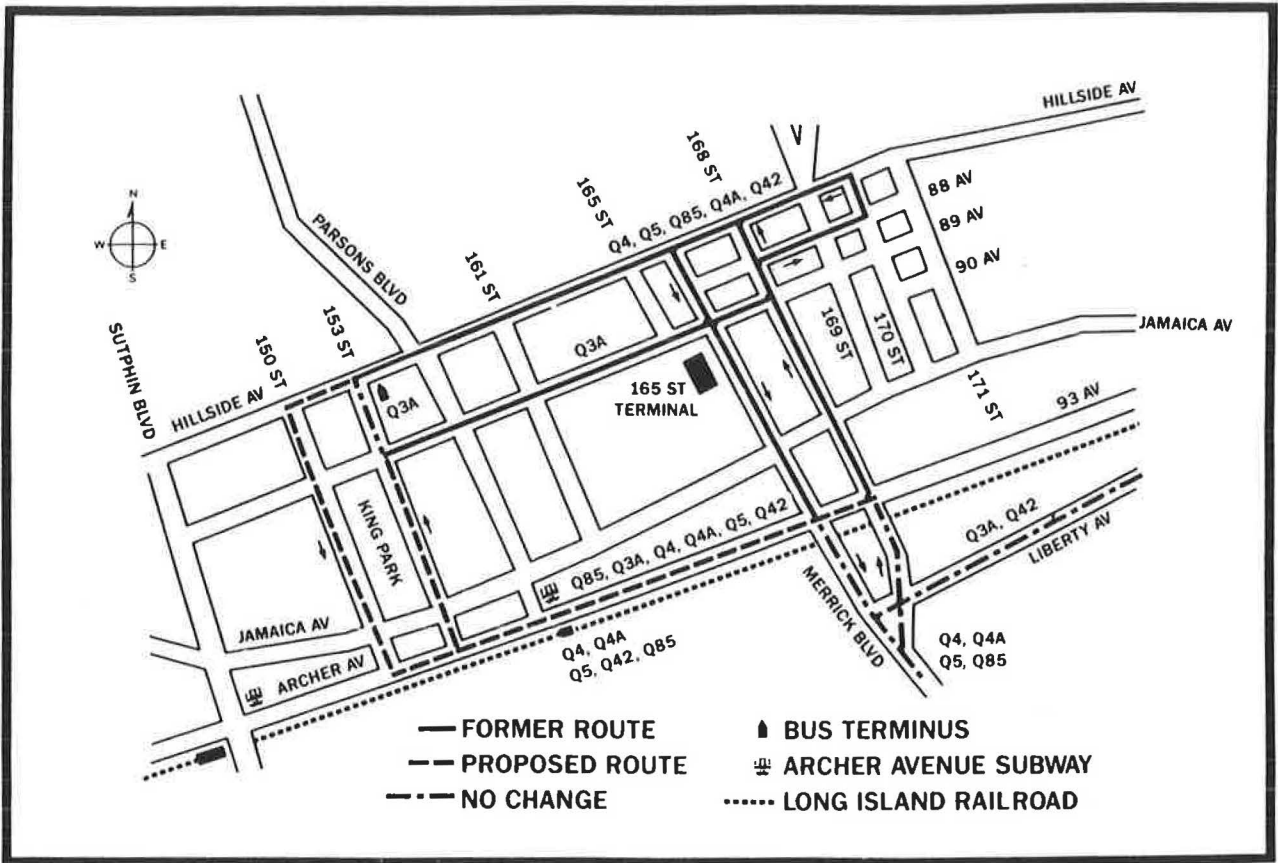


FIGURE 2 Merrick Boulevard corridor rerouting.

