



COMMONWEALTH of VIRGINIA

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September 6, 2018

The Honorable Ralph S. Northam
Governor, Commonwealth of Virginia
1111 Broad Street, Richmond, Virginia 23219

Re: 2017 Annual Status Report on Rail Fixed Guideway State Safety Oversight Program
Performance in the Commonwealth of Virginia

Dear Governor Northam:

The Moving Ahead for Progress in the 21st Century Act (MAP-21), and 49 CFR Part 674.13 (a) (7), mandates that "At least once a year, the State Safety Oversight Agency reports the status of the safety of each rail fixed guideway public transportation system to the Governor,...". As such the Virginia Department of Rail and Public Transportation (DRPT) submits this annual report of rail transit state safety oversight program activities for the period November 1, 2016 through December 31, 2017.

The attached report outlines the program's mission, describes its current activities, while detailing ongoing efforts to comply with the federal regulation on State Safety Oversight of Rail Fixed Guideway Systems.

Please do not hesitate to contact the DRPT Transit Rail Safety and Emergency Management Administrator, Andrew Ennis (andrew.ennis@drpt.virginia.gov, 703-786-3434) should you or your staffs have questions or wish to discuss the program.

Sincerely,

A handwritten signature in black ink that reads "Jennifer L. Mitchell".

Jennifer L. Mitchell

cc: Shannon Valentine, Secretary of Transportation
Andrew Ennis, Transit Rail Safety & Emergency Management Administrator

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Virginia Department of Rail and Public Transportation

2017 Annual Status Report

Rail Fixed Guideway State Safety Oversight Program Performance

Commonwealth of Virginia

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Program Background and Overview

In 1996 the Federal Transit Administration (FTA) issued the Rail Fixed Guideway Systems; State Safety Oversight rule, 49 CFR Part 659. Under this rule, each state, with rail fixed guideway systems that were not subject to the regulatory authority of the Federal Railroad Administration, was responsible for overseeing the safety and security program implementation of these rail fixed guideway systems. In the Commonwealth of Virginia, the designated Rail State Safety Oversight Agency (SSOA) is the Virginia Department of Rail and Public Transportation (DRPT). The rail fixed guideway systems covered by this regulation and overseen by DRPT include Hampton Roads Transit (HRT) Tide light rail system and Washington Metropolitan Area Transit Authority (WMATA) Metrorail.

A new rule issued in March 2016, 49 CFR Part 674, directs eligible states to significantly strengthen their authorities to oversee and enforce safety requirements to prevent and mitigate accidents and incidents on rail fixed guideway systems. Additionally this new regulation mandates eligible states to demonstrate legal independence, and availability of financial and human resources for overseeing the number, size, and complexity of rail transit systems within their jurisdictions.

This report will address state safety oversight as it pertains to the HRT Tide light rail system only. An interstate compact was enacted on August 22, 2017, creating the Metrorail Safety Commission. The Metrorail Safety Commission will become the designated State Safety Oversight Agency for WMATA Metrorail. The District of Columbia, the state of Maryland and the Commonwealth of Virginia (led by DRPT officials), are working diligently to support the mobilization of the Metrorail Safety Commission. The state safety oversight activities discharged by DRPT are separate and distinct from any program activities associated with WMATA Metrorail or the Metrorail Safety Commission or the Tri State Oversight Committee.

For the purpose of this report, “rail transit agency” and “rail fixed guideway system” are used interchangeably. Both these terms refer to Hampton Roads Transit light rail system. “State” and “state safety oversight agency” are used interchangeably in this report. Both these terms refer to DRPT.

State Safety Oversight Responsibilities

DRPT’s Rail State Safety Oversight activities are intended to ensure that the rail transit agency places safety considerations over operational expediency in all decision making.

An important distinction should be made in delineating the role of the state safety oversight agency versus the role of the rail transit agency in maintaining and improving rail safety. The role of the state is that of the regulator ensuring that all of the mechanisms that are in place at the rail transit agency, to preserve the highest levels of safety is sound and unconditionally applied. The state does not perform day-to-day functions at the rail transit agency. Alternatively, the role of the rail transit agency is to perform all necessary programmatic, procedural, technical, engineering and operational activities that the rail system has formally adopted, to maintain safety in rail operations.

