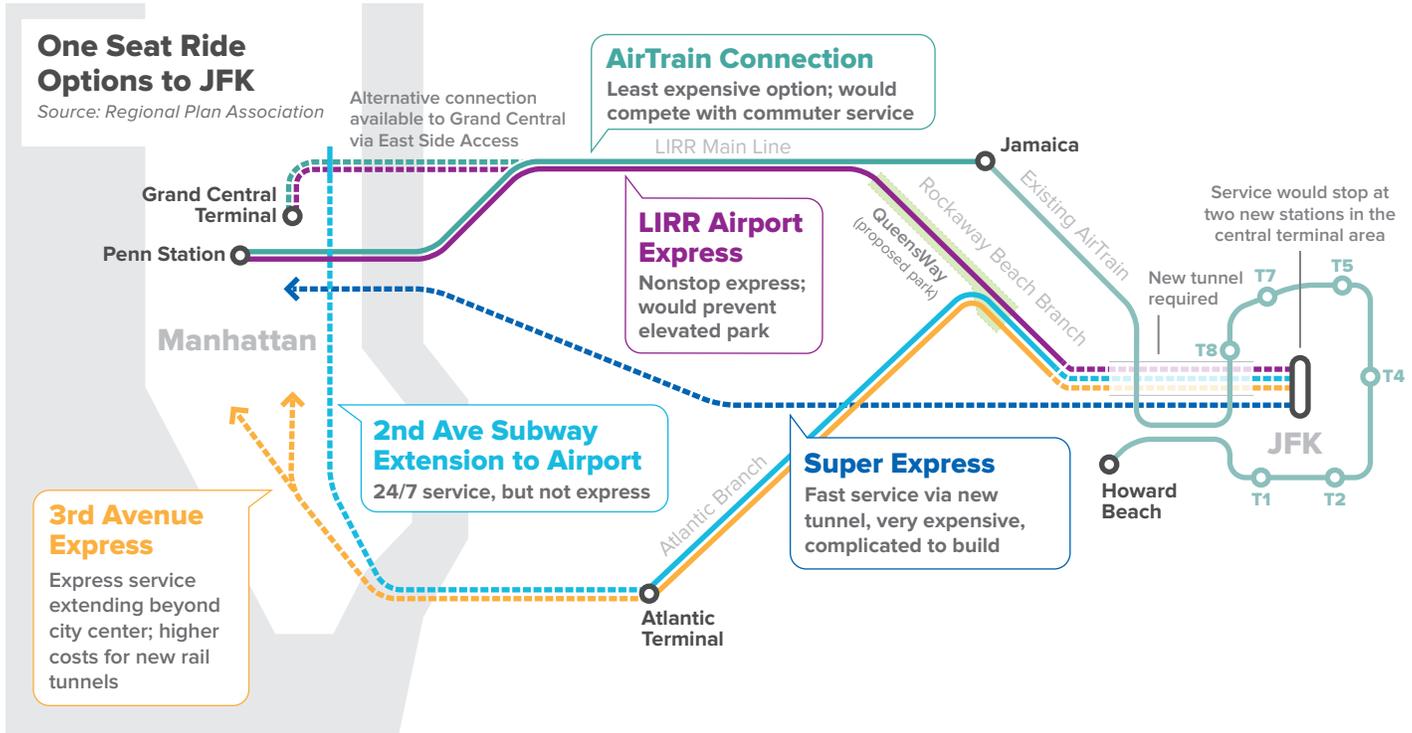


# Creating a One-Seat Ride to JFK

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Almost every major international airport has at least one direct transit service to its metropolitan center. Why should New Yorkers accept anything less? Here are five ways that it could be done. They range from extending the existing AirTrain to reactivating an unused LIRR right-of-way to building new rail tunnels for all or part of the trip to JFK.

RPA is evaluating all five options as part of **A Region Transformed**, a comprehensive plan for the metropolitan area due out later this year. To learn more about the plan, visit [rpa.org/fourth-plan](http://rpa.org/fourth-plan).

## Five Options

**AirTrain Connection:** Connect the AirTrain to the LIRR main line at Jamaica, creating a one-seat ride from Penn Station and Grand Central to JFK.

**LIRR Airport Express:** Extend the unused Rockaway Beach Branch LIRR line in Queens into the airport, and run service from Penn Station or Grand Central along the LIRR mainline to the branch line.

**2nd Ave Subway Extension to Airport:** Extend the Second Avenue subway to Brooklyn and connect to the airport using the Atlantic and a portion of the Rockaway Beach rights-of-way.

**3rd Avenue Express:** Connect a new rail line along Third Avenue in Manhattan through the Atlantic and a portion of the Rockaway Beach rights-of-way as part of a larger transformation of the region's rail network.