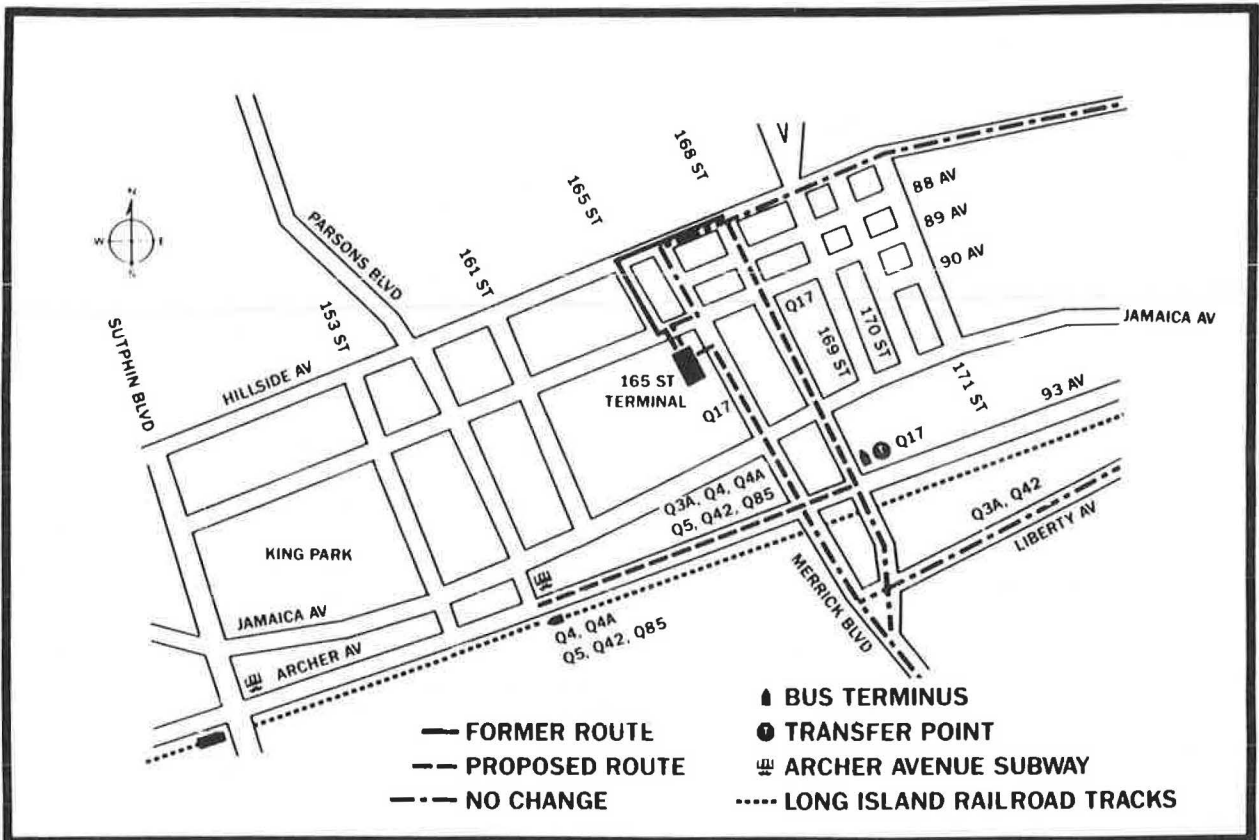


FIGURE 3 Q17 extension.

