

Southwest LRT Project Office Responses to Community Questions

September 30, 2020

Safety Metrics and Reporting

1. How does the recent boom crane accident show up in the metrics that the Met Council and its contractors use to monitor and report on safety performance? Was it counted as a Near Miss incident?

- This crane failure was recorded as an incident. It was not recorded as a near miss.
- LMJV investigated the incident through its Project Safety Department.
- Facts of the incident were presented to the LMJV Safety Council which includes LMJV Senior Management and the Project Safety Department.
- LMJV Safety Council determined that the actions of the crane operator were the root cause of the incident and recommended to the Corporate Accountability Team the operator's employment be terminated.
- Corporate Accountability Team concurred with our findings and the crane operator's employment was terminated.

2. What are most recent reported metrics and trends for the SWLRT project in terms of total:

- a. Near Miss Incidents (by type, if available)
- b. Non-Lost Time Incidents, and Rate (NLTIR, per 200,000 hrs)
- c. Minor Injuries (MI)
- d. Medical Treatment Injuries (MTI)
- e. Restricted Work Cases (RWC)
- f. Lost Time Incidents, and Rate (LTIR, per 200,000 hrs)

The primary safety metric that is monitored by the Council is the Contractor's Total Case Incident Rate (TCIR). TCIR is a calculation based on the number of recordable injuries and illnesses per 100 full-time workers during a one-year period. An OSHA recordable injury or illness – defined by OSHA – is one that is treated with medical treatment beyond first aid or involves other specific criteria. The Council calculates LMJV's TCIR through the end of August 2020 as approximately 4.6.

3. With what frequency and format are safety metrics and incidents, including near miss incident reports, communicated to contractor employees?

There is a safety update at the beginning of every weekly Coordination Meeting that involves the Project Office and LMJV Construction Management, staff representatives from the five corridor cities, and other agencies that coordinate with the Project. Topics covered in the safety update include safety topics of the week that are being communicated in the field, and any safety incidents that have occurred over the preceding week. In addition:

- LMJV communicates all incidents immediately on the project to all managers and foremen.

- This information is then shared with all craft labor on the site through their respective foreman.
- Additionally, LMJV communicates safety issues to its staff through:
 1. Safety Alerts for Incidents;
 2. Alerts for Near Misses;
 3. Incident reviews with Safety Team and Crews;
 4. Daily tool box talks;
 5. Weekly Manager's Meeting; and
 6. Supervisor Safety Audits.

Project Safety Accountability

4. Who holds the Met Council accountable for construction safety metrics, when, and by what mechanism/s?

Federal and State Occupational Safety and Health Agencies (OSHA/MNOSHA) as well as the Federal Railroad Administration (FRA) perform announced and unannounced inspections during construction. The Council is required to provide monthly updates to the FTA on safety incidents.

5. What are the consequences for the Met Council of failure to meet goals identified by safety metrics?

The Metropolitan Council can be fined, and individual Council staff can be fined or disciplined if staff is observed to be in violation of safety protocols.

6. What are the consequences for the contractor and subcontractors?

Organizations can be fined if OSHA/MNOSHA or FRA inspectors observe conditions or practices that do not meet their respective safety regulations. The FRA can also issue fines directly to the worker. LMJV can discipline or terminate the employment of staff or contracts with subcontractors for safety protocol violations.

7. Are records kept about each safety related incident and how are they used to improve processes?

Yes. Incident reports are written that can include corrective actions that will be taken to prevent similar incidents from taking place in the future.

8. Are records of safety incidents and the response available to the public?

Yes.

9. What bodies, if any, are providing independent safety oversight of the SWLRT project?

OSHA/MNOSHA and FRA.

10. How is MN-OSHA engaged, and is there any proactive engagement vs. reactive engagement (e.g., crane incident)?

Council safety staff routinely and proactively engage with MNOSHA. MNOSHA can conduct announced or unannounced inspections of the worksite and cite companies for safety protocol violations. The Council notified MNOSHA of the crane incident.

Construction Safety and Incidents

11. How were the flagging incidents addressed and what steps were taken to prevent future incidents?

After the second flagging incident occurred in 2019, the Council re-evaluated flagging procedures and contracted with TC&W to have the railroad provide flagging personnel. This arrangement resolved the communication problem between train crews and flagging personnel. The Federal Railroad Administration (FRA) is aware of these events and the Council's decision to have TC&W provide flagging for the project.

12. What was the result of the investigation into the crane incident near W 28th St?

LMJV's investigation confirmed that the incident was caused by operator error. The crane operator's employment was subsequently terminated for leaving the cab in violation of LMJV policy. The press-in-piler operator was suspended and given a written warning for knowingly continuing auger operations while the crane operator was not at the controls. The crew foreman was given a written warning.