**Super Express:** Construct a new rail right-of-way, most likely a tunnel, between Manhattan and the airport.



**JFK AirTrain**  
 Photo: Port Authority of  
 New York and New Jersey

None of these options are easy. The cost and range of service they would provide varies widely, and some options could require tradeoffs between commuter service and airport access. Here are the pros and cons of each:

### Connect AirTrain to the LIRR

## AirTrain Connection

The existing AirTrain would be connected to Long Island Rail Road's main line at Jamaica station. It would require the extension of the line through the existing station area and the construction of a flying junction to connect the AirTrain to the LIRR main line. In the process, the existing AirTrain station would be eliminated and the AirTrain would instead stop at the main line track-level platforms at Jamaica station. We also explored a connection to the subway (the E train), but this option would require more extensive construction to connect both systems and raise technical compatibility issues. Furthermore, it would complicate service on the E, J and Z subway lines without offering competitive travel times to the Manhattan central business district.

### Pros

- ▶ Direct access to all JFK terminals;
- ▶ Could run express to Manhattan after departing Jamaica station;
- ▶ Would rely mostly on existing infrastructure;
- ▶ Would enable a one-seat ride to Penn Station and/or eventually Grand Central Terminal once East Side Access opens.

### Cons

- ▶ Incompatibility between AirTrain and LIRR main line. The power, train control, track geometry and vehicle performance/durability (buff strength) specifications are very different. In theory, a hybrid vehicle could be developed that could bridge both systems, though it's unknown whether this would be feasible.
- ▶ Inadequate East River capacity and limited train slots at Penn Station and Grand Central. The rail tunnel capacity under the East River is fully subscribed. Even with new capacity coming from the future East Side Access project connecting the LIRR to Grand Central, the Metropolitan Transportation Authority's plans to add Metro-North Railroad trains to Penn Station would consume the vacated LIRR slots. The only option would be to construct additional capacity or displace commuter trains. Commuter trains carry far more riders than the AirTrain would, and it would be very difficult to justify their elimination for a relatively smaller number of airport customers.
- ▶ Too many on-airport stops. The AirTrain was designed primarily as an automated people mover or internal circulator. Its stations are small, and there are many of them. A longer-haul express service should have fewer stations that are larger. As part of terminal consolidation, the AirTrain stations could be rebuilt and/or combined and some stops eliminated, but this would come with added costs.

## Options Using the Rockaway Beach Branch

The Rockaway Beach Branch<sup>1</sup> is an abandoned rail right-of-way that once was part of the Long Island Rail Road's commuter rail network. The right-of-way runs north-south for 4.8 miles from Rego Park to Howard Beach. The line also intersects with the LIRR's Lower Montauk and Atlantic branches, which currently are used by NYA Railway for freight and the LIRR to serve Atlantic Terminal in downtown Brooklyn, respectively.

There are three options for one-seat access to JFK using all or part of the Rockaway Beach Branch. All three options would serve JFK's main terminals directly and significantly increase transit capacity to JFK, because they would function in addition to the existing AirTrain. But all three alternatives would cost more than the AirTrain connection described above. In addition, there might be strong community opposition to reactivating the rail line, and some passengers likely would need to transfer to the AirTrain for access to some terminals, parking and rental car facilities.

The three Rockaway Beach Branch options include two commuter rail alternatives and one subway. All options would use the same alignment once they reached the boundary of the airport at Howard Beach, running on a subterranean right-of-way that would pass under the central airport terminal and include two to three stations.

## LIRR Airport Express

LIRR service would be restored along the Rockaway Beach Branch and the line extended to the airport. Some existing stations along the Rockaway Beach Branch could be reactivated as well. Service could be similar to London's Heathrow Express, which runs from Paddington Station to the airport, making no stops in between.

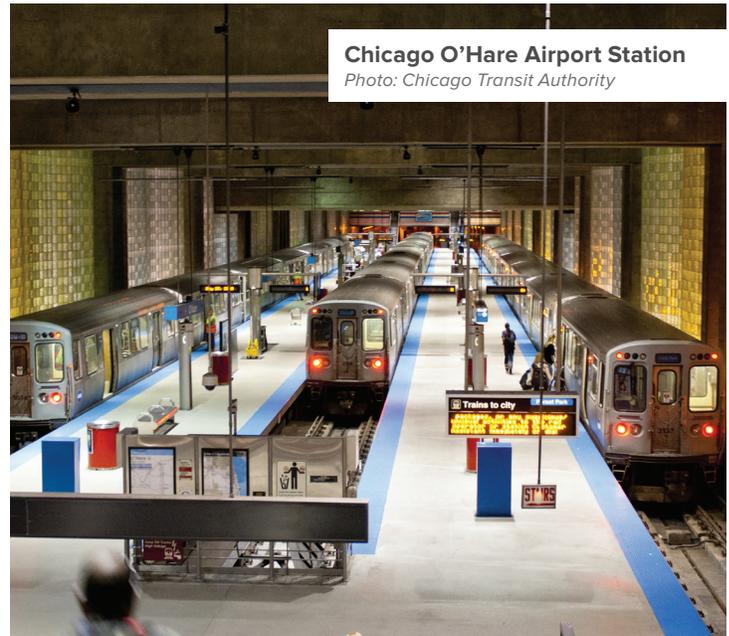
### Pros

- ▶ Could be done with little new infrastructure aside from the on-airport tunnel and stations;
- ▶ Could run nonstop express from JFK to Manhattan.