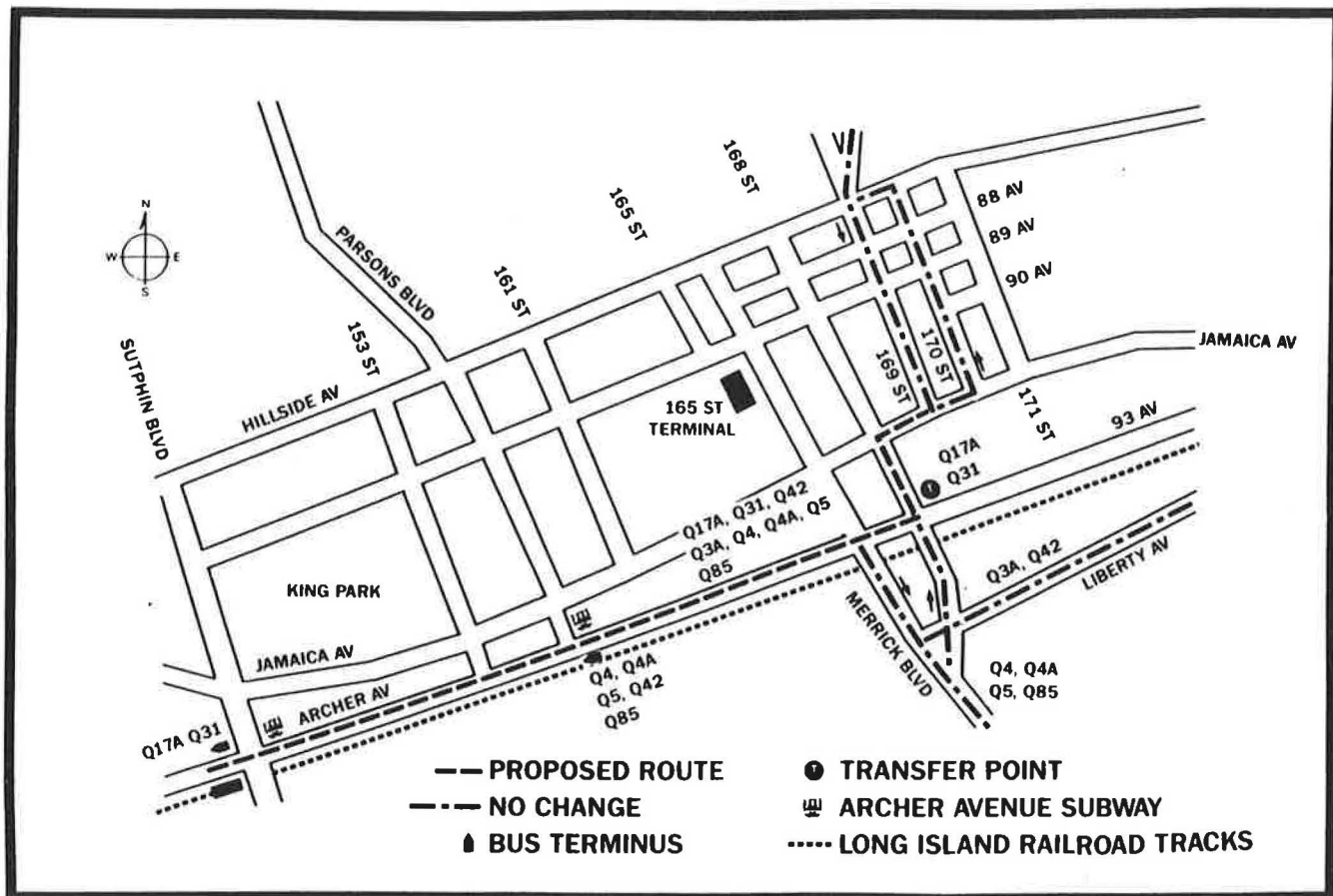


FIGURE 4 Q17A/Q31 route extension.

the first subway stop at 179th Street was extended to the 165th Street terminal. Plans also were advanced to upgrade the terminal, which was an old facility in a state of general disrepair.

A major feature added to the bus service plan after the public hearings was limited-stop service on three of the six routes serving the Archer Avenue line. On each route, limited-stop buses in the peak hours continue to make all stops on the outer portion of the route but stop only at major transfer points on the route's inner portion. Short-turn buses make all local stops on the inner portion of the route. Limited-stop service reduces travel time by 5 min and continues to provide all transfer connections on the route.

