

National Transportation Safety Board

Office of Railroad, Pipeline and Hazardous Materials

Washington, DC 20594



RRD24FR003

TRACK AND ENGINEERING

Group Chair's Factual Report

March 19, 2024

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A ACCIDENT

Location: Manhattan, New York
Date: November 29, 2023
Time: 12:13 a.m. (local time)
Train: 2317-D

B TRACK AND ENGINEERING GROUP

Group Chair / IIC	Jon Todd Kraholik NTSB NTSB Group Chair/IIC
Group Member	Carlos Albert Transportation Workers Union (TWU) Group Member
Group Member	Ira Williams III Metropolitan Transportation Authority (MTA) Group Member
Group Member	Robert Sarno New York City Transit (NYCT) Group Member

C SUMMARY

See Docket for full description of accident.

D TRACK DESCRIPTION

The B2 track is tangent from the first set of yellow lights (first set the operator observed/encountered) to the north end of the station. For northbound movement, midway through the station platform there is a designed reverse apex in the track. On the west side of the track, there is a 49" high bench wall that extends off the station platform south all the way through the flagging lights and beyond. The bench wall, at the portable trip block, has a clearance of 6.5" from the thresholds of the car doors and 9" of clearance from the car body.

The B2 track adjacent to the station platform was illuminated well, but going south off the station platform the track was dark with no lights on. There was a string of lights on the east wall, that was unplugged. A power source would be needed to turn them on (i.e., extension cord(s) or generator).

E PLANNED WORK OF INCIDENT NIGHT

The planned work for the night of incident was to clean the tracks adjacent to the station platform at 34th Street and 6th Avenue. The work gang consisted of 11 employees and one supervisor, who were scheduled to work from 10 p.m. through 6 a.m. The gang was manually cleaning the trash from all four tracks of station with brooms and shovels.

F POST-ACCIDENT OBSERVATIONS

The track group took measurements of the distance between all flagging lights and the work location. The yellow lights are labelled in order from which the operator observed/encountered them, and the measurements are as follows:

- Distance between the first set of yellow flagging lights and the second set of yellow flagging lights - 289' 1"
- Distance between the second set of yellow flagging lights and the red flagging light/portable trip block - 500'
- Distance between the red flagging light/portable trip block and the working area - 188' 7"

In addition, the track group used an illuminometer to record the light readings at the red flagging light/portable trip block and the station. The light readings are recorded in foot candles. The readings¹ are as follows:

- At the red flagging light/portable trip block the light reading was negative (-) 3, at the bench wall and in the center of the track. (replicating the conditions for the night of the incident)
- At the red flagging light/portable trip block the light reading was 6-9 with a portable Milwaukee M18 battery operated light on, at the bench wall and in the center of the track. (there was no Milwaukee light on the night of the incident)
- In the work area (adjacent to the station platform) the light reading was 9.7 in the center of the track.

There are dedicated locations marked on the east wall where the flagging lights are supposed to be placed. The dedicated location for the red flagging light/portable trip block is 14'5" north of the ladder used to get on the bench wall for the clear location for this assigned job. The actual location of the red flagging light/portable trip block was 4' south of the ladder, at marker 1028+00. The second set of yellow flagging lights were at marker 1023+00.

¹ The readings were recorded exactly as the NYCT illuminometer displayed them. The readings were taken in conditions simulating the same conditions as the incident.

It was determined that on the night of the incident, the flagger set up the flagging lights for the B2 track alone. At the same time the flagger was setting up his lights, the supervisor went to the adjacent track (B4) and set up flagging lights for that track alone.

G INTERVIEW SUMMARY

For a summary of the interviews, refer to the docket for this investigation, RRD24FR003.

H TRAINING AND QUALIFICATIONS

As part of the investigation, NTSB has requested and received training/qualification documentation for the workers involved in this incident. All employees were up to date on their training and qualifications.

