

MTA New York City Transit and MTA Bus Company System-wide Service Standards

In accordance with Title VI of the Civil Rights Act of 1964 (“Title VI”), MTA New York City Transit (“NYCT”)¹ and MTA Bus Company (“MTA Bus”) have established System-wide Service Standards for each mode of service that is provided. The following fixed route modes are provided by NYCT: Subway, Local Bus and Express Bus. MTA Bus provides Local Bus and Express Bus modes.

1. Service Availability

Service availability is a general measure of the distribution of routes within a transit system. NYCT and MTA Bus use differing measures as a result of their dissimilar service area densities and operational characteristics. NYCT Bus services are designed to be complementary with NYCT Subway services, providing feeder routes to many subway locations, which are part of a fixed infrastructure, allowing riders to transfer easily between modes to complete their trips. Therefore, NYCT Service Availability includes both bus and subway stops.

The NYCT service area comprises the five counties of New York City: New York, Queens, Bronx, Kings and Richmond, and provides high density local, express and select bus routes and subway lines in a complimentary service pattern. The MTA Bus service area comprises the counties of Bronx, Kings, Nassau, New York, Queens and Westchester, providing express and local bus service.

NYCT (Bus & Subway)

NYCT measures Service Availability by the distance that a person must travel to gain access to its (Bus stop or Subway station) services. The distance to transit service is measured by the distance from the geographic center of a given Census tract to the closest available service. NYCT aims to provide transit service within ¼ mile from the geographic center of a given Census tract (or Centroid). Factors governing bus stop placement include route spacing, land use, population density and the location of major traffic generators, and type of bus service (local, limited or express).

MTA Bus

MTA Bus measures Service Availability by the distribution of express and local routes within the MTA Bus service area, which includes Bus Stop Spacing. MTA Bus uses different criteria for express service and local service bus stop spacing, pursuant to the “Bus Stop Spacing Guidelines.” Local bus routes have minimum desired spacing interval of approximately 750 feet or about three blocks between bus stops while express bus routes have a minimum desired spacing interval of approximately 1,300 feet or about five blocks between bus stops.

2. On-Time Performance

On-Time Performance is a measure of trips completed as scheduled. Several criteria may define what is considered to be “on time.”

¹ For purposes of these standards and policies, “NYCT” refers to the New York City Transit Authority and its statutory subsidiary, Manhattan and Bronx Transit Operating Authority (“MaBSTOA”).

NYCT (Bus & Subway Wait Assessment)

NYCT’s measurement of On-Time Performance is called “Wait Assessment.” “Wait Assessment” is measured on bus routes with the highest passenger volume within each borough (plus eight associated limited services and two +SelectBus routes) and for all Subway routes, as part of the Performance Indicator (“PI”) program.

Wait Assessment measures whether scheduled headways are maintained during the hours of most frequent service and is defined as the number of service intervals that are no more than the scheduled interval plus the following:

| | |
|---|--------------------------------|
| <u>Local Bus</u> | <u>7 am to midnight</u> |
| <u>Acceptable Interval in Excess of Scheduled Interval</u> | |
| + 3 Minutes (Peak), + 5 Minutes (Off-Peak) | |
| Peak hours are 7 am - 9 am and 4 pm - 7 pm | |
| Off-Peak hours are 9 am - 4 pm and 7 pm - 12 am | |
| | |
| <u>Subway</u> | <u>6 am to midnight</u> |
| <u>Acceptable Interval in Excess of Scheduled Interval</u> | |
| + 25% of scheduled interval (6 am- midnight) | |

Routes may be added or deleted to the program as required (i.e., a new +SelectBus route is started).

MTA Bus (On-Time Performance)

MTA Bus uses the following methodology to measure On-Time Performance. On-Time Performance is presently assessed by MTA Bus by the use of traffic checks of the bus trips that either leave an enroute location or arrive at a terminal in accord with the public schedule. The times that the buses leave timepoint locations are then tabulated. These tabulations result in a measure of the On-Time Performance.

