

**Testimony of David L. Mayer, PhD**  
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**Before the Committee on Oversight and Reform, Subcommittee on Government Operations**  
**Hearing: “Metro: Report Card for America’s Subway”**  
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**Introductory remarks**

Chairman Connolly, Ranking Member Meadows, and members of the subcommittee:

On behalf of our chairman, Christopher Hart, and the commissioners of the WMSC, I want to thank you for having the Washington Metrorail Safety Commission (WMSC) here before you to testify.

I appreciate this important opportunity to discuss the WMSC and our critical mission overseeing the safety of the Metrorail system. The WMSC is only a few months old, but we are already very busy.

I also want to thank those who were instrumental in standing up the WMSC and in providing it with the tools to succeed, including many members of this panel, as well as many other members of the U.S. House of Representatives and the U.S. Senate. They are joined by officials in several other agencies and organizations who have been key partners in this effort, including the U.S. Department of Transportation, the Federal Transit Administration (FTA), the states of Virginia and Maryland, the District of Columbia and the Metropolitan Washington Council of Governments.

Finally, I want to recognize the representatives of WMATA, seated here with me, for their willingness to work with the WMSC as we establish a new safety oversight framework and assume oversight of the agency from the FTA. I will leave it to WMATA’s representatives to discuss the unique elements of operating the Metrorail system. We are not tasked with carrying out operational duties, as they are. But I served as managing director of the NTSB during its investigation ten years ago of the Fort Totten collision in which nine people died. I am acutely aware of the many challenges and complexities of the Metrorail system and of its importance to the region. I am also a customer, so I personally depend on the system for safe, secure and reliable transportation.

It is as the WMSC’s CEO and with that perspective that I appear before you today.

**Safety oversight of Metrorail before the WMSC**

For those unfamiliar with the WMSC, we are the organization certified by the FTA to serve as the independent state safety oversight agency (SSOA) for the WMATA Metrorail system. In other words, much as the Federal Railroad Administration (FRA) oversees safety practices on railroads and much as the Federal Aviation Administration (FAA) oversees safety practices on airlines, we oversee safety on the region’s Metrorail system.

That was not always the case.

For many years, the FTA functioned more like an investment bank to transit systems, but not necessarily as a safety regulator. That approach started to change in the mid-1990s with the FTA and states establishing a framework for some states with rail transit systems (RTAs) to oversee the safety of those systems.

In 2012, Congress greatly bolstered this framework. In the surface transportation bill passed that year (MAP-21), Congress required every state with a rail transit agency – or RTA – to establish a body that would be financially and legally independent from the RTA and would be empowered with certain enforcement and investigative authorities and be tasked with carrying out regular audits of the RTA. That independent body would be known as the state safety oversight agency – or SSOA. The FTA would fund a portion of the SSOA’s budget and if the SSOA failed to effectively oversee the RTA, the FTA would be empowered to withhold significant transit dollars from the state.

In 2016, the FTA finished the regulatory framework mandated by MAP-21, and this established a deadline of April 15, 2019 for each state with an RTA to establish a federally-certified SSOA. The Metrorail system was one such system in need of an SSOA.

Meanwhile, as the FTA’s SSOA framework came together, it became apparent that there were some significant and urgent safety challenges facing the Metrorail system. These issues were made evident by an accident in January 2015 just a few hundred feet south of the L’Enfant Plaza station, which is less than a mile from where we sit. That incident involved electrical arcing that created smoke that filled the tunnel and also the station. One person died and ninety-one people were injured.

The National Transportation Safety Board (NTSB) led an investigation and ultimately found a “range of safety issues and conditions” at WMATA including “lack of a safety culture.” The NTSB found deficiencies in addressing emergency events, deficiencies in addressing smoke and fire events and deficiencies in ensuring proper ventilation of tunnels and railcars. The NTSB also found deficiencies in Metrorail’s oversight, including the organization known as the Tristate Oversight Committee – or TOC – that in the years before the accident and MAP-21 had served as the safety entity overseeing Metrorail. A number of these findings were on repeat from twelve previous accidents the NTSB had investigated.

