

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF COLORADO**

PROCEEDING NO. 19I-0347R

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IN THE MATTER OF THE REGIONAL TRANSPORTATION DISTRICT'S CORRECTIVE ACTION PLAN REGARDING THE SABLE BOULEVARD AND EXPOSITION AVENUE DERAILMENT, RULE 4 CCR 723-7-7347.

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**COMMISSION DECISION GRANTING  
EXTENSION OF TIME TO FILE BUDGET ANALYSIS AS  
PART OF THE RTD CORRECTIVE ACTION PLAN**

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Mailed Date: June 4, 2020  
Adopted Date: June 3, 2020

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**I. BY THE COMMISSION**

**A. Statement**

1. This matter comes before the Commission for consideration of a Motion for Extension of Time to Provide Analysis of Budget Issues Regarding Technological Mitigation and Plan to Move Forward (Motion) filed by the Regional Transportation District (RTD) on May 26,

2020, requesting additional time to August 31, 2020 to make this filing due to issues involved with the current novel coronavirus pandemic (COVID-19).

**B. Background**

2. By Decision No. C19-0535 mailed June 19, 2019, the Commission opened an Investigation and required RTD to file its Corrective Action Plan (CAP) and any associated hazard analysis, if necessary, for Commission review and approval in this investigation proceeding within 30 days of the decision.

3. RTD filed its CAP and associated hazard analysis in this proceeding on July 18, 2019. The CAP contains all of the information required by Rule 7347 of the Commission's Rules Regulating Railroads, Rail Fixed Guideways, Transportation by Rail, and Rail Crossings, 4 *Code of Colorado Regulations* 723-7.

4. On March 14, 2019, RTD performed a hazard analysis of the derailment at the Sable Boulevard and Exposition Avenue crossing derailment which occurred on January 28, 2019. Looking at the number of trains that have maneuvered this crossing since service started on the R-Line, there have been approximately 26,052 round trips completed from January 2018 through January 2019. Thus the one derailment that occurred during this one-year timeframe occurred with a probability of 3.8384E-05, which would put derailments at this crossing at a risk assessment code of 2D/E. An analysis looking solely at the train involved in the January 28, 2019 event shows that the first run through at the crossing was successful, but the second was not, giving the probability of derailment at 0.5 or a risk assessment code of 2A. However, since risk assessment is not reviewed solely on a single train and operator, the overall risk assessment for the crossing and corridor would be at a 2D/E.

5. RTD's investigation of this incident and the results of the accident reconstruction determined that weather was not a contributory factor to the derailment and that only human factors caused the derailment. Because of the nature of the accident, this CAP is being required as a result of the human factors cause of the accident and not as a result of the hazard analysis of the corridor. Because of the human factors elements of the accident, RTD has convened a series of meetings with Rail Operations, Maintenance of Way, Training and Safety to discuss this event and possible mitigation measures to address how to prevent reoccurrence of similar events in the future.

6. RTD proposed the following mitigation measures in its CAP: 1) Evaluation of current "return to work" policies and procedures for RTD staff authorized to operate trains with a specific focus on employees returning from extended time away; 2) Investigation/Assessment/Implementation of Psychological Fitness for Duty Policies and Procedures under the direction of RTD's medical provider for "return to work" programs; 3) Development of means and methods by RTD Rail Operations for evaluating and tracking all train operators; 4) Review and reassessment by the RTD Transportation Department including Standard Operating Procedures and Rule Book materials with a focus on inclement weather operations; 5) Confirmation of current placement and the addition of permitted speed signs in multiple locations in Downtown Denver and the R-Line in Aurora; 6) Publication of a bulletin that is signed for by Operators regarding permitted speed on the alignments and adherence to posted speeds; 7) Reminders included in Train Orders of speed limits on the light rail alignments; and 8) Implementation of a Field Supervisor campaign focused on speed adherence with violations of posted speeds triggering face-to-face meetings with Operators regarding speeding.

7. On July 31, 2019, the Commission issued Decision No. C19-0665 mailed August 6, 2019, requesting additional information and actions to be included in RTD's CAP. Specifically, the Commission required the following additional information to be provided by RTD with this CAP including:

- a. An analysis of the light rail alignment for locations where radar based speed violator strobe signs would be effective and will be installed;
- b. A report of the analysis performed by RTD of the LRV door design and what, if anything, can be done to mitigate the door failure that occurred during the January 28, 2019 derailment from occurring again under a similar set of circumstances in the future should such circumstances occur;
- c. Additional information from RTD on any additional information obtained and an analysis performed by RTD on anything else learned from this incident that can be used by RTD going forward to better prepare future operators or analyze operator awareness while they are operating light rail vehicles;
- d. Additional information from RTD on any issues they are having with obtaining and retaining operators and/or how the limited numbers of operators may be creating or leading to issues that may have led to or contributed to the derailment.<sup>1</sup>

8. On September 4, 2019, RTD filed an Unopposed Motion to Permit Limited Provision of Report Materials to Manufacturer and on September 5, 2019, RTD filed an Unopposed Motion of RTD to Permit Limited Provision of Report Materials to Manufacturer.

9. By Decision No. C19-0768 issued September 19, 2019, the Commission granted the limited provisioning of report materials to RTD's manufacturer for the purpose of performing additional analysis to respond to the additional information and questions posed to RTD as part of this CAP.

