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# Some Subways Found Packed Past Capacity



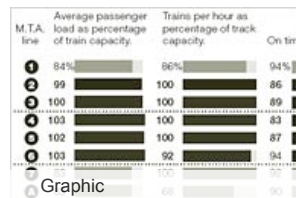
Kitra Cahana/The New York Times

Passengers packed into a No. 4 train at Grand Central Terminal Monday. Crowding on that line during the morning rush exceeds guidelines.

By WILLIAM NEUMAN  
Published: June 26, 2007

They are just lines on a graph, but for many subway riders they will provide unique insight into one of the great aggravations of life underground: why trains on some lines are so often both crowded and late, while on other lines the trains seem to cruise along on schedule with almost no one on board.

### Multimedia



### Track Performance

In an unusually candid effort at self-examination for a habitually insular agency, [New York City Transit](#) yesterday presented what could be called an index of straphanger frustration. It made an analysis of each subway line that shows at a glance how often trains run late, how crowded they are and whether more trains could be added to ease the problems.

What is revealed is both predictable and eye-opening. Many subway lines are simply maxed out, meaning there is no room on the tracks they use to add trains that could carry the swelling numbers of riders. And that has implications that range from day-to-day decisions about how trains travel through the system to long-term planning on how to best move people around a growing city.

"From my point of view, this is scary," said Howard H. Roberts Jr., the president of New York City Transit, who presented the data to members of the Metropolitan Transportation Authority's board. "This is scary in the sense that right now, on a lot of

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these lines, we're several years and a big capital construction project away from being able to provide what I consider adequate service. We're constrained."

Mr. Roberts said the data had particular significance in light of Mayor [Michael R. Bloomberg](#)'s proposal for a congestion pricing system that would charge most drivers who enter Manhattan below 86th Street — with the intent of moving people out of their cars and onto mass transit.

Mr. Roberts said that on many subway lines, especially the heavily used numbered lines, there is little or no room to accommodate more riders.

"It's bad news," Mr. Roberts said. "There's no room at the inn."

If congestion pricing becomes a reality, planners will have to rely on additional bus service as a way to increase the transit system's capacity.

Mr. Roberts had his staff compile the data to solve a mystery he encountered after taking over the nation's largest transit system in April. He said that he noticed that the subway's A division (the 1, 2, 3, 4, 5 and 6 lines) regularly operated with about 7 percent more late or canceled trains than the B division, (all the letter lines and the No. 7 line.) The 1, 2, 3, 4, 5 and 6 trains are part of the old IRT system, the city's first subway.

What Mr. Roberts discovered was that most of the A division lines are being stretched to their limit in two ways: no additional trains can be added to the schedule during rush hours because the tracks they use are already handling the maximum number possible, and most of the rush hour trains are already crammed with an overflow of riders.

Crowding is so bad that on the 4, 5, 6 and L lines, trains during the morning rush exceed the transit agency's loading guidelines, which posit that every rider should have at least a three-square-foot space to stand in (that translates to a square patch of car floor 20 inches on each side).

Crowded trains can lead to delays because it takes people more time to get in and out of the cars.

But the real squeeze results from the crowded tracks. Trains must operate with enough space between them so they have room to stop to avoid a collision. That limits the number of trains that can fit on a stretch of track. And when a track is operating at full capacity, even small delays — like those caused by a passenger who is ill or someone holding a door open while a friend races down the stairs — can have a big impact.

"You get to the point where the slightest deviation in schedule causes a backup and what is sometimes referred to as 'the wave,'" Mr. Roberts said. "One train slows down for any reason and it starts a wave back up the system."

He compared the most heavily used tracks to a highway with bumper-to-bumper traffic, where someone slowing down or changing lanes can force drivers far behind to put on the brakes.

The information presented yesterday brings the problem into clear focus.

The No. 4 and 5 trains share the express track on the Lexington Avenue line in Manhattan. The track is at full capacity, with a total of 27 trains an hour running during the morning peak. In addition, peak ridership on both lines exceeds the guidelines, with more people jamming onto cars than the cars are meant to hold.

It is no wonder, then, that in April, riders on the No. 4 line suffered through the greatest number of late trains, with only 83.2 percent of trains running on time. The No. 5 train was not far ahead, with 87.2 percent of trains on time.

It was a far different story on another set of tracks. The J, Z and M trains, which run from Queens to Manhattan and Brooklyn, are far from using their full capacity, both on the tracks and inside the cars. All three lines had an on-time performance close to 99

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percent in April.

Mr. Roberts said that he is trying to find solutions to these problems. He has asked the agency’s engineers to study the feasibility of extending the length of the platforms on the most crowded lines, to allow for longer trains. On the Lexington Avenue line, that could mean running 12-car trains instead of the current 10-car trains, a 20 percent increase in capacity. But a project of that magnitude would take several years to complete.

Other long-term solutions are also years away, including a new Second Avenue subway and expansion of a computerized signal system that would allow the trains to run closer together, increasing the number that could run on the tracks.

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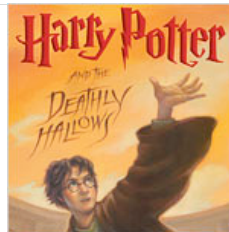




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