The parameters for On-Time Performance assessment require that each bus trip of a particular route must not be earlier than one minute before or not be later than five minutes after its scheduled departure time at each of its assessed (terminal or enroute) time points.

3. **Vehicle Headway**

Vehicle Headway is the time interval between two vehicles, traveling in the same direction on the same route.

Subway

The Subway headway, expressed in minutes, indicates the average maximum amount of time that a person should spend waiting for a train during the analyzed time period. Shorter headways, with less

waiting time, are indicative of "better" service provision. Average headways are taken from official and authorized subway timetables, and display the average scheduled interval between trains (in minutes) for a given route at a specific time-point location. If there are a large number of riders, then the headway is short since more frequent service is needed to maintain guideline loading levels. Although headways are route specific, more than one service may run on a given set of tracks, at certain locations, thus decreasing overall wait times.

NYCT subway headways are based on publicly approved Service Guidelines, which specify "policy," or minimum service headways, which are 10 minutes (Peak, Weekday Mid-day and Saturday Mid-day), 12 minutes (Weekday Evening, Saturday Evening and Sunday) and 20 minutes (Overnight) so that even during low ridership hours, transit riders have an expectation that a fixed level of service will be maintained.

Bus

The parameters for setting bus headways for local and express services are based on Board approved system-wide loading guidelines. If there are a large number of riders, then the headway is short since required trips must be more frequent. The guidelines also specify a "policy," or minimum service headway, so that even during low ridership hours, transit riders have an expectation that a fixed level of service will be maintained. The guideline used by NYCT and MTA Bus is based on the volume of ridership passing maximum load points ("MLPs"), with lessening thresholds of service (longer headways) when loads do not justify more frequent service. The guideline varies by type of service (express and local) and size of bus (45-foot express, 40-foot standard local, 60-foot articulated local). We schedule for up to a maximum of a seated load on express buses at all times, up to a maximum of a seated load on local buses during off-peak periods, and up to a maximum of approximately 50% standees in addition to seated load on local buses during peak periods.

4. **Vehicle Load**

Vehicle loading standards are established by Board-approved passenger loading guidelines, which mandate acceptable maximum vehicle capacities. NYCT and MTA Bus use the average load factor for conducting evaluations under Title VI.

Subway

For Subway travel, most passengers travel toward the Central Business District ("CBD") in the a.m. rush period, and away from the CBD during the p.m. rush period. Ridership is generally lower and spread over a longer period of time in the p.m. rush period. As a result, ridership levels at the MLP for most routes will be lower during the p.m. rush period than the a.m. rush period.

The load factor is the average passengers per car divided by the scheduled load. The number of passengers per car ("Average/Car") is the number of passengers divided by the number of cars, with the result rounded to the nearest whole number. The scheduled load is the Board-approved loading guideline for the class of cars in service. Subway loading guidelines differ for the three sizes of subway cars used by NYC Transit: "A" Division 51-foot cars (car classes R62, R62A, R142, and R142A), "B" Division 60-foot cars (car classes R32, R42, R143, R160A, and R160B), and "B" Division 75-foot cars (car classes R46, R68, and R68A). All subway service is scheduled to provide for standees

during peak periods. When service operates more frequently, the guidelines allow more customers per car. The maximum capacity for each car size is based on a standing space of three square feet per standing customer. The number of allowable peak period riders per “A” Division car is 110. Similarly the numbers of allowable peak period riders per “B” Division cars are 145 and 175, for 60-foot and 75-foot cars, respectively.

All subway service is scheduled up to 125 percent of a seated load during off-peak periods.

A factor of less than one (1.0) indicates that the average load is below the loading guidelines. In cases where factors are greater than one (1.0), the fixed rail infrastructure and safe distance vehicle operation may prevent adding service on lines running at maximum operational levels.