Another advantage to limited-stop service was that the decrease in travel time would allow the NYCTA to compete more effectively with the vans that have dominated in Southeast Queens over the past decade. Some of the vans are regulated by New York State; however, the majority operate illegally, are unregistered and uninsured, and do not adhere to traffic regulations. Limited-stop service would allow the buses to compete with the vans in terms of travel time and regain some of the ridership lost in recent years.

The bus service plan submitted for approval to the MTA Board contained the following major elements:

- Direct bus service to the Archer Avenue line by rerouting the six Merrick Boulevard corridor buses;

- Connections provided by the extension of selected Hillside Avenue routes and by provision of walking transfers between Archer Avenue and the 165th Street bus terminal; and

- Limited-stop service in peak periods on three of the six Merrick Boulevard corridor routes.

The MTA Board voted to approve this service plan. However, the Jamaica Chamber of Commerce brought a lawsuit to prevent the plan from going into effect. The bus changes did take place in conjunction with the opening of the Archer Avenue line on December 11, 1988. However, the out-of-court settlement between the Transit Authority and the Jamaica Chamber of Commerce introduced a new circulator route within the Jamaica CBD, extended two more Hillside Avenue corridor routes to the 165th Street bus terminal, and proposed an extension of certain bus routes operated by a private carrier to the 165th Street terminal from an on-street layover two blocks away.

#### MARKETING

The marketing effort for the Archer Avenue line had both city-wide and local aspects. Rapid transit changes affecting Brooklyn and Manhattan were also scheduled to take place on December 11. The first new segment of a rapid transit line

in 20 years, the central focus of the advertising campaign was the opening of Archer Avenue. A local advertising agency was engaged to prepare the advertising campaign.

The city-wide campaign included full-color brochures, newspaper and radio advertisements, a Sunday newspaper insert, and new subway maps. The bus route changes were mentioned in several of these efforts but the local aspect of the marketing effort focused on mailings to thousands of Southeastern Queens households and on preparation of specific route brochures. Eleven new bus brochures for the six Merrick Boulevard corridor routes and the routes being extended were prepared by the Transit Authority's marketing department. Each brochure included a route map, transfer locations, a description of the changes in the route, and a timetable. The brochures for the three routes receiving limited-stop service also included a description of the new service. The effort was the first large-scale preparation of route-specific brochures and timetables, although brochures had been distributed for individual bus routes on the occasion of route changes.

A large part of the challenge of any marketing campaign is ensuring that the material reaches its intended audience. A direct mailing to households with zip codes served by the Merrick Boulevard corridor bus routes reached people who did not use public transportation and those who did not read newspapers. Although no formal study of its effectiveness has been undertaken, this technique had been used in previous cases of route extensions and had elicited positive feedback from the community.

Distribution of the route-specific brochures on the buses was more chaotic. One of the hallmarks of the Archer Avenue project was that different departments within the NYCTA worked closely together to ensure its success. However, this approach did not lend itself to the establishment of procedures to be carried over after the changes were in effect. Consequently, the depots' supply of brochures for certain routes was reduced quickly. After the first few days, the majority of buses either had no brochures or brochures for a different route. At bus stops, information was available in the form of maps and timetables contained in guide-a-ride cannisters (attached to poles at bus stops) and was updated for all affected routes before December 11. Efforts have since been undertaken to make the reprinting and restocking of route brochures a routine process.

The marketing effort overall was successful in achieving its primary goal to inform riders of the December 11 changes. Specific route improvements such as limited-stop peak-period bus service may have received more attention in a less hectic atmosphere, in which there were not so many systemwide changes. The marketing effort needed to focus more on information and less on enticements to use the system because of the magnitude and sheer volume of service changes taking place on December 11. Follow-up work has been limited, mostly involving second printings of the bus route brochures.

## OPERATION

Prior to the Archer Avenue opening, plans were designed to monitor various aspects of bus operations. Among the elements to be monitored were the overall operation at the Archer

Avenue station, particularly in the evening peak period, limited-stop service, operation of the extended routes, and transfer activity. Traffic checkers were deployed extensively to measure ridership.