Continuous verification that the rail system is carrying out its documented programs in place to ensure the safety of its passengers and its employees is at the core of the state safety oversight agency's mission. The state's Rail State Safety Oversight efforts are conducted so that they are fully transparent to HRT. All of the state's Rail State Safety Oversight actions, including those that denote various deficiencies at HRT, are communicated objectively with the goal of improving HRT's rail safety posture, and not to assign fault. HRT's Safety and Security Department is the custodian of HRT's safety program. However, the entire HRT organization is empowered and responsible for upholding its safety goals, including its senior executives, its middle managers, supervisors and its front line personnel.

The entirety of this state safety oversight effort is called the "Program". The activities of the DRPT Rail State Safety Oversight program are described in a document titled the Safety and Security Program Standard (SSPS). This is a document mandated by federal regulation containing a description of the organizational structure and lines of authority in support of the oversight program and DRPT's protocols in conducting a federally compliant Rail State Safety Oversight program. This is a dynamic document that is reviewed annually and updated to reflect enhancements to the program. This document and the practices it represents are subject to FTA review.

While states are required to comply with the minimum requirements mandated by the regulation, states also have the prerogative to scale its program to meet the unique characteristics and challenges within the rail system(s) it oversees.

Key Program Activities

DRPT state safety oversight key program activities include:

- Regular work sessions with HRT rail safety, security, operations and maintenance personnel
- Conducting reviews and special assessments of HRT's light rail operations
- Review and approval of primary HRT rail safety, security, and emergency preparedness plans
- Review, approval and adoption of rail investigations of accidents, incidents, and hazards occurring on the HRT light rail system
- Tracking and field verification of HRT's progress in correcting safety and security gaps on its light rail system

Staffing

DRPT's Rail State Safety Oversight responsibilities are performed by a team of three full time DRPT staff. There is one dedicated Rail State Safety Oversight Manager performing safety oversight for each of the rail fixed guideway systems in the Commonwealth of Virginia with programmatic decision making and supervisory tasks being performed by the Rail Transit Safety Programs Administrator. The DRPT Rail State Safety Oversight team reports directly to the DRPT Director.

The DRPT Rail State Safety Oversight Manager for HRT's TIDE light rail, Andrew Ennis, is fully trained in all of the currently mandated certifications and training. One of the changes enacted through the Moving Ahead for Progress in the 21st Century Act and 49 CFR Part 674, was a more standardized approach to certification and training of designated state personnel who conduct rail safety reviews and examinations with direct rail safety oversight responsibility. With these new regulations, there is a greater emphasis on Rail State Safety Oversight staff having certain certifications and competencies as well as a specific knowledge base of the rail system they oversee.

DRPT's Rail State Safety Oversight capacities are further augmented through a team of consultants, including subject matter experts in the fields of train signaling, civil engineering, track and structures, rail vehicles and rail operations. These consultant resources can be leveraged in the event that staff resources need to be augmented for a finite period or if DRPT would benefit from the subject matter expertise on a particular issue.

Budget/Funding

Since the passage of Moving Ahead for Progress in the 21st Century Act (MAP-21), the USDOT and the FTA has provided a dedicated source of formula grant funding, to states with Rail State Safety Oversight responsibilities. This formula funding is based on the number of rail modes overseen by the state agency, and the scale of the rail transit agency's operation – track miles, passenger trips and revenue miles. These FTA formula grant funds can be utilized for Rail State Safety Oversight staff salaries, to complete FTA mandated training, for consultant services, and for the purchase of equipment. The DRPT State Safety Oversight Program receives an annual apportionment of approximately \$250,000 in federal funding. These apportionments began in federal FY 2013. DRPT has utilized this funding for various eligible purposes. These include staff salaries; to hire a consultant team that assists DRPT in conducting accident investigations, reviews and routine state safety program activities; securing training for staff at such training locations as the National Transportation Safety Board (NTSB) institute as well as training at various universities with nationally recognized rail transit standards courses, and for purchase of equipment.

Program Highlights from 2017

Each of the following program components commands equal significance. These program components are designed to be symbiotic, with information and intelligence gathered in one program element informing the other. For instance, information gathered in a triennial review might inform an accident investigation. In the same manner a finding of cause discovered during an accident investigation might spur closer scrutiny of a certain practice at the rail agency prompting frequent inspections by the State Safety Oversight staff.