Bus

The guideline for average riders per trip for local and express bus services is based on official system-wide loading guidelines, previously approved by the Board. These loading guidelines vary between different times of day/week, bus sizes and bus route configurations (grid vs. feeder). A feeder route takes most riders to the same final destination in the morning, and takes them away from that point in the evening. The destination is often a transfer point such as a ferry terminal or a subway station. The MLP for a feeder route is usually at the destination point or at a stop very near the end, in the a.m. period, and at the same point, which becomes the new origin, in the p.m. period. In contrast, a grid route picks up and discharges passengers throughout the entire route, in both directions. The MLP of a grid route tends to be near the center of the route in both the a.m. and the p.m. periods.

The average load factor is the average riders per trip divided by the number of bus seats. The average number of seats per bus for Standard size, Coach, and Articulated buses are 40, 55 and 62, respectively. Therefore, a factor that is less than one (1.0) indicates that the actual loads are below established guidelines at the MLP point.

MTA New York City Transit and MTA Bus Company System-Wide Service Policies

NYCT and MTA Bus apply the following Policies for System-wide Policy Indicators, based on the NYCT Service Guidelines Manual, the Department of Subways (“DOS”) Rail Fleet Management Plan and the Department of Buses (“DOB”) Program Standards. The following fixed route modes are provided by NYCT: Subway, Local Bus and Express Bus. MTA Bus provides Local Bus and Express Bus modes.

1. Vehicle Assignment

Vehicle Assignment refers to the process by which transit vehicles are placed into service in depots and on routes throughout a transit system.

Subway

The assignment of subway cars to individual subway routes is guided by the practices outlined in the Rail Fleet Management Plan. As detailed in the Rail Fleet Management Plan, car assignments are based on several factors, which include ridership levels on each subway route, operational factors such as subway clearance and car class compatibility, and maintenance factors, such as the location of repair and overhaul facilities.

Ridership concerns, such as severe overcrowding, can lead to major capital investments to increase capacity, such as the purchase of additional subway cars or the construction of new subway lines like the Second Avenue Subway. Maintenance and operational factors are important as the NYCT fleet is not uniform and no single car class can operate in passenger service on all subway routes. NYCT Subways has two physically separate divisions with different gauges and, consequently, different car sizes. Cars and trains on the A Division (numbered routes 1 through 7, plus the S 42nd Street Shuttle) are physically smaller than those on the B Division. Signal system needs may affect car assignments and will become increasingly important as NYCT modernizes with Communications-Based Train Control (“CBTC”). New technology cars delivered since 2000 are all CBTC-compatible.

Subway cars are maintained on a daily basis at 13 car maintenance shops throughout the system, supported by two heavy overhaul shops, all of which handle specific car classes. As a result of the ridership, operational, and maintenance considerations outlined above, certain car classes tend to cluster at specific shops and, hence, are assigned to specific routes. Car assignments for individual routes and shops also tend to remain fairly steady for years, and sometimes decades, except when new fleets are replacing older fleets. Therefore, there is no applicable standard or guideline for subway fleet age.

Bus

NYCT and MTA Bus seek to maintain a uniform fleet age across the system, with the average fleet age standard for any depot or division between 6 and 7 ½ years. DOB has developed extensive supporting policies to facilitate compliance with this standard.

New buses are assigned to various depots in the system based on the needs of the individual depot, not the needs of the individual route. The assignment of vehicles is depot based, not route based. However, express buses are assigned only to express routes. Depot assignment is predicated on a

number of independent and interrelated factors, such as peak service requirements by mode, uniform fleet age and alternative fuel types.

The depots with the oldest buses will in general get the greatest share of any new buses. However, in order to properly maintain buses at each location, it is necessary that a limited variety of buses be assigned to each depot. This enables mechanics at a given location to be familiar with a variety of buses and minimizes inventory needs for repair parts. Specific equipment assignments for a route are not made within the depot; each route is served with the first bus available. The average bus age is independent of a particular route in a depot, given that bus assignments are not route specific.

2. Transit Amenities

Transit amenities refer to items of comfort and convenience available to the general riding public.