13. What was the procedural or equipment failure that led to the crane incident?

The crane operator left the cab of the crane while hoisting the auger on the press-in-piler while the auger was in operation. Due to a lack of slack in the crane boom cable, the auger pulled the crane boom onto the press-in-piler. The crane operator, having exited the cab, could not reestablish the slack causing the boom to fall.

14. What measures have been taken to prevent future incidents involving construction machinery?

With respect to the operation of the press-in piler, the Job Hazard Analysis has been updated for this activity to reflect that the crane operator and press-in-piler operator must be in communication at all times while the piler is in operation. Additionally, all crane operators on the SWLRT project participated in a safety "stand-down" meeting to review the crane incident. Equipment is also routinely inspected per OSHA standards.

The Council consulted with MnDOT on crane safety on state projects.

15. What safety training and ongoing training is provided and is it documented?

Safety training is required for all project employees before they enter active construction sites. Ongoing training is an integral component of a safe construction environment. There are five main examples of how workers receive SWLRT Project safety training:

1. Documented compliance training is provided to all employees through their unions and/or employers.

2. In addition to compliance training, the SWLRT Project contractually requires completion of an OSHA Training Program:
 - Contractor and Council project employees complete an OSHA 10-hour Construction Outreach Safety and Health training program that emphasizes identification and avoidance of hazards.
 - Supervisor-level construction personnel complete an OSHA 30-hour Construction Outreach Safety and Health training program emphasizing hazard identification, avoidance, control and prevention.
3. All employees working within freight rail right-of-way must complete Roadway Worker Protection training that emphasizes the protocols of working adjacent to an active freight rail.
4. All employees working within freight rail right-of-way must complete security and safety training and background screening.
5. Both LMJV and Council construction employees participate in weekly toolbox topic events. Topics are selected based on recent observed safety issues or current activities.

Additionally, all crane operators are required to hold a current crane operator certificate from a nationally recognized and accredited certification program.

16. What specific training was provided to crane operators in follow up to the July 15th incident?

Retraining was conducted with all crane operators who work with the press-in piler to review the Standard Operating Procedure and updated Job Hazard Analysis.

17. Is there a worker at each construction site continuously observing the activity to ensure proper procedures and personnel are in use?

Construction supervisors are present at every worksite. The operation of specific types of equipment or the performance of specific activities requires a competent person to observe activities. Supervisors are trained in how to identify hazards and how to handle safety incidents.

18. CICA: What alternative sheathing process will be used to build the tunnel next to the Calhoun Isles buildings? The current process would compromise the structure.

The Council is evaluating an alternative for the support-of-excavation for the area adjacent to the Calhoun Isles Condominium building and adjacent the parking garage that consists of a secant wall, which involves drilling interlocking columns and filling them with structural steel and concrete.

Public Safety - Construction

19. How will (or has) signage be(en) improved at construction sites? From neighbors: “current proliferation, careless deployment, and failure to remove signs on a timely basis is confusing” — “a death waiting to happen.”

Signage is monitored by a signage subcontractor. The subcontractor performs regular checks of signage, especially signage that is moved periodically for closures or detours. Council staff are also tasked with performing regular signage checks.

Other entities deploy traffic control measures for work unrelated to the SWLRT project. This can lead to confusion among community members; Council and Contractor staff work with other entities to coordinate the deployment of signage.

If a sign is noticed to be missing, in an incorrect location, or if a community member feels as though signage is a potential safety issue, they should immediately call the Construction Hotline at 612-373-3933 to report the issue.

20. Much work/rework is being done to both the existing and new freight rail infrastructure. Some of this work is done under time pressure between trains. What precautions are being taken to ensure safety of the rails against derailment until the permanent rail installation is complete?

To ensure the track is safe during construction and prior to returning the track to service from an outage or train window condition, freight rail track conditions are monitored multiple times per workday using an approved monitoring method. Monitoring conforms to contract specifications, which are more conservative than the FRA's track safety standards. If a track is inspected and found to be out of compliance, work is halted, and the railroad flagger is contacted immediately to coordinate the movement of trains until the track is brought into compliance. Note, that rail maintenance activities are on-going to maintain serviceability.

21. What protocols or measures have been taken to protect citizens living in the blast zone of a possible SWLRT and/or freight train derailment and/or ethanol, Liquid Natural Gas or other spill and resulting fire/explosion?