Because the rerouted Merrick Boulevard corridor buses stopped within sight of the subway entrance, the morning peak period did not present a problem at the station. Several Transit Authority personnel were stationed at the major transfer point to reach Hillside Avenue, to assist riders in finding their bus. Morning operations on December 12, 1988, proceeded smoothly. However, there was more transfer activity than expected. In the evening peak period, employees were posted at the subway exits to steer riders to their buses. Because construction of the bus canopy at Archer Avenue was delayed, a temporary canopy was built with a narrow wooden sidewalk and signs at the bus stops for each of seven routes—the six Merrick Boulevard corridor NYCTA routes and one route operated by the Metropolitan Suburban Bus Authority. Buses were staged in a turnaround area to the west of the canopy. For the first two evenings, employees at the canopy would contact a dispatcher in the staging area when a bus was needed for a particular route. Intended to match bus departures with the arrival of subway passengers, this procedure resulted in long lines, service delays, crowded conditions under the temporary canopy, problems at the major transfer point several blocks to the east, and considerable passenger disgruntlement. Late in the second evening peak period, the decision was made to dispatch buses from the staging area only according to the route schedules. By the evening of the third day, the combination of schedule-based dispatching of buses and increased passenger familiarity, both with the layout of the canopy and the new station, considerably eased the operating problems and allowed the intermodal transfer point to operate as planned. The concentration of passengers and buses for seven routes in a clearly demarcated area has to a large extent kept unlicensed, illegal vans from operating at the canopy and siphoning off NYCTA passengers. Traffic enforcement in the first two weeks by the New York City Department of Transportation also helped to keep traffic moving and to keep illegal vans out of the canopy area.

Transfer volumes exceeded expectations at the Merrick Boulevard corridor major transfer point, Archer Avenue and 165th Street, which was redesigned on the first day of operation. A universal stop at the transfer point approximately one-half block in length was extended to cover nearly two blocks, and dedicated stops for each route were established. This change, along with the presence of NYCTA employees to direct transferring passengers to the appropriate bus stop, enabled the transfer point to function effectively. However, there is still inadequate shelter for waiting passengers on the narrow sidewalks and unresolved disputes with property owners. The peak demand for passengers transferring to Merrick Boulevard corridor buses occurred at 3:00 p.m., which indicated a high proportion of transferees were intermediate and high school students. It was hypothesized that a low proportion of these students had responded to the origin-destination survey, leading to low predicted transfer volumes, with actual transfer volumes heavier than expected. Also, lack of knowledge of the rerouting or a resistance to changing established travel patterns may have inflated transfer volumes in the first weeks of operation.

Limited-stop bus service presented no problem in the morning because the overwhelming majority of passengers were either bound for Jamaica or alighted at a transfer point. However, in the evening, passengers had to learn to look not just for their route but also for either a local or a limited bus. There was insufficient room at the temporary canopy to form two separate lines for buses, and considerable confusion was created. However, if a more pronounced education effort had been undertaken before the Archer Avenue opening and focused on the actual operation of limited-stop service, much of this confusion would have been prevented. As riders became accustomed to limited-stop service, it met with a high degree of acceptance and approval. Observations indicated a balance in local and limited peak-period loads. Passengers on one of the Merrick Boulevard corridor routes not served by limited-stop buses petitioned to extend limited-stop service to their route. The general acceptance to limited-stop service has led the Transit Authority to explore its use in the Hillside Avenue corridor.

The two bus routes crossing Hillside Avenue that were extended to the Jamaica Long Island Rail Road station proved to be more heavily used than anticipated, especially in the morning peak hours. The original proposal had been questioned by some who doubted that there was any demand for access to or from the train station. The extension to the train station resulted in an average of 20 additional passengers on each bus in the morning peak hours during the first weeks of operation even though it is not the heaviest route segment.