Triennial Reviews

One of the mechanisms the DRPT Rail State Safety Oversight program utilizes to assess the ongoing health of HRT's rail safety performance is the triennial review process. Triennial reviews gauge the level to which safety is integrated into rail operations, maintenance, training, human resources, procurement, engineering, quality assurance departments and into HRT's management structure. All of these separate departments and the organization as a whole

support the safe operation of the rail system. The methodology associated with the triennial reviews is the continuous and robust assessment of all of these departments and the associated documented efforts at ensuring safety of HRT's passengers and employees. Instead of a single review of the entire program being conducted once every three years, DRPT conducts this review on a continual three-year cycle. During these reviews, if the DRPT Rail State Safety Oversight concludes that any aspects of HRT's documented programs related to rail safety are not being executed as officially described, DRPT will record these as deficiencies. HRT is required to address such deficiencies through corrective action plans. These corrective action plans either take the form of re-calibrating a program to better match the practical applications of such a program, re-instruction, instituting procedures or programs, anew, or in some cases completely overhauling a program or practice. The DRPT Rail State Safety Oversight reviews and approves such corrective action plans proposed by HRT, and then monitors these corrective action plans to ensure completion within established timeframes.

DRPT conducted two safety and security triennial reviews of HRT in May and October of 2017. In May, the triennial review assessed HRT's performance in the areas of system facilities, signal systems, power and track maintenance. There were no findings of non-compliance for this review. The triennial review in October focused on System Safety Program Plan review, modification, hazard management process, accident investigation procedures and internal safety reviews. A summary of findings for this review are listed below.

The triennial review conducted in October presented the following areas of non-compliance:

1. HRT is not tracking all identified hazards and is not reporting all identified hazards to DRPT on a monthly basis, as is required by the Virginia DRPT Safety and Security Program Standard.
2. HRT is not assigning hazard ratings to identified hazards, in accordance with HRT System Safety Program Plan.
3. HRT's accident investigation procedures are outdated and were not reviewed and revised on the required annual schedule. HRT's accident investigation procedures, associated standard operating procedures, and System Safety Program Plan provide insufficient and contradictory information concerning what forms must be completed and what data must be completed following accidents and incidents on the system.
4. HRT's submittal of its annual internal review report to DRPT was late in both 2015 and 2016.

In 2017 DRPT requested HRT conduct a special study of its track access training related to adjacent construction work sites and construction workers at these sites. In March, while conducting field observations, DRPT witnessed a construction worker at a construction site adjacent to the Tide light rail right-of-way come within a few feet of the overhead catenary wire system, which carries 750 volts of DC power. This prompted DRPT to request HRT Safety and Security department to conduct a special study looking into the City of Norfolk and HRT's joint permitting process related to adjacent construction near the Tide light rail right of way, as well as HRT's training program for adjacent construction track access. DRPT's review of the special study identified several findings that HRT will be required to address with a corrective action plan. At the time of this report, DRPT was awaiting HRT's final proposed corrective actions. Per DRPT's Safety and Security Program Standard, DRPT will review and approve proposed

corrective action plans for the above-mentioned findings when they are submitted to DRPT for review.

Accident Notification and Investigation

Federal regulation requires DRPT to investigate incidents such as collisions with rail vehicles, damage to rail facilities above a certain dollar threshold, derailments, fatalities and injuries to employees or passengers or rule violations by employees on the rail system. In conducting these investigations, DRPT may authorize HRT to conduct an investigation on its behalf, or DRPT can conduct its own independent investigation. In the event the National Transportation Safety Board launches an investigation into a HRT light rail accident, DRPT can participate in the investigative process. DRPT Rail State Safety Oversight staff closely scrutinizes the conduct of any accident investigation carried out by HRT, evaluates all of the investigation reports prepared by HRT for completeness and accuracy, and approves and adopts each report as its own official investigative report.