[Question for the City of Minneapolis]

22. Burnham Road is the only way into Kenwood from the south. Turning north on Burnham Road from westbound Cedar Lake Parkway in a car requires a stop before the turn to check there are no bicyclists or pedestrians on Cedar Lake Parkway (pathway or roadway, east or west) who might conceivably be in your line of travel as you make the turn. (There are stop signs on the pathway in both directions that are very very seldom observed.) Before the freight rail was relocated there was room for a car between the track and Burnham Road. Now there is not. Bicyclists tend to think the flashing lights of the warning signals mean "go faster" so it is even more difficult to judge when there will be a gap in the pedestrian and bike traffic. How long before the freight rail track is put back where it was? Before next Spring can something be done to fix this problem? Moving the pathway crossing farther north to make room for a car to stop after turning on Burnham Road for example.

The freight rail track at Cedar Lake Parkway is in its final location. The final configuration of the trail and curb at Cedar Lake Parkway/Burnham Road intersection will allow space for a vehicle to stop for pedestrian/bicycle traffic on the trail; however, under no circumstances

should any vehicle stop on the freight tracks. The Project Office will advise on the schedule to complete this work. We have reviewed the current signage at the trail crossing and determined that additional signage will be deployed to alert motorists and trail users.

23. When the TC&W track was reconstructed between the new channel bridge and the Burnham Road bridge, a ditch was added along the west side of the tracks. Next to the backyards it was planted with grass. Where the water from a storm drain comes down the slope into the ditch (just south of the bridge) it caused erosion that washed the grass seed away. This area is now covered by a white sheet type material. North of the bridge the ditch doesn't have a normal "v" shape - its west slope is vertical. At about the point the track returns to its original alignment the ditch ends without an outlet. No grass was seeded north of the bridge. Is there more work to be done on this ditch and when will it be done? Is there any danger of the interim conditions creating a washout, especially where the storm drain runoff enters the ditch? Is the white sheeting the permanent fix for the erosion caused by the storm drain?

The white poly sheeting is a temporary erosion control measure. The area will eventually be seeded and receive an erosion control blanket. Final restoration efforts will be implemented once heavy construction has concluded. The contractor still has work to perform to extend this ditch to the north and is targeting to do this work later in the fall, weather permitting.

Public Safety - Construction

24. Will the MFD be able to conduct the location-specific boots-on-the-ground SWLRT emergency drill that Minneapolis Fire Chief John Fruetel proposed pre-COVID?
[Question for the City of Minneapolis]
25. What about the other community emergency training events?
[Question for the City of Minneapolis]
26. Who will replace Chief Fruetel as the SWLRT MFD safety contact?
[Questions for the City of Minneapolis]
27. What concerns does Mpls Fire Chief Fruetel have about construction of SWLRT and its future operation adjacent to TC&W?
[Question for the City of Minneapolis]
28. What safety concerns does TC&W President Mark Wagner have about construction of SWLRT, future operation adjacent to TC&W?
[Question for TC&W]

Public Safety - Operations

29. Will the barriers at the 21st St crossing be activated for just LRT or also for freight?
Crossing gate arms at the West 21st Street crossing will be activated for both LRT and freight traffic.
30. Is the 10 mph speed limit on the Kenilworth corridor permanent and enforceable? How is it enforced?
TC&W has no plans to increase its operating speeds beyond 10 mph.

31. What means is there to automatically cut power to a section of the LRT line should there be a derailment or other disruption of an LRT vehicle? How quickly will power be cut?

The Project includes real-time monitoring of the LRT power delivery system. If a derailment or accident with a light rail vehicle were to occur, Metro Transit's Rail Control Center would be alerted and would be able to remotely power down the affected section of track.

32. Do project plans adhere to safety design standards including the MIL-STD-882E standards adopted in 2012? Specifically, how are the following incorporated:

- a. Traffic arms
- b. Positive train control
- c. At least two drivers per LRT train
- d. Features to keep wanderers out of the tunnel
- e. Staff systems engineers to manage safety contractors?

MIL-STD-882E is a US Department of Defense standard for identifying hazards and assessing and mitigating associated risks encountered in the development, test, production, use, and disposal of defense systems.

The SWLRT Project adheres to the Metro Transit Design Criteria which governs its design and implementation. These design criteria are based on industry standard best practices and on experience with local rail projects. These criteria reference the State of Minnesota Building Codes and, in addition, the project's design must comply with all other applicable engineering codes and standards, including federal, state, and local jurisdictions.

- a. The LRT crosses three roadways at-grade in Minneapolis:
 - i. 21st Street - crossing gate arms will be installed
 - ii. Glenwood Avenue - crossing gate arms will be installed
 - iii. Royalston Avenue N/Holden Street N – traffic signals will be installed
- b. The LRT system does not use positive train control. LRT train traffic is controlled by the Rail Control Center using real-time train detection and signaling.
- c. Each train allows for one train operator.
- d. The Project includes intrusion detection systems at each portal of the Kenilworth LRT Tunnel.
- e. This question is not clear.