I EXTERNAL OVERSIGHT

Federal Transit Administration (FTA)

An agency within the U.S. Department of Transportation (DOT), FTA is headed by an administrator appointed by the President of the United States. FTA is one of DOT's 10 modes of transportation and is run by a headquarters in Washington, D.C. as well as 10 regional offices that assist transit agencies in all states and U.S. territories. The FTA has an Office of Safety in Washington D.C. that conducts triennial audits of a State Safety Oversight Agency's (SSOA) compliance with Federal requirements. The FTA Region 2 Office is located in New York, NY, attends SSOA quarterly meetings and site visits at MBTA as appropriate.

FTA is required to implement and maintain a national public transportation safety program to improve the safety of all public transportation systems that receive federal funding. The safety program includes:

- 1) The National Public Transportation Safety Plan, detailing safety performance criteria and minimum transit safety standards.
- 2) The Safety Certification Training Program, a safety training regime for personnel who conduct transit safety audits.
- 3) The Public Transportation Agency Safety Plan, a requirement for each transit agency to detail what it will do to ensure the safety of its system; and

4) The State Safety Oversight Program, which establishes independent state-based rail transit safety oversight agencies, with enforcement authority to compel the rail public transit agency to complete necessary safety actions

FTA does not have established regulatory requirements for internal oversight transit operations in Title 49 Code of Federal Regulation (CFR), Subtitle B, Chapter VI, or within National Public Transportation Safety Plan.

J REGULATORY REQUIREMENTS FOR INTERNAL OVERSIGHT

Internal oversight typically establishes minimum requirements for conducting periodic tests and inspections to determine the extent of compliance with operating rules and timetable special instructions. Employees are tested on various aspects of their job to evaluate their ability to perform their jobs correctly and their knowledge of company rules and federal regulations. This testing not only evaluates the worker's skills and overall ability to perform a task safely and correctly, but it also reinforces compliance with rules.

The operational factual report in this docket discusses the detailed-formal operational testing procedures in place at NYCT.

According to interviews, the Maintenance of Way (MoW) department differs from other departments in the fact that it has a supervisor attached daily to their working groups. The MoW department supervisors utilize stop cards and a butcher book to document exceptions to the rules they observe. These two tools have the supervisor's name who's reporting, and the infraction found, but they do not put the employee's name with the infraction. It is done this way because it's meant to be anonymous so that the tools are not tied to discipline. These are tracked by a monthly report generated from the observations. The safety team is an audit group that performs unannounced field safety audits, but they do not check stop cards or butcher books.

NTSB requested the supervisor's and the decedent's discipline history (DAN), neither employee had any discipline in their history. In addition, the butcher books and stop cards completed by the supervisor for the six-month period prior to the fatality were requested. Along with the supervisor's, any butcher book or stop card completed on the decedent was requested for the same period. NTSB requested any audit completed by the safety team of Mr. Nelson's use of the butcher books or stop cards, in the year prior to the fatality. On April 22, 2024, NYCT said there were no records for any.

K CELL PHONE USAGE POLICY

NYCT's cell phone policy, for MOW employees, is described in Maintenance of Way Bulletin 22-01A. This bulletin states: employees are prohibited from the use or wearing of all potential sources of distractions such as, but not limited to wired hands-free devices, electronic games, televisions, portable audio players, periodicals, smart watches/wearables, headphones, personal cellular phones, or cellular phone accessories (Bluetooth hands free devices or phone cameras).

The cell phone records for the supervisor and flagger were obtained by the NTSB and reviewed by the recorder specialist. The RE factual report containing a detailed description of the data and can be found in the docket for this accident.

L RELEVANT RULES

1.0 FLAGGING RESPONSIBILITIES

3.72(c) The supervisor in charge of the work to be performed must provide for and ensure that the required flagging protection is established and maintained for the safety of employees and the safe passage of trains.