### Cons

- ▶ Would preclude the proposed QueensWay park and run through the densest residential area abutting the line;
- ▶ LIRR would need to reduce service on one or more of its existing commuter lines to divert 4-6 trains per hour to the airport, or construct new tunnels under the East River to provide new service without a loss on other lines;

<sup>1</sup> Reactivation of the Rockaway Beach Branch has been proposed in the past along with its conversion to a subway and busway. There is a strong case that the land along the Lower Montauk branch should be preserved for industrial uses and other goods movement purposes, which would eliminate the option of converting the line to a service that is incompatible with freight, such as a subway. This would eliminate an earlier proposal made by RPA to extend the F from 63<sup>rd</sup> Street via the Lower Montauk to the Rockaway Beach branch. Use of the viaduct as a busway would be a subpar alternative since there are no adjacent rights of way that would provide a rapid connection to Manhattan comparable to rail options, nor would it be compatible with any of the existing passenger services on the connecting lines.



Chicago O'Hare Airport Station

Photo: Chicago Transit Authority

- ▶ Would have to run to either Penn Station or Grand Central, but not to both hubs, to allow for frequent service.

## 2nd Ave Subway Extension to Airport

Complete the full build of the Second Avenue subway and extend it to Brooklyn via new tunnels under the East River and a connection to the LIRR's Atlantic Branch. The subway would divert some service to the Rockaway Beach Branch to serve the airport. This would be similar to the Piccadilly Line in London or the Blue Line in Chicago, making numerous stops between the city center and airport.

### Pros

- ▶ Connection at Atlantic Avenue would preserve most of the Rockaway Beach Branch for QueensWay park conversion;
- ▶ Direct access to more places in the outer boroughs and city center due to integration with existing subway service;
- ▶ Higher capacity and possibility for more frequent service;
- ▶ Service could run 24/7 like the rest of the subway.

### Cons

- ▶ Service would be local and slow due to the large number of stops and no express tracks to bypass stations;
- ▶ Connections to legacy subway network wouldn't likely be ideal for airport customers because many lack modern accessibility options, relying instead on stairways at transfer points and for street access;
- ▶ Would require the construction of Phases 3 and 4 of the Second Avenue subway at huge costs, and capacity would be limited due to constraints elsewhere in the subway network.

## 3rd Avenue Express

This option would create a new service on Third Avenue in Manhattan that would connect to both LIRR and Metro-North service as part of a more extensive transformation of the region's rail network. It would extend rail service to the airport via the Rockaway Beach Branch, connecting at the Atlantic Branch in Brooklyn. The service would run through the center of Manhattan via express subway along Third Avenue making limited stops, and link to the Atlantic and Rockaway Beach rights-of-way. This option is similar to London's future Crossrail service (to be named the Elizabeth line), which will likely replace the Heathrow Express once the new service opens in 2018, and Paris's RER B from Charles de Gaulle Airport. Both make a limited number stops between the airport and the city center but also service multiple locations within the urban area.

### Pros

- ▶ Connection at Atlantic Avenue would preserve most of the Rockaway Beach Branch for a park conversion;
- ▶ Limited-stop, express service to JFK and service to major business and tourist destinations in Manhattan, and possibly Brooklyn, with easy connections to other commuter and subway services;
- ▶ Possible to have through-running to all sectors in region, creating transit alternatives to JFK that could be used by residents throughout the region.

### Cons

- ▶ Would require construction of new tunnels under Third Avenue in Manhattan, along with two Lower Manhattan East River tunnels connecting it to the Atlantic Branch, making it more expensive than the other two Rockaway Beach Branch options.
- ▶ Limited stop rather than express service to city center.

*Construct an Entirely New Right-of-Way*

## Super Express

A final option wouldn't use any existing rights-of-way. Instead, a new tunnel would be constructed between Manhattan and the airport.

### Pros

- ▶ Most direct, fastest, express alignment between JFK and Manhattan;
- ▶ Could be designed to support more than one stop to serve multiple districts;
- ▶ Would avoid any of the complexities of reactivating service on Rockaway Beach Branch.



London Heathrow Express  
From Paddington Station  
Photo: Andrew Nash (flickr)

### Cons

- ▶ Service would be independent and wouldn't be building on or adding to commuter/urban transit system;
- ▶ Most expensive option;
- ▶ An enormous infrastructure investment that would almost exclusively benefit air passengers;
- ▶ Line would pass under private property, requiring numerous easements and takings for the construction of ventilation shafts and emergency exits.

### Acknowledgments

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Regional Plan Association is an independent, not-for-profit civic organization that develops and promotes ideas to improve the economic health, environmental resiliency and quality of life of the New York metropolitan area. We conduct research on transportation, land use, housing, good governance and the environment. We advise cities, communities and public agencies. And we advocate for change that will contribute to the prosperity of all residents of the region. Since the 1920s, RPA has produced three landmark plans for the region and is working on a fourth plan due out in 2017. For more information, please visit [www.rpa.org](http://www.rpa.org).