Subway

The transit amenities and corresponding standards listed below apply to Subway stations. The following measures are used to evaluate subway transit amenities:

- Benches - Benches are placed in paid areas on mezzanines or at platform level.
- Trash Receptacles - Trash receptacles are to be placed near seating benches and on platforms. Final locations will be based on the recommendations of the maintenance unit of the Stations Department.
- Train Arrival Annunciator - Every station, where the (24 hours) fare control area is on a different level from the train platform, has at least one train arrival annunciator to alert passengers with audio and/or visual components of impending train arrivals and to direct them to the proper platform.
- MetroCard Vending Machines (“MVM”) - Space permitting, there should be least two MVMs per entry control area (excluding High Entry and Exit Turnstile locations within a station) selling fare media with multilingual capabilities. Where space is not available for two MVMs, at least one MVM should be provided.
- Passenger Information Center (“PIC”) - PIC displays shall be installed in the unpaid zone of every full-time control area; installation depends on the availability of wall space; installation in part-time control areas depends on the display’s vulnerability to vandalism. Where available wall space does not permit complete installation of the PIC display, the items below should be displayed in order of priority: 1. Guide-A-Ride Maps 2. System Map 3. Neighborhood Map 4. Notice Board (for service notices of diversions) 5. Bus Maps.
- Subway System Maps - System maps shall be installed in both the paid and unpaid zones of stations. In unpaid zones, they will be installed as part of the PIC. They shall be wall-mounted at typical platforms. At island platforms, maps will be installed in free-standing frame elements parallel to the track and located so that they do not obstruct the flow of passengers.

Bus

Neither NYCT nor MTA Bus report on bus stops or bus shelters as these right-of-way amenity elements are maintained by the New York City Department of Transportation (“NYCDOT”).

MTA New York City Transit and MTA Bus Company Major Service and Fare Change Policy

1. Major Service Change

Prior to conducting a service change analysis under Title VI, NYCT and MTA Bus first determine whether a particular service change is considered to be major or minor.² If a service change is determined to be “major,” a Title VI analysis is conducted in order to determine whether the major service change will have a disparate impact or result in a disproportionate burden on any Title VI or Environmental Justice (“EJ”) protected class.

NYCT and MTA Bus use the following definitions of “major” service changes:

- Route restructuring actions resulting in at least a 25% change in overall route length
- Service frequency changes resulting in at least a 25% change in annual revenue vehicle miles (“RVM”) Annual RVMs are a compilation of Weekday, Saturday and Sunday RVMs.
- Span change actions resulting in at least one hour change in service span.

The following exceptions to the definition of “major” service changes apply:

- Demonstration projects or experimental service.
- Standard seasonal or holiday adjustments.
- Temporary schedule changes to enable performance of line maintenance or capital improvement work.
- Temporary changes in response to emergency situations, service disruptions or events beyond the control of NYCT or MTA Bus.

2. Fare Changes

NYCT and MTA Bus require a Title VI fare equity analysis to be performed for any proposed fare change presented to the Board.

3. Disparate Impact/Disproportionate Burden Policy

Adverse Effects

NYCT and MTA Bus perform statistical analyses for minority/non-minority and for at or below poverty/above poverty groups to assess if proposed changes may disproportionately affect any of the protected classes in terms of average trip cost, travel time or passenger loading (for Major Service Changes) or average fare media cost (for Fare Changes).

Threshold

Using a statistical test (t-test and/or Chi-square, where appropriate), NYCTA and MTA Bus will apply a 95 +/- 5% confidence level to ascertain if there are significant differences between any of the groups being compared, using results from the impact analysis.

² Multiple changes implemented concurrently as a single related action will be reviewed as a single change for purposes of determining whether such change is major.

- If the result falls within the boundaries of the test statistic, there is no “statistically significant” difference between the groups and no further analysis is necessary.
- If the result falls outside the test statistic there is a “statistically significant difference” between the groups associated with the service change. It then must be determined if the difference represents an adverse impact to any protected class (e.g., an increase in average travel time for minorities for a service reduction represents an adverse impact).
- Any adverse impact will result in a consideration of an alteration to the service change and/or implementation of mitigation measures, or, where neither alteration nor mitigation is possible, an explanation for the adverse impact and/or justification for the service change.