For all Subways divisions, an additional qualified flagger must accompany the designated flagger, in setting up and removing the flagging. The additional flagger must be specifically assigned to watch for and warn of approaching trains and must also verify that the flagging is properly established and removed in accordance with the pre-job meeting.

For Division of Track jobs that are not being performed under General Order protection, a Track supervisor must be the additional qualified flagger to accompany the designated flagger assigned to set up and remove the flags, except under the following conditions:

1) Where station tracks are being cleaned and flagging locations have already been pre-determined, two Trackworkers who are qualified flaggers can set up and remove flags or

2) For employees who normally work without a supervisor on the track (e.g., TEM, Track Inspector, Welder-Burner, etc.), the accompanying flagger can be another qualified flagger).

2.0 FLAGGING ARRANGEMENTS

3.80 On the track or tracks to be worked upon or obstructed:

3.80(a) Two (2) yellow lights or two (2) yellow flags must be displayed at a point NOT LESS THAN 500 feet, nor more than 700 feet, in approach to the point selected as the flagger's station, except as specified in Rule 3.80(d). Two (2) additional yellow lights or two (2) yellow flags must be displayed at a point three hundred (300) feet farther in the direction from which trains approach. If

there is a station platform within the three hundred (300) feet the two (2) additional yellow lights or flags are not required.

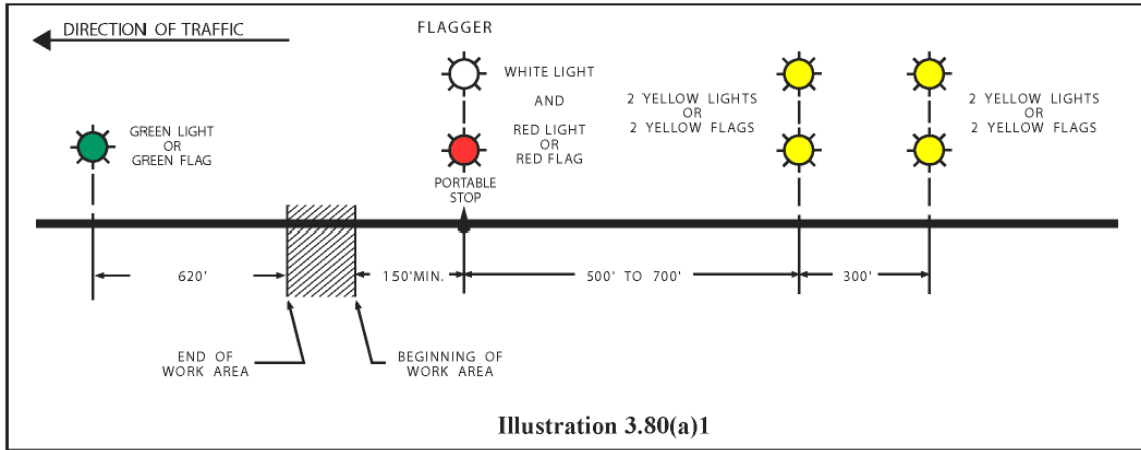


Figure 1: Diagram of flagging light requirements

3.0 NYCT Subway Bulletin 15-19

Sufficient Track Work Area Illumination. Full Flagging Flaggers' Position Illumination

Flaggers' positions must be sufficiently illuminated during construction or maintenance activities along the right-of-way, under full flagging.

At Locations where additional illumination is provided for those activities, additional illumination must be provided in the form of one portable lamp bank or an approved alternative light source at the flaggers' position.

During maintenance and track cleaning activities in stations where station lighting provides work area lighting, additional illumination must be provided in the form of one portable lamp bank or an approved alternative light source at the flaggers' position.

M SUBMITTED BY AND CHIEF REVIEW

Submitted by:

Todd Kraholik
Track Group Chair
April 2024

Approved by:

Zach Zagata
Branch Chief/ RPH-140
April 2024