



Memorandum

To: Jim Southworth
Investigator-in-Charge
National Transportation Safety Board

From: [REDACTED] [REDACTED]
Chief Safety & Security Officer
Chicago Transit Authority

Date: November 30, 2023

Re: Incident #RRD2401MR002
CTA Interim Safety Enhancements

The intent of this memorandum is to provide the Investigator-in-Charge (IIC) at the National Transportation Safety Board (NTSB) with an update on the Chicago Transit Authority's (CTA) post incident activities related to RRD2401MR002, the collision that occurred on CTA's Yellow Line on November 16, 2023 (the "Incident"). CTA remains committed to cooperating with the IIC at the NTSB in his investigation and will continue working in close coordination with the NTSB to determine root causes and contributing factors to this Incident. CTA is equally committed to addressing any NTSB findings that may come out of the ongoing investigation.

As the NTSB is aware, CTA cancelled all revenue service on the Yellow Line (a/k/a Skokie Swift) after the two-rail car train consist and the Diesel Snow Fighter (the "Snow Fighter") collision occurred. Initially, CTA left both the Snow Fighter as well the two-rail car train in place at the site until the NTSB could arrive, initiate its investigation, collect evidence, and inspect the equipment. After the IIC released the site to CTA, CTA removed both the incident two-rail car train and the Snow Fighter. The equipment remains out of service, in secure storage within a CTA facility, and available for assessment. At this time, CTA is waiting for the return of the NTSB so that they may perform their assessment.

Additionally, since the release of the site, CTA has engaged in some additional information gathering activities in the area of the collision. The activities are aimed at learning more about CTA's vehicles' mechanical performance parameters, track condition impacts on those parameters, the signal system interface, and brake modeling verification generally. All activities were performed after consulting and coordinating with the NTSB. All of the Parties involved in the investigation were invited to participate in the activities.

CTA has taken the following interim actions, which have been discussed and coordinated with the unions, as immediate and precautionary safety enhancements during the pendency of the rest of the investigation:

1. **Speed code reductions**- The maximum allowable cab-controlled speeds on the Yellow Line (the "Line") have been reduced from 55 mph to 35 mph throughout the Line. Additionally,

CTA has further reduced speeds entering the track circuit where the incident occurred to 25 mph. These changes decrease the distance necessary for a train to come to a complete stop and increase the reaction time available to an operator.

While there are no prescriptive regulations or uniform requirements regarding safe braking distances generally, they are determined by an agency through an analysis of a variety of factors, including but not limited to, the allowable cab speed of a train, a train's weight and length, the level of track incline or decline, track configuration, and the actual operating conditions and environment.

Following an examination of the incident area and observations of the operating conditions at the time of the incident – specifically the outdoor, uniquely wooded environment and its impact on CTA's tracks in the area – CTA has reduced the allowable cab speeds in order for trains to be able to be brought to a complete stop sooner and thus further in advance of any potential track occupancy. The additional speed reduction to 25 mph in the circuit area of the Incident is to take the most conservative approach possible since this area of the Yellow Line has limited line of sight and a downward grade.

2. **Rail Cleaning**- Crews have cleaned the running rails of any debris or other accumulated materials, films, deposits, or residues along the Yellow Line incident tracks. This cleaning activity works towards restoring the rail-wheel interface in a way that limits the amount of slipping and sliding conditions on the running rails. Cleaning the rails allows for more friction between the wheels and the rail which, in turn, better enables adherence to a braking distance that conforms to CTA's current modern braking formula guidelines.

As mentioned, there are environmental elements present along the Yellow Line that are unique when considered among the broader CTA service area. CTA has inspected the track conditions in the limited areas that are similar, such as wooded areas of the Purple Line where those environmental elements are also present. CTA resolved any anomalies that were discovered.

3. **Track Maintenance Program Modifications**- CTA has begun to review and modify its preventative maintenance protocols in order to better account for unique environmental considerations which may have the potential to impact track conditions, and thus braking performance. To that end, rail cleaning activities in identified areas will happen as a regularly scheduled activity.

Additionally, the Trackperson recertification training program has been modified; it now contains information related to identifying unique material build up on the running rail like those sometimes found in outdoor wooded environments. The Track Department's enterprise asset management system, the software platform used for documenting track inspection activities and work orders, has been modified with the creation of a new entry item in order to specifically classify rail that has been identified as requiring cleaning.

4. **Manual Blocking**- Manual blocking is an operational control that requires trains and non-revenue equipment to be restricted in their movement by verbal commands. Typically,

revenue vehicles are held at stations while non-revenue equipment is moved ahead of them. The revenue trains may then only proceed after the non-revenue equipment has cleared the area ahead and they receive verbal permission from CTA's Control Center. In this way, these trains and equipment movements are closely scrutinized and monitored through human intervention and direction that does not rely on the control of automated systems.

Bulletins are being revised to more clearly reflect that manual blocking is to be utilized for all non-revenue vehicles, even ones that do shunt. Previous versions of bulletins were primarily aimed at non-revenue vehicles that do not reliably shunt the signal system. However, manually blocking all non-revenue vehicle movements creates an additional layer of protection.

5. **Additional Supervision**- Supervisors and managers will accompany Yellow Line Operators on the initial set of runs on the Line when it resumes in order to provide additional support to the Operators. This hands-on approach will serve as a means to: assure Operators of the safe operating environment, explain to Operators what changes have been made and why, be present to Operators as a resource for answering any additional questions which they may have regarding the circumstances.
6. **Messaging Campaign**- All Operators assigned to the Red, Yellow, Purple Lines, which includes switch workers, will be informed in person by supervision of these collective precautionary safety enhancements. The Operators assigned to those Lines is representative of the entire population of employees who might operate on the Yellow Line either through Extra Board assignments or other means. Additionally, all CTA Operators throughout the entire service area have been reminded of best practices related to operating trains under slippery conditions. These reminders were delivered in the form of Rail Service Bulletins; specifically, R822-23 and R823-23.

Although the NTSB did not issue any urgent safety directives, CTA has elected to take these precautionary measures out of an abundance of caution. CTA's proactive posture is based on information garnered from the examinations, studies, and findings from activities that have transpired since the Incident occurred. If the investigation garners additional insights which result in recommendations, then CTA will address those promptly and accordingly, as well.

cc: [REDACTED]
President, Chicago Transit Authority—