During the period covered by this annual report there were three collisions involving Tide light rail vehicles, one evacuation from a light rail vehicle (LRV) due to a loss of electrical power, and several rule violations by rail operators. The investigations into each of these accidents concluded:

- Investigations found the collisions were the fault of drivers of a privately owned vehicles, and a construction worker inserting an object into the right of way, respectively, and were not operator caused;
- The evacuation was due to a Tide Maintenance technician not following proper procedures which resulted in water inundating a cable box on the roof of the LRV causing a loss of power and propulsion; and
- The operator rule violations were addressed through re-instruction and training.

Approval of Program Documents

The federal regulation mandates that the Rail State Safety Oversight agency reviews and approves the key documents associated with safety and security at the rail transit system it oversees. Accordingly, the DRPT Rail State Safety Oversight Manager has reviewed and approved HRT's System Safety Program Plan and the Security and Emergency Preparedness Plan. These plans describe HRT's approach and commitments to safety and security of the TIDE light rail system. In doing so, DRPT has the ability to scrutinize changes from year to year, and to prevent any degradation of safety and security programs at HRT that impact the TIDE light rail system.

Technical Assistance and Field Observations

In addition to the above standardized portions of the DRPT's state safety oversight work program, the DRPT Rail State Safety Oversight Manager provides technical assistance and monitors all aspects of HRT's Tide light rail activities. The DRPT Rail State Safety Oversight Manager has the training and the certifications required to observe various maintenance activities within the rail right of way. The DRPT Rail State Safety Oversight Manager is frequently on site at HRT either providing technical assistance, participating in work sessions with HRT staff, accompanying employees who are conducting inspections or maintenance activities on the light rail system, or participating in various HRT committees and work groups. All of these efforts

combined to promote a very collaborative environment that encourages HRT to be open and transparent about both its accomplishments and its challenges concerning rail system safety.

Federal and State Legislative Changes

MAP-21 has numerous implications for Rail State Safety Oversight agencies and rail transit agency safety programs. As of 2018, six years following the enactment of these sweeping changes, FTA is currently in the midst of completing its federal rulemakings that will serve as mandated regulations impacting Rail State Safety Oversight activities across the country, including DRPT's Rail State Safety Oversight Program and HRT. The MAP-21 rule most pertinent to DRPT is the State Safety Oversight regulation (49 CFR Part 674) which became effective April 2016. As pointed out throughout this report, this is the central regulation that delegates authority to the states to perform oversight of rail fixed guideway systems.

In order to be fully compliant with this new set of regulations, Rail State Safety Oversight programs such as DRPT's have to demonstrate adherence with several key programmatic enhancements, including the following:

- DRPT must be financially and legally independent from the transit agency(s) it oversees. DRPT has to demonstrate that it is legally and financially independent of Hampton Roads Transit, and that DRPT does not utilize any rail agency employees to conduct state safety oversight responsibilities. Any further perceived conflicts have to be mitigated through the adoption of a formal Conflict of Interest policy adopted January 17, 2018.
- DRPT must provide an annual report to the Governor of Virginia and an annual summary of Rail State Safety Oversight Program activities to HRT's Board of Directors.
- Unlike under the previous regulation, DRPT is mandated to engage in field verification of changes/improvements made by HRT's light rail system, as well as inspections, to assess the health of various parts of the rail operation.
- DRPT must provide technical training for dedicated Rail State Safety Oversight staff and ensure that its contractors, including subject matter experts, are compliant with any relevant regulations on training and competencies.
- DRPT must have enforcement authority to compel the transit agency to take action in response to hazards. This could include the power to require removal of employees who violate rules and engage in repetitive negligent behavior, or shut down rail service until any potentially catastrophic safety gaps are satisfactorily addressed by HRT.

Next Steps and Timeframe

FTA's new State Safety Oversight final rule took effect on April 15, 2016, which began the three-year timeframe for DRPT to make the programmatic changes outlined above, to have its authority expanded to include enforcement authority, and to be certified by FTA as a fully compliant state safety oversight agency. The Commonwealth of Virginia is required to comply with this Federal regulation by April 2019.

On January 18, 2018, DRPT submitted its Certification Application to the FTA. FTA has acknowledged receipt of our application and as of March 2018, DRPT is awaiting a response from FTA on this application.

For further information regarding this report and the state safety oversight activities it describes, please contact the DRPT Transit Rail Safety and Emergency Management Administrator as noted below.

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Transit Rail Safety and Emergency Management Administrator
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