In an out-of-court settlement reached between the NYCTA and the Jamaica Chamber of Commerce, a new downtown circulator route was established. Transfer privileges were revised to make it easier to transfer between buses in the Hillside Avenue and Merrick Boulevard corridor. The Jamaica link operates on a 15-min headway for most of the day and has been poorly patronized. Were it not for the special circumstances surrounding the birth of this route, it would be high on the list of routes to be discontinued. Its low ridership translates to a low use of the new transfer privileges, which to date have not been subject to abuse.

The latest combined ridership figures on the Archer Avenue and Merrick Boulevard corridor routes reveal ridership increases overall on five of the six individual routes. On the Q83, the only route showing a decline in riders, a morning

branch to the 179th Street and Hillside Avenue subway station was discontinued. Some of these riders are now served by a different route. Table 1 presents these ridership figures. However, revenue on Jamaica Depot bus routes—five of the six Merrick Boulevard corridor routes operate out of the Jamaica Depot—decreased by 4 percent between February 1988 and February 1989. These conflicting reports indicate that it will take time to determine the ultimate impacts on ridership and revenue, of the rerouting of Merrick Boulevard corridor buses. Recent counts on the Q4 indicate that limited-stop service is functioning as planned, with slightly heavier loads on limited trips. The most recent ridership count on the new Jamaica link downtown circulator shows only 170 daily riders on 53 trips.

## CONCLUSION

The Archer Avenue experience suggests four major factors vital in determining the success of a service change of this magnitude: (a) real benefits for riders, (b) communication of the nature of the service changes and benefits to both riders and potential riders, (c) coordination with the business community and local political groups, and (d) a willingness to innovate. The following paragraphs summarize the effects of these factors in the implementation of the Archer Avenue bus service changes.

The rerouting of heavily traveled buses to serve a new rapid transit line is often seen as a simple restructuring of service to make more efficient use of facilities and resources. However, from the riders' perspective it is a forced change in established travel routines. Conveying accurate and timely information concerning both the change itself and the reasons for the change is of prime importance in making a successful transition to the new route structure. It helps to offer increased amenities and a faster trip as a result of the change. Among the primary benefits of rerouting bus service to Archer Avenue were a much improved chance of getting a seat on the subway (because this was the beginning of the line), a choice of subway service, and an improved environment for transferring between subway and bus.

The marketing and community outreach efforts emphasized these benefits and provided not only news on the changes taking place but also information not previously available such as bus timetables. The direct mailing might have been enhanced by a brief brochure outlining upcoming service changes, transfer locations, and answers to frequently posed questions, and distributed directly to Merrick Boulevard corridor bus passengers 1 or 2 weeks before the implementation date. Although this additional step appears redundant, experience in the first week after the rerouting indicated that, despite direct mailings, newspaper advertisements, and public notices, many riders were still unaware of what was happening. Local politicians, community board members, and members of the business community were kept fully abreast of all of the changes. It is possible that because the marketing effort addressed city-wide changes, some Merrick Boulevard corridor riders did not bother to check fully how these changes might affect them. Among the implications for future marketing efforts is the primary importance of emphasizing specific information on the impacts of service changes. Direct mailings and route-specific brochures, although not universally successful, worked

TABLE 1 BEFORE-AND-AFTER RIDERSHIP ALIGHTING MERRICK BOULEVARD CORRIDOR BUSES IN THE MORNING PEAK PERIOD AT THE SUBWAY IN JAMAICA

Route	Number of Riders		Percent Change
	Prior to Archer Avenue <sup>a</sup>	After Archer Avenue <sup>b</sup>	
Q4	2,120	2,472	+14
Q5	1,556	2,124	+27
Q42	383	554	+31
Q83	2,345	2,081	-13
Q84	1,214	1,473	+18
Q85	2,360	2,821	+16
Total	9,978	11,525	+13

<sup>a</sup>Prior counts: October 1986, August and October 1987, March and June 1988.