As the NTSB’s investigation of the accident proceeded, the U.S. DOT – through the FTA – assumed direct safety oversight of Metrorail. The U.S. DOT also took steps to urge the region to expedite the establishment of an independent oversight entity that would meet the requirements of MAP-21.

That left the region in a situation where it needed: (1) to establish an independent safety oversight agency to satisfy the mandates of MAP-21 and (2) to respond to the pressing problems the NTSB found in its investigation of the L’Enfant Plaza accident.

### **The establishment of the WMSC**

In 2017, the region took action to address both of these issues. The states of Virginia and Maryland and the District of Columbia each enacted identical legislation establishing the WMSC. That legislation amounted to an interstate agreement and thus needed the ratification of Congress, which passed H.J.Res. 76 and which enacted on August 22, 2017.

The legislation – often referred to as the WMSC Compact – grants the WMSC significant enforcement powers in its safety oversight of Metrorail. These powers include, among others, the following authority:

- to investigate hazards, incidents and accidents on Metrorail;
- to restrict, suspend or prohibit rail service on all or a part of Metrorail;
- to restrict, suspend or prohibit certain personnel on all or part of the Metrorail system;
- to remove a vehicle, infrastructure element or hazard from the Metrorail system;
- to direct WMATA to prioritize spending on safety-critical measures;
- to order WMATA’s Inspector General to conduct certain investigations;
- to take legal action to enforce our powers; and
- to issue citations and fines in relation to WMSC-directed safety measures.

In addition, the WMSC Compact provides the WMSC with extensive physical and virtual access to the system. These rights include the right to electronic information and databases, to enter onto WMATA property to make inspections, to conduct investigations and examinations, and, finally, to carry out related activities that we conclude are necessary to ensure that proper protocols and practices are being followed.

In the immediate months after the WMSC Compact became law, the three jurisdictions appointed commissioners to fill the six commission seats (two each for Virginia, Maryland and D.C.) and three alternate seats (one each for Virginia, Maryland and D.C.). The commissioners elected as chair Christopher Hart, one of D.C.’s commissioners who also served as vice chairman of the NTSB during the Fort Totten accident investigation and as NTSB chairman during the L’Enfant Plaza investigation.

The commissioners hired staff, and I was honored in early 2018 to be selected to serve as chief executive officer. I immediately went to work building our staff, hiring experts in WMATA operations, track and structures, rail vehicles, signaling systems and traction power. The Metropolitan Washington Council of Governments graciously served as an incubator and was critical in helping stand up the WMSC and in ensuring we had the administrative support necessary to carry out our mission. The FTA and the states of Virginia and Maryland and the District Columbia have similarly been instrumental in ensuring the WMSC has the funding and resources envisioned by the WMSC Compact.

### **The certification of the WMSC and the commission’s actions since certification**

The WMSC’s most important task in its first few months was the drafting of what is known as our program standard. This document outlines our approach to safety oversight of the Metrorail system and the procedures for conducting investigations, audits and the other core oversight functions that are mandated by MAP-21 and the WMSC Compact. The WMSC provided this document to the FTA in September 2018. In March 2019, the FTA officially certified the WMSC’s oversight program, effectively handing over the reins of WMATA safety oversight that the U.S. DOT assumed in October 2015, nearly three and a half years earlier.

We are now up and running, and I am pleased to update you on our work so far.

As I discussed, the WMSC Compact affords the WMSC with rather extensive powers, which we use to carry out six core oversight functions: (1) investigations; (2) inspections; (3) audits; (4) Corrective Action Plans (CAPs); (5) safety certification; and (6) emergency management.

On a day-to-day basis, this means that the WMSC must be a 24-7 operation just like Metrorail, which is moving trains and conducting maintenance at all hours of the day and night. We receive notifications (many of which we are informed of within minutes, as the law and our program standard require) of safety events that occur in the system. We are constantly assessing the issues raised and deciding what additional investigative action is necessary. Some days there could be no reportable events, but some days could see several safety events. Of those, many often are minor, but sometimes there are crashes like we saw in the tunnel between Foggy Bottom and Farragut West stations two weeks ago. I will discuss that, but I first want to discuss our key functions.

