

I-95 Piscataqua River Bridge CCTV Analytics–Based Suicide Prevention Response



By New Hampshire DOT

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Overview

NHDOT faced a cluster of suicide incidents at the I-95 Piscataqua River Bridge in April and May 2025 —three within a two-week period, two of them fatal. Rather than waiting for capital retrofits, the agency used existing TSMO resources — closed-circuit television (CCTV) cameras with object analytics, intelligent transportation systems (ITS) assets, and transportation management center (TMC) staff — to detect activity that may indicate a person in distress on the bridge and to speed notification to state police. TMC operators verify analytics alerts against live camera feeds and follow formalized work instructions to document and communicate each event. The approach improved early awareness of potentially life-threatening situations, reduced the time between detection and notification, and supported a successful law enforcement intervention following deployment. It offers a transferable, low-cost model for using transportation operations to contribute directly to life safety within established agency roles.

In this case study you will learn:

1. How NHDOT integrated CCTV object analytics into daily TMC operations to detect and verify potential suicide-related activity on the bridge
2. Why human verification and professional judgment remain essential when deploying automated analytics for time-critical, high-risk events
3. How formalized TMC work instructions and interagency coordination with state police enabled rapid, consistent response using existing infrastructure and staff

BACKGROUND

The Interstate 95 (I-95) high-level bridge over the Piscataqua River between New Hampshire and Maine is a critical interstate connection and complex operational environment. In April and May 2025, this location experienced a concerning cluster of suicide incidents, three within a two-week period and two resulting in fatalities. In June 2025, a law enforcement officer successfully intervened to prevent another suicide attempt at the same location. These events identified the bridge as a high-risk location and highlighted limitations in traditional detection and response methods. Historically, awareness of suicide-related activity on transportation infrastructure has relied on delayed public reporting or third-party notification, often reducing opportunities for timely intervention. Given the severity of outcomes and the time-critical nature of these events, the New Hampshire Department of Transportation (NHDOT) identified a need for a proactive, operations-based approach to improve situational awareness and response capability. Rather than waiting for long-term infrastructure retrofits or capital improvements, NHDOT leveraged existing transportation systems management and operations (TSMO) resources, including intelligent transportation systems (ITS) assets and existing transportation management center (TMC) staffing. The objective was to apply real-time monitoring, defined operational procedures, and interagency coordination to improve early detection, verification, and notification for suicide-related incidents occurring within the highway environment.



TSMO PLANNING, STRATEGIES, AND DEPLOYMENT

NHDOT implemented this initiative using established TSMO principles focused on operational readiness, use of existing technology, and clearly defined response procedures. Planning began with an internal assessment of available ITS assets and TMC capabilities, with particular emphasis on closed-circuit television (CCTV) cameras equipped with object analytics. The strategy centered on integrating CCTV object analytics into daily TMC operations to detect activity that may indicate a person in distress on the bridge. Rather than relying solely on automated alerts, the approach emphasized human verification and operational judgment. When analytics generate an alert, TMC operators immediately access live camera feeds to assess conditions and determine appropriate actions. Deployment included development and formalization of TMC work instructions to ensure consistent response across shifts and operators. These procedures define how alerts are received, verified, documented, and communicated. Upon verification, operators notify state police and appropriate partner agencies to support rapid response and intervention. Importantly, the deployment relied entirely on existing infrastructure, software, and staff. This enabled NHDOT to implement the solution quickly, adapt procedures as needed, and integrate the process seamlessly into established transportation management center and traffic incident management (TIM) workflows.

COMMUNICATIONS PLANNING AND EXECUTION

Effective communication was essential to the success of this initiative. Internally, NHDOT coordinated closely between TMC management and operators to ensure staff were trained on new procedures and understood their roles during alert-driven events. Clearly defined work instructions provided consistency and reduced uncertainty during time-critical situations. Externally,

communication focused on rapid notification and coordination with state police and other partner agencies. Once a potential suicide-related incident is verified through live CCTV, TMC staff promptly relay situational information, including camera views and location details, to support informed response decisions by law enforcement. Situational awareness tools, including internal TMC camera platforms and NewEngland511.org when applicable, support shared understanding among transportation and response partners. Public communications are handled carefully and responsibly, prioritizing safety and coordination while avoiding unnecessary detail. This structured communication approach strengthened interagency trust, improved response coordination, and ensured that information flowed efficiently from detection to action.



individual incidents, the initiative enhanced operational confidence among TMC staff and partner agencies when managing sensitive, high-risk events. It demonstrated how transportation operations can contribute directly to life safety while remaining within established agency roles and responsibilities. Key lessons learned include the importance of clear procedures when deploying advanced analytics, the continued need for human verification and professional judgment, and the value of strong interagency relationships. The project also demonstrated that operational strategies can be implemented quickly and refined over time, providing flexibility that complements longer-term infrastructure solutions. This approach offers a transferable model for other agencies seeking to address emerging safety challenges through TSMO, using existing resources to deliver timely and impactful safety outcomes.

OUTCOMES, BENEFITS, AND LEARNINGS

The implementation of this TSMO solution produced meaningful operational and safety benefits. The combination of CCTV analytics and defined TMC procedures improved early awareness of potentially life-threatening situations and reduced the time between detection and notification. The successful law enforcement intervention following deployment reinforced the value of proactive monitoring and rapid response. Beyond