

Bergen Street Signal Investigation

Learning from Recent Failures and Planning for the Future

Overview

On March 15, the signal system at Bergen St failed, causing service disruptions and major delays on F, G, A, C, D, E, and M lines. One train was stuck in between stations for over an hour, and hundreds of trains were delayed. We know you expect more from us, and we've taken action to identify the root causes and remedy while continuing to provide 24/7 service.

The following report details our findings to date and the work we've done to stop these types of disruptions from happening again. Our investigation and repair-work continue in partnership with the manufacturer of the signal system, incorporating learnings from the additional signal failures over the past month.

Bergen St Signal

The interlocking signal system at Bergen St is relatively new, having been installed in 2006. The manufacturer, Thales, designed it with certain redundancies so that if one element fails, another can fulfill its task, and service won't suffer. It was specifically designed to not allow trains to enter a dangerous situation and has fail-proof settings to prevent unsafe conditions. When failures are detected by the system, we cannot "force" the system, which keeps New Yorkers safe but can cause significant delays, to behave differently.

Key findings

This was not a result of one issue, but of multiple factors:

- The system threw off multiple FEC (Field Element Controllers) and I/M (Interlocking Module) failures, which made redundancies ineffective.
- The electronic components of the signal system did not have a consistent Uninterruptible Power Supply (UPS), which would prevent dips and surges that might have caused several of the FEC and I/M failures.
- The Bergen St Station is not accessible by other subway lines, and because this occurred during rush hour, our specialists coming from various boroughs had difficulty reaching the station.

What we're doing differently

- We have specialized staff on-site at Bergen St 24/7 to survey performance of the signal system and troubleshoot in real-time should the need arise.
- Our engineers have made modifications to the circuitry to stabilize and monitor the power draw and are working to reinstate the Uninterruptible Power Supply. We are also surveying all other signal systems in the network to ensure they have the same protections.
- The system manufacturers are in the process of sending us extra spare parts, and they are continuing to examine log data to identify root causes of FEC and I/M failures.
- We have staged personnel to improve the timeliness of response in the event of an outage.

Bergen Street Signal Investigation (continued)

As we work to restore full and consistent service, periodic interruptions will likely be needed, and we appreciate your patience and understanding that we're doing everything to ensure that service is safe and reliable.

Long-term solutions

Next month, we'll release our five-year modernization plan. As many of you are acutely aware, an overhaul of the signal system is critical. The computer-based interlocking system at Bergen Street was the first of its kind installed in New York City, and we have gathered great learnings over the past twelve years that are now informing our modernization plan and our procurement requirements moving forward.

We're working hard to give New Yorkers the transit system they expect and deserve and minimize experiences like the one many of you had on March 15. It won't be easy or happen immediately but know that we won't stop until we have your trust to get you where you're going.