### **Investigations**

When we receive notice of certain events, the WMSC's program standard mandates a thorough investigation by WMATA. The WMSC also has discretion to require WMATA to carry out an investigation for certain other events. That investigation often begins in the minutes after the event, and the WMSC's experts often participate in-person in interviews and the other investigative activities that follow. Our organization is a lean and nimble one, so we must generally rely on the staff of WMATA to undertake many elements of the investigation.

Ultimately though, the investigation is owned by the WMSC. If the investigation meets the rigorous standards of the WMSC, then the WMSC will adopt the investigative report as its own. If the report does not meet WMSC standards, the WMSC would reject the product and order WMATA back to the drawing board to resolve the shortcomings.

So far, that process has been successful, and the WMSC has adopted seventeen investigative reports. Some of those investigations have involved minor injuries, while two involved fatalities. The WMSC adopts these reports at its public meetings, which the commission has held monthly since certification in March.

### **Inspections**

The WMSC is far from a deskbound organization. WMSC staff and experts have been out on and in the system vigilantly since certification (and with the FTA before our certification). We are inspecting track and structures, signaling equipment, electrical equipment, railcars and railyards, and have carried out observations on trains and in the rail operations control center. The WMSC has undertaken 57 risk-based inspections since certification, working alongside WMATA personnel to point out safety deficiencies and to verify their correction.

### **Audits**

The WMSC is required to conduct a triennial safety audit of the Metrorail system. In layman's terms, this means a top-to-bottom review of key departments within the system. The process involves

extensive interviews, document reviews, visits to the field, on-site inspections of assets and activities, and ends with the preparation of a report of the WMSC's findings and needed improvements.

To expedite the process, the WMSC will stagger its audits of the departments over the three-year timeframe. The WMSC has already begun this approach with an audit this summer of Metrorail's track inspection and maintenance and the associated training for workers who focus on track issues. The WMSC is finalizing its audit report on this area and expects to present a report with findings to the public in the coming weeks.

The WMSC is moving quickly to its second audit, which will focus on the program designed to protect workers carrying out tasks on tracks, known as the Roadway Worker Protection (RWP) program.

In the months to come, among many areas, we will audit rules and training that govern train operator and controller performance, traction power, elevators and escalators, and how capital projects are executed.

### **CAPs**

The WMSC oversees Metrorail's handling of safety improvements known as CAPs, as noted above. A CAP is a plan for addressing a hazard or deficiency that we have identified and for which we have required action to resolve the issue. When the WMSC received certification from the FTA in March, the WMSC integrated 101 CAPs that the FTA had been overseeing into our safety oversight framework; many of those CAPs even pre-dated the FTA's assumption of oversight in 2015.

Since our March certification, the WMSC has found that WMATA has taken acceptable action to warrant the closure of 39 CAPs. We continue to vigilantly review the status of issues affected by any CAPs that we have closed to ensure that Metrorail does not allow bad habits to return or otherwise regress on successful safety improvements.

We have also re-assessed and re-structured many CAPs that we essentially inherited from FTA. Rather than focusing on the volume of CAPs and lowering the overall number, we are focused on ensuring that the safety improvements are still relevant and the timeframes for completion are reasonable.

And, finally, based on the WMSC's own investigations and analyses, we are issuing new findings that will necessitate new CAPs. Those findings will require CAPs concerning, for example, ensuring that video camera recordings are available of operator actions inside camera-equipped cars to ensure that both WMATA and the WMSC can evaluate train operator performance.

In this effort, as in every one of our core functions, it is critical that we be transparent. We will be posting our efforts on CAPs – as we call it our CAPs Tracker – on our website and we hope this will be a helpful tool for the subcommittee and the public in evaluating WMATA's safety progress.

### **Emergency management**

The WMSC is focused on ensuring that lessons of the past are truly learned. Another one of the WMSC's core functions requires us to ensure that WMATA is taking proper steps to prepare itself for

emergencies on the system. The L'Enfant Plaza event was an ominous wake-up call that WMATA and its regional partners ought to take extensive measures to improve how they coordinate, communicate and execute emergency response procedures. In this area, it appears that WMATA has made significant strides in assessing its emergency management needs and preparing for the worst through drills and other exercises. On this, as on so many other fronts, we intend to make sure progress is sustained and not lost amid a sea of other priorities.