<sup>b</sup>After counts: January, February, and March 1989.

best in providing information on the Archer Avenue changes, whereas newspaper ads and public notices were less successful from this perspective.

The delay in construction of the bus canopy at Archer Avenue and the problems with placing bus shelters at the major transfer point diluted the argument that service to Archer Avenue offered more passenger amenities. Instead of a spacious, well-lit, sheltered waiting area with two lanes of traffic reserved for buses, bus passengers at Archer Avenue were crowded under a temporary canopy and buses pulling away from the curb were forced to negotiate regular traffic. Another city agency was responsible for construction of the canopy, but the excessive delays focus attention on the importance of ensuring that all amenities are in place at, or soon after, the service change. Although the temporary canopy provided overhead shelter that Merrick Boulevard corridor passengers did not have at Hillside Avenue, its narrow sidewalk and unattractive appearance detracted from the perceived benefits.

The positive impact of transit service on local business activity is generally accepted. To outsiders, the intense opposition of the Jamaica Chamber of Commerce to the service plans may seem bizarre. In fairness, the Chamber did not object to the rerouting of peak-period bus service via the most direct route, and certainly did not object to a new rapid transit line. Its concerns focused on the eastern end of the CBD, which it viewed as receiving less direct bus service because passengers bound for businesses in the vicinity of the 165th Street bus terminal or along Jamaica Avenue would now have to walk one to two additional blocks. Its concerns were exacerbated by the closing of the only major department store left in Jamaica in the latter part of 1988. In its out-of-court settlement, the NYCTA added service to the CBD in response to these concerns. However, the origin-destination study of Merrick Boulevard corridor passenger destinations within Jamaica showed that approximately two-thirds of these passengers would have the same or shorter walk under the original service plan. It is possible, but unlikely, that adding this service to the final service plan would have avoided a lawsuit. The most likely outcome would have been continued pressure to compromise further, particularly on using Jamaica Avenue instead of Archer Avenue for off-peak service. The NYCTA has stated that the overall impact of these service changes on the Jamaica business community would be positive. Recent renewed commercial activity in long-dormant storefronts in the vicinity of the new subway station supports this. The new federal office building at the subway station location will also have a positive impact on the health of the Jamaica business community.

The lawsuit and the demands for split service between Archer and Hillside Avenues highlight the inability of transit service to satisfy every travel desire. However, the decision to reroute the Merrick Boulevard corridor buses to Archer Avenue has been borne out by the private sector. The van operators emphasized, at the time of the service changes, that they would continue to serve Hillside Avenue and 168th Street and thus positioned themselves as a clear alternative to NYCTA buses. In the ensuing months, the licensed van organization has petitioned the New York State Department of Transportation to allow their vans to serve Archer Avenue, and many of the unlicensed vans have joined together in a new formal organization that has also filed for permission to serve Archer Avenue.

Finally, a major project of this nature encourages and may force innovations in several areas. Among the key innovations is the provision of limited-stop service on a large scale in the Merrick Boulevard corridor, an idea proposed at the initial public hearing. This service has allowed the NYCTA to compete more effectively with the unlicensed vans in terms of speed, which is the major advantage of vans over buses. The delayed construction of an intermodal transfer facility is a major change from the on-street jumble of bus stops typical of other major transfer points in Queens on Hillside Avenue and in Flushing. The major marketing effort emphasizes a recent trend within the NYCTA of actively marketing its services. The cooperation of various departments within the NYCTA was not only necessary to the success of Archer Avenue but also laid the foundation for working together on other major projects and routine day-to-day issues.

The major changes involved in the Archer Avenue project reflect a determination to examine existing bus service closely and to recommend and implement changes called for by evolving travel patterns and trip destinations. This process, carried on throughout the city on a smaller scale, is perhaps the most important break from the past and resulted in improved and more efficient provision of service reflecting present travel needs.

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