10. On September 16, 2019, RTD filed an addition to its CAP in this matter responding to the questions proposed by the Commission and adding additional mitigation

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<sup>1</sup> Decision No. C20-0665, ¶ 19.

measures to the proposed CAP. These additional mitigation measures include: 1) Addition of radar based speed monitoring units to alert operators based on RTD's analysis of its light rail alignment; 2) Provision of an initial report from Siemens Mobility, Inc. (Siemens) and a report from door manufacturer Innovations for Entrance Systems with plans to provide a follow-up report from Siemens after their final analysis based on being able to review additional accident report information to be provided to them; 3) Review and enhancement of RTD's operator training program, re-training program, scheduling of monthly safety campaigns, and addition of efficiency testing; 4) a review of additional technology that may be considered to enhance light rail system safety; and 5) RTD analysis and efforts to address obtaining and retaining operators.

11. RTD has also looked at possible technology that could be installed in the light rail vehicles that would either enhance operator awareness, provide better oversight of operations, or that could even prevent speeding in light rail vehicles. These technologies include the following: 1) upgraded cameras to include in cab and forward facing cameras which have been included in the 29 new LRVs placed in service, but which will need to be added to the existing 172 vehicles, which will cost approximately \$4M for which no budget has been identified or appropriated in the short- or long-term; 2) an enhanced ATC which would establish vehicle to wayside communications to monitor vehicle position and speed and would provide signal enforcement and civil speed control of all trains, thus eliminating red signal violations and govern the speed of all trains at a cost of \$12 to 15M for which \$7M is in the current short-term budget for 2019, \$2M in the 2020 budget, and \$1M per year in budget years 2021 to 2025 (this budget allows for some type of enhanced ATC system, but is insufficient to acquire any type of system currently available for a fleet of RTD's size); 3) communication based train control/ultra wide band communications, which would provide very sophisticated control of train position, speed,

braking distance, signal systems, etc. at an approximate cost of \$100M, which is cost prohibitive for RTD. RTD is evaluating grant funding opportunities, and alternative and budget adjustments. However, the technology enhancements are cost prohibitive in the short-term and long-term under RTD's current budgeting.

**C. Analysis**

12. RTD's Motion requests an extension of time to August 31, 2020 to complete the required budget issues analysis that was due to the Commission by April 30, 2020.<sup>2</sup>

13. As grounds for this Motion, RTD states that it has been unable to provide the required budget issues analysis due to delays caused by COVID-19.

14. RTD states that it has been deeply involved with the unprecedented demands of COVID-19 crisis management for its mass transit system since March of this year. Additionally, RTD has been required to make amendments to its budget necessary to cover COVID-19 financial impacts, and these impacts are not yet finalized.

15. RTD believes that the long-range effects of COVID-19 on work practices, operations, and budget will be more apparent, and the burden of these issues related to the budget will have been met by August 31, 2020.

16. Because of the unforeseen COVID-19 issues, RTD respectfully requests an extension of time up to and including August 31, 2020 to submit the analysis of budget issues and a proposed plan to move forward with possible technology options.

17. The CAP in this matter was approved on October 11, 2019 by Decision No. C19-0829 prior to the start of the effects of the COVID-19 pandemic, over which Colorado

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<sup>2</sup> See Ordering Paragraph No. 2 of Decision No. C19-0829 issued October 11, 2019.

Governor Jared Polis declared a state of emergency.<sup>3</sup> The public health crisis management efforts that RTD has been required to be involved with as a result of COVID-19 has created necessary changes to the RTD budget that could not have possibly been analyzed by the April 30, 2020 date. For public health purposes, RTD needs to concentrate on COVID-19 now and delay the budget analysis to later in the year.

18. To date, RTD has completed all required mitigation measures of this CAP except for the budget analysis. These mitigation measures have been verified by Commission Staff as complete and will be included in the final report to the Commission upon completion of this last CAP item.

#### **D. Conclusions**

19. RTD has been steadily working to complete the required mitigation actions involved with this CAP. The COVID-19 circumstances are beyond RTD's control and are the reason RTD has not been able to fully complete the CAP implementation by performing the required budget analysis.

20. We find that good cause exists to grant the Motion consistent with the above discussion.

## **II. ORDER**

#### **A. The Commission Orders That:**

1. The Motion for Extension of Time to Provide Analysis of Budget Issues Regarding Technological Mitigation and Plan to Move Forward filed by the Regional Transportation District (RTD) on May 26, 2020, requesting additional time to August 31, 2020 to

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<sup>3</sup> In this instance, given the timing of the filing of the initial Application and Governor Polis' declaration of a state of emergency, we recognize this declaration on our own motion. Any future filings should continue to specify whether COVID-19 considerations, or any other pertinent circumstances, support the requested action.

make this filing due to issues involved with the current novel coronavirus pandemic (COVID-19) is granted.

2. RTD is required to provide a full analysis of its budget issues regarding adding technological mitigation to its light rail system and provide the Commission with a plan of how RTD proposes to move forward with enhancing its system and operations with additional technologies by August 31, 2020.

3. No additional filings are required of RTD at this time.

4. The Commission retains jurisdiction to require additional mitigation measures be added to the Corrective Action Plan based on the outcome of the two outstanding items to be filed at a later date in this proceeding.

5. This Decision is effective on its Mailed Date.

**B. ADOPTED IN COMMISSIONERS' WEEKLY MEETING  
June 3, 2020.**

(S E A L)



ATTEST: A TRUE COPY

Doug Dean,  
Director

THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF COLORADO

JEFFREY P. ACKERMANN

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JOHN GAVAN

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Commissioners