### **Safety certification**

Finally, our last major core function is the safety certification of WMATA's major capital projects. This means ensuring that WMATA introduces into operation only projects designed, built and tested applying industry-accepted engineering approaches to minimize hazards. There are governing processes on what constitutes a hazard, how to accurately assess its risk and how to assess the risk once the remedy is selected. This is not an arbitrary process, but one that undergoes scrutiny by engineers of the airports authority and Metrorail. The WMSC's role is to have an ongoing presence on the project and to have an ongoing presence in the safety certification process. Incidentally, well before the WMSC achieved certification, the WMSC's staff started a methodical effort to familiarize, educate and participate in major capital project activities. The WMSC has the authority to essentially verify that such projects are ready to be introduced into operations. This function will be carried out, for example, on the Silver Line Phase 2 project, where we will effectively be a second set of eyes on any decision to open the new extension.

### **Other key efforts**

In addition to what is outlined above, we are carrying out our mission in other important ways.

One key task will be our review and approval of WMATA's Public Transportation Agency Safety Plan (PTASP). The requirements for this plan are guided by federal law, but it is the WMSC that will certify that it comports with the federal guidelines. The plan must adhere to a safety philosophy known as Safety Management Systems (SMS) and must set certain performance targets concerning fatalities, injuries, safety events and reliability. This plan must pass muster with the WMSC by July 20, 2020 or the FTA could withhold funding from WMATA. We are already in regular communication with WMATA to ensure that this effort is moving forward.

We have established a safety reporting portal on our website and have invited public feedback. We have received numerous concerns, which we have raised with WMATA and followed up on to ensure that appropriate measures are taken.

We have built a tremendous relationship with WMATA's Inspector General and have been proud to work with the office on a number of matters.

And I stress that while we are cementing our role as WMATA's safety regulator, we are also establishing ourselves as a start-up organization, building the ship as we sail it. Of all the country's 31 SSOAs, we are the only one that stands on its own and must manage its own administrative and financial responsibilities. The other 30 SSOAs are housed within a public utility commission or

transportation department and can benefit from having other specialists housed in their larger home agency to address matters that our organization largely handles on its own.

### **October 7 collision in tunnel between Foggy Bottom and Farragut West stations**

These efforts may seem all well and good, but what really matters is what happens when push comes to shove – how does the WMSC respond when crisis strikes.

Perhaps our first major test occurred earlier this month in the early morning hours of October 7. At 12:54 a.m., two eastbound trains on the Orange Line that were not carrying passengers collided between Foggy Bottom and Farragut West stations. The six-car striking train (#700) collided with a six-car stationary train (#755) at about 11 miles per hour. The investigation is ongoing, but we know already that the operator had received a zero speed command. When a train has essentially been told to stop and stay in place, operators can still move the train, but at low speed.

This incident highlights how we will participate in the investigative process. Here, it is ongoing, and we are participating with WMATA step-by-step in interviews, tests, data analysis and the like.

The incident highlights our oversight of CAPs. WMATA has had a CAP relating to movement under zero speed commands since 2016, and its current deadline to address it is 2020. This is one of the CAPs that the WMSC has prioritized since taking over oversight seven months ago. Just days ago, we held an engineering summit with WMATA, which I called for the day after the incident. At that meeting, experts from WMATA and the WMSC discussed engineering activities completed and underway and applications to current and future rail cars.

It also highlights our commitment to transparency. In the hours and days after the incident, we shared with the public what we knew almost as soon as we knew it. This effort included updates and photos, and it is our intent to continue that level of transparency on this and future efforts.

Finally, the incident highlights how critical it is that WMATA continue to welcome the new safety oversight framework. The WMSC's only interest is in making Metrorail a safer system, and with WMATA's continued cooperation, our mission-critical role will only serve to benefit Metrorail safety. We greatly prefer that dynamic to a situation in which we must spend our time and resources penalizing the system instead of improving it.

### **Going forward**

In the months and years to come, the WMSC will continue its oversight efforts as laid out above. We will also continue to explore additional areas where our unique expertise can effectively be brought to bear. On these and all other issues we face, I look forward to keeping the subcommittee informed of our efforts.

I look forward to your